

T.C.
BAHCESEHIR UNIVERSITY
GRADUATE SCHOOL
THE DEPARTMENT OF FOREIGN LANGUAGES EDUCATION
DOCTORAL PROGRAM IN ENGLISH LANGUAGE EDUCATION

**AN INVESTIGATION INTO THE INTEGRATION OF SELF-REGULATED
LEARNING INTO L2 INSTRUCTION IN HIGHER EDUCATION**



PHD THESIS

TUBA KIVANÇ CONTUK

ISTANBUL 2025

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ABSTRACT

AN INVESTIGATION INTO THE INTEGRATION OF SELF-REGULATED LEARNING INTO L2 INSTRUCTION IN HIGHER EDUCATION

Kıvanç-Contuk, Tuba

Doctoral Program in English Language Education

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Self-regulated learning skills have been recognised as pivotal life skills as they are closely related to the development of knowledge, skills, and attitudes. These skills are suggested to pave the way for constructing learning strategies and developing self-reflective behaviour. In the field of foreign language acquisition, self-regulated learning skills are considered engines which foster autonomous strategic learning needed for a lengthy and laborious language learning process. Despite the benefits of self-regulated learning, the integration of these skills into foreign language education has not gained widespread recognition and has yet to be systematically investigated. To address the gap, the current study aims to offer self-regulated learning skills integrated L2 instruction, which is to be implemented at Schools of Foreign Languages, and to evaluate its effectiveness through quantitative and qualitative methods. In line with these objectives, the study adopts a convergent parallel design incorporating quantitative and qualitative data with equal weight. 55 students from a school of foreign languages attended the study. The semi-structured interviews were held with 22 students. Moreover, two instructors implementing the instruction conducted a dialogic interview. The findings from the quantitative data revealed that

self-regulated learning skills integrated L2 instruction partly enhanced the self-regulated learning skills of the participants. The opinions of the students and instructors indicated the benefits of the instruction in students' strategies, thinking, and habits in the language learning process. In addition, the study has provided guidance for the future implementations of the self-regulated learning skills instructions.

Keywords: Self-Regulated Learning, English as a Foreign Language, Strategy Use, Self-Evaluation, Motivation, Autonomy in Learning



ÖZET

ÖZ-DÜZENLEME BECERİLERİNİN YÜKSEK ÖĞRETİM YABANCI DİL EĞİTİMİNE ENTEGRASYONU ÜZERİNE BİR ÇALIŞMA

Kıvanç-Contuk, Tuba

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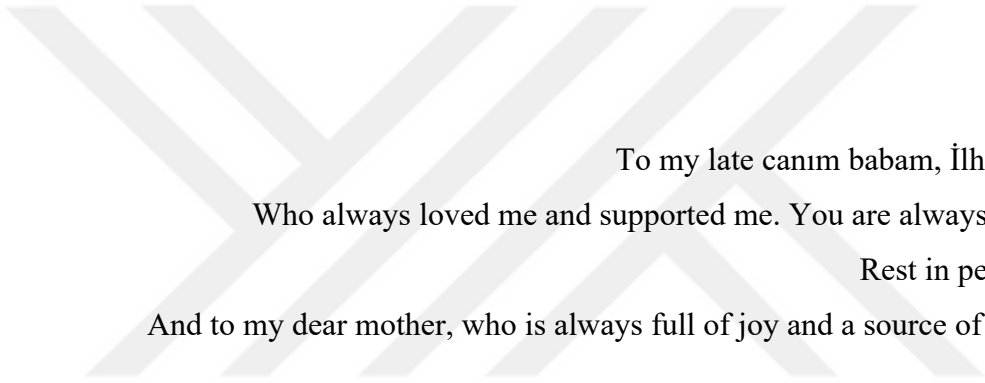
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Bilgi, beceri ve tutumların gelişimiyle yakından ilişkili olan öz-düzenlemeli öğrenme becerileri, önemli yaşam becerileri olarak kabul edilmektedir. Bu becerilerin, öğrenme stratejileri oluşturmada ve öz-yansıtıcı davranış geliştirmede önemli rol oynadığı düşünülmektedir. Yabancı dil edinimi alanında ise, öz-düzenleyici öğrenme becerileri uzun ve zahmetli bir dil öğrenme süreci için gerekli olan bağımsız ve stratejik öğrenmeyi teşvik eden araçlar olarak kabul edilir. Öz-düzenleyici öğrenmenin faydalarına rağmen, bu becerilerin yabancı dil eğitiminde kullanılması yaygın olarak kabul görmemiş ve henüz bu alanda yeterli araştırma yapılmamıştır. Bu nedenle, bu çalışma, yabancı diller yüksekokullarında dil öğrenme programına entegre edilmiş bir öz-düzenlemeli öğrenme becerileri öğretimi sunmayı ve öğretimin etkinliğini nicel ve nitel yöntemlerle değerlendirmeyi amaçlamaktadır. Bu amaçlar doğrultusunda çalışma, nicel ve nitel verileri eşit ağırlıkta değerlendiren yakınsayan paralel bir desen benimsemiştir. Çalışmaya bir yabancı diller okulundan 55 öğrenci katılmıştır. Yarı yapılandırılmış görüşmeler 22 öğrenci ile gerçekleştirilmiştir. Ayrıca, eğitimi uygulayan iki öğretmenle de diyalojik bir görüşme gerçekleştirilmiştir. Nicel verilerden elde edilen bulgular, öz-düzenlemeli öğrenme becerilerinin entegre edildiği yabancı dil öğretiminin katılımcıların öz-düzenlemeli öğrenme becerilerini kısmen

geliřtirdiđini ortaya koymuřtur. Öğrencilerin ve öğretim görevlilerinin görüşleri, öğretim öğrencilerin dil öğrenme sürecinde stratejileri, düşünme biçimleri ve alışkanlıkları üzerindeki faydalarına işaret etmektedir. Ayrıca, çalışma, öz-düzenlemeli öğrenme becerileri öğretiminin gelecekteki uygulamaları için yol gösterici olmuřtur.

Anahtar Kelimeler: Öz-Düzenlemeli Öğrenme, İngilizcenin Yabancı Dil Olarak Öğretilmesi, Strateji Kullanımı, Motivasyon, Öz-Değerlendirme, Bağımsız Öğrenme





To my late canım babam, İlham Kıvanç,
Who always loved me and supported me. You are always beside me.
Rest in peace, balam.
And to my dear mother, who is always full of joy and a source of life for me.

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Chapter 1

Introduction

This chapter aims to provide information regarding the research which first aims to develop self-regulated learning instruction to be integrated into the programs of SoFL and explore the extent and the ways this self-regulated learning integrated L2 instruction impacted the self-regulated learning skills of the participants and their language learning process. The chapter commences with the background of the study and then the purpose of the study. Afterwards, the research questions and significance of the study are presented. The chapter concludes with the definitions of the terms.

1.1 Background to the Study

Learners today are required to question, think critically, take responsibility, produce, adapt to new situations, and develop their problem-solving skills (Ay & Bulut, 2017). Accordingly, in education, there is a growing emphasis on the active construction of knowledge, which serves as a critical component in developing the life skills of learners (Jakešová & Kalenda, 2015). Among these necessary skills, the development of self-regulation is one of the most crucial because self-regulation refers to the development of knowledge, skills, and attitudes, and it is transferable to various learning contexts (Boekaerts, 1999). In an educational environment which aims to raise autonomous students, self-regulated learning has been acknowledged as a fundamental component of effective learning processes.

The concept of self-regulation was rooted in the educational psychology of the 1970s. The term is closely related to the science of mind and human behaviour. The term self-regulated learning, which specifically addresses the academic functions of self-regulation, was coined as a new term and has attained an interdisciplinary status subsequent to its evolution in the past 20 years (Teng & Zhang, 2022). A substantial body of research has been conducted to examine self-regulatory processes in the fields of music, mathematics, psychology, science, social sciences, and teacher education.

Regarding theoretical frameworks underlying the studies of self-regulation, Pintrich (2004), Zimmerman (2001), Winne and Hadwin (1998), and Boekaerts' (2011) models have been applied widely, Zimmerman's Cyclical Model being the most dominant theoretical model. Oxford's Strategic Self-Regulation Model of Language Learning (Oxford, 2011), on the other hand, has remained relatively underexplored, although the model offers new agendas for research (Rose et al., 2018). Given the specific aims of the present study, Pintrich's framework was deemed more appropriate by addressing the research objectives, the ages of the participants, and concrete definitions of behaviours under its dimensions. Thus, the study was grounded on Pintrich's framework.

Regarding second language acquisition (SLA), after Dörnyei and Skehan's criticism (2003) in relation to language learner strategies due to their inconsistency, the field of language learner strategy was offered to be replaced with the concept of self-regulation. Dörnyei's definition of self-regulation underscored the learners' own strategic efforts towards a certain academic achievement with an emphasis on its multidimensionality. Although self-regulation was held to be an outsider construct which needed theoretical development, some other researchers regarded the position of self-regulation in language learning research as "both the glue and the engine that helps students manage their strategic learning" (Weinstein, Acee, & Jung; 2011, p.47). While reviewing the current state of self-regulation research in language learning, Teng and Zhang (2022) argued that research in self-regulated learning flourished and matured in educational psychology; however, future studies are needed to explore the effectiveness of self-regulated learning approach in language learning, which is a complex and lengthy process. Studies focusing on the integration of self-regulation into L2 and including self-regulation integration are still considered an emerging research domain and entail certain limitations (Ardasheva et al., 2017). The self-regulated learning training or interventions have been developed for shorter periods of time and are not integrated into the language learning curriculum. Yet, as indicated by Perels et al. (2005), training programs should be domain-specific and context-related, which paves the way for the construction of a relationship between the training and the context and applying the acquired skills in the classroom.

In the sphere of higher education also, self-regulated learning skills are recognized as a key competence for both higher academic education and future professional life. According to Dignath-van Ewijk et al. (2015), university students have to plan and regulate their own studies so that they can finish their studies and gain requirements for their future profession. However, the previous research has indicated that university students experience difficulties with coping the autonomy; and the main reason has been suggested to be lack of promotion of self-regulated learning skills in higher education (Wild, 2000). The lack of promotion of these skills results from some misconceptions in the field. Firstly, it has been thought that self-regulated learning skills develop in line with age and elder students do not need to be trained for these skills specifically. However, Cengiz-Istanbullu and Sakız (2022) put forward that students can better develop their self-regulated learning skills regardless of their grade level if they are instructed with these skills in their learning environment. In addition, Teng and Zhang (2022) postulate that self-regulation is composed of complex skills and requires learners to shift their affective, mental, and motivational abilities to achieve academic success in primary and elementary schools or at university. Another misconception is about the students' acquisition of self-regulated learning skills on their own, through self-discovery. Although some students can develop these skills automatically, for most students, this self-discovery is demanding and exhausting (Zimmerman, 2000, as cited in Adıgüzel et al., 2023). Thus, it is clear from the empirical evidence that self-regulated learning skills are teachable at any level of instruction.

1.2 Purpose of the Study

The language learning process requires learners to set goals, employ various strategies to reach these goals, self-evaluate and adapt their strategies, stay focused and motivated, and learn autonomously. The language learning context in Türkiye, specifically SoFL within the scope of the current study, do not foster strategic thinking which encompasses abovementioned requirements. The curricula in SoFL do not provide learners with knowledge of self-regulated learning or present any practices despite the merits attributed to self-regulated learning. In line with this, the current study offers a self-regulated learning integrated L2 instruction alternative, which was investigated through

piloting and implementation processes. The study investigates the impacts of self-regulated learning integrated L2 instruction on the self-regulated learning skills of the students and in their language learning process. In addition, the perspectives of the participating instructors are included in the study for a better grasp of the impacts and the implementation of the self-regulated learning integrated L2 instruction.

1.3 Research Questions

The present study addresses the following research questions, which comply with the purpose of the study.

1. To what extent does self-regulated learning integrated L2 instruction have an effect on the development of self-regulated learning skills of L2 students?
 - a. Is there a statistically significant difference between the control and experimental group?
 - b. Is there a statistically significant difference between the lower-level and higher-level English proficiency experimental groups?
 - c. To what extent, if any, does self-regulated learning integrated L2 instruction have a sustained impact on the self-regulated learning skills of the higher-level English experimental group, as measured by delayed post-test results?
2. To what extent do L2 students employ the sub-skills of self-regulated learning, and how do they employ them?
3. What are the opinions of instructors regarding self-regulated learning skills of their students involved in the self-regulated learning integrated instruction?
4. What are the perceptions of L2 students in the experimental groups regarding the self-regulated learning integrated L2 instruction?

1.4 Significance of the Study

This study is significant in particular ways. To start with, the study has yielded with a self-regulated learning instruction applicable to students with diverse levels of English proficiency, attempting to facilitate and foster their language learning processes. EFL instructors who are concerned with improving their students' self-regulated learning

skills may implement the activities which are flexible to be modified according to various contexts. The self-regulated learning integrated L2 instruction will provide the instructors with a guide, which prevents EFL instructors from spending extra time in planning and integrating self-regulated learning activities.

The subsequent point concerns the piloting process of the self-regulated learning integrated L2 instruction. The instruction was piloted in two classes; students with lower-level English proficiency and students with higher-level of English proficiency in order to ensure the applicability of the instruction in various levels of English proficiency. In addition, the instruction was fully implemented with its 15 activities in these two classes rather than piloting some activities of the instruction. Piloting the instruction fully enabled the researcher to observe the application of all activities and make the necessary adjustments. Moreover, in the piloting process, the second instructor gained knowledge regarding how to implement the self-regulated learning integrated L2 instruction effectively.

Turning to the design and data collection tools of the study, the study adopted a convergent parallel design, and quantitative and qualitative data were collected simultaneously and with equal weight. The literature as for self-regulated learning has mostly pinpointed correlation studies, especially correlation between the use of self-regulated learning skills and the achievement in L2 (Smadi et al., 2024; Xu et al., 2022). There is a dearth of research in intervention studies which encompass long-term and subject specific interventions (Perels et al., 2005). In essence, the current study is significant considering the long-term and subject specific instruction it presents. In relation to the data collection tools, the study combines qualitative and quantitative data collection methods, although previous studies have employed quantitative tools such as self-regulated learning skills questionnaires. It is believed that the perspectives of the instructors and opinions of the student participants enrich the findings of the study. In addition, weekly journals kept by the student participants as a data collection tool contributed to the validity of the findings by depending the results not only on self-reports of the participants.

All things considered, the present study is significant with its all-encompassing approach, combining both quantitative and qualitative data to reach conclusions. Moreover, it postulates an alternative to L2 instruction, which is self-regulated learning integrated L2 instruction and offers easily applicable activities with various English proficiency level students. Lastly, the outcomes of the study underscore a range of pedagogical implications, which are expected to enhance language learning practices and outcomes.

1.5 Definitions

Second Language (L2): Any language which is learned subsequent to the first language (Ellis, 1997)

English as a Foreign Language (EFL): Teaching and learning English for communication purposes (Nunan, 1999)

Self-Regulation: Planned and modified self-generated thoughts, feelings, and actions achieve a personal goal (Zimmerman, 2000)

Self-Regulated Learning: A process in which students activate, control, and sustain their cognition, motivation, and behavior in order to achieve academic goals (Zimmerman, 2001).

SoFL: School of Foreign Languages

Chapter 2

Literature Review

2.1 Definition of Self-Regulation

Self-regulation has been defined by various researchers in the field of education, especially after the term attracted attention due to learner-centred approaches to instruction. To exemplify, Schunk and Greene (2017, p.1) define self-regulation as *‘the ways that learners systematically activate and sustain their cognitions, motivations, behaviours, and affects toward the attainment of their goals.’* Zimmerman (2000), on the other hand, refers to self-regulation as self-generated thoughts, feelings, and actions which are planned and modified in a cyclical way to achieve a personal goal. Hadwin (2008) also states that self-regulation is *‘deliberate planning, monitoring, and regulation of cognitive, behavioural, and affective or motivational process toward completion of an academic task.’* (p. 187)

Self-regulation in educational settings has been suggested to share some common features. (Shunk & Greene, 2018). The first common feature is that self-regulation requires learners to be behaviourally, cognitively, metacognitively, and motivationally active in their learning and performance (Pintrich, 2000; Zimmerman, 2001). Secondly, goal-directed activities rather than just completing tasks contribute to self-regulation in a better way (Sitzmann & Ely, 2011). The third feature is self-regulation's dynamic and cyclical nature, which also involves feedback loops (Lord, Diefendorff, Schmidt, & Hall, 2010). Self-monitoring or external feedback may lead to a change of or stick to specific strategies. Moreover, the role of motivation in deciding whether to pursue or quit a goal (Zimmerman & Schunk, 2008) and the role of emotions in attaining goals are other common features of self-regulation in learning (Efklides, 2011).

2.2 Theoretical Background of Self-Regulation

The concept of self-regulation is discussed in various theoretical positions, such as psychoanalytic, behavioural, social learning, social-cognitive, cognitive-developmental, and information-processing. In the current study, perspectives regarding

social learning, social-cognitive, and information-processing approaches are presented due to their relevance to the scope of the study.

Prominent theorists such as Piaget and Vygotsky discussed the concept of self-regulation and developed ideas regarding its development. Piaget (1959) refers to self-regulation in two components which are intellect and affect. Self-regulation is evident in both components. Regarding intellect, intention, the deliberate direction of thoughts, and problem-solving actions are included in self-regulation. In affect, self-regulation is formed as will and control of desires and emotions (Fox & Riconscente, 2008). The development of self-regulation goes in parallel in both components. The development of intellect, which occurs together with metacognition, relates to children's thinking and perception of other perspectives and realities requires. It is supported by physical interaction with objects and verbal interaction with others (Fox & Riconscente, 2008). Affect component of self-regulation, on the other hand, is less dependent on the interaction with the objects but closely related to interactions with others. Piaget also touches upon the differences between the interactions with adults and peers in fostering self-regulation development. While adults are considered superior and dominant, interaction with peers includes persuasion, explanations, comparisons, and cooperative interaction.

According to Vygotsky (1986), on the other hand, the sociocultural environment plays a significant role in self-regulation. Although the control mechanism is an innate feature, goal-setting and the methods used to achieve these goals are learned. In this learning process, the child takes an active role but is not alone. Symbolic tools that facilitate learning, such as language, writing, art, or other means of communication and thought, assist in this development. Communication is one of these cultural tools and includes a method known as scaffolding. According to this method, the child receives assistance from an adult or a more experienced peer. This support, which is given through techniques such as prompting, modelling, questioning, and strategy instruction, enables the child to complete a task they would not be able to accomplish independently. The support should always be in the child's Zone of Proximal Development.

From Freud's psychoanalytic perspective (1965), emotional development plays a pivotal role. The concept of self-regulation is understood as the outcome of dynamic

interaction and contradictions between the id, ego, and superego. The id, as defined by Freud, is an innate unconscious mechanism that focuses exclusively on the basic needs of human beings and functions to fulfil these needs. The superego, on the other hand, emerges at the age of about 6 with the internalization of social norms and the social constraints brought about by these norms. The ego, meanwhile, acts as an intermediary to fulfil the desires of these two forces. In this respect, Freud sees self-regulation as a struggle to keep the personality forces that are constantly in conflict with each other under control and perceives it as an important and inevitable developmental threshold. Later, expanding upon Freud's ideas, ego psychologists such as Hartman and White regarded the ego as an autonomous structure that self-regulates, seeks identity, and fulfils its own needs. According to this approach, as the child grows up, the ego structure becomes stronger and can act as a more effective bridge between the id and superego. This equally leads to an improvement in the child's self-regulation skills. A well-developed ego can cope with anger and stress and pursue its objectives without being driven by impulses from the id or overwhelmed by the restrictive pressure of the superego. From this point of view, self-regulation skills should not be regarded as merely the suppression of impulses from the id; but also as a means for the individual to become a more productive and whole person by adapting better and more effectively to the social environment.

According to theorists from the behaviourist approach, self-regulation is defined as learned self-control that develops in response to external factors, such as reward and explicit training. Theorists such as Pavlov (1927), Thorndike (1911), Hull (1952), and Skinner (1974) have demonstrated that individuals can acquire automatic behaviours through conditioning methods to achieve reward and avoid punishment. In this theoretical framework, the individual who develops self-control skills can renounce immediate rewards and instead anticipate greater long-term rewards. In other words, they can restrain their impulsiveness. Skinner's operant conditioning theory (1974) has been a reference point in teaching self-regulation. Through this process, individuals are taught to set specific goals, monitor their own behaviour, give themselves helpful instructions, and use short-term rewards to maintain motivation for longer-term outcomes. The operant perspective comprises four fundamental components: goal setting, self-instruction, self-

monitoring, and self-reinforcement. In this context, children can progress in these four areas as they mature by recognising the value of rewards, refraining from impulsive choices, and employing certain strategies to achieve the desired outcomes. This developmental process can be influenced by many factors. These factors may include the child's cognitive abilities, physical activity levels, age, and prior learning experiences. Over time, the child becomes increasingly competent in deciding whether the reward is big enough to pursue and in resisting impulsive tendencies on the way to the objective.

The social and cultural context of the child is also a significant factor in the development of self-regulation (Bronson, 2019). The value attributed to a reward by the child may be shaped by the values transmitted by the family, teachers, friends or media. For instance, if a behaviour is repeatedly and consistently approved of by an adult, the value of the reward for that behaviour will increase. Furthermore, the value attributed to a reward may have never been experienced by the child. For instance, if a sportsperson or media celebrity is constantly praised and glorified by their friends or the media, the child will place a high value on this reward, whether they have achieved it or not. When considering all these factors, the behavioural approach demonstrates that children are not innately capable of self-regulation. Instead, it is the acquisition of knowledge from experience by which they discover which rewards are most important and then learn the behavioural strategies needed to obtain them.

According to Bandura's Social Learning Theory (Bandura, 1977), in order for learning to occur, individuals should develop 'expectancies' by observing their own or others' behaviours and whether these behaviours are (or are not) rewarded and valued in the environment. These expectancies and then performance standards regulate the individuals' behaviour with the evaluation of outcomes and their effectiveness. Bandura suggests that the outcomes of behaviours in particular settings should be appropriate to the children's age, abilities, and level of experience and learning so that they can develop the expectancies and performance standards which are necessary for self-regulation and adaptive behaviour. If the performance standards are too high, the individual may not meet

the standard. If the standards are low, on the other hand, the individual may not reach his/her potential (Bandura, 1997; Bronson, 2019).

Social-Cognitive Theory, which was pinpointed in Bandura's Social Foundations of Thought and Action: A Social Cognitive Theory book (1986) considers adults and children as active information processors who are involved in constructing models which are compatible with social life (Bronson, 2019). Individuals who believe in controlling certain situations can set realistic goals, take the necessary actions to reach these goals and make evaluations of their progress (de Charms, 1976). According to Bandura (1991), this notion of individual self-efficacy stimulates self-regulatory behaviour, and self-regulatory systems involve self-efficacy through its strong effects on thought, motivation, and action (as cited in Gümrükçü-Bilgici, 2021). Individuals with high self-efficacy are better at self-regulation; they can think in a more positive way, anticipate better outcomes, and react to difficulties in perseverance. Lower self-efficacy is suggested to result in lower motivation for challenging efforts (Schunk & DiBenedetto, 2014). From a social-cognitive perspective, self-regulation is cyclical as individuals use feedback from previous performances to make adjustments. Because personal, behavioural, and environmental factors are continuously changing, individuals have to make these adjustments (Zimmerman, 2000). These feedback loops are considered to be open, which means a proactive increase in performance through goal-raising and more challenging tasks. The triadic processes of self-regulation are presented in Figure 1 (Zimmerman, 1989, p.330).

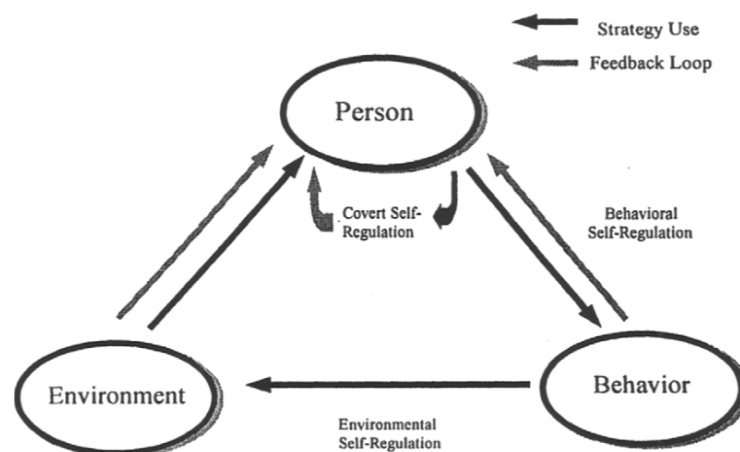


Figure 1. The triadic processes of self-regulation by Zimmerman (Zimmerman, 1989).

2.3 Models of Self-Regulation

Diverse perspectives in self-regulation research reached more integrated perspectives thanks to major conferences such as the American Educational Research Association (1986). These integrated perspectives on self-regulation set the stage for research in educational contexts (Schunk & Greene, 2017).

Research on self-regulation in education gained momentum in the 1980s; integrated models of self-regulation were developed. The researchers worked on theories and research methodologies which were to guide them in their studies. The time period from the 1980s to the present was divided into three periods characterised by theoretical, empirical, and practical issues (Schunk & Greene, 2017). This period, which spanned until the 1990s, was called the period of development. Then, during the period of intervention, the researchers tried to understand how students used self-regulation skills and how the researchers could teach self-regulation skills to their students. In the last period, which is the period of operation, the researchers desired to put forward the dynamic nature of self-regulation. Thus, they used a variety of data collection techniques, such as think-aloud protocols and observations (Schunk & Greene, 2017). Although research on self-regulation has evolved and new models have been suggested (e.g. Efklides, 2011) since the 1980s, most of the research has been grounded on the models which were developed in the period of Development. Below, primary self-regulation models are presented.

2.3.1 Zimmerman's cyclical model of self-regulation. Zimmerman's cyclical model of self-regulation (2000) addresses a fundamental framework within the field of learning. This model serves as an organised approach useful in analysing how learners control their actions during the learning and study cycles. This model highlights the cyclical processes of self-regulation, with three sustaining components, namely forethought, performance, and self-reflection, which are never-ending processes. Each step is important in helping learners seek goals, implement strategies, and assess how they perform, which improves their learning experiences. The forethought phase, as defined by this model, is the first and final stage of the model. In this stage, learners develop action plans to meet the specified objectives. First, they analyse the task and take the necessary steps to complete the task such as breaking down the complex tasks into smaller parts

which are manageable and determining the strategies that will be used to achieve these objectives. In determining the strategies, individuals' self-efficacy beliefs may shape the plans which will have an effect on performance. In addition to individuals' self-efficacy beliefs, goals are determining factors in planning and preparation for the tasks; individuals may persist in challenging tasks, or they may give up. Also, their goals may require more detailed and effective planning. The performance phase is a consequence of the procedures determined through the forethought phase. In this phase, students evaluate their self-regulation progress and may change their efforts and strategies where applicable. During this phase, learners are more persistent, and it becomes necessary to use self-monitoring, as affirmed by Zimmerman since learners focus on their output and modify undeviatingly (Smith et al., 2022). The self-reflection phase of Zimmerman's model is the last phase, which takes place when learners compare their achievements with pre-determined targets. In this phase, self-evaluation is used to assess the effectiveness of the strategies, and self-responses steer changes in the strategies for future learning (Panadero, 2017). This phase is seen to enhance and promote the reinforcement of learning. It assists in the acquisition of metacognitive skills, which are effective in making learners more independent regarding their educational components. Zimmerman's cyclical model begins with the occurrence of one of the actions and ends with the initiation of self-regulation, whereas all the rest phases are its integral components. All levels, in their own way and at their own time, affect the remaining levels, creating a system in which the learners can continuously modify their strategies based on constant feedback (Kookan, Zaini, & Arroyo, 2021). Figure 2 presents the revised and more detailed version of Zimmerman's cyclical model of self-regulation (Zimmerman & Moylan, 2009).

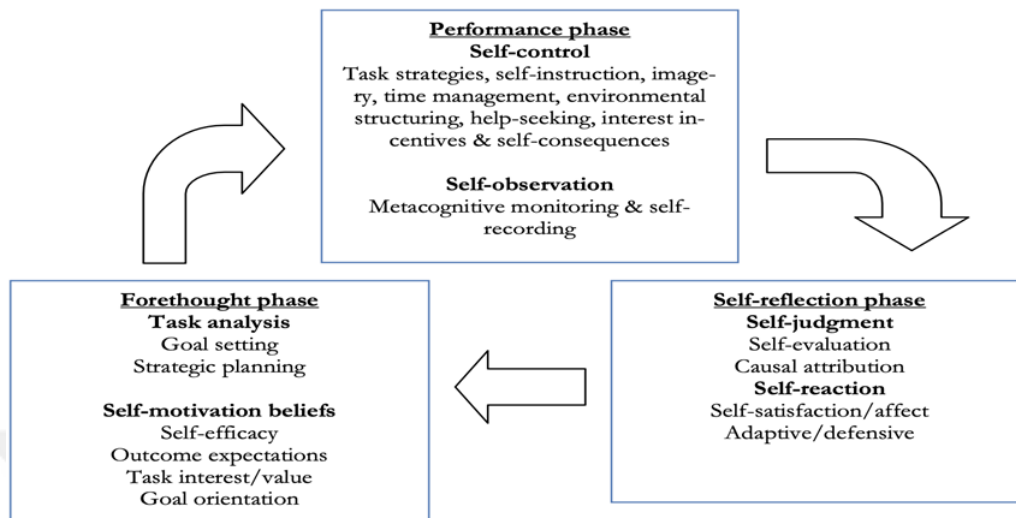


Figure 2. Zimmerman's cyclical model of self-regulation (Zimmerman & Moylan 2009).

2.3.2 Pintrich's model of self-regulation. Pintrich, as well, is a pivotal researcher in the field of self-regulation both for his contribution to the framework and empirical work on self-regulation (Schunk, 2005). Pintrich also highlighted the relationship between self-regulation and motivation and the differences between metacognition and self-regulation by putting more emphasis on metacognitive and motivational aspects compared to Zimmerman's cyclical model. Pintrich's model for self-regulation (2000) comprises four phases which are (a) forethought, planning, and activation; (b) monitoring; (c) control; and (d) reaction and reflection. These phases are based on four areas: regulation of cognition, regulation of motivation/affect, regulation of behaviour, and regulation of context. In the forethought, planning, and activation phase, the individual sets goals, activates his/her metacognition, tries to perceive the difficulty of a task, makes plans regarding time and the necessary amount of effort, and lastly, attempts to understand the task in a certain context. In the monitoring phase, individuals monitor their metacognition, motivation, affect, efforts, and any need he/she has to receive from others and behave in awareness. In addition, this phase also encompasses monitoring the changes in the task and context. The control phase, on the other hand, is related to choosing appropriate strategies and adapting them when necessary, regulating emotions and motivation through strategies, and controlling efforts. In the final phase, which is reaction and reflection, individuals make judgments and attributions cognitively. In addition, they seek help or

withdraw from the task, select the correct behaviour to complete the task and evaluate the task within a certain context. As Pintrich (2004) indicates, the phases may follow a general time-ordered sequence in performing a task; however, hierarchical and linear structures may demonstrate flexibility. In addition, the phases, especially phases 2 and 3, may become intertwined and are found hard to differentiate when the data are gathered through self-report questionnaires and think-aloud protocols in research.

Pintrich's conceptual framework has different categories of phases and areas of regulation. Table 1 displays Pintrich's conceptual framework with the phases and areas for self-regulated learning.

Table 1

Pintrich's Phases and Areas for Self-Regulated Learning

Areas for regulation				
Phases	Cognition	Motivation/affect	Behavior	Context
Forethought, planning, and activation	Target goal setting	Goal orientation adaptation	Time and effort planning	Perceptions of task
	Prior content knowledge activation	Efficacy judgements	Planning for self-observations of behavior	Perceptions of context
	Metacognitive knowledge activation	Perceptions of task difficulty		
		Task value activation		
		Interest activation		
Monitoring	Metacognitive awareness and monitoring of cognition	Awareness and monitoring of motivation and affect	Awareness and monitoring of effort, time use, need for help	Monitoring changing task and context conditions
			Self-observation of behavior	
Control	Selection and adaptation of cognitive strategies for learning, thinking	Selection and adaptation of strategies for managing motivation and affect	Increase/decrease effort	Change or negotiate task
			Persist/give up	Change or leave context
			Help-seeking behaviour	
Reaction and reflection	Cognitive judgments	Affective reactions	Choice behaviour	Evaluation of task
	Attributions	Attributions		Evaluation of context

As for the areas of self-regulated learning in Pintrich's model, the cognition column addresses various cognitive strategies which are employed by learners in the learning process or performance phase. In addition, metacognitive strategies are placed in this column, which learners use to control and regulate their cognition. The motivation and affect column encompasses motivational beliefs such as self-efficacy beliefs, as well as interest in the task. Strategies for controlling motivation and affect are also given in this column. The behaviour column, on the other hand, includes general effort that learners strive for the task. Seeking help and behaviour choice are classified under the behaviour column. Apart from other traditional models of self-regulated learning, Pintrich asserts that task environment, context in a more general term, is also monitored and controlled to some extent by learners and thus included as a fourth area of self-regulated learning. Learners are observed to control and adapt the context when necessary, although it is not an aspect of an individual. The attempts to regulate the context with the help of strategies are regarded as an important aspect of self-regulated learning by Pintrich (2000).

2.3.3 Winnie and Hadwin's model of self-regulation. Canadian researchers Winnie and Hadwin postulated another model of self-regulated learning, which is influenced by the Information Processing Theory (Winnie, 2001). Winnie and Hadwin's model of self-regulation is strongly related to metacognition, and in this model, learners are active and monitor their own learning processes (Panadero, 2017). They use metacognitive and cognitive strategies; they are goal-driven. Their model consists of four recursive and linked phases (Winnie, 2011). The phases of the model are (a) task definition, (b) goal setting and planning, (c) enacting study tactics and strategies, and (d) metacognitively adapting studying (Winnie & Hadwin, 1998). In the first phase, students try to gain an understanding of the task. In the goal-setting and planning phase, students set their goals and plan the strategies to achieve these goals. In the next phase, which is enacting study tactics and strategies, students decide on the tactics and strategies to use. Finally, students reach a decision and make long-term adjustments in their motivations, beliefs, and strategies in the metacognitively adapting studying phase (Winnie, 2011). Winnie and Hadwin's model of self-regulated learning has been extensively employed in

research conducted in computer supported learning settings (Panadero, Klug, & Järvelä, 2016.)

2.3.4 Boekaerts' model of self-regulation. Boekaerts' Dual Processing Self-Regulation Model defines self-regulation as a set of dynamic, interacting regulation processes (Boekaerts, 2011, p. 408). Boekaerts (2006) underscored two goal priorities which are sought after by students. The first goal priority related to gains in their resources such as improving cognitive strategy use; the second goal, on the other hand, addressed well-being and preserving a balanced state of well-being. Students struggle to stabilize these two goal priorities. Boekaerts assumed that students employed three sources of information in participating in a learning activity and creating a mental representation of a task: “ (1) current perceptions of the task and the physical, social, and instructional context within which it is embedded, (2) activated domain-specific knowledge and (meta)cognitive strategies related to the task; and (3) motivational beliefs, including domain-specific capacity, interest, and effort beliefs.” (Boekaerts, 2006, p.349). Emotions and emotion regulation strategies play a significant role in this model; positive and negative emotions contribute to or damage one's well-being. This perspective is associated with the affective/motivational self-regulation dimension. This dimension also encompasses self-efficacy beliefs, cognitive and behavioural readiness, determination in cases of obstacles, regulation of negative emotions, and stress. Taken altogether, self-regulation is assumed to play a key role in knowledge expansion, engagement in learning, and prevention of self-harm in the Dual Processing Self-Regulation Model (Boekaerts, 2011).

2.4. Self-Regulated Learning

Self-regulated learning refers to the concept of self-regulation in educational settings. Zimmerman and Schunk (2011) describe self-regulated learning as a dynamic process in which learners are focused on achieving their personal goals by activating and sustaining their cognitions, behaviours, and affects. Singer and Bashir (1999) suggest that self-regulated learning is constituted by three processes which are reciprocally influenced by each other: personal processes, learning environment, and individual behaviour. Academic self-efficacy, understanding task demands, and performance outcomes are

examples of these processes, respectively. Self-regulated learners are actively involved in these processes by use of strategies, goal setting, time management, self-evaluation and reflection, and planning (Nugent et al., 2019). Learners who are good at these are good learners. These characteristics are also descriptions of self-regulated learners. Self-regulated learning is different from mental abilities, but it is the use of mental abilities to achieve an academic goal through self-directive processes and self-beliefs (Zimmerman, 2008). Individuals try to reach goals through self-regulated learning thanks to their cognitive, metacognitive, behavioural, and emotional strategies. While using these strategies in this process, they need to plan autonomously and monitor their understanding and improvement (Zimmerman, 1989). They are required to be aware of the whole process and self-evaluate their learning process (Pintrich, 2000). From that perspective, self-regulated learning emphasises the learner's autonomy and control of his or her learning and behaviour.

According to Pintrich (2000), there are common assumptions for self-regulated learning. The first assumption of many models of self-regulation, such as Zimmerman's model, is the active and constructive feature of the learners. They construct meanings, goals, and strategies via internal and external information. Learners are not considered passive recipients of information. The second assumption refers to the control assumption. It is assumed in the models that learners can monitor, control, and regulate their cognition, motivation, behaviour, and environment to a certain degree. This assumption does not refer to constant and full control but rather changing degrees of control according to factors such as developmental or individual differences. The third assumption relates to goals and criteria. Learners are assumed to set standards, goals, and criteria for which they make an effort to reach. In the process, they monitor their progress and make modifications in their cognition, motivation, and behaviour to reach the set goals and criteria. The final assumption is the mediating role of self-regulatory activities. It is indicated that learners' achievements cannot only be explained by their characteristics or classroom environment. Instead, self-regulatory activities mediate the relationships between the individual, context, and, lastly, achievement. Thus, self-regulatory activities are directly related to achievement.

Regarding the role of self-regulated learning in achievement, self-regulated learning is regarded as a key to academic success (Hmelo-Silver, Duncan, & Chinn, 2007). Students who are better self-regulated are believed to achieve higher academic success (Blume, Irmer, Dirk, & Schmiedek; 2022). On the contrary, the academic success of students with lower self-regulation has also proved to be low in various studies (Boekaerts & Corno, 2005; Duckworth & Gross, 2014). According to research, there are some reasons behind it. Firstly, self-regulated learners take responsibility for their learning and take the necessary actions for their learning. These actions include the use of various strategies and establishing a relationship between the use of these strategies and their success. They are conscious of learning outputs, whether they could achieve their goals or not. They are eager to look for new strategies that will be suitable for their goals if their previous strategies do not work. They evaluate their learning process over and over and try to overcome the obstacles they experience (Banarjee & Kumar, 2014). Finally, self-regulated learners set realistic goals, use their time efficiently, select an effective context, make plans, and self-evaluate their learning process (Üredi & Üredi, 2007). Bertrams and Dickhauser (2012) also suggest that they are intrinsically more motivated, and they have confidence in their performance. These characteristics of learners pave the way for higher academic success (Baldan-Babayiğit, 2017).

Zimmerman (2001) asserts that learners who are advantageous in terms of their mental capacities, socio-economic status, and educational quality may not reach their academic goals. This failure may result from their perceptions of themselves and the way they use self-regulatory processes. According to Zimmerman, improvement in metacognitive and motivational strategies may prevent this problem in learning together with peer assessment and self-assessment. Zimmerman puts forward some common criteria which promote self-regulated learning and may result in higher achievement: deliberate use of strategies to improve academic achievement, self-monitoring the effectiveness of the strategies and making changes in the use of strategies according to the given feedback, considering self-efficacy beliefs, which is the motivational dimension (Zimmerman, 2001)

EU Council (2002) also emphasizes the role of self-regulated learning in life-long learning. Schunk (2005) also postulates that self-regulated learning is of high value in life-long learning beyond formal education. It is also thought to have effects on well-being, social achievement, and online education (Kizilcec et al., 2017). Self-regulated learners are suggested to be better at their achievements both academically and in life (Lau, 2013); they are superior in their motivation. Moreover, self-regulated learners are advantageous in their career due to their use of self-regulated learning strategies (Baldan-Babayigit & Güven, 2020). As self-regulated learning is considered a life-long skill, self-regulated learning is a must-skill for individuals both for academic achievements and career paths (Luftenegger et al., 2016).

2.5. Self-Regulated Learning Strategies

Self-regulated learning is regarded as a key competence which is indispensable for life-long learning (Dent & Koenka, 2016). Gaining self-regulated strategies is of high importance, especially for university students, for organization of their studies, better academic performance, and better management of difficulties (Theobald, 2021). Thus, self-regulated learning strategies have become an issue of concern in many studies since the 1980s. Conducting one of the most fundamental studies regarding self-regulated learning strategies, Zimmerman and Martinez Pons (1986) examined the self-reports of high school students in order to identify the types of strategies employed by them. After the first study, the researchers validated the self-regulated learning strategies in a subsequent study which was conducted with the teachers' responses in addition to self-reports of the students. According to the results of their studies, the researchers identified 14 strategies for self-regulated learning. Table 2 presents the categories and definitions of these strategies.

Table 2

Zimmerman and Martinez-Pons' Categories and Definitions of Self-Regulated Strategies

Categories/Strategies	Definitions
1. Self-evaluating	Statements indicating student-initiated evaluations of the quality or progress of their work; e.g., "I check over my work to make sure I did it right."
2. Organizing and transforming	Statements indicating student-initiated overt or covert rearrangement of instructional materials to improve learning; e.g., "I make an outline before I write my paper."
3. Goal setting and planning	Statements indicating students' setting of educational goals or subgoals and planning for sequencing, timing, and completing activities related to those goals; e.g., "First, I start studying two weeks before exams, and I pace myself."
4. Seeking information	Statements indicating student-initiated efforts to secure further task information from non-social sources when undertaking an assignment; e.g., "Before beginning to write the paper, I go to the library to get as much information as possible concerning the topic."
5. Keeping records and monitoring	Statements indicating student-initiated efforts to record events or results; e.g., "I took notes of the class discussions"; "I kept a list of the words I got wrong."
6. Environmental structuring	Statements indicating student-initiated efforts to select or arrange the physical setting to make learning easier; e.g., "I isolate myself from anything that distracts me"; "I turned off the radio so I can concentrate on what I am doing."
7. Self-consequating	Statements indicating student arrangement or imagination of rewards or punishment for success or failure; e.g., "If I do well on a test, I treat myself to a movie."
8. Rehearsing and memorizing	Statements indicating student-initiated efforts to memorize material by overt or covert practice; e.g., "In preparing for a math test, I keep writing the formula down until I remember it."
9-11. Seeking social assistance	Statements indicating student-initiated efforts to solicit help from peers (9), teachers (10), and adults (11); e.g., "If I have problems with math assignments, I ask a friend to help."
12-14. Reviewing records	Statements indicating student-initiated efforts to reread notes (12), tests (13), or textbooks (14) to prepare for class or further testing; e.g., "When preparing for a test, I review my notes."
15. Other	Statements indicating learning behavior that is initiated by other persons such as teachers or parents, and all unclear verbal responses; e.g., "I just do what the teacher says."

Zimmerman states that these strategies can be categorised according to the triadic model of self-regulation. The main aim of strategies is to develop self-regulation of students in terms of their personal functioning, academic and behavioural performance, and learning environment (Zimmerman, 1989). For instance, goal setting and planning

relate to personal functioning; self-evaluation is considered in behavioural performance; environmental structuring is to enhance the learning environment.

Apart from Zimmerman, Weinstein and Mayer (1986) also classified strategies into five categories: rehearsal strategies, elaboration strategies, organizational strategies, comprehension monitoring strategies, and affective strategies. Rehearsal strategies include actions such as copying, note-taking, and underlining. Elaboration strategies, on the other hand, help learners connect prior knowledge and present knowledge. Paraphrasing, question answering, and summarising are considered in elaboration strategies. Organisational strategies are for building internal connections (Mayer, 1988). Outlining and organising the material hierarchically are some tasks of this category. In comprehension monitoring strategies, learners make self-checks for their understanding. In order to make these self-checks, learners need to set goals for their learning and evaluate to what extent they can accomplish these goals. Comprehension questions are the task of these strategies. Finally, affective strategies refer to decreasing anxiety and being relaxed. To do this, learners should try to limit distractions such as low grades or failure anxiety by making efforts to stop these ideas and studying in a peaceful environment (Weinstein & Mayer, 1986).

The aforementioned learning strategies are categorised into three types: metacognitive strategies, cognitive strategies, and source management strategies. Metacognitive strategies refer to planning, monitoring, and evaluating the cognitions, cognitive strategies refer to connecting knowledge with prior knowledge, and source management strategies refer to efforts, time management, environmental structuring, and seeking help (Dresel & Haugwitz, 2005). According to Weinstein et al. (2005), intrinsically motivated learners tend to use in-depth learning strategies such as elaboration strategies.

With the increase in the ways of reaching information, Dignath and Büttner (2008) suggested a new classification of self-regulated learning strategies considering online sources and peer communication. Table 3 presents Dignath and Büttner's classification of self-regulated strategies.

Table 3

Dignath and Büttner's (2008) Classification of Self-Regulated Strategies

Main strategies	Subcategories
Cognitive strategies	Rehearsal
	Elaboration
	Organization
Metacognitive strategies	Planning
	Monitoring
	Evaluation
Motivation strategies	Self-efficacy
	Task value
	Goal orientation
Management strategies	Effort
	Environment
	Peers

According to the classification above, cognitive strategies assist learners in receiving, encoding, and retrieving information. Rehearsal, elaboration, and organization are the subcategories of cognitive strategies. Metacognitive strategies, which are in a similar vein to Dresel and Haugwitz (2005), relate to planning, monitoring comprehension, and making adaptations accordingly. Motivation strategies refer to beliefs such as self-efficacy or belief in the value of a given task. Finally, management strategies apply to learning conditions and assist learners in coping with obstacles and difficulties during their learning process.

2.6. Teaching Self-Regulated Learning

Given the importance of self-regulated learning skills in the life of students, the concerns regarding how to teach self-regulated learning have been raised. Various researchers have argued about the effective ways of teaching self-regulated learning and postulated a number of guidelines.

Self-discovery in the attainment of self-regulated learning skills is considered a long and tiring process, although some learners may develop these skills on their own (Zimmerman, 2000). Most learners need to be trained on these skills, and the ways of teaching these skills have become a hot issue of debate (Wolters & Brady, 2021). Some of the concerns regarding teaching self-regulated learning skills are the self-efficacy beliefs of instructors, the belief that self-regulated learning is not taught but acquired automatically, and the lack of strategy training (Karlen, Hertel, & Hirt, 2020). Cengiz-İstanbullu and Sakız (2022) suggest that learners acquire these skills irrespective of their levels if they are provided with effective instruction.

As self-regulated learning skills offer many advantages for students, it is suggested that self-regulation skills can be taught in educational contexts (Zimmerman & Schunk, 2008). In a number of studies, it has been suggested that teaching self-regulation skills paves the way for building better learning strategies, developing self-efficacy of learners and self-reflective behaviour. These activities provide proactive thoughts to make adaptations in the strategies and behaviours (Boekaerts & Corno, 2005; Machado & Boruchovitch, 2015; Panadero, Klug, Jarvela, 2016).

The question regarding how to teach self-regulated learning strategies to learners in learning contexts has been addressed by many researchers. These researchers have postulated guidelines which will assist teachers and policymakers in education. To start with, Üredi and Üredi (2007) support the idea that the learning environment can be organised in a way that will contribute to self-regulated learning skills. This learning environment should be enriched by presenting the information via differentiated forms, allowing students to interpret the information and guide their own learning processes. In addition, Üredi and Üredi (2007) suggest that providing learners with control over their learning, especially with complex and realistic tasks, is of high importance in learning self-regulated learning skills in the educational environment.

Cassidy (2011) also offers guidelines on how to teach self-regulated learning skills in higher education. With the increasing number of students in higher education, Cassidy states that the population of students has become more diverse than ever. From that perspective, self-regulated learning may be a tool to address the individual differences of

this diverse population. After reviewing several reports, Cassidy (2011) has come up with important guidelines in school education that also apply to higher education. Below are the guidelines:

- Not all students are equally predisposed to self-regulate, but aspects of self-regulation improve as a result of effective teaching and learning practices;
- Self-regulated learning requires the development and deployment of learning strategies, positive self-efficacy, and pursuance of meaningful goals;
- Introducing curriculum strategies that focus on the development and enhancement of cognitive skills, metacognitive skills, and affective skills to improve self-regulated learning;
- Student self-monitoring and self-evaluation are important factors in the development of self-regulated learning;
- Self-regulated learning improves with practice;
- Self-regulated learning can be improved through guidance, modeling, and effective strategies;
- Self-regulated learning requires an ‘enabling environment’, including the physical setting, material resources and social interaction, and positive support from teachers and peers;
- There is a particular emphasis on information and communication technologies as a tool to support self-regulated learning;
- Self-regulated learning involves a new role for teachers which focuses on process-orientated teaching, with students actively involved in the learning process, i.e. ‘learn how to learn’;
- Any interventions to promote self-regulated learning are likely to be long-term;
- Implementation requires a ‘whole-school’ approach involving the support of both senior management and teachers. (cassidy, 2011, p. 996)

Regarding strategy teaching in self-regulated learning, Butler (2002) points out that in addition to strategy teaching, it is of high importance for learners to select and adapt the strategies appropriate for certain circumstances. Thus, learners need to be trained on this perspective, as well.

In relation to the roles of teachers and students, it has been put forward that self-regulated learning skills are expected to develop in learner-centred approaches as these strategies are in use in these approaches (Eshel & Kohavi, 2003). Learners have opportunities to make choices and take responsibility and actions for their learning processes. In addition, teachers should change their mindsets of instruction, teaching and learning, be willing to update their ways of teaching, evaluate and reflect on their teaching, and collaborate with their colleagues (Perry, Hutchinson, & Thauberger, 2008).

In teaching self-regulated learning skills, various methods can be applied (Adıgüzel, Aşık, Bulut, Kaya, & Özel, 2023). Firstly, learners may be provided with explicit instruction in relation to self-regulated learning skills and how to use these skills effectively; this method is called the explicit method. In the implicit method, on the other hand, learners are not given direct instruction but are often given models for the target skills (Kistner, Rakoczy, Otto, Klieme, & Büttner, 2015). In their study, Adıgüzel et al. (2023) trained teachers to model self-regulated learning strategies, and the effects of the training were positive in terms of teachers' role-modelling strategies and teachers' role in the development of learners' self-regulated learning skills.

Studies regarding the attainment and development of self-regulated learning skills have investigated instructional issues, teacher-student roles, and testing. From these studies, Baldan-Babayiğit and Güven (2020) created a list of principles which contribute to the self-regulated learning skills of learners. Table 4 presents these principles:

Table 4

Instructional Principles and Practices Suggested by Baldan-Babayiğit and Güven

Elements regarding the planning and conducting the instruction	To inform students about the instructional objectives To relate real life and the needs/interests of the students to learning tasks To present students multi-dimensional, authentic and complicated learning content and tasks that allow flexibility To present knowledge in diverse ways Strategy instruction To be a model for students in strategy use To conduct problem-based learning activities To teach problem solving skills To conduct collaborative learning activities To allocate time for peer instruction
Elements regarding classroom management and learning atmosphere	Having positive, supportive and respectful attitudes toward students To increase student control in instructional processes To enhance social interaction To encourage students to help and seek help
Elements regarding testing and evaluation	To use formative assessment tools To provide students with opportunities for self and peer evaluation To accept students' mistakes as a part of the learning process To value and reward students' success and progress To provide effective feedback regarding students' performance

A growing body of research has underscored the positive outcomes of self-regulated learning training at various levels. Regarding pre-school students, Gümrükçü-Bilgici (2021) conducted a study with pre-school students in which the researcher developed and applied a self-regulation education problem in the control group. The program was shown to positively impact self-regulation skills of the pre-school students.

As for primary schools, a meta-analysis review by Olid-Luque, Ayllón-Salas, Arco-Tirado, and Fernández-Martín (2025) investigated the effectiveness of self-regulated learning training programs on primary students' self-regulated learning and academic achievement. The results of the meta-analysis demonstrated the positive influence of the training programs.

A recent study by Dermitzaki (2025) focused on promoting self-regulation skills of elementary school students in reading comprehension. The researcher employed a self-regulation skills training program with an emphasis on cognitive and metacognitive strategies. The findings revealed that the experimental group surpassed the control group

in self-regulation strategy use, which fostered the reading comprehension of elementary school students.

Self-regulated learning training programs have also been implemented at high schools. To exemplify, Naderi, Doust, and Talebi (in press) examined the effectiveness of self-regulation strategy training on procrastination, academic achievement, and happiness of 1st-grade high school students. Their findings suggested that self-regulation strategy training reduced the tendency for procrastination. In addition, the training fostered the levels of happiness and academic achievement.

Taken together, teaching self-regulated learning skills has proved to be beneficial in building cognitive and metacognitive strategies, academic achievement, and the well-being of students at various levels. Furthermore, the tendency to procrastinate decreased thanks to instruction. Within the scope of the current study, the ways of implementation and potential effects of self-regulated learning in higher education are to be presented in the following section.

2.6.1 Self-regulated learning in higher education. Self-regulated learning is also considered vital for students who are in higher education (Broadbent, 2017). Students at the tertiary level with higher self-regulation skills have higher academic performances and can overcome difficulties more easily, especially in adaptation to university, and the rate of school drop-out is lower with high self-regulated students (Lowe & Cook, 2003; Park, Edmondson, & Lee, 2012; Schneider & Preckel, 2017). However, many university students struggle to self-regulate their learning process, and there is a need for self-regulation training programs for university students (Theobald, 2021).

According to Ganda and Boruchovitch (2018), self-regulated learning can serve as a cultural capital and this capital may help learners overcome obstacles regarding opportunity and achievement. Thus, interventions which contribute to learners' self-regulated learning skills are fundamental in supporting students who are at various risks such as early dropouts and academic failure (Andrzejewski, Davis, Bruening, & Poirer, 2016).

Higher education requires learners to exert more flexibility and freedom in their learning processes. Learners are expected to think critically and work strategically in

addition to self-evaluation, self-reflection, and self-questioning (Eğitim, 2021; Su et al., 2023; Zheng & Yining, 2020). Moreover, it is evident that students with high levels of self-regulated learning skills tend to achieve more successful outcomes in higher education (Bai & Guo, 2021). Keeping the requirements of higher education and its contribution to the learning process in mind, self-regulated learning in higher education is an important area to be dealt with. Managing time and resources, critical thinking, goal setting, developing strategies to reach goals, and problem-solving are essential skills in academic and professional life.

Another important function of self-regulated learning in higher education is its key role regarding individual differences and diversity in the learner population (Cassidy, 2011). Despite this diversity, ‘normal practice’ continues to be applied in higher education institutions; self-regulated learning may serve as a solution to address this diversity and may be a helpful mechanism for individual differences with its emphasis on autonomy (Cassidy, 2011).

Dignath-van Ewijk, Fabriz, and Büttner (2015) also emphasized the degree of autonomy provided by self-regulated learning in higher education. This degree of autonomy might not be coped effectively, and the transition from secondary education to higher education might be demanding for some students (Dignath-van Ewijk et al., 2015; Su et al., 2023). Self-regulation was considered a key competence for higher education students who had difficulty in autonomy and had to regulate their own studies to a great extent.

The need for self-regulated learning skills in higher education has been underscored in self-regulated learning research. To exemplify, Oportus-Torres et al. (2024) performed an empirical investigation by administering a 10-week intervention to EFL students. The intervention was integrated into the program during the time of emergency remote teaching due to sanitary reasons. The findings of the study revealed that the intervention fostered the self-regulated learning skills of the participants. In addition, the participants were observed to have better attendance and class participation and better control of their learning process. The research emphasised the importance of

self-regulated learning skills and the need for training, which would facilitate the use of these skills, the level of engagement, and autonomy in language learning.

Turning to the relationship between the use of self-regulated learning strategies and academic success in higher education, numerous recent studies have been conducted in the field. To start with, Smadi, Al Masri, Maharmah, and Abu-snoubar (2024) investigated whether there was a correlation between the degree of using strategies and academic success. This correlation study, which included 120 students from the English and Literature department at a university, pointed out that the students with better use of self-regulated strategies demonstrated higher academic achievement. Taken together, the study indicated the significance of the use of self-regulated learning strategies to improve academic achievement and highlighted that it was essential to encourage students to develop these skills.

Similarly, a correlation study by Xu, Duan, Padua, and Li (2022) examined the effects of self-regulated learning techniques on the success of college students in distance education. The study found out that self-regulated learning components such as self-evaluation, metacognitive self-regulation, and effort regulation predicted academic success. Moreover, self-evaluation and effort regulation aid students enhance their GPAs in distance education. Overall, this study called attention to the role of self-regulated learning strategies in student achievement in higher education.

In the Turkish higher education context, there have been several studies conducted focusing on such issues as the self-regulated learning skills levels of the students, the outcomes of these skills and the role of factors such as motivation and cognitive flexibility. To start with, Baldan-Babayigit (2017) conducted a study with undergraduate students and highlighted certain factors which would foster self-regulated learning skills in higher education. With high levels of self-regulated learning skills, the students pointed out that factors such as collaborative learning activities, strategy instruction, guidance by the instructors, and administration of alternative testing methods would enhance the teaching-learning environment and contribute to their self-regulated learning skills. Tosuncuoğlu's study (2019), on the other hand, investigated the self-regulated learning components in higher education. The results of the study indicated a moderate level of self-regulated

learning skills of the students and put forward that self-regulation and the use of cognitive skills are moderately correlated. Dişlen-Dağgöl (2023) focused on online self-regulated learning and cognitive flexibility and examined both the levels of these components and the correlation between them. Language learners were found to possess high levels of self-regulated learning skills and cognitive flexibility; self-regulated learning and cognitive flexibility were slightly correlated. In a similar vein, Yemenici and Karakaş-Yıldırım (2023) conducted their studies in an online environment and searched the correlation between achievement and the level of self-regulated learning skills. The students with higher levels of self-regulated learning skills were found to be more advantageous and successful in online learning environments.

The studies above brought to light the positive impacts of self-regulated learning skills on engagement, autonomy, class attendance, and achievement in general. However, there is still a need to foster these skills in higher education because although many students felt the urge to own this critical skill, self-regulated learning, they did not receive sufficient support from the instructors and institutions (Karlen, Hirt, Liska, & Stebner, 2021). It is believed that these findings should urge educators and policymakers to take the necessary steps for the implementation of self-regulated learning practices in higher education (Smadi et al., 2024).

2.6.2 Self-regulated learning interventions. Interventions with the aim of developing self-regulated learning skills have evolved alongside the enhancement of self-regulated learning models (Boekaerts & Corno, 2005). Although many variations of interventions were applied, classroom interventions have been analyzed since the 1980s. The classroom interventions demonstrate high variation due to factors such as the application of the interventions by individual teachers, different curricula, values, and beliefs (Randi & Corno, 1997). Nevertheless, Boekaerts and Corno (2005) suggest a typology of interventions which is divided into three categories which extend over time.

The earliest intervention category, which is called cognitive-behaviour modification interventions, addresses learners with special needs, especially learners with emotional and behavioural disabilities. To exemplify, Stress Inoculation Therapy is aimed at helping students direct and maintain attention and cope with emotional arousal and

difficulty. In addition, in *Manipulating Students' Motivation in Tasks*, another type of cognitive-behaviour modification intervention, teachers worked on the various components of motivation, such as efficacy and attributions in phases of self-regulated learning.

The second category, direct instruction in learning and metacognitive skills and strategies, emphasizes the importance of learning-to-learn and study skills of learners. Both cognitive and metacognitive aspects of self-regulated learning are focused in this category. In the earlier versions of the instruction programs, general study and learning skills programs were developed for learners who needed academic support. This decontextualised strategy instruction approach has been transformed into the strategy use in various contexts. In addition, the transfer of the strategies to new contexts and metacognitive reflections have gained importance. Self-regulated learning skills and strategies have been integrated into textbooks for different subject matters, and they have become regular sections of some textbook series. The concerns regarding the focus on individual students rather than a sociocultural perspective have led to the third category.

The third category, which is second-generation classroom interventions based on principles of socioculturalism, gained momentum after the related research suggested self-regulated learning contributed to expertise in subject areas. In line with this, self-regulated learning interventions became more subject-specific, for example, interventions for reading comprehension and problem-solving in mathematics were developed (Alexander, 1997). As the subject-specific interventions were now the focus, the researchers started working with classroom teachers due to their pedagogical knowledge. The classroom context complied with the premises of socioculturalism, and this perspective led to learner-to-learner collaboration. The implementations of apprenticeships and collaborative learning were promoted in the third category.

Apart from these three broad categories for interventions, Boekaerts and Corno (2005) offered some highlights for self-regulated learning interventions. It was suggested that supporting these interventions in larger contexts, for example, in a school context rather than the individual implementation of a teacher, would result in more comprehensive and cumulative effects. Thus, it was indicated that it was of high

importance to establish and evaluate school-wide interventions. Another important highlight was relating to the teachers as partners in research. Boekaerts and Corno emphasised that considering their expertise in classroom contexts, teachers could work with researchers in designing tasks and interaction with learners, which would lead to independent and academically effective self-regulated learning interventions. On the other hand, working with the researchers was stated to contribute to the development of teachers regarding self-regulated learning and paved the way for a more insightful approach to self-regulated learning in a classroom context.

In recent research, Cazan (2022) discussed some issues of concern regarding effective self-regulated learning interventions. The first issue is designing content-independent or domain-specific self-regulated learning interventions. Domain-specific interventions were asserted to vary according to the area in which learners were involved, from psychology to foreign language teaching, as in the current study. As mentioned by Boekaerts and Corno, domain-specific interventions have been highlighted more in recent years in terms of their effectiveness due to their contextualised nature, especially in higher education. Another issue regarding the interventions raised by the researchers is implicit versus explicit instruction in self-regulated learning interventions. In implicit interventions, students are involved in self-regulated learning tasks, or teachers model self-regulated learning behaviours. In explicit interventions, on the other hand, students are taught the self-regulated learning strategies explicitly. When compared in terms of effectiveness, implicit instruction was stated to provide more opportunities for students to integrate self-regulated learning strategies into their practices and routines (Cazan, 2022). The components of self-regulated learning, which are cognitive, metacognitive, behavioural, and motivational, also differentiate the self-regulated learning interventions. In some studies, these components were combined in the interventions (Ganda & Boruchovitch, 2018), and some others concentrated on a single component, such as the metacognitive component (Dighnath & Büttner, 2015). In addition, the length of interventions was among the issues to be considered. Rather than one-shot pieces of training, interventions with more sessions proved to be more effective in developing self-regulated learning strategies (Chen, 2022). Lastly, connected with domain-specific self-regulated learning interventions, the integration of these interventions into the learning

process of learners has been discussed by some researchers. Li and Mark (2022) remarked that integrated self-regulated learning interventions produced more efficient outcomes compared to delivering these interventions as independent modules because they promoted students' participation in regular classroom settings. In the present study, the self-regulated learning integrated L2 instruction is domain-specific in foreign language learning and incorporated into the English curriculum applied by the school of foreign languages.

2.7 Measuring Self-Regulated Learning

Self-regulated learning is a type of learning which is *metacognitively guided, partly intrinsically motivated, and strategic* (Siqueira et al., 2020, p.1). With these underlying mechanisms, various facets of self-regulated learning are not observable; therefore, measurement of self-regulated learning is a challenge (Winnie & Perry, 2000).

In line with the developmental phases of self-regulation and self-regulated learning since the 1980s, the perspectives regarding the measurement of self-regulation have changed (Boekaerts & Corno, 2005). In the 1980s, most researchers addressed cognitive and metacognitive aspects of self-regulated learning of individual learners and measured the developmental qualities. The use of cognitive strategies in particular contexts, timing, and ways and students' self-awareness were among the measured developmental qualities. Questionnaires, structured interviews, and teacher ratings were some of the measurement tools used in this period. In the 1990s, with more emphasis on domain-specific self-regulated learning, situation-specific self-reports began to gain wider recognition. In addition, components in relation to motivation and affect were placed in the measurement of self-regulated learning. Motivated Strategies for Learning Questionnaire (Pintrich, Smith, Garcia, & McKeachie, 1991) is one of the most renowned self-regulated learning measurement tools which have been developed to measure the presence, absence, and frequency of self-regulated learning aspects. Boekaerts and Corno (2005) mentioned the change in perspectives in relation to self-regulated learning measurement in the 2000s. Firstly, researchers and educational psychologists started to conceptualize self-regulated learning as a dynamic and developing process rather than a steady concept. Accordingly, researchers were suggested to examine beyond assessing the current use of self-regulated

learning strategies. Another important shift in the 2000s was in relation to the social constructivist perspective. Social interaction with teachers and peers, which was called co-regulation, was stated to contribute to the self-regulated learning process, and thus, interactive learning environments should be included in the measurement of self-regulated learning in order to grasp a better understanding of social interactions and self-regulated learning (Patrick, Anderman, Ryan, Edelin, & Midgley, 2001).

As for the instruments to measure self-regulated learning, Boekaerts and Corno (2005) put forward a compilation of various instruments which also encompass the instruments employed in the current study. Self-reported questionnaires, observations of overt behaviour, think-aloud protocols, and diaries are the most frequently employed instruments. In addition, traces of mental events and processes, situational manipulations, and recording student motivation strategies are other instruments for assessing self-regulated learning strategies.

Winnie and Perry (2000) also postulated two main ways in the measurement of self-regulated learning: measuring self-regulated learning as an aptitude and as an event. In aptitude measures, learners' attributes and common behaviours are aggregated and described (Zhidkikh, Saarela, & Kärkkäinen, 2023). Questionnaires, structured interviews, and teacher ratings are common types of aptitude protocols (Zimmerman & Martinez-Pons, 1988). Although aptitude measures are easy to apply and provide information about common behaviour (Roth, Ogrin, & Schmitz, 2016; Zhidkikh et al., 2023), they might be disadvantageous in some respects, such as accuracy (Jovanovic et al., 2017). Regarding accuracy, participants may not answer the questions accurately, deliberately due to low motivation, or not deliberately due to social desirability (Jex, 2002; Zimmerman, 2011). Thus, it is of high importance to employ these measures with awareness of threads and triangulate the data through various sources to reach a full understanding of different aspects of self-regulated learning (Winnie & Perry, 2000). Event measures, on the other hand, focus on student behaviour and try to measure the transition and behaviour change. Think-aloud protocols, observations, diaries, and learning analytics tools such as trace logs are used as event measures (Jovanovic, Gašević, Dawson, Pardo, & Mirriahi, 2017).

In the research of self-regulated learning, certain self-report instruments have been administered more frequently as a measurement tool. In their study, Roth, Ogrin, and Schmitz (2016) reviewed the self-report instruments employed in higher education to measure self-regulated learning. Their review of the 115 studies revealed the most frequently used self-report instruments. Below is the list demonstrating five instruments which are most commonly employed in the reviewed studies (Roth et al., 2016, p. 235).

1. Motivated Strategies for Learning Questionnaire (MSLQ) (Pintrich et al., 1991)
2. Learning and Study Strategies Inventory (LASSI) (Weinstein, Palmer, & Schulte, 1987; Weinstein & Palmer, 2002)
3. Inventory of Learning Styles (ILS) (Vermunt, 1998)
4. Academic Self-Regulated Learning Scale (A-SRL-S) (Magno, 2009)
5. Online Self-Regulated Learning Questionnaire (OSLQ) (Bernard, Paton, & Lan, 2008)

The review also unravelled that the instruments used in the studies were mostly employed in previous studies and established instruments with very few studies administering think-aloud protocols, diaries, and interviews (Roth et al., 2016).

In the Turkish context, most researchers utilized the translated and adapted versions of the established instruments (Aydın, Özer-Keskin, & Yel, 2014; Fındık-Tanrıbuyurdu & Güler-Yıldız, 2014; Yavuzalp & Özdemir, 2020). To exemplify, Kilis and Yıldırım (2018) conducted a study to translate and validate the OSLQ (Bernard, Paton, & Lan, 2008). With the acceptable validity and reliability results, the Turkish version of OSLQ was suggested to be employed in future studies. In addition, the Self-Directed Online Learning Scale (SDOLS) (Su, 2016) was translated into Turkish by Karabatak, Alanoğlu, Yang, and Su (2025). The study demonstrated that the Turkish version of the instrument proved to be psychometrically adequate, which supported the use of the instrument in the research. In addition to the translations, some researchers have developed instruments which aim to measure self-regulated learning. To start with, Turan (2009) designed the Self-Regulated Learning Skills Questionnaire focusing on four sub-skills of self-regulated learning. The questionnaire is based on Pintrich's and Zimmerman's frameworks and has been commonly employed in higher education

(Baldan-Babayigit, 2017; İnan-Karagül, 2013). Furthermore, Arslan and Gelişli (2015) constructed the Perceived Self-Regulation Scale and tested its reliability and validity in order to offer the researchers a self-regulation scale in Turkish. This scale was also demonstrated to possess high internal consistency, which would promote the use of it in future studies.

2.8 Self-Regulated Learning in Language Learning

Several approaches have been offered, such as technology-enhanced language learning, task-based learning, and self-regulated learning in order to support language learning process (Su, Noordin, & Jeyaraj, 2023). Self-regulated learning has emerged as an approach, especially over the past few decades, and addressed issues such as goal setting, self-monitoring, adjusting the learning process to reach the goals, and agency in FLL (Bransen, Govaerts, Sluijsmans, & Driessen, 2020; Huang, Li, Poitras, & Lajoie, 2021).

Dörnyei (2005) is considered the researcher who introduced self-regulation to the field of Second Language Acquisition (SLA) (Teng & Zhang, 2022). Dörnyei (2005) suggests that there is a change in language learning from what is learned to how it is learned. He postulated the replacement of the concept of learning strategy with self-regulation; however, self-regulation has been placed within the learning strategies paradigms or suggested to complement students' strategic learning (Ranalli, 2012; Weinstein et al., 2011). According to Dörnyei (2005), there are several self-regulation strategies which are in the metacognition literature, but these strategies need to be replaced under self-regulated learning strategies. The first one is commitment control strategies for determination to reach a goal. Metacognitive control strategies are used for monitoring and controlling concentration to prevent procrastination. Satiation control strategies refer to the interest and attraction towards a task. Emotion control strategies, on the other hand, are helpful for regulating disruptive emotional states. Environmental control strategies, as a last strategy, refer to dealing with distractions in the environment, such as video games (Dörnyei, 2005).

The effects of self-regulated learning on FLL have been suggested to vary (Su et al., 2023). Firstly, self-regulation contributes to the motivation of language learners

because they can monitor and control their learning processes and make modifications when necessary. Additionally, self-regulated learning paves the way for learner involvement. When learners are more involved in their learning process and take active roles, their learning outcomes are improved. Moreover, self-regulated learning leads to better use of metacognitive strategies, which also contributes to the improvement in language skills. Lastly, as language learning is not limited to in-class instruction, self-regulated learning skills help learners become autonomous learners who can take responsibility for their learning and are self-sufficient and independent also outside of the classroom (Su et al., 2023).

Teng and Zhang (2020) also elaborate on the self-regulated learning strategies (cognitive, metacognitive, and motivational) and their role in foreign language learning. Thanks to cognitive strategies, learners first construct knowledge and apply it to complete a task. Such cognitive strategies as revising and organization contribute to higher academic achievement. Metacognitive strategies, on the other hand, increase learners' self-regulated learning capacity and learning outcomes (Sato & Loewen, 2018). Motivational self-regulated learning strategies are more related to persistence and learners' willingness to maintain their motivation to accomplish a task.

Self-regulated learning is regarded as a framework for in-class language teaching/learning (Teng & Zhang, 2022). Thus, there is a plethora of research which aims to investigate self-regulated language learning, the use of self-regulated strategies in language learning, and the effects of the use of self-regulated learning skills on academic achievement (Shen, Wang, Yang, & Yu, 2023; Y. Zhang, Li, Chieh, & Han, 2022). In order to equip learners with self-regulated learning skills, various interventions have been designed. Thanks to these interventions, learners can acquire a lifelong skill, which is self-regulation, besides developing their language skills (Kang, 2022).

Regarding self-regulated learning interventions in EFL, Su et al. (2023) reviewed 20 studies which investigated the effectiveness of self-regulated interventions on EFL at the tertiary level. The review touched upon the specific components of self-regulated learning, the EFL outcomes, the most effective types of self-regulated learning interventions, and important implications for self-regulated learning interventions. As for

the components, cognitive, metacognitive, and affective strategies were included in the interventions, metacognitive strategies being the most prevalent strategies. Among metacognitive strategies, goal setting, planning, and monitoring were found in the studies. Self-regulated learning interventions were also discovered to contribute to various aspects of language learning. Cognitive and metacognitive strategies improved the writing performance of Chinese participants, and planning and evaluating resulted in better listening comprehension and oral performance of Japanese participants. Interventions on affective strategies, such as self-efficacy, on the other hand, increased motivation and language achievement in general. In the review, it was postulated that the most effective self-regulated learning interventions were the ones which were tailored according to the learners' profiles and addressed a certain aspect of language learning. Thus, as an implication, it was suggested that self-regulated learning interventions should include cognitive, metacognitive, and affective strategies and be applied in a structured way over an extended period (Su et al., 2023)

The relationship between the use of self-regulated learning strategies and academic achievement in EFL contexts has also attracted attention in the past decades. From the Turkish context, İnan-Karagöl (2013) conducted a mixed-method study with students who were in an ELT program at a state university. She investigated whether there was a relationship between students' grade point average scores and their use of self-regulated learning skills. As a result of the study, there was a positive correlation between the three dimensions of the questionnaire and the GPA scores. Motivation and action to learning, planning and goal setting, and strategies for learning and assessment were found to be significantly correlated with GPA scores.

Another study in the Turkish context came from Çelik (2022). He conducted a qualitative study, which was designed as a descriptive phenomenological study. In this study, the self-regulated learning skills of a very successful English learner, Tuana, were investigated through semi-structured interviews expanding over two months. The results of the study showed that she used various self-regulated learning strategies which would increase her exposure to English. In addition, she was found to be well aware of her needs, motives, interests, and useful ways, such as online platforms.

Trujillo and Roman (2024) conducted another qualitative study to explore the potential effects of self-regulated learning strategies with Information and Communication Technologies (ICT) on the EFL speaking proficiency of the participants. The study put forward that participants made use of such self-regulated learning strategies as repetition, self-correction, and spoken interaction together with ICT tools to develop their fluency, pronunciation, spoken grammar, accent, and vocabulary. This recent study also highlighted the importance of self-regulated learning skills in EFL speaking proficiency.

In a recent study, Dong and Habok (in press) investigated the potential correlation between the use of self-regulated learning strategies and the language proficiency levels of EFL students in Vietnam. The researchers also sought the most common self-regulated learning strategies utilized by the participants. The results indicated that participants most frequently employed elaboration, help-seeking, and time and study environment management. In addition, it was suggested that there was a strong correlation between their language proficiency and the use of self-regulated learning strategies; the strongest correlation was for the elaboration strategy.

In another recent study, Yang, Wang, and Yang (2025) examined the effectiveness of a self-regulated learning intervention designed by the researchers. EFL students from two intact classes attended the intervention which included five aspects: goal orientation, self-efficacy, time management, study environment management, and language learning strategies and attributions. The results of the study demonstrated no significant difference between the experimental and control groups in terms of cognitive, affective, and social strategies in the quantitative analysis of the study; however, language learning strategies were observed to develop in the experimental group.

In conclusion, self-regulation may contribute to SLA, applied linguistics, or foreign language education in that self-regulation is a goal-directed process in which learners utilize their mental abilities to reach an academic goal. From this perspective, self-regulation can provide a framework for language learners and teachers (Teng & Y. Zhang, 2022). Self-regulated learning is suggested to be effective in foreign language learning in higher education. These skills enhance language learning outcomes, contribute

to autonomy and self-efficacy, and increase motivation, which is of high importance in the language learning process (Su et al., 2023).

2.8.1 Self-regulated language learning strategies. With respect to language learning strategies, Oxford (1990) is one of the most renowned researchers in the field of language learning. Her taxonomy has been employed by many researchers in the literature (Köksal & Dündar, 2018). Oxford suggests two main categories for language learning strategies, which are direct strategies and indirect strategies. Direct strategies encompass active mental involvement and they are directly related to language production and comprehension. Memory, cognitive, and compensation strategies are included in direct strategies. Indirect strategies, on the other hand, are relating to the regulation of the language learning process rather than direct interaction with the language. Metacognitive strategies, affective strategies, and social strategies are the sub-categories of indirect strategies (Oxford, 1990).

The recent years, however, have witnessed criticism from influential scholars such as Dörnyei (2005) regarding language learning strategies and have led to a re-evaluation of traditional perspectives on language learning strategies (Yang et al., 2025). This paradigm shift highlights the significance of a more holistic approach in terms of how learners manage the complex process of language learning and stresses the role of self-regulation in this process (Wu, Lee, Li, Huang, & Huang, 2023). Integration of self-regulation and language learning strategies is offered to provide a more insightful understanding of learner behaviours and language learning experience (Gao, 2019; Yang et al., 2025).

In line with the paradigm shift in the field, Oxford (2011) amended her taxonomy with a focus on self-regulation and named her new taxonomy Strategic Self-Regulation (S²R) Model. She re-defined language learning strategies as self-regulated language learning (L2) strategies, and below is her definition of self-regulated L2 learning strategies in the S²R Model.

In the S²R Model, self-regulated L2 learning strategies are defined as deliberate, goal-directed attempts to manage and control efforts to learn L2 (based on Afflerbach, Pearson, & Paris, 2008). These strategies are broad, teachable actions that learners choose

from among alternatives and employ for L2 learning purposes (e.g., constructing, internalizing, storing, retrieving, and using information; completing short-term tasks; and/or developing L2 Proficiency and self-efficacy in the long term) (Oxford, 2011, p. 12).

Besides her definition, Oxford (2011) states features of self-regulated L2 learning strategies. The strategies in the model are used consciously, facilitate learning by making learning easier, faster, more enjoyable, and more effective, can be used in various contexts and for different purposes, and address learners as a whole, not only to cognitive and metacognitive strategies. Learners can employ these strategies to regulate their learning, beliefs, affects, behaviours, and environment.

The S²R Model involves three main dimensions of strategies for L2 learning: cognitive strategies, affective strategies, and sociocultural-interactive strategies. Cognitive strategies assist learners construct, transform, and apply L2 knowledge. Affective strategies enhance positive emotions and help learners stay motivated. Sociocultural-interactive strategies, on the other hand, relate to communication and sociocultural contexts. In addition to strategies, Oxford (2011) refers to metastrategies, which are used in the main dimensions of strategies to manage and control them. Metastrategies affect the three dimensions of strategies and are included within each dimension as metacognitive strategies, meta-affective strategies, and metasociocultural-interactive strategies. Metacognitive strategies facilitate cognitive strategy use; meta-affective strategies help learners control their affective strategies; metasocio-cultural interactive strategies assist with socio-cultural interactive strategies. Table 5 presents the metastrategies and strategies in the S²R Model in detail (Oxford, 2011, p. 16).

Table 5

Metastrategies and Strategies in the S²R Model of L2 Learning

Metastrategies: metacognitive, meta-affective, Purpose metasocio-cultural interactive	
Paying attention, planning, obtaining and using resources, organizing, implementing plans, orchestrating strategy use, monitoring, evaluating	Managing and controlling L2 learning in a general sense, with a focus on understanding one's own needs and using and adjusting the other strategies to meet those needs
Cognitive dimension	
Using the senses to understand and remember, activating knowledge reasoning, conceptualizing with details, conceptualizing broadly, going beyond the immediate data	Remembering and processing the L2 (constructing, transforming, and applying L2 knowledge)
Affective Dimension	
Activating supportive emotions, beliefs, and attitudes, generating and maintaining motivation	Handling emotions, beliefs, attitudes, and motivation in L2 learning
Socio-cultural interactive dimension	
Interacting to learn and communicate, overcoming knowledge gaps in communicating, dealing with sociocultural contexts and identities	Dealing with issues of contexts, communication, and culture in L2 learning

The S²R Model by Oxford suggests that learners take active and conscious roles in their learning process. Thus, learners' use of strategies in learning L2 is worth examining to develop further insights into L2 learning (Köksal & Dündar, 2018). In addition, this close examination of the self-regulated language learning strategies helps learners manage and control their language learning process, which might be enhanced by instruction in strategic learning (Gu, 2010).

In the lengthy process of foreign language learning, students need to be equipped with skills which will enable them to think strategically, stay focused and motivated, learn autonomously and self-evaluate. Teaching self-regulated learning skills is believed to provide the students with these qualifications. However, when the curriculum of SoFL is examined, self-regulated learning skills have not been adequately incorporated into the existing educational practices. To this end, the impetus of the current study is to integrate self-regulated learning skills into L2 instruction with a set of activities and investigate its

effectiveness through qualitative and quantitative data. In compliance with this impetus, the research questions of the present study are as follows:

1. To what extent does self-regulated learning integrated L2 instruction have an effect on the development of self-regulated learning skills of L2 students?
 - a. Is there a statistically significant difference between the control and experimental group?
 - b. Is there a statistically significant difference between the lower-level and higher-level English proficiency experimental groups?
 - c. To what extent, if any, does self-regulated integrated L2 instruction have a sustained impact on the self-regulated learning skills of the higher-level English experimental group, as measured by delayed post-test results?
2. To what extent do L2 students employ the sub-skills of self-regulated learning, and how do they employ them?
3. What are the opinions of instructors regarding self-regulated learning skills of their students involved in the self-regulated learning integrated instruction?
4. What are the perceptions of L2 students in the experimental groups regarding the self-regulated learning integrated L2 instruction?

Chapter 3

Methodology

3.1 Research Design

The current study adopts a mixed-method approach. The numerical data give an idea of the participants' level of development in the self-regulated learning skills scale. Qualitative data, on the other hand, provide participants' perspectives and opinions about their self-regulated learning skills and the instruction.

According to Dörnyei (2007), mixed-method approaches have specific features which result in more robust studies. First of all, mixing both approaches helps researchers eliminate the weaknesses of using these methods individually. In addition, merging findings from the numeric data and close inspection of a phenomenon leads to a multi-level analysis of a complex issue and improved validity (Dörnyei, 2007).

Among the mixed method approaches, the present study employs a convergent parallel design in which quantitative and qualitative data are collected simultaneously and with equal weight. Cresswell (2013) indicates that quantitative and qualitative data focus on the same or parallel constructs or concepts, being self-regulation skills in the current study.

This study includes a questionnaire which is utilized as a pre-, and post-test, compare the self-regulated learning skills of the participants before and immediately after the implementation of the self-regulated learning integrated L2 instruction. In addition, higher-level English group was administered a delayed post-test six months after the implementation. Interviews after the program with the student participants and the instructors and weekly journals of the students written during the application of the instruction constitute the qualitative part of the study. Findings from both quantitative and qualitative data are interpreted in relation to the literature.

3.2 Research Context

The SoFL, where the study was conducted, is a separate unit at a state university in Istanbul with its own administration and applications. The curriculum department at the school prepares the curriculum and syllabus. In their yearly meetings, the curriculum

department also decides the materials, such as the main course or other skill-based supporting materials. The school accepts around 1000 students annually, and instruction is delivered by 63 instructors in four languages: English, Turkish, French, and German. The English classes at the SoFL comprise three levels. Program 1 is designed for beginners, and students are taught 20 hours a week in this program. Programs 2 and 3 are designed for pre-intermediate and intermediate English level students, respectively. At these levels, students receive 20 hours of instruction a week. The curricula of all programs are based on the Common European Framework of Reference for Languages (CEFR).

Two instructors are responsible for teaching the students in one class for all programs. Writing and speaking skills are also taught separately besides main course classes. These two instructors share the class hours based on the number of hours and days, ten hours for each instructor. During class time, teachers are expected to follow the weekly schedule for the main course, writing and speaking lessons.

Within the scope of the current study, the English curricula of SoFL do not provide any instruction in self-regulated learning. The main objective of SoFL in Türkiye is to enhance students' linguistic abilities in a foreign language prior to their transition to their respective faculties. Thus, the concerns regarding the need for self-regulated learning skills for higher education students and the incorporation of self-regulated learning skills are also valid in the research context.

3.3 Procedures

Following the granting of approvals by the institution where the study would be conducted and the ethics committee, the study commenced. In the Fall term of the 2023/2024 Academic year, the piloting of the self-regulated learning integrated L2 instruction was started. As the piloting aimed to test the instruction and make the necessary adaptations, no pre- or post-tests were given to the student participants. After the piloting was completed, the researcher made modifications, and the expert opinions were gathered from an academician working in the field and two instructors experienced in language teaching in SoFL. In the Spring term of the 2024/2024 Academic year, the implication started with the pre-tests of the experimental and control groups. The experimental groups (pre-intermediate and intermediate level students) received the self-

regulated learning integrated L2 instruction. The control group (intermediate level), on the other hand, was not informed about self-regulated learning or did not receive any instruction. The self-regulated learning integrated L2 instruction comprises a total of 15 activities. The completion of these activities is scheduled to occur within a 10-week period. Following the 10-week instruction, a post-test was conducted with both the experimental and control groups. Following the tests, the interviews were initiated with the researcher. The interviews lasted a total of 346 minutes, with 279 minutes conducted with the students and 67 minutes with the trainer. Six months after the post-test, a delayed post-test was administered to the intermediate-level experimental group. Once all data had been collected, the researcher commenced data analysis.

3.4 Design and Piloting Phase

To design self-regulated learning integrated L2 instruction, the researcher first examined the curricula applied in English language teaching in preparatory programs at universities. Additionally, she worked on the contents used in English preparatory schools. A list of common topics and themes from the curricula and textbooks was created. This ensured the applicability of the instruction, regardless of the schools and levels in which it is used. In addition, a literature review was conducted to identify the framework on which the self-regulated learning enhanced instruction would be based. Pintrich's model of self-regulation (2000) was considered more suitable for several reasons. Firstly, Pintrich suggested his framework, especially for college students, which was in line with the ages of the student participants in the current study. In addition, the classroom applications of self-regulation were highlighted with concrete behaviours, which made it easier to define and classify the behaviours regarding each dimension. In a similar vein, Pintrich's framework was comprehensive with its detailed phases and aspects which were explained thoroughly with areas of regulation such as cognitive regulation.

The self-regulated learning skills that are particularly needed in language learning was another criterion for selection of skills and activities in the instruction. In order to determine these skills, Oxford's S²R Model (2011) was reviewed. The metastrategies and strategies provided in her model were examined.

As a last step, the measurement tools, which would be administered as a quantitative data collection instrument, were analysed. It was of high importance to measure the skills involved in the self-regulated learning integrated L2 instruction. Another concern was in relation to the language of the instrument; as the instruments were self-reports, it was thought that the student participants might grasp a better understanding of the propositions if the instrument was in Turkish. When the instruments were investigated in the literature, it was observed that the Self-Regulated Learning Skills Questionnaire by Turan (2009) was commonly implemented with high values of reliability. The four self-regulated learning skills focused on in the questionnaire were in line with Pintrich's framework and Oxford's strategic self-regulated language learning model. Thus, the instruction was shaped around four self-regulated learning skills. The skills included in the instruction are as follows: motivation and taking action for learning, planning and goal setting, strategy use and evaluation, and autonomy in learning.

After determining the four self-regulated learning skills, the researcher referred again to the literature, examining theses conducted both in Türkiye and abroad that focused on developing self-regulated learning skills training, interventions, and instructions. (Aşık, 2015; Canbay, 2022; Gümrükçü-Bilgici, 2021). A list of activities aimed at fostering the targeted skills was prepared, and these activities were designed to encompass all four core language skills: reading, listening, speaking, and writing. After an approximately two-month instruction development process, the self-regulated learning integrated L2 instruction was sent to two English teachers working in a preparatory school and to an academic with expertise in self-regulated learning. Based on the feedback from the teachers and the expert, the instructions for two activities were simplified, and a reflection component was added to one activity. In addition, again, in line with the suggestions from the academician, four instructional presentations were added to the instruction regarding four self-regulated learning skills. In this version, before the piloting process, the instruction consisted of 15 activities, which were to be applied in 10 weeks.

Unlike most studies, which commonly conduct a pilot study for only the first few weeks, the current study was fully piloted at both levels as if it were being implemented in practice. In the piloting, the students from a state SoFL attended the study. These students were already registered at two classes according to their results from an English

Proficiency Exam conducted by the school at the beginning of the semester. In line with this, 21 students from pre-intermediate and 22 students from intermediate levels were included in the study. The piloting phase of the study lasted 10 weeks. During the piloting, the co-teacher gained experience with the self-regulated learning integrated L2 instruction, and meetings were held regarding the implementation of the training at both levels, with notes taken. As a result of the piloting, the following changes were made to the instruction.

- 1) The platform for the journal entries was changed to make it more practical to keep track of the journals and give weekly feedback to the participants.
- 2) It was decided to give feedback weekly for each journal entry and for each student and ask further questions to support participants' self-regulated learning skills.
- 3) The reading passages were simplified for students with lower levels of English.
- 4) After the instructional presentations, an oral or written reflection was requested from the participants.

After these changes, feedback from the expert and the co-instructor was sought again, and the self-regulated learning integrated L2 instruction was finalized for implementation.

3.5 Participants

The current study was conducted at an English Preparatory School of a state school and the students who were enrolled in this school attended the study. In addition to students, two instructors, one of which was the researcher of the current study, took part in the both piloting and implementation process. The second instructor, who carried out the piloting process, also volunteered to take part in the main study.

The convenience sampling method was adopted in the study. Convenience sampling refers to choosing an available population due to specific purposes of the studies or administrative limitations, which result in the selection of a specific population for the study and hinder the random selection and assignment of the participants (Best & Khan, 2006). In the present study, due to administrative reasons, student participants were from two intact classes which were assigned to the instructors by the administration.

3.5.1 Student participants. The current study was conducted at a state SoFL, hence, higher education. In order to study at a university in Türkiye, students are required to pass the university entrance exam. After they pass the exam and are placed into the faculties, they have to take an English proficiency exam. If their score is 70 and above, they continue to their faculties, which vary from different branches of engineering, medicine, dentistry, pharmacy, and midwifery to veterinary, nursing, and teaching. If they can not pass the English proficiency exam, they are required to take an English preparatory year at SoFL. The student participants of the present study were registered in the English preparatory program of the SoFL, which was selected for the study. The study was conducted with three groups of students: one control group and one experimental group who had an intermediate level of English proficiency. The control group consisted of 19 students, and the equivalent experimental group with intermediate level (higher level of English henceforth) included 17 students. In addition, in order to compare the effects of the instruction on students with various levels of English, one experimental group with pre-intermediate level (lower level of English henceforth) participated. 19 students from the second experimental group attended the study. The age range of the students across all groups was between 17-22 years. Table 6 presents the number and genders of the students in the groups.

Table 6

The Number and Genders of Students in the Study

Group	Number of students	Gender	
		Female	Male
Control group	19	5	14
Experimental group	17	9	8
Experimental group with lower-level English	19	6	13
Total	55	20	35

Following the implementation of the self-regulated learning integrated L2 instruction, semi-structured interviews were conducted with the volunteer students. These

interviews were conducted as a focus group, with a total of 22 students in four groups participating.

3.5.2 Instructor participants. Two instructors participated in the study. The researcher instructor was responsible for designing the instruction, piloting and implementing it in her own classes. In addition, the researcher instructor guided the second instructor in application of self-regulated learning activities. The second instructor implemented the activities, took field notes, and reflected on the activities in the piloting. After the piloting, the second instructor implemented the instruction in the lower-level English experimental group.

As for more details about the roles of the instructors, before the piloting, the researcher informed the instructor about the aim of the instruction and the steps to be followed. Moreover, the instructor was provided with information in terms of the activities included in the instruction. In addition, she was requested to take field notes regarding the classroom implementation, especially in the piloting process. After the weekly activities of the self-regulated learning integrated L2 instruction, a meeting was held with the instructor to evaluate the classroom implementation and whether any changes to the activities were needed. During the implementation of the instruction, the instructor and the researcher determined the activity which would be integrated into the schedule of the week, and they also discussed the potential problems that might arise during the implementation and made modifications to make the program more suitable for their classroom. The modifications made by the researcher and the instructor consisted of changing the activity into group work or individual work, asking for reflection for the next week regarding an activity, or requesting students to make a preparation before the class. The core of the activities was not changed, the instructors modified the activities in accordance with their students' needs or classroom climate. Apart from these meetings and discussions, the second instructor attended a dialogic interview at the end of the study. The interview with the instructor lasted 67 minutes.

The second instructor, who worked voluntarily in the study, had finished her B.A. and M.A. in ELT departments at state universities. During her M.A. studies, she attended a course, one of whose topics was self-regulated learning. In that sense, she had prior knowledge of self-regulated learning. The instructor continues her PhD in an ELT

department and works on discourse analysis for her doctoral dissertation. She has six years of experience in teaching English at the SoFL. She wishes to be an academic in the ELT department.

The researcher, on the other hand, applied the training in the piloting and implementation processes, so she actively participated in both the piloting phase and the implementation stage of the training. Therefore, she is also one of the instructor participants in this study. The researcher completed both her undergraduate and master's degrees in ELT. During her PhD studies, she took a Cognition and Learning lesson in which she encountered the theoretical backgrounds and implementations of self-regulated learning. With 15 years of experience in teaching English, the researcher has spent the last two years working at a SoFL.

3.6 Self-regulated Learning Integrated L2 Instruction

One of the aims of the current study was to develop self-regulated learning activities that would be incorporated into the L2 curriculum of SoFL. It was believed that such instruction would help learners in their long and tiring language learning process.

Table 7 presents the activity numbers, the self-regulated learning skills they address and the language skills that are used.

Table 7

A Summary of Self-Regulated Learning Activities

N of Activities	Self-regulated learning skills focus	Language skills focus
Activity 1	Strategy use and evaluation, Planning and goal setting, Motivation and taking action, Autonomy in learning	Reading/ Listening/ Speaking
Activity 2	Strategy use and evaluation, Planning and goal setting, Motivation and taking action, Autonomy in learning	Reading/ Speaking/ Writing
Activity 3	Planning and goal setting	Speaking/ Writing
Activity 4	Strategy use and evaluation, Motivation and taking action	Reading/ Listening/ Speaking/ Writing
Activity 5	Autonomy in learning	Reading/ Listening/ Speaking/ Writing
Activity 6	Strategy use and evaluation	Reading/ Listening/ Speaking
Activity 7	Planning and goal setting	Listening/ Writing
Activity 8	Motivation and taking action	Speaking/ Writing
Activity 9	Strategy use and evaluation, Planning and goal setting, Motivation and taking action, Autonomy in learning	Listening/ Speaking
Activity 10	Strategy use and evaluation, Motivation and taking action	Writing/Reading
Activity 11	Strategy use and evaluation, Motivation and taking action	Reading/ Speaking/ Writing
Activity 12	Autonomy in learning	Reading/ Listening/ Speaking/ Writing
Activity 13	Planning and goal setting	Reading/ Writing
Activity 14	Strategy use and evaluation, Planning and goal setting, Motivation and taking action, Autonomy in learning	Reading/ Listening/ Speaking/ Writing
Activity 15	Strategy use and evaluation, Planning and goal setting, Motivation and taking action, Autonomy in learning	Reading/ Listening/ Speaking/ Writing

3.6.1 Details of the activities. The self-regulated learning integrated L2 instruction comprises 15 activities in total. The implementation of most activities do not require a pre-determined order and instructors are encouraged to modify the sequence and selection of the activities in line with their instructional content.

Activity 1

The activity is designed as a first and introduction activity for self-regulated learning. Integration into the language classrooms is planned to be realized through some holiday questions regarding their plans for the summer/winter holidays and whether they can fulfil their plans, such as the number of books they plan to read or words they want to learn. Moreover, the instructors can encourage learners to share their goals regarding language learning. After this initiation, the concepts of self-regulation and self-regulated learning are defined and introduced to the students through an instructional presentation. The importance of these concepts is emphasized in regulating our lives and the language learning process. The details regarding the sub-skills of self-regulated learning in the current study are also provided. From that perspective, this activity focuses on both the concept of self-regulated learning as a whole and sub-skills, which are planning and goal setting, motivation and taking action, strategy use and evaluation, and autonomy in learning. As for language skills, the student participants listen to the presentation and the instructors and express their opinions about self-regulated learning.

Activity 2

The students are asked to create a weekly language learning journal throughout the term where they will write their weekly aims, the words or structures they have learned, the difficulties they have experienced. In addition, they are requested to mention the strategies they have used to overcome these difficulties and whether these strategies are useful for the language learning process. Moreover, the students are requested to elaborate on classroom discussions based on the instructions and prompts provided by the instructors. Keeping a weekly journal is aimed at creating a platform where the student participants evaluate their learning process partly or as a whole and reflect on it. The student participants are expected to evaluate and reflect on their goals, strategies, level of

motivation, and factors that affect their motivation. In addition, they can identify the areas which need improvement and determine the steps they need to take. In that sense, it attempts to contribute to autonomy in learning. In terms of language learning, journals serve various purposes for language learners, such as cognitive knowledge construction, preparation tools for exams, and sometimes even a vocabulary notebook (Alharbi, 2024; Bently & Shoffner, 2025). Moreover, journals are suggested to play an important role in improving writing performance (Zhang & Chieh, 2025)

Activity 3

This activity focuses on self-evaluation, goal-setting, and strategy use sub-skills of self-regulated learning. The students are requested to think about the features of good students as language learners. They are asked to prepare a checklist for a good student and evaluate whether they have these features. The students are told to prepare their lists in three parts. In the first part, they write about the features of good students, and in the second part, they self-evaluate and write which features they own among the features of a good student. In the final part, the students are requested to think and write what they should do to acquire the features of a good student. For language skills, the activity covers speaking and writing; the student participants first express their ideas regarding the features and their reasoning and then write their ideas to submit to the instructors.

Activity 4

The activity is based on two sub-skills of self-regulated learning: motivation and taking action and strategy use and evaluation. The students are led to consider misconceptions about language learning, which may hinder their motivation. In addition, they are supported to develop strategies to tackle these misconceptions. In the activity, the students are provided with a text about misconceptions in language learning. After they understand the concept of misconception, they are asked whether they have misconceptions regarding language learning, which may include any advantages/disadvantages in terms of gender or the first language. They are initiated to question the reality of these misconceptions and are given correct information by the instructors. After the class discussion, the students are assigned to write an essay about

their misconceptions in language learning. The students are asked to evaluate their learning process and find whether they have such misconceptions. They are told to refer to how they discover these misconceptions and what kind of strategies they use to correct them. In terms of language learning, all four language skills are employed in the activity. Thanks to the passage reading and essay writing, the activity is incorporated into the reading and writing skills. As the students are involved in class discussions, speaking and listening skills are addressed.

Activity 5

This activity focuses on autonomy in learning sub-skill of self-regulated learning. The aim of the activity is to make the student participants think about the ways of autonomous language learning. The activity commences with a reading passage on useful tips for language learning outside the classroom. Then, the students are asked to comment on whether they employ similar tips and what other tips they use outside the classroom to improve their English. They share their opinions and discuss the pros and cons of autonomy in language learning. They are also requested to share their sources, such as any online applications or beneficial YouTube channels with their classmates. At the end of the activity, the students are said to select three tips for studying English outside the classroom from the suggestions in the discussion or the reading passage. The students are also asked to write the tips they select and why these tips would be useful for them. From the language learning perspective, the activity includes all language skills in that they read a passage, talk about their tips, listen to their friends, and reflect and write about their selection of the tips.

Activity 6

Expressing obligations, prohibitions, and suggestions is a topic which is taught at all levels, both grammatically and thematically in language learning. Thus, its integration into self-regulated learning skills can be applicable to various levels. With this rationale, strategy use and evaluation as a subskill of self-regulated learning is combined with these grammatical structures and themes. In the activity, first, the students are asked to prepare a list of obligations and prohibitions which support or inhibit the language learning

process. Then, they share their lists with their pairs. The pairs are expected to evaluate their pairs' development and suggest changes or new obligations, prohibitions, and suggestions for their partners. Afterwards, the students are expected to select the most suitable suggestion for themselves and try to use it for the upcoming process. For language learning, the students practice the grammatical structures for obligations, prohibitions, and suggestions. In addition, when they share their lists and receive feedback from their peers, they are included in an interaction, which promotes listening and speaking skills.

Activity 7

Expressing present and past habits is another theme which is placed in the language teaching curriculum to teach grammatical structures of the Simple Present Tense, the Simple Past Tense, and 'Used to'. After teaching these structures, this activity can be incorporated into the daily schedule as a self-regulated learning activity. The activity specifically focuses on the planning and goal-setting sub-skill of self-regulated learning. In the activity, the students first listen to a passage including past and present habits of a language learner. They are asked to list which habits are useful for language learning and which habits they want to own in order to manage a more effective language learning process. Moreover, they are also told to note down which habits they have quit to be more successful in language learning. As the activity aims to prompt the students to consider effective habits in language learning, the focus is more on their planning. Moreover, they are encouraged to set goals to gain better language learning habits. As for language skills, they listen to a passage and note down the effective and inhibiting habits; thus, listening and writing skills are emphasized.

Activity 8

In this activity, the aim is to lead the students to evaluate their learning process and then to decide the necessary steps needing to be taken in case of any difficulties. From that sense, the activity highlights motivation and taking action sub-skill of self-regulated learning. In the activity, the students are asked to review their language learning process in the half of the term and express the difficulties they have experienced throughout the term. They are urged to think about their motives to elaborate on and actions to solve these

difficulties. Then, they are requested to write an essay reflecting on the discussion carried out in the classroom. The feedback provided by the instructors can also contribute to the ways the students employ for their learning difficulties. As for language skills, classroom discussions and essay writing regarding motives and difficulties are considered speaking and writing activities, respectively.

Activity 9

This activity is planned to cover all sub-skills of self-regulated learning within the scope of the study. Through self-evaluation, the students identify a language skill about which they have negative feelings, they suggest strategies for their friends and select appropriate strategies for themselves. Finally, they would seek opportunities to employ these strategies. Thus, this activity provides a chance for the students to use many sub-skills of self-regulation. In the application of the activity, the instructor first creates groups and asks the students to select a language skill for which they have negative feelings. After the students express these negative feelings, other students in the group are expected to suggest strategies for the negative feelings mentioned by their friends. Then, the student selects the best three strategies that he/she will use to overcome the negative feelings about this particular skill. After the class discussion, the students are instructed to write the reasoning behind their selected strategies. The activity is incorporated through listening and writing skills with classroom discussions and essay writing.

Activity 10

The activity focuses on two self-regulated learning sub-skills: strategy use and evaluation and motivation and taking action. The activity aims to encourage students to evaluate their performances, find their weaknesses and then think about the actions which can strengthen these weak sides of their learning process. In the activity, the students are requested to evaluate their language learning performance in general. They write down their strengths and weaknesses, the points they could do better. Then, they are asked to think about and plan new strategies that they have not used before and plan actions for their learning weaknesses. The activity is designed as a writing activity as the students are expected to write about their weaknesses and actions for new strategies.

Activity 11

The aim of the activity is to lead the students to think about the shortcomings of language learning systems in their countries and urge them to find personal strategies to tackle these shortcomings. From that perspective, the activity encompasses two self-regulated learning sub-skills: strategy use and evaluation, motivation and taking action. In the activity, the students read a passage about different language teaching systems in Slovakia and Singapore. The students mention the differences between these two systems, express in which system they would be more motivated for language learning, and explain their reasoning. Moreover, they are also requested to comment on the Turkish educational system of language teaching. They are asked to discuss the weaknesses and strengths of the Turkish educational system. Regarding weaknesses, they comment on how they are motivated and what kind of strategies they develop to overcome the shortcomings of the system. In addition, they are initiated to express their failures in terms of language learning due to the language teaching system in Türkiye. The activity is incorporated into a language classroom as a reading, speaking, and writing activity. They first read a passage and then are included in a class discussion. Finally, they are expected to write an essay regarding their ideas.

Activity 12

The activity endeavours to introduce the idea of autonomy in language learning through apps and AI tools. When the themes in various textbooks which are frequently utilized by SoFL are examined, apps and AI tools are observed to be a prominent theme in many of these books. Thus, apps and AI tools are integrated with autonomy in learning, one of the sub-skills of self-regulated learning in the current study. In the activity, to set the scene, the students are asked to think about an educational system where they have to learn English by themselves, and they are requested to elaborate on how they would learn and regulate their language learning. In addition, they are asked whether they would use any apps for language learning and which apps or AI tools they would use. Then, the students are asked whether they use these apps or AI tools in their real life in the language learning process. The students are assigned to search for new AI tools or apps that will help them in their learning and list them with explanations. They are asked to share them

with the group in the following lesson and exchange their lists to take notes. Regarding the incorporation of the activity into a language learning classroom, as mentioned above, apps and AI tools are a trending topic in language classrooms and placed in language learning curricula. Relating to the topic, the students are encouraged to express their ideas about autonomy in learning in English, search for information, and take notes about apps and AI tools. Finally, they take notes of useful apps and AI tools which can be used during their self-study time and write them in their weekly journals.

Activity 13

The activity has the objective of assisting the students with their career plans by encouraging them to elaborate on their plans and goals through thought-provoking questions. Hence, the aim of the activity is to enhance planning and goal-setting self-regulated sub-skill of the students. To improve their planning and goal setting, the instructor provides the students with a reading passage which includes remarkable highlights to consider while building a career. The passage also poses some self-evaluation questions and requires the students to identify their must-haves in their careers. They are also urged to make a list of companies/sectors they may work in and think about possible training they may need or actions they need to work in order to work at these jobs, companies, or industries. They are expected to submit their lists to the instructor. The current activity addresses the reading and writing skills of the students. After they read important key points in building a career, they prepare their roadmaps for their goals.

Activity 14

The aim of the activity is aimed at fostering students' reflections on their learning processes by supporting self-evaluation. The focus of the activity is on all sub-skills of self-regulated learning, which may also shaped by the students. In the activity, the students are presented with the lists that they prepare at the beginning of the term for the features of a good language learner. They are told to evaluate themselves and their development. They are asked whether they have acquired new good features within the term and whether their improvement is in line with their goals. Moreover, they are requested to consider new features they want to add to the list based on their experiences in their language

learning process. Thanks to this activity, the students have a chance to evaluate themselves and consider their goals and actions which need to be taken. Although the activities in the current study do not have a fixed sequence, the present activity is suggested to be applied as a last activity at the end of the term. The activity may be administered in various forms, such as individual or group work as a class discussion. It is believed that interaction among the students during the activity will enhance the benefits of the activity. In line with the form of application, language skills may differ; a class discussion will be a speaking and listening activity. Writing the list or reflections will address the writing skill.

Activity 15

In addition to the given activities, five instructional presentations are integrated into 10 weeks of training. In these instructional presentations, important guidelines and strategies are provided in relation to each self-regulated learning skill. Thus, the aim of these instructional presentations is to provide the students with background knowledge regarding self-regulated learning and the sub-skills within the scope of the study. The instructional presentations are suggested to be delivered in an interactive way and last around 20 minutes.

3.6. Instruments

3.6.1 Self-regulated learning skills questionnaire. The scale developed by Turan (2009) (Appendix A) was used in the present study so as to determine the self-regulated learning skills levels of the participants before and after the self-regulated learning integrated L2 instruction. In addition, the same questionnaire was employed in the delayed post-test, which was conducted with only the experimental higher-level English group six months after the post-test. The reason why the delayed post-test was administered only to that particular group was that the participating students had already graduated from the SoFL, and the researcher maintained contact only with this group. Communication was realized through a former class representative from the previous academic year, who facilitated the dissemination of the test to all students via a Whatsapp group they had previously created.

The Likert-type scale contains 41 items categorized into four factors (motivation and taking action for learning, planning and goal setting, strategy use and evaluation, and autonomy in learning), with response options ranging from 1 (I strongly disagree) to 5 (I strongly agree). The minimum possible score on the scale is 41, while the maximum possible score is 205. Higher scores mean higher levels of self-regulated learning skills. The internal consistency of the self-regulated learning skills questionnaire was computed at .91 for the entire scale by Turan (2009). The Cronbach's alpha values for the sub-dimensions of the questionnaire were calculated at .88 for motivation and taking action for the learning dimension, .91 for the planning and goal-setting dimension, .83 for the strategy use and evaluation dimension, and .76 for the autonomy in the learning dimension.

Regarding the current study, Cronbach's alpha values were close to Turan's study (2009). The findings of the pre-test revealed that Cronbach's alpha coefficient of the self-regulated learning skills scale was .90, indicating a high reliability level. As for the sub-dimensions of the questionnaire, the results indicated moderate to high reliability .67 for motivation and taking action for learning (MTA). In terms of planning and goal setting (PGS), Cronbach's alpha value was measured .80. Reliability of strategy use and evaluation (SUE) sub-dimension, on the other hand, was .87. Lastly, Cronbach's alpha coefficient for the sub-dimension of autonomy in learning (AIL) was calculated as .78. These values showed an acceptable level of internal consistency. Table 8 presents the Cronbach's alpha coefficient and the item numbers of the questionnaire, and the sub-dimensions.

Table 8

Reliability Analysis for Self-Regulated Learning Skills Scale and Its Sub-Dimensions

Constructs	N of Items	Cronbach Alpha
Total Scale	41	.90
MTA	7	.67
PGS	8	.80
SUE	19	.87
AIL	7	.78

Regarding the reliability coefficient of the post-test, the analysis indicated that the post-test demonstrated high internal consistency, with a value of .89. With regard to the sub-dimensions of the post-test, two of the sub-dimensions indicated moderate internal consistency. Cronbach's alpha value for motivation and taking action was .65, and for autonomy in learning, the value was .70. When we turn to planning and goal setting, the results showed a higher value of internal consistency, .80. Lastly, strategy use and evaluation indicated the highest value; Cronbach's alpha coefficient for strategy use and evaluation was .86. Table 9 gives values for internal consistency.

Table 9

Reliability Analysis for the Post-Test and Its Sub-Dimensions

Constructs	N of Items	Cronbach Alpha
Post-test total	41	.89
MTA	7	.65
PGS	8	.80
SUE	19	.86
AIL	7	.70

As for the delayed post-test, the reliability coefficient for the test as a whole and sub-dimensions were calculated. The Cronbach's alpha value of the delayed post-test pointed to high internal consistency, .93. In relation to the sub-dimensions, the reliability coefficient of motivation and taking action was measured as .74. The planning and goal setting sub-dimension was calculated .92, which indicated high reliability. Moreover, Cronbach's alpha value of the strategy use and evaluation also demonstrated high reliability, which was .93. Finally, as for the internal consistency of autonomy in learning, the value was .67, which was considered a moderate reliability coefficient. Table 10 presents the values for Cronbach's alpha coefficient.

Table 10

Reliability Analysis for the Delayed Post-Test and Its Sub-Dimensions

Constructs	N of Items	Cronbach Alpha
Delayed post-test total	41	.93
MTA	7	.74
PGS	8	.92
SUE	19	.93
AIL	7	.67

3.6.2 Semi-structured interviews. The semi-structured interviews with the students were focus-group, and the students who volunteered for the interviews attended. The students were divided into four groups, allowing them to select their preferred interview partners. The first group consisted of six students, the second group had five students, the third group included four students, and the fourth group comprised six students. The interviews were conducted via the Teams platform and lasted a total of 275 minutes. Due to subsequent data analysis, the interviews were recorded and transcribed. In order to unveil richer data and prevent language barriers, the interviews were conducted in the participants' first language which was Turkish. Regarding the interview questions, an interview protocol was prepared before the interviews (Appendix B). The protocol consisted of 11 main questions and some sub-questions for elaboration.

3.6.3 Dialogic interview. The interviews conducted with both instructors was defined as dialogic interviews. Rather than just asking questions, dialogic interviews focus on making meaning as dialogue leaves space for transformation, collaboration, and suspension of assumptions resulting from understanding the similarities and differences (Barge, 2002). From that perspective, dialogic interviews are regarded as better opportunities for participant reflection (Cunliffe, 2003). Thus, during the dialogic interview, both the instructor participant and the researcher collaborated and shared their experiences. The researcher not only interrogated the second instructor but also partook in the interview with her reflections and experiences. Thus, the dialogic interview served as a tool to collect data from both instructors.

The dialogic interview with the instructor participants was also conducted on the Teams platform. It was also recorded and transcribed for data analysis. The interview protocol (Appendix C), which included nine questions, was prepared in advance. Similar to the interviews with the students, the instructors' interview was also administered in Turkish and lasted 67 minutes.

3.6.4 Weekly language learning journals. Weekly journals were administered both as a form of reflection after some class discussions and as a learning journal where the student participants wrote about learning difficulties and strategies to overcome these difficulties, such as a challenging topic in grammar. Sometimes, they shared their weaknesses and even asked for advice. Weekly journals became a platform for the student participants through which they could build a one-to-one connection with their instructors, especially when they felt insecure regarding their self-regulated learning skills and language learning processes. Every week, after the deadline for the journals, the student participants received feedback from their instructors. With further questions, this feedback turned into exchanges about self-regulated learning from time to time. Besides serving as an activity in self-regulated learning integrated L2 instruction, weekly language learning journals were a source of valuable data for instructors to trace the signs of self-regulated learning strategies, their learning processes, and the effects of the instruction provided.

3.7. Data Analysis

The current study is a mixed-methods study which combines qualitative and quantitative data collection procedures. While the first research question sought answers from the quantitative data, the second, third, and fourth questions referred to the qualitative data. In line with this, various data analysis methods were used to analyse the data. The quantitative and qualitative data analysis methods are displayed in Table 11.

Table 11

Methods and Tools Employed in Data Collection and Analysis

Research Question Focus	Data Collection Tool	Analysis Method
R.Q.1 The extent of the effect of the self-regulated learning integrated L2 instruction on the self-regulated learning skills of the student participants	Self-regulated learning skills questionnaire	Descriptive Statistics (mean, percentage, standard deviation etc.) Inferential Statistics (Dependent samples t-test, Independent samples t-test, one-way ANCOVA, Repeated Measures ANOVA)
R.Q.2 The extent of the use of self-regulated learning sub-skills and how these skills are employed by the student participants	Focus-group semi-structured interviews, weekly journals	Deductive Content Analysis, Deductive Thematic Analysis
R.Q.3 The perceptions of the instructors regarding the training and self-regulated learning skills of the student participants	Dialogic interviews	Thematic Analysis
R.Q.4 The opinions of the student participants regarding the instruction	Focus-group semi-structured interviews, weekly journals	Thematic Analysis

To start with the first research question, the self-regulated learning skills questionnaire was administered in the spring semester of the 2023/2024 academic year. The data from the questionnaire was analysed through SPSS (Statistical Package for Social Sciences) version 22. In the data analysis, the normality tests were conducted first. As the scores did not violate the normality, descriptive statistics and inferential statistics were employed. Regarding descriptive statistics, means, percentages, and standard deviations of the groups in the pre-test, post-test, and delayed post-test were calculated. Through inferential statistics, the groups were compared on the basis of their scores on the questionnaire. Independent Samples T-tests were used to make between-group comparisons in the pre-test. At first, the pre-test scores of the control and experimental group with higher-level of English proficiency were compared. In addition, another independent samples t-test was conducted to compare the pre-test scores of the experimental groups, higher-level English and lower-level English groups. Paired-sample t-tests, on the other hand, were employed for within-group comparisons both in the pre-

test and post-test. The analysis of the mean differences between the groups was carried out by one-way ANCOVA. One-way ANCOVA was preferred to be administered instead of one-way ANOVA because the researcher wanted to eliminate the pre-test effect on the post-test. The comparisons through one-way ANCOVA included the sub-dimensions of the questionnaire, which are motivation and taking action (MTA), planning and goal setting (PGS), strategy use and evaluation (SUE), and autonomy in learning (AIL), namely, the groups were compared based on both the total scores from the questionnaire and scores from the sub-dimensions. The reliability coefficients of the questionnaire and its sub-dimensions are presented in section 3.6.1 above. As for the delayed post-test, only the experimental higher-level English group attended the post-test and repeated measures ANOVA was conducted to compare the results of the experimental higher-level English group in the pre-, post-, and delayed post-test. As the scores were not significantly different in the tests, no post-hoc tests were implemented.

Regarding the second research question, deductive content analysis was conducted to reveal the extent of the use of the self-regulated learning sub-skills. In the deductive content analysis, the data was analysed based on the categories (Dinçer, 2018), which were the sub-skills of self-regulated learning in the current study. The instances in the interviews and weekly journals were counted, and a frequency chart was created. In addition, deductive thematic analysis was administered to investigate how the sub-skills of self-regulated learning were employed by the student participants. In order to conduct both deductive content analysis and deductive thematic analysis, the researcher used the software MAXQDA 24, which is mainly used for qualitative data analysis. After transcribing the interviews and exporting the weekly journals from Google Classroom, the researcher imported them to MAXQDA. The researcher then labelled the responses into self-regulated learning sub-skills.

As for the third research question, which focused on the perspectives of the instructors on the self-regulated learning integrated L2 instruction and self-regulated learning skills of the student participants, the researcher first conducted a dialogic interview with the participant instructor (Way, Kanak-Zwier, & Tracy, 2015). The interview was transcribed, the transcription was again imported to MAXQDA, and the

researcher commenced her inductive thematic analysis. After iterative readings, the data were coded, and main themes emerged in the data.

The fourth and last research question aimed at examining the opinions of the student participants in relation to self-regulated learning integrated L2 instruction. The transcribed interviews and weekly journals were analysed on MAXQDA, and inductive thematic analysis was conducted on the data. After the coding, the researcher reached the main themes emerging in the data.

3.8. Researcher Stance and Trustworthiness

I, as the researcher of the current study, have experience in teaching a foreign language, English and doing both qualitative and quantitative research. Considering these backgrounds, I was well aware of the learning processes through which students went while developing the self-regulated skills training program. Thus, as an insider and as a researcher, I was advantageous in research design, application, and interpretation of the findings with an emic perspective (Brannick & Coghlan, 2007). However, during the study and data analysis, I was conscious of my positionality, and I aimed to put the responses of the participants in the centre.

With the positionality in mind, some steps were taken to ensure the trustworthiness of the study. Trustworthiness is based on four factors in the current study: credibility, transferability, dependability, and confirmability. Firstly, credibility refers to the extent to which the findings are an indication of reality, and credibility is exerted through various methods such as member checks and triangulation (Shenton, 2004). In order to ensure credibility, the data received from the interviews were sent to the participants for member-checking. The participants confirmed the transcriptions. In addition, various data collection methods were employed in the study, which were questionnaires, interviews, and weekly journals. It was believed that the use of various data collection methods would ensure the triangulation of the data. As for transferability, it is more about the generalizability and replication of the study in other contexts (Hatch, 2002). The present study is a mixed-method study; however, with its smaller size of participants, the generalizability of the results might be an issue of consideration. Yet, it is believed that with thick descriptions of the procedures and a clear explanation of design, in addition to

its flexible nature of self-regulated learning integrated L2 instruction, researchers or instructors can replicate the study in other contexts. Dependability, on the other hand, addresses the issue of a thick description of the procedures, tools, participants, and design of the study (Shenton, 2004). The current study also provided a very detailed description of its methodology. Thus, other researchers may replicate the study and achieve similar results. Lastly, confirmability, which focuses on objectivity (Patton, 2002), was attempted to ensure by its mixed-method design. Moreover, the triangulation of the data, the researcher's awareness of her positionality, and self-reflections to eliminate bias were believed to contribute to the confirmability of the study.

3.9 Ethical Considerations

In order to ensure ethical standards, the researcher followed several steps. Firstly, approval from the institution where the study was conducted was requested. In addition, protocols for the interviews and approval documents were prepared. The researcher applied to the ethics committee of a university. After the approval was received (Appendix D), the study commenced, and the participants were informed about the study. One of the students in the control group declared that he did not want to attend the study. Consequently, he was not given any documents relating to the study. Other participating students in both control and experimental groups read the forms, asked questions, and signed the consent forms with the information that they could withdraw from the study at any time. As for confidentiality, the data and the documents of the participants were not and will not be shared with third parties and were not uploaded on any cloud that was open to the access of anyone. To ensure the anonymity of the participants, pseudonyms were used instead of their real names.

3.10 Limitations

The current study is thought to contribute to the self-regulated learning skills literature; however, it is not without limitations. To start with, the administration of self-report questionnaires as a quantitative data collection tool might result in biased responses of the participants. Thus, the quantitative findings should be interpreted with caution, considering the discrepancy between the reported and enacted practices.

In addition, the duration of the instruction and lack of any follow-up support might be acknowledged as limitations. Despite a 10-week instruction period, in line with the literature which confirms the benefits of longer instruction, instruction which expands on a whole term might provide different results. Furthermore, follow-up activities delivered at certain intervals might foster the effectiveness of self-regulated learning skills instruction.



Chapter 4

Results

4.1. Quantitative Results

4.1.1 Pre-test results of the groups. The comparison of the pre-test scores was first conducted within the control and higher level English experimental group and then within two experimental groups.

4.1.1.1 Pre-test results of the control and experimental group. In order to evaluate the self-regulated learning skills of the participants before and after the training, a self-regulated learning questionnaire with 41 items (Turan, 2009) was conducted. The questionnaire was a 5-point Likert-type questionnaire, and it consisted of 4 sub-dimensions. The questionnaire was administered as a pre-, post-, and delayed post-test.

Independent samples t-test was conducted to compare the pre-test scores of the control group and the higher-level English experimental group. Table 12 below shows the descriptive results of the pre-test of the control group and the experimental group.

Table 12

Descriptive Results of the Pre-Test

		Statistic	Std. Error
Mean		3.7195	.07174
95% Confidence Interval for Mean	Lower Bound	3.5739	
	Upper Bound	3.8652	
5% Trimmed Mean		3.7168	
Median		3.7561	
Variance		.185	
Std. Deviation		.43044	
Minimum		2.66	
Maximum		4.73	
Range		2.07	
Interquartile Range		.53	
Skewness		.056	.393
Kurtosis		.495	.768

As it is clear from the table, the participants' responses ranged from 2.66 to 4.73 and the mean was 3,7. The Skewness and Kurtosis values were between ± 1 ; .056 and .495, respectively. As these values were close to 0, it was asserted that the data were normally

distributed (Huck, 2012). As for the Kolmogorov-Smirnov test for normality, p value was .200, which shows the normal distribution of the test scores.

As it is presented in Table 13, the mean scores of the participants in the pre-test are close. The participants in the control group received 3.64 ($SD = .331$), while the participants in the experimental higher-level English group scored 3.80 ($SD = .516$). The scores of the groups were compared in order to test whether there was a significant difference between the groups before the self-regulation program on independent samples t-test. As a result of Levene's test, which shows the homogeneity, the variances across the groups are homogenous ($p = .116$).

Table 13

Results of the Independent Samples T-Test of the Control and Experimental Groups

Groups	N	M	Std. Deviation	t (34)	p
Control	19	3.64	.331	1.13	.26
Experimental	17	3.80	.516		
Total	36	3.71	.430		

The analysis revealed no statistically significant difference across the groups regarding their scores on the self-regulated learning skills questionnaire. The participants, both in the control group and the experimental group, showed similar tendencies in the pre-test.

4.1.1.2 Pre-test results of the lower-level and higher-level English experimental groups. The pre-tests scores of the experimental groups were also compared before the instruction to examine whether there was a difference between their levels of self-regulated learning skills. The analysis was conducted on independent samples t-test on SPSS. Table 14 presents the descriptive statistics of the experimental groups in the pre-test.

Table 14

Descriptive Results of the Experimental Groups in the Pre-Test

	Statistic	Std. Error
Mean	3.6673	.07939
95% Confidence Interval for Mean	Lower Bound	3.5062
	Upper Bound	3.8285
5% Trimmed Mean	3.6661	
Median	3.6098	
Variance	.227	
Std. Deviation	.47632	
Minimum	2.66	
Maximum	4.73	
Range	2.07	
Interquartile Range	.71	
Skewness	.206	.393
Kurtosis	.108	.768

As the Table 13 indicates, the mean of the experimental groups' t-test was 3.66 ($SD = .47$), and the highest score was 4.73 whereas the lowest score was 2.07. The Skewness and Kurtosis values were between ∓ 1 , demonstrating normal distribution of the data. As for Kolmogorov-Smirnov normality test, no deviation from normality was confirmed ($p = .200$).

Since the scores of the experimental groups were normally distributed in the pre-test, an independent samples t-test was administered in order to detect any difference in the levels of self-regulated learning skills before the instruction. Table 15 displays the results of the independent samples t-test of the experimental groups.

Table 15

Results of the Independent Samples T-Test of the Control and Higher-Level English Groups

Groups	N	M	Std. Deviation	t (34)	p
Lower-Level English	19	3.54	.412	-1.68	.102
Higher-Level English	17	3.80	.516		

The result of the Levene's test demonstrated homogeneity across the groups with the p value .404. The mean of the lower-level English experimental group was 3.54 ($SD=.412$). The higher-level English experimental group, on the other hand, received 3.80 ($SD=.516$). Regarding the significance of the p-value, it was seen that there was no statistically significant difference between the experimental groups before the instruction ($p=.102$).

4.1.2. Post-test results of groups. The same questionnaire, The Self-Regulated Learning Skills Questionnaire (Turan, 2009), was administered after the self-regulated learning integrated L2 instruction was implemented in the experimental groups. Before commencing the data analysis, the data from the post-tests of the groups were analysed to determine whether the data were normally distributed in the post-tests. When the normality tests were performed, the findings suggested that post-test scores of the higher-level English experimental group were not normally distributed. To eliminate extreme values and bring the data closer to a normal distribution, the technique known as winsorization was applied. According to this technique, the two highest values were replaced with the next highest value (Wilcox, 2003). This approach allows for the elimination of outliers without data loss. Following the winsorization process, the Kolmogorov-Smirnov and Shapiro-Wilk tests were re-applied. Although the results of the Kolmogorov-Smirnov test remained significant, the near-normal distribution observed in the histogram and the Skewness and Kurtosis values falling within the range of ± 1 , and non-significant p-value of the Shapiro-Wilk test ($p=.23$) led to the decision to proceed with parametric tests for further analysis. Regarding the post-test scores of the control group, the value of the Kurtosis was slightly above +1; however, as the Skewness value

was within ± 1 and the normality test scores were not significant, parametric tests were decided to be performed. Table 16 shows the descriptives and normality values of the post-test for each group.

Table 16

Descriptives and Normality Values of the Groups in the Post-Test

Post-test		Control Group	Lower-level English	Higher-level English
Mean		3.61	3.49	3.86
95% Confidence Interval for Mean	Lower Bound	3.52	3.34	3.62
	Upper Bound	3.70	3.64	4.11
5% Trimmed Mean		3.61	3.49	3.86
Median		3.56	3.46	3.87
Variance		.033	.095	.224
Std. Deviation		.182	.307	.473
Minimum		3.37	2.85	3.10
Maximum		3.91	4.12	4.71
Range		.54	1.27	1.61
Interquartile Range		.34	.34	.72
Skewness		.455	.014	.484
Kurtosis		-1.171	.338	-.432
Kolmogorov-Smirnov		.083	.200	.011
Shapiro-Wilks		.065	.982	.239

The post-test results of the groups were compared first within groups through paired-sample t-tests. In addition, the scores of the control group and higher-level English group were analysed to determine whether the self-regulated learning skills integrated L2 instruction impacted the self-regulated learning skills of the student participants. Finally, the results of the experimental groups, lower-level English and higher-level English, were compared on one-way ANCOVA in order to examine the effects of the instruction at two

different levels. There was a rationale behind choosing ANCOVA for the analysis. Cochran (1957) suggested that ANCOVA had several potentials in randomised experiments in that it increases precision and enlightens the nature of treatment effects (as cited in Belin & Normand, 2009). Accordingly, in the current study, one-way ANCOVA was employed to increase the precision and eliminate the effects of pre-test on the post-test scores of the participants. In the analysis, first, the total mean scores were compared, and then the scores from the sub-dimensions of the questionnaire were compared. The sections below first present the paired-sample t-test results of the groups and then report the findings of ANCOVA between the control group and the higher-level English group and the experimental groups, respectively.

4.1.2.1 Paired-sample t-test results of the groups. In order to determine whether significant differences existed between the scores of the pre-test and post-test within groups, paired-sample t-tests were conducted. The pre- and post-test scores of the control group were also compared to examine whether the group changed in terms of their self-regulated learning skills. The results of the tests revealed that there were no statistically significant differences between the pre-test and post-test scores of all groups. Table 17 presents the paired-sample statistics of the groups.

Table 17

Paired-Sample Statistics of the Groups

		Mean	N	Std. Deviation	Std. Error Mean
Control	Pre-test	3.64	19	.33	.07
	Post-test	3.61	19	.18	.04
Experimental lower-level English	Pre-test	3.54	19	.41	.09
	Post-test	3.49	19	.30	.07
Experimental higher-level English	Pre-test	3.80	17	.51	.12
	Post-test	3.86	17	.47	.11

According to the results, the mean scores of the pre-test and post-test of the groups were close. For the control group, the mean of the pre-test was 3.64 ($SD=.33$), and the mean of the post-test was 3.61 ($SD=.18$). Regarding the experimental lower-level English

group, the mean score of the pre-test was 3.54 ($SD=.41$) and the post-test 3.49 ($SD=.30$). Regarding the experimental higher-level English, 3.80 ($SD=.51$) and 3.86 ($SD=.47$) were the mean scores of the pre-test and post-test, respectively.

Table 18 shows the results of the paired-sample t-test comparing the groups' pre-test and post-test scores.

Table 18

Paired-Sample T-Test Results for Pre-Test and Post-Test Scores

		Paired Differences			95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
Groups		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Control	Pre-test	-.02	.30	.06	-.11	.17	-.41	18	.68
	Post-test								
Experimental lower-level English	Pre-test	.04	.38	.08	-.13	.23	.53	18	.59
	Post-test								
Experimental higher-level English	Pre-test	-.06	.34	.08	-.23	.11	-.76	16	.45
	Post-test								

The data analysis revealed no statistically significant differences between the control group's pre-tests and post-tests, $t(18)=-.41$, and $p=.68$. Similarly, in the experimental lower-level English group, there was no difference between the mean scores of the pre-test and post-test, $t(18)=.53$, $p=.59$. Lastly, in the experimental higher-level English group, no statistically significant differences were found, $t(16)=-.76$, $p=.45$.

4.1.2.2 Post-test results of the control and experimental groups. One-way ANCOVA was conducted to understand whether there were statistically significant differences between the post-test scores of the control group and the higher-level English experimental group. The findings suggested that Levene's test for homogeneity of variances was not significant, which indicated equal variances, $F(1,34)=2.63$, $p=.114$. The

analysis demonstrated that the instruction did not yield any significant impact after controlling the pre-test scores, $F(1,33)=3.93, p=.07$. Table 19 displays the summary of the analysis.

Table 19

Analysis of the Post-Test Scores of the Control and Higher-Level English Experimental Groups

	Mean	S. D	F	Sig.
Control	3.61	.18	3.93	.074
Experimental	3.86	.47		

In addition, one-way ANCOVA was performed on the sub-dimensions of the questionnaire, which are motivation and taking action (MTA), planning and goal setting (PGS), strategy use and evaluation (SUE), and autonomy in learning (AIL).

Regarding the sub-dimension MTA, the results of Levene's test assumed homogeneity of variances, $F(1,34)=0, p=.99$. The analysis revealed no notable effects of the instruction on this sub-dimension. Table 20 presents the findings in relation to MTA sub-dimension.

Table 20

Analysis of the Post-Test Scores of the Control and Experimental Groups in the MTA Sub-Dimension

	Mean	S. D	F	Sig.
Control	3.95	.41	3.28	.079
Experimental	4.14	.46		

As for the PGS sub-dimension, the variances were found to be homogeneous in Levene's Test, $F(1,34)=.46, p=.50$. It was observed that the instruction did not result in significant differences between the groups, $F(1,33)=.001, p=.97$. Table 21 shows the results for the PGS sub-dimension.

Table 21

Analysis of the Post-Test Scores of the Control and Experimental Groups in the PGS Sub-Dimension

	Mean	S. D	F	Sig.
Control	3.63	.49	.001	.97
Experimental	3.79	.78		

Regarding SUE, homogeneity of variances was confirmed, $F(1,34)=.11$, $p=.74$. The analysis revealed no effects attributable to the instruction after controlling the pre-test effects, $F(1,34)=.004$, $p=.949$. Table 22 summarizes the findings in relation to SUE sub-dimension.

Table 22

Analysis of the Post-Test Scores of the Control and Experimental Groups in the SUE Sub-Dimension

	Mean	S. D	F	Sig.
Control	3.77	.35	.004	.94
Experimental	3.79	.58		

The last dimension, AIL, produced deviating findings compared to the other sub-dimensions and the total scores of the post-test of the groups. The analysis found a statistically significant difference between the control group and the higher-level English experimental group; the latter outperformed the control group in terms of the scores in the AIL sub-component. Similar to the other tests, Levene's test indicated homogeneity of variances, $F(1,34)=.564$, $p=.45$. Table 23 presents the findings for the sub-dimension AIL.

Table 23

Analysis of the Post-Test Scores of the Control and Experimental Groups in the AIL Sub-Dimension

	Mean	S. D	F	Sig.
Control	3.12	.49	7.96	.00
Experimental	3.88	.60		

Taken together, the post-test scores comparison of the control and higher-level English experimental group did not reveal a notable impact of the instruction in the post-test as a whole and in MTA, PGS, and SUE sub-dimensions. The findings of the AIL sub-dimension, on the other hand, suggested that the higher-level experimental group received higher scores compared to the control group.

4.1.2.3. Post-test results of the experimental groups. The post-test scores of the lower-level English and higher-level English experimental groups were also compared through one-way ANCOVA, which controlled the pre-test scores. The comparisons were conducted on five levels: the first analysis was performed for the whole questionnaire, and the other comparisons were made for the four sub-dimensions of the questionnaire, which were MTA, PGS, SUE, and AIL.

Regarding the total scores from the post-test of the groups, Levene's test for homogeneity of variances was not significant, which indicated equal variances, $F(1,34)=.07$, $p=.79$. The analysis revealed that there was a statistically significant difference between the total post-test scores of the lower and higher-level English experimental groups. It was observed in the data that the instruction yielded greater effects in the higher-level experimental group, considering the non-significant difference between the pre-test scores of the group, $F(1,33)=4.62$, $p=.03$. Table 24 presents the results of the analysis.

Table 24

Analysis of the Post-Test Scores of Lower- and Higher-Level English Experimental Groups

		Mean	S. D	F	Sig.
Lower-level Experimental	English	3.49	.30	4.62	.03
Higher-level Experimental	English	3.86	.47		

The scores from the post-test were also compared within the sub-dimensions of the questionnaire. To start with, the results from the MTA sub-dimension suggested no significant difference between the scores of the experimental groups. In the analysis, the assumption of equal variances was met; Levene's test for homogeneity of variances was not significant, $F(1,34)=.001$, $p=.97$. The instruction did not lead to any significant changes in the means of the experimental groups as for the MTA sub-dimension. Table 25 displays the summary of the analysis.

Table 25

Analysis of the Post-Test Scores of Lower- and Higher-Level English Experimental Groups in the MTA Sub-Dimension

	Mean	S. D	F	Sig.
Lower-level English Experimental	3.80	.45	2.89	.09
Higher-level English Experimental	4.14	.46		

Similar to the MTA sub-dimension, the analysis of the data did not demonstrate any significant impact of the instruction in the self-regulated learning skills of the participants in terms of the PGS sub-dimension. With equal variances, $F(1,34)=.00$, $p=.99$,

the mean difference of the experimental groups was not significant, $F(1,33)=.77, p=.38$. Table 26 shows the details of the analysis.

Table 26

Analysis of the Post-Test Scores of Lower- and Higher-Level English Experimental Groups in the PGS Sub-Dimension

	Mean	S. D	F	Sig.
Lower-level English Experimental	3.45	.52	.77	.38
Higher-level English Experimental	3.79	.78		

As for the SUE sub-dimension, the homogeneity assumption for the groups was fulfilled in the analysis, $F(1,34)=.16, p=.69$. The difference between the post-test scores of the participants in the SUE sub-dimension was not significant, after controlling the pre-test effect, $F(1,33)=3.35, p=.07$. Table 27 displays the mean scores, standard deviation, and significance value regarding the SUE sub-dimension of the experimental groups.

Table 27

Analysis of the Post-Test Scores of Lower- and Higher-Level English Experimental Groups in the SUE Sub-Dimension

	Mean	S. D	F	Sig.
Lower-level English Experimental	3.48	.40	3.35	.07
Higher-level English Experimental	3.79	.58		

Finally, the scores of the lower- and higher-level English experimental groups in the AIL sub-dimension of the post-test were examined. The assumptions of variance were

met according to the results of Levene's test $F(1,34)=1.36$, $p=.25$. The instruction, however, was not found to impact the self-regulated learning skills scores of the experimental groups in the AIL sub-dimension, $F(1,33)=3.79$, $p=.06$. Table 28 shows the details of the analysis.

Table 28

Analysis of the Post-Test Scores of Lower- and Higher-Level English Experimental Groups in the AIL Sub-Dimension

		Mean	S. D	F	Sig.
Lower-level Experimental	English	3.27	.55	3.79	.06
Higher-level Experimental	English	3.88	.60		

Overall, the comparison of the post-test scores of the experimental group indicated that student participants in the higher-level English experimental group benefitted more from the self-regulated learning skills integrated L2 instruction. Although the sub-dimension scores did not differ significantly, the overall scores from the post-test indicated the higher-level English experimental group surpassed the lower-level English experimental group in the self-regulated learning skills scale.

4.1.3 Results of the higher-level English experimental group in the delayed post-test. A delayed post-test was administered to the experimental higher-level English group in order to detect the potential effects of the instruction in the long-term. The delayed post-test was given to the participants six months after the post-test. The descriptive statistics for the delayed post-test are presented in Table 29.

Table 29

Descriptive Statistics for the Delayed Post-Test

	Statistic	Std. Error
Mean	3.87	.12
95% Confidence Interval for Mean	Lower Bound	3.61
	Upper Bound	4.13
5% Trimmed Mean	3.86	
Median	3.75	
Variance	.25	
Std. Deviation	.50	
Minimum	3.12	
Maximum	4.80	
Range	1.68	
Interquartile Range	.73	
Skewness	.696	.55
Kurtosis	-.37	1.06

As shown in Table 29, the mean of the post-test is 3.87, which is higher than the mean of the pre-test and post-test. The minimum score was 3.12, and the maximum score was 4.80 in the delayed post-test. The Skewness and Kurtosis values were .696 and -.37, respectively, which are between ± 1 and show that the data were normally distributed (Huck, 2012). The value of Shapiro-Wilk tests was not significant, $p=.07$. Due to the Skewness and Kurtosis values falling within the range of ± 1 and the non-significant value of the Shapiro-Wilk normality test, the repeated-measures ANOVA was conducted to analyse whether there were statistically significant differences between the pre-test, post-test, and delayed post-test scores of the experimental higher-level English group regarding their self-regulated learning skills. The means and standard deviations of the scores from the repeated-measures ANOVA are presented in Table 30.

Table 30

Descriptive Statistics for the Self-Regulated Learning Skills of the Experimental Higher-Level English Group in Pre-Test, Post-Test, and Delayed Post-Test

Higher-level English Group	Mean	SD
Pre-test	3.80	.51
Post-test	3.86	.47
Delayed Post-test	3.87	.50

Mauchly's test indicated that the assumption of sphericity was met, $X^2(2)=3.23$, $p=.19$. The results of the repeated-measures ANOVA revealed that there were no significant differences between the pre-test, post-test, and delayed post-test scores of the experimental higher-level English group as for their self-regulated learning skills prior to the training, immediately after the training, and six months after the training, $F(2), (32)=.61$, $p=.54$, partial $\eta^2=.03$.

The repeated-measures ANOVA was also performed for the sub-dimensions of the self-regulated learning skills questionnaire. As it is also seen in Table X, the self-regulated learning skills scores of the experimental higher-level English group did not differ significantly in the sub-dimensions before the training, immediately after the training, and six months after the training. Table 31 presents the results of the repeated-measures ANOVA in the sub-dimensions.

Table 31

The Results of the Repeated-Measures ANOVA in the Sub-Dimensions

	SS	df	MS	F	p	η^2
Motivation and Taking Action for Learning						
Time	.10	2	.05	.83	.44	.05
Error	2.04	32	.06			
Planning and Goal Setting						
Time	.70	2	.35	2.56	.09	.13
Error	4.36	32	.13			
Strategy Use and Evaluation						
Time	.12	2	.06	.85	.43	.05
Error	2.36	32	.07			
Autonomy in Learning						
Time	.12	2	.06	.85	.43	.05
Error	2.36	32	.07			

Note: Time refers to the measurement at pre-test, post-test, and delayed post-test.

Note 2: The assumption of sphericity was met in all tests.

4.2. Findings Related to Research Question 2

In order to answer the second research question which aimed to investigate the extent and ways of self-regulated learning skills employment, the transcribed data from the interviews with the student participants and their journals were reviewed to find out how frequently and in what ways the sub-components of self-regulated learning skills which were covered during the implementation were utilised by the student participants. To do data analysis, deductive content analysis was conducted on MAXQDA. Deductive content analysis is defined as a method in which written materials are classified based on specific criteria to make meaning. Counting the frequency and categorising the data in the transcriptions is one of the common ways of applying content analysis (Dinçer, 2018). In line with this, the data was reviewed and then analysed deductively under four themes, which were motivation and taking action, goal setting and planning, strategy use and evaluation, and autonomy in learning. The journals and interviews were reviewed by the researcher and one of her colleagues to ensure the categories included relevant and consistent information from the data.

The data from the weekly journals and interviews of the student participants revealed varying frequencies for the corresponding themes. 786 instances of sub-components of self-regulated learning skills were identified. It was observed that strategy use and evaluation was the most frequent sub-component, whereas autonomy in learning was the least observed. Table 32 presents the frequency counts of four sub-components. Table 32 is followed by the exemplars from the data belonging to various student participants.

Table 32

Frequency Registers of Self-Regulated Learning Sub-Components: SUE, MTA, PGS, and AIL

Sub-Component	Frequency Register
Strategy Use and Evaluation	516
Motivation and Taking Action	137
Planning and Goal Setting	97
Autonomy in Learning	35

4.2.1 Strategy use and evaluation. The student participants frequently addressed their strategies in language learning and made decisions regarding the effectiveness of these strategies through self-evaluation. It was observed that most of the students first tried their prior knowledge and experiences while learning and decided to keep or abandon the strategy according to their goal achievements. If the strategy proved to be helpful in their language learning process, they continued to use that particular strategy. However, if the strategy did not help them reach a certain goal, the students realized that although that strategy was effective in other learning goals, they had to quit it and seek other strategies or adapt that strategy so that it could be used more effectively. Regarding this, one of the student participants made the following remarks:

Exposing myself to the material is of great importance to me. While studying for the university entrance exams, I wrote the important parts in notebooks and on paper and looked at them continuously as if I had to see them everywhere. In the language learning process, I have turned everything into English; I watch series with English subtitles, I listen to podcasts in English, and I do not listen to Turkish music anymore. I expose myself to English for my learning purposes, and now I can understand almost everything in the lyrics, and I feel proud of myself.

As is clear from the remarks, the student attempted to use a strategy she had previously employed in past learning experiences and mentioned that it also proved beneficial in the language learning process. By exposure, she could improve her comprehension of the target language, and she felt a sense of accomplishment.

Some of the students abandoned their previously used strategies as they came to the understanding that they did not prove effective. One of the students explained this change of mind in his strategy use by the following comments:

While preparing for the university entrance exam, I spent a long time on a topic. After focusing that much, I could learn the topic or solve difficult math problems. In the first term of English preparation, I did the same. However, I thought that this was not rational because there might be easier ways to learn, but I exerted too much effort and time.

In their language learning process, the student participants searched for various tools and sources in order to grasp a better understanding of the target language. The Internet and online applications emerged as the most frequent tools for language learning. YouTube videos were the primary source of information for them. Some students mentioned that they followed channels whose primary focus was teaching English, and in order to learn a topic, they watched videos from several channels to learn different dimensions of the topic. One of the students explained her study routine to learn a topic:

I review all YouTube channels to see how different instructors teach the topic I want to learn. I watch all videos relating to the topic and sometimes take notes. After I assure myself that I totally understand it, I start doing exercises given by those channels or on different websites.

Apart from YouTube, some other applications and websites were employed by the students. They mentioned that they could create puzzles online, review dictionaries and examples for unknown words, and utilize online vocabulary books such as Tureng Notebook for their vocabulary studies. For listening, the students stated that they listened to podcasts and watched series with English subtitles online. In addition, they mentioned that they followed Instagram accounts on which they could see real-life dialogues and expressions. For writing, they received feedback from some applications such as ‘The Ginger Essay Checker’, and they practised their speaking via ‘Cambly, Smalltalk2me and Elsa Speak’. It was clear in the data that the Internet and some applications were a great source of language learning.

As for more traditional ways, taking notes was the most common response from the student participants. While some students wrote down the main ideas or the most

important sections or words, other students took very detailed notes by writing each and every piece of the topic or all words that were new to them. Mete, one of the students in the higher-level English group, expressed his habit of note-taking as a learning technique.

I am a note-taker. Firstly, I write down every detail of the topic that I attempt to learn. I even keep a record of the page numbers to find the sources of the notes easily. I like keeping notes because I can hold a record of my previous learning, and when I forget or miss something, I can go back and review my notes, which is very valuable for me. Also, I can change the form of my notes; sometimes, I can write in the form of prose or draw diagrams for some words.

Seeking help from a more knowledgeable person was a common learning strategy employed by the student participant. The students sought help from their teachers, peers, or other people who were considered experienced or successful in language learning. Begüm, for example, stated that her first point of reference for seeking help was her teachers. She explained her rationale with the following comments:

I learn subjects at school by carefully listening to my teachers. They can explain things in detail. If I watch videos relating to the subject matter, they generally focus on the shortcuts, and I miss the details. If there are easier ways to learn, I want to learn them after I learn everything in detail. Thus, if I can access it, my first choice is to contact the teachers.

Some students asserted that the person from whom they sought help might depend on how much they knew about the subject matter. If the subject matter was totally new to them, they remarked that they would refer to teachers if they needed help. One of the students in the experimental higher-level English group stated that:

If I do not have any background knowledge about the subject matter, I prefer to listen to it from my own teacher or a teacher on YouTube. Yet, if I have the background or some prior information, any kind of source or notes of other people will help me. It is about using time efficiently.

Some other students mentioned that they sought assistance from their peers in their language learning process. They indicated that peers generally explained the subject matter in a simpler way and might present some tricks or shortcuts relating to the subject matter. In addition, they highlighted that these peers were expected to be more

knowledgeable and supportive throughout the process. Irmak elaborated on the issue by saying:

I would prefer a peer to a teacher with whom I have a more formal relationship. I can discuss the plans and find solutions with my friend, which will make the process more effective and make me feel better. Cooperating with a friend who is more knowledgeable contributes to the learning process and increases motivation.

It was clear from the comments of the student participants that a formal relationship with teachers and the thought that teachers might have judgmental comments affected their perspectives on the person they sought assistance. Speaking practices, for example, were preferred to be realised with their peers in peer or group work. The reason why they opted for their peers was that they assumed that teachers expected a perfect performance knowing all the rules of the language.

Lastly, more experienced or successful people in language learning might be referred to for help by the student participants. The students believed that a person who successfully acquired a foreign language could be an efficient source of help by giving useful suggestions. Upon being asked what he did when he had difficulty in language learning, one of the students mentioned the people he turned to for help by the following remarks:

I consult my sister because she goes to a private school and she is good at English. Also, I have people around me who can give me suggestions. One of them told me that I could study vocabulary through word cards. I write the words on the cards and make sentences with them. If I can use them in sentences and remember their meaning, I understand that I have learnt them. I can say that it works.

In conclusion, it was observed in the data that the student participants employed common language learning strategies and techniques to improve their English. Among these strategies and techniques, immersing themselves in the target language through various ways, using platforms and applications such as YouTube, from more traditional techniques, note-taking, and seeking help from teachers, peers, or more experienced individuals emerged as the most frequently adopted practices in the interviews and journals of the students. Apart from the most common strategies and techniques mentioned, below is a list of other strategies and techniques employed by the students in

order to develop their language skills. These strategies and techniques were collected through an examination of the weekly journals and interviews, and were categorized according to language skills.

Table 33

Other Language Learning Strategies and Techniques Employed by the Students

Speaking	• Internal speech in the target language, • Reading aloud, • Communicating with natives, • Developing a mindset for thinking in English, • Speaking with the peers in English, • Playing computer games, • Making presentations, • Speaking with tourists in Istanbul, • Talking to themselves in front of a mirror, • Translation
Listening	• Turning off the sub-titles, • Listening to soundtracks for numbers, • Focusing on keywords to grasp the meaning
Writing	• Writing essays, • Writing journals, • Asking for feedback, • Analysing common and frequent mistakes
Reading	• Reading articles, • Making research online in English, • Reading a book above their current level, • Attending the class regularly, • Reading the news, • Reading aloud
Vocabulary	• Memorizing sample sentences with the target words, • Studying the roots of the words, • Studying/revising regularly
Grammar	• Explaining the subject to a peer, • Integrating it into the daily life, • Studying difficult subject matters first, • Listening to explanations in English, not in Turkish

The student participants also commented on their mindsets in relation to their self-evaluation process, besides mentioning their language learning strategies and techniques. Self-evaluation was observed to be realised in all stages of language learning, namely at the beginning of the process, during the process, and at the end of the process. The student participants evaluated their prior knowledge before they commenced learning in order to choose the best learning strategies and techniques for themselves. During the process, they evaluated their use of strategies and techniques, and if these strategies and techniques did not prove to be efficient, they attempted to employ others. At the end of the process and when their studies were completed, they tended to evaluate their performance in various ways. These ways of evaluation were observed to depend on students' profiles; while some of them were more reliant on assessment instruments such as exams or teacher feedback, the others were detected to utilise more intrinsic self-evaluation systems. The responses in the interviews and entries in the weekly journals revealed that the student participants conduct self-evaluation in four main ways: teachers' feedback, performance on the exams and written materials such as worksheets, performance on oral tasks and in real life, and intrinsic evaluations based on personal achievement criteria.

Referring to teachers' feedback for self-evaluation was mentioned by three students, which indicated that it was an infrequent action for self-evaluation. Upon being asked how they understood that they could learn or how they evaluated that their strategies and techniques were efficient, three students stated that they consulted their teachers to determine whether they were on the right track. As older students whose ages varied from 17 to 22, depending on teachers' feedback for self-evaluation was less likely to be expected.

Performance on the exams and written materials, on the other hand, was the main indicator for the student participants regarding their learning. One of the students asserted that "For me, exams and activities we covered in the classroom are evaluation criteria." Similarly, another student stated that he considered exams an important way of evaluation and the results from the exam were the main indicators of the efficiency of our studies.

The student participants also considered their performance on oral tasks and in real life a criterion for self-evaluation. They highlighted that if they could employ the words that they had just learned or use a grammatical structure in their oral performances or in real life, in a conversation with a foreign friend, for example, they inferred that they could achieve their learning goal. One of the students made the following comment regarding this:

My way of understanding the efficiency of my learning is through my social life. For example, I have difficulty in speaking, and if I can convey my message and express myself comfortably, then I can say that my problem is solved.

In a similar vein, another student, Kardelen, indicated that she realized her strategy or technique did not work and that she could not learn effectively if she could not use it in her real life. Her self-evaluation method was to be able to use it and integrate it into real life.

In addition to Kardelen, one of the students considered his speaking performance as self-evaluation criteria. “I understand that my speaking is not fluent, and I feel something does not go as I expected, and I can not order the words correctly according to the grammar structure.” At this point, he stated that he realized he should practice more and find more effective learning strategies and techniques.

Lastly, in the data, interesting intrinsic evaluations based on personal achievement criteria emerged. Some of the students developed unexpected learning self-evaluation criteria. To exemplify, Begüm gave an interesting response regarding her self-evaluation method with the following remarks:

If my headache starts while taking notes, it indicates that I am not on the right track. I have a personalized way of note-taking and summarizing. If I fail to understand my summary or notes while writing and develop a headache, I realize that my learning method is ineffective. In such a case, I change my approach and try to rewrite my summary with shorter and more crucial points.

Developing headaches as an indication of poor understanding can be regarded as a rare way of self-evaluation. Considering that Begüm was one of the most successful students in the class and a student of medicine, her ways of self-evaluation proved to be

efficient. It was clear that although her self-evaluation method was not common, it worked for her.

Another notable comment which was worth mentioning was made by Umay. Her method of self-evaluation made it particularly distinctive in that her self-evaluation process was completely internal, and her self-evaluative ideas were not affected by any external assessment instruments and methods. If Umay believed that she had learned something, then any external indicator, such as exams, would become insignificant to her. Regarding this, she made the following remarks:

After studying, I take the exams, written or oral. I am sure that I know the subject matter. However, during the exams, there are some factors which I can not manage, such as anxiety, invigilators, illness, or even weather temperature. It does not mean that I do not know the subject matter if my performance is not high in the exams. Without any external pressure, if I believe that I know it, I know it. The exams are not criteria to evaluate myself.

The student participants reported their use of both internal and external self-evaluation instruments in various degrees and situations. Yet, unlike others, Umay asserted that she only depended on her internal mechanism. In this sense, it can be regarded that she had a strong internal self-evaluation mechanism.

4.2.2 Motivation and taking action. The data from the interviews and journals revealed 137 instances regarding motivation and taking action. These 137 instances were gathered around several issues which the researcher instructor raised through prompts in the journals and questions in the interviews. The motives to learn a foreign language, the situations when they found language learning more difficult and easier, and the ways they motivated themselves and took action were the issues mentioned by the student participants.

Upon being asked how they were motivated to learn in their language learning process, most of the students stated primarily that they would need English in the future, especially in their professional lives. Considering English as a lingua franca and some students' plans to live and work abroad after graduation, most of the students felt the urge to master their foreign language skills. In relation to this issue, one of the students asserted,

"It was a remarkable decision for me to learn English because I am an engineer and definitely, I should know this language. It is also the suggestion of my acquaintances who are also engineers." Another student also explained his rationale behind learning English by stating, "Despite the obstacles, I stay motivated by the ongoing journey of learning a language. Although there are moments of frustration and doubt, I remind myself of the significant value that English proficiency will bring in the long run." Another motivation for the student participants to learn a foreign language was the English content they encountered in their daily lives. When the student participants watched videos, played games, and researched various issues, from science to shopping and even magazine news, they recognized that most of the online content was created in English. Hence, they necessitated to understand the content, which was in English. To exemplify, one of the students pointed out that when she encountered a video in English and could not understand it, she felt upset at first, but then she became motivated to improve her English to comprehend such content. Moreover, the student participants thought that up-to-date knowledge regarding their research area was generally provided in English, and they could obtain this up-to-date information from primary sources of information such as scientific journals, news, and documentaries. They could conduct research on the topics about which they wondered. In relation to this, one of the students stated that:

Once, I was reading a book, and it mentioned that some countries built statues of Atatürk. I became curious about the countries where we could see Atatürk's statues, and I investigated these countries and in which other countries we could encounter Atatürk's statues. That was all about my curiosity.

Regarding situations when language learning was difficult for the student participants, most of them shared common ideas. According to the participating students, most students struggled to learn topics which relied on rote memorisation. The students stated that they could not use their logical reasoning for such topics, and their motivation tended to decrease while learning them. When asked to exemplify these topics, most of the students reported gerunds/ infinitives, phrasal verbs, and if-conditionals. Another learning difficulty and consequent low motivation resulted from the differences between the students' first language, which was Turkish, and the foreign language that they would like to acquire. The most frequently mentioned topic was the Perfect Tenses, which do not

have direct equivalents in Turkish. One of the students made the following remarks in relation to this issue:

The more correspondences there are between Turkish and English, the easier it is for me to understand a topic. For example, the Present Perfect Continuous does not have direct correspondence, and these tenses are challenging for me. However, the Present Continuous Tense and the Present Tense are easier to learn because they also exist in Turkish.

While most students displayed decisive behaviour and were determined to take action to overcome the difficulties they encountered, very few students quit learning or stated they were not motivated to learn. One student who found speaking challenging noted down the striking remarks in his journal:

Understanding the importance of improving my speaking skills, I am really eager to find ways to create a more immersive environment where I can have regular conversations. Despite the obstacles, I stay motivated by the ongoing journey of learning a language. Although there are moments of frustration and doubt, I remind myself of the significant value that English proficiency will bring in the long run. In conclusion, facing obstacles in language learning is a natural part of the process. What matters most is the determination to keep going and continually strive for improvement. I am committed to advancing along this path, and I appreciate your guidance and support throughout this endeavour.

His quotes demonstrated that he was motivated to take action to develop his weaker skills in the foreign language, although he sometimes felt desperate. Considering the merits provided by fluency in English, he seemed decisive to advance in English.

Another student also mentioned her learning difficulty and how she was motivated to tackle it by making the following points:

This term, I encountered a deeply learning difficulty in speaking English fluently. While I've been stably improving my vocabulary and grammar, expressing myself has proven to be quite challenging. Formulating sentences on the spot and maintaining a conversation without doubt has been tough. At first, I felt frustrated and self-conscious about my speaking abilities. Worried about making mistakes

and being misunderstood by others. This led to feelings of inability and unwillingness to engage in conversations in English. To overcome this difficulty, I took proactive steps. Despite the firstly challenges, I remain motivated to overcome my speaking difficulties in language learning. Each day, I remind myself of the progress I've made and the goals I aim to achieve. I believe that with claim, unselfishness and continued practice, I will become more fluent and confident in speak English.

As stated above, very few students, on the other hand, complained about their inefficient studying methods or distractive habits. Their lack of motivation might have refrained them from taking action. Mertcan explained his motivational concerns with the following entry in his journal:

I need to memorize these words, but I postpone them all the time. I want to study, but I can't. This is my problem. I want to get through it. I always suffer from this problem. Sometimes, I am doing fine, but then I can't take action. This is some kind of loop, I guess.

Although Mertcan was well aware of his distractive habits, he stated that he could not take action. Procrastination was his concern which he wished to overcome. Another student also mentioned his fluctuating level of motivation to rectify challenges with the following entry:

I had difficulty distinguishing between stative verbs and action verbs. I studied as many sentences as I could and looked at the examples in the book and learned as much as I could. Actually, I am someone who has fun solving challenges, but it can be frustrating at times, but this issue was one of the fun issues for me to solve. Such difficulties are actually like steps to be overcome in language learning, but I may not always be motivated for this.

As was indicated in the entry, this student endeavored to resolve challenges, but sometimes his motivation level might be low, and he might not feel willing to resolve them.

Finally, some students expressed that some of the activities in the instruction, which were developed within the scope of the current study, facilitated their learning

process, especially when they felt hopeless or unmotivated. Regarding this, one of the student participants expressed how the training helped her with her motivation:

To be honest, I had lost my motivation recently. But then, I remembered all the things why I am doing this and why I am here right now, and what my goal was. After your presentation, I updated my goals according to your presentation.

The student participants highlighted that the instruction helped them with their goals when they lost their focus, concentration, and motivation. From that perspective, the training might be considered effective in making them take action.

As for the situations when the student participants exhibited higher motivation, they emphasized two main points: learning the language in a classroom environment, preferably interactive, and possessing background information relating to the topic they were trying to learn. To start with, the students highlighted the importance of learning English in a classroom environment rather than learning individually. They believed that language learning was interactive in nature. Hence, learning a foreign language individually would not produce effective results. Especially interactive classroom environments were thought to contribute to prolonged motivation. Regarding this issue, one of the students expressed her opinions with the following comments:

Interactivity and learning in the classroom environment with the presence of the teacher make learning easier and more effective for me. Applying the rules of the language in speaking, group works, namely being in interaction with others. That will enhance my learning. However, in the oppressive learning environment, I feel stressed, and I do not want to interact. I remember my high school English teacher; she got so angry when we mispronounced words or made grammar mistakes that no one wanted to attend the class. That is a kind of trauma for me from my high school days.

It was clear from the comments above that an interactive and distressing classroom environment would motivate students for language learning. Another student also focused on the importance of learning a language in a learning community. She explained her reasoning with the following comment in the interview:

I think it is important to be with people who are gathered around similar goals, like our English preparatory class. We, eighteen people, have been trying to learn English in the same classroom for eight to nine months, and we are always interacting. It is more effective than our high school years because, as I said, interacting with people about 20 hours a week for the same purpose makes a difference.

Possessing background information was also indicated as one of the factors which contributed to willingness to learn and higher motivation. The student participants stated that if they had some idea relating to the subject matter, then they would feel more confident in learning. This background knowledge might include the vocabulary that they encountered previously, a grammatical subject, or the topic of the reading or writing activity in which they were interested. Regarding vocabulary, some students asserted that the more words they could understand in an activity, the easier and the more their learning was facilitated. In relation to grammatical subjects, one of the students gave an example of his incremental way of learning:

Learning is easier for me when I know a structure, let's say, Future Tense. Then, we need to learn the Future Continuous Tense. Actually, I build new knowledge on the knowledge I already know. In this way, I can easily understand and feel eager to learn.

Lastly, special interest and previous engagement in the topic of activities led to higher motivation. Many students emphasized that they would be eager to learn if the subject matter and the topic were in their field of interest. One student expressed how her curiosity triggered her motivation for language learning: "Sometimes, I want to learn something not due to the school, but because that topic catches my attention, I watch a video relating to it, for example." She continued to elaborate on this in her journal entry:

Since English is an universal language, whenever I wonder something, it can be about skincare, physics, biology, or even a gardening thing, I search it up in English. This way, I reach more sources, and without even realizing, that improves my skills.

In addition to special interest, previous engagement was also stated to be an important determinant in their motivation to learn. One of the students indicated, “If the topic is something I have learned before or I have been familiar with, I tend to understand it easier.” On the other hand, unfamiliarity with a subject made learning more difficult and decreased their motivation for learning. One of the student participants expressed her feelings:

My foreign language education at high school was high quality and I can say that I have some background. However, there are some topics which I had not encountered, so it was very difficult for me to learn them. I remember I experienced a lot of difficulties in this respect.

4.2.3 Planning and goal-setting. In the deductive content analysis, the data revealed 97 instances of the planning and goal-setting sub-skill of self-regulated learning skills. Regarding the planning aspect of the sub-skill, the student participants shared common ways of planning their language learning studies. In relation to the goal-setting aspect, although some variations were observed, most of the students stated that they aimed to develop their language skills.

To start with, planning was mentioned as the first thing that the student participants did before they started studying. Most of the students shared that they first analyzed the content they were supposed to study. This analysis included whether they had prior knowledge of the topic, the difficulty level, and how long it would take to learn it. Accordingly, they outlined their plans and attempted to implement them. Regarding planning, one of the students in the experimental lower-level English group shared her routine with the following comments in the interview:

First, I examine the content I want to learn as a whole. I consider its sub-titles and their difficulties. I write them down and assign time periods according to their load. I feel that I have to do this planning and comply with it. This planning is a must for me, like homework.

As was indicated by the student, she felt the urge to make plans and take action accordingly. They considered planning as an indispensable part of their study routine. In

a similar vein, Eylül from the higher-level English group explained her decision-making process in her planning:

I am very good at planning and can plan my learning. Before studying, I identify what I need to learn and decide how long I need to spend on which topics. Later on, I ask questions, such as: Can I study the subject matter as a whole? Is it too extensive, and do I need to divide it into parts? After considering these issues, I make my plans.

It was clear, both in the interviews and entries in the journals, that the student participants had developed certain methods for planning. Since the participants were English preparatory students and were respectively older, they might be experienced in planning their studies. In addition, due to the same reasons, not many variations regarding planning emerged in the data, most of the students asserted comments similar to the quotes provided above. Only one student stated explicitly that she did not prefer making plans for her studies because when she could not comply with the planning, she felt stressed. Another concern regarding the planning was that the student participants generally mentioned their short-term planning; however, there were several signs of long-term planning in the data. Although most of the students referred to their planning for exams or the current term, several students mentioned their long-term plans to develop their language skills in general. To exemplify, Alp elaborated on his planning to use various strategies for each skill with the following comment:

In the current term, my primary aim in language learning is to enhance my overall proficiency in English across various skills, including writing, speaking, listening, reading, and grammar. To achieve this, I have thought about strategies separately to develop them. My focus on writing is a regular practice through journaling and essays. I plan to diversify my writing genres. In addition, I will receive constructive feedback from my teachers and learn about different writing styles. In terms of conversation, I aim to practice with my friends in my everyday life. This real-time interaction will help me improve my fluent speaking, pronunciation and speech skills. For listening, I intend to immerse myself in videos and movies. This will not only expose me to diverse accents and vocabulary. It will also improve my

ability to understand spoken English at various speeds. As for reading, I plan to explore a variety of materials, from articles and books to newspapers and online content. This will contribute to improving my vocabulary.

As for goal-setting, the student participants set various goals as an output of their language learning process. In response to a prompt in one of the weekly journals questioning their language learning goals, they stated various goals which ranged from specific goals to more general goals or from short-term goals to long-term goals. Table 34 presents goal samples of the list of the student participants which were written in their journals.

Table 34

Samples of the Goals Written in the Weekly Journals

Broad goals	· My goal is to finish the semester successfully. · My goal is to improve the English level in this end of period.
Skill-specific goals	· My aim for this term in my language learning process is to improve my English skills in speaking. · My first aim for learning a language is developing my speaking skills because I do not feel good enough to speak English. Another aim of mine is to improve my writing.
Objective-specific goals	· My first goal is to be able to easily communicate with tourists. My second goal is to be able to order, ask for addresses and shop when I go abroad. · To be able to watch movies and TV series in English without Turkish subtitles.

As is evident in the list, the student participants set several goals; while some were more specific and short-term, others were more general and related to the final achievement level. In addition, some students referred to a specific language skill, mostly speaking and writing, because these skills were addressed as the ones which caused difficulties. Hence, these students developed plans to improve these skills.

4.2.4 Autonomy in learning. Autonomy in learning was the last self-regulated learning skill included in deductive content analysis. The data revealed 35 instances regarding this sub-skill. The student participants generally discussed their preference for learning with a guide or without a guide. In addition, statements in the interviews or entries in the journals about the preference for working in groups were considered in the sub-skill, autonomy in learning.

To start with, it was noticeable in the data that many students demonstrated a tendency toward learning with a guide. Especially when they were learning something for the first time, they asserted that they needed a more knowledgeable person who was a teacher or sometimes a peer. In relation to this, Eylül made the following remarks:

In order for me to learn something, somebody should explain it from scratch. This person may be a teacher or a friend who knows the topic well. However, if it is something that I partly know, I can learn it myself without any help from a teacher but studying more.

Besides a source of information, some students might need a guide due to the fact that they could not plan their studies. They expected guides to create a framework for their studies, plan a timetable, and sometimes prepare a to-do list. These students might be considered to lack planning skills or self-discipline. Regarding this, one of the student participants self-evaluated herself and put forward explicitly why she needed a guide in her learning process:

I am not a self-disciplined person. I regretted not going to a university preparatory course, for example. This is not because I can not learn myself. However, it is for planning what to do between the dates. At school, we have an order; we have exams and homework. According to this, the study plan is created. Although I can learn by myself, I think I need to be in a group to have a general framework which shapes what and when I will study.

As the student indicated, a guide might also be viewed as a planner or a schedule. Obviously, the student struggled to plan her studies and needed support in that sense.

Some students, on the other hand, believed in the importance of studying in a group while learning a language. They indicated that learning a language was interactive in

nature, and communication was an indispensable part of language learning. Regarding this, one of the students made the following remarks:

It is easier to study as a group while learning a language. Language is a way of communication, you are supposed to speak to someone and understand what the other is telling you. I prefer studying in a group and classroom environment to realise this communication.

In a similar vein, another student emphasised the advantages of studying a foreign language in a group. Expressing the need to interact with others in language learning, the student participant also highlighted the joy he had during peer work and group work activities.

An inclination towards independent study in language learning was also evident in some of the student participants' interviews and journals. Rather than working in a group, several students asserted that they preferred learning alone. The main reason behind this preference was a lower concentration in group work due to the classroom environment. In relation to this, one of the participant students indicated that:

I do not know whether you will be surprised, but I prefer studying alone because if there is a teacher or classroom environment, I can distract myself and my friends with my jokes and perspectives. Thus, it is better for me to study alone. I like learning alone as I can concentrate better.

Learning outside the classroom without a teacher or a more knowledgeable friend was the last issue raised in the interviews and journals. The student participants referred to YouTube as the main source of information when they tried to learn themselves. The aims of using YouTube varied according to the needs of the students. To exemplify, while some students resorted to YouTube for their preparatory work for the classes, others made use of videos from native speakers or excerpts from films. In relation to this, one of the students asserted, "I generally turn to YouTube, but it is not just for grammar. There are some YouTube channels which broadcast parts from the movies. I believe that they are more long-lasting, so I choose such videos and watch them."

As the results suggested, many instances of strategy use and evaluation, motivation and taking action, planning and goal setting, and autonomy in learning emerged in the

data. The instances of strategy use and evaluation surpassed the other three sub-skills in the frequency count. The data were considered to provide a lot of samples regarding the strategies employed by the student participants in the language learning process. In addition, the data revealed how the students made their plans, set goals, and also put their motives for language learning and the actions they took in order to enhance their learning outputs. In addition, it was evident in the data that the student participants mostly preferred guided learning in a group, although several students tended to learn alone due to concentration reasons.

Another important deduction from the data was related to increased self-awareness and subsequent self-evaluation, which might have resulted from the self-regulated learning integrated L2 instruction. It was observed that the journals included more reflective and self-evaluative comments towards the end of the term. To exemplify, it was seen that the student participants could opt for strategies which were more effective after testing and evaluating various strategies. The self-regulated learning integrated L2 instruction might lead the students to ask self-reflective questions. Thanks to the instructions, group work, and discussions throughout the training, they might have an opportunity to engage with different strategies. In addition, it was inferred that the student participants were motivated to overcome the difficulties in their language learning processes by self-regulated learning skills. Upon being asked how they would overcome a difficulty, only two students responded hesitantly and stated that they did not have an idea about how to overcome the difficulty. Most of the students were well aware of the action they should take again after comprehensive self-assessment. The habits of successful language learners were also identified by the student participants, and it was evident in the data that the students struggled to quit learning-inhibiting habits such as procrastination. Some students indicated that they could better manage their procrastination after the instruction.

In conclusion, the data suggested improvement in self-assessment and self-evaluation of the student participants. This self-reflection contributed to their search for new methods, and all discussions, group work, and instructions helped them find and employ efficient methods. Thanks to this self-reflective stage, the students had a chance

to try out strategies, either previously used or novel ones, and selected better strategies for their language learning processes, focused on their goals, and sometimes modified them.

4.3. Findings Related to Research Question 3

In this mixed-method design study, the third research question sought to reveal the perspectives of the instructors regarding the self-regulated learning integrated L2 instruction and the self-regulated learning skills of the student participants. An online dialogic interview was held with the instructor, which lasted 67 minutes. The interview was recorded on Microsoft Teams, and it was transcribed automatically by this software. After the automatic transcription, it was checked two times by the researcher. The analysis of the transcribed data was conducted on MAXQDA 24. Thematic analysis was utilised through the scheme postulated by Braun and Clarke (2006). The emerging themes, codes, and their frequencies are presented in Table 35.

Table 35

The Emerging Themes, Codes, and Frequencies in the Interview with Instructions

Themes	Codes	Frequency of the Codes
Implementation	use of the instruction	7
	flexibility and adaptation	5
	the effective aspects of the instruction	3
	the aspects needing to be developed	5
	the role of motivation	7
Benefits of the instruction	benefits for language learners	13
	benefits for instructors	3
Implications	future uses of the instruction	12
	teacher training on SRL	7
	instructor effects	8

Thematic analysis of the dialogic interview revealed a total of 70 codes with three main themes: implementation (27 codes), implications (27 codes), and benefits of the

training (16 codes). The findings are presented below, starting from the theme implementation, which is followed by the implications and benefits of the training.

4.3.1 Implementation. The interview of the instructors unveiled significant points to consider regarding the implementation of self-regulated learning integrated L2 instruction. In this theme, five codes emerged, which are implementation of the instruction, flexibility and adaptation, the effective aspects of the training, the aspects that need to be developed, and the role of motivation.

The instructors gave important details regarding their implementation of the self-regulated learning integrated L2 instruction. The integration of the instruction into the lesson was of significant importance to both instructors. They were both very careful about the natural integration of the instruction so that the student participants would not feel alienated from the lesson. While commenting on this natural flow, Nisa stated that:

Although the activities in the instruction are easy to integrate, as an instructor, I made decisions about where to place the activity in that day's pacing. I thought about how to make the connection and the best ways that would connect the self-regulated learning activities with classroom activities in the curriculum. According to that day's pacing in the curriculum, sometimes I started with the self-regulated learning activity or left it to the last lesson as if it was the last exercise of a grammar topic.

As can be understood from Nisa's comments, she made her planning considering the natural integration of the activities into the curriculum. In a similar vein, the researcher also applied the instruction in a way that student participants did not feel the activities appeared 'out-of-nowhere'. The researcher indicated that she endeavoured for a smooth transition to self-regulated learning activities. Although the activities were designed in a way that would be integrated into the SoFL curriculum, a natural and smooth transition was pivotal for the instructors. In addition, some other factors were articulated by the instructors regarding the implementation of the training. To start with, student behaviour influenced instructors' decision-making processes in implementing the training. For instance, the experimental higher-level English class demonstrated greater discipline in completing assignments and engaging in out-of-class study, whereas the experimental

lower-level English class exhibited less consistency in this regard. Consequently, the researcher instructing the experimental higher-level English class was able to request preliminary research from students for certain tasks or assign follow-up responsibilities. However, Nisa, who taught the experimental lower-level English group, placed greater emphasis on in-class group activities rather than assigning preliminary research tasks outside the classroom. She explained her rationale as follows: "Since I anticipated a low number of students completing pre-assignments or homework, I incorporated preliminary work into the classroom activities through group work. This approach allowed students to engage in brief exercises, learn from one another, and develop ideas collaboratively." The homogeneity/heterogeneity of classrooms in terms of structure was also effective in decision-making processes in the implementation of the training. The experimental higher-level English class was stated to be more homogeneous regarding students' behaviours, discipline, and dedication to learning. The experimental lower-level English group, on the other hand, consisted of dedicated students and students who had problems with attendance and willingness to learn. Thus, the instructor in the experimental lower-level English group was conscientious while forming groups in group work. She tried to place a motivated student into each group together with less motivated students so that motivated students could serve as an impetus. In addition, the instructor strategically placed students who demonstrated more effective self-regulation skills into different groups and aimed to facilitate the development of these skills among students who exhibited lower levels of self-regulation by giving them a chance to observe, model, and learn from their peers. Nisa explained this situation in these words:

While grouping the students, I distributed some students into the groups as impetus and these students could manage the discussions and acted upon self-regulated learning skills. Less motivated students had an idea about the strategies at least and were involved in the discussions.

The researcher instructing the experimental higher-level English group mentioned that regarding their academic success, the motivation to be involved in the training, and the use of self-regulated learning skills, the group acted in a more homogenous manner. Thus, the researcher did not need to make special arrangements for the activities of the training.

Upon being asked about the flexibility and adaptability of the training, which is also another code, Nisa asserted that the training was flexible enough to be applied at different levels and at different SoFLs. As an experienced instructor who worked at three SoFLs, she thought that the activities and the training as a whole were suitable for the curricula of SoFL, maybe with minor adaptations. On the flexibility and adaptation, she said that:

Although the curricula differ throughout the SoFL, the aims are the same, and we cover similar topics. Consequently, with minor changes, the training can be applied at different schools. In addition, I believe that the activities in the training are easy to integrate into the curricula as the topics selected, such as difficulties in language learning and learning English outside the classroom, are very common in most schools. The instructor can just change the order or make small adjustments according to his/her students' profiles. In that sense, the training is easily adaptable.

Nisa also commented on the types of modifications she decided to make. She turned some of the individual activities into group work. There were two reasons behind this decision. Firstly, as mentioned earlier, her heterogeneous classroom profile made her do more group work compared to the other experimental group. The second reason was to foster group dynamics in self-regulated learning activities, which would lead to more creative ideas and more development regarding self-regulation. In addition to group work, after observing students' unwillingness to write their weekly journals, she asked for shorter writings. The students' lower level of English compared to the other experimental group also affected this decision.

The researcher instructor agreed with Nisa concerning the ease of flexibility and adaptation of the instruction. The researcher stated that the activities in the training were designed after a comprehensive review of various curricula of SoFL and sources so that they could be integrated into the curricula of students with diverse profiles. This aim was asserted to be realized in that the researcher applied the program in the piloting and implementation processes with two different groups who had different levels, curricula,

and sources. The instruction was applicable in both groups with minor changes in sequence.

The third code concerned the effective aspects of the instruction, which were successful during implementation. Both the researcher and the instructor, Nisa, agreed that one of the most effective aspects of the training was the reflective weekly journals. Thanks to these journals, the student participants had the opportunity to reflect on their development, ask self-evaluative questions, and consider strategies to overcome challenges. The feedback provided in the journals also contributed to both the students' self-regulation learning skills and foreign language skills. Furthermore, the instructors were able to better understand their students, including their strengths, weaknesses, and strategies. Nisa also mentioned that "The feedback provided to the students helped them feel more valued and recognized." Another effective aspect of the training was the inclusion of group work in many activities. According to the instructor participants, group work established the foundation for class discussions. The student participants achieved higher forms of thinking regarding their strategies, analyzed their learning, and received feedback from their peers thanks to group work. Group work also led to the involvement of less motivated students.

In relation to the aspects that need development, the researcher mentioned that some student participants did not deepen their self-evaluation or elaborate on innovative and useful strategies which might be helpful in their learning. Such students generally suggested commonplace ideas or strategies without exerting much effort on comprehensive thinking. Thus, she stated regarding these students:

The instructors should better encourage these students to think creatively and develop more effective strategies, as they sometimes generate ideas that everyone is familiar with but fail to implement. For instance, to improve a weaker skill in language learning, a few students suggested reading a book. However, our goal in this training is to focus more on deeper thinking for greater impacts on self-evaluation and strategy development.

The researcher asserted that students who had a tendency to avoid challenges can be better supported throughout the implementation. The instructor of the experimental

lower-level English group also postulated that some students preferred to stay silent, although the group works were carefully arranged according to the student profiles. These students needed to be encouraged and urged from time to time when the instructor observed unwillingness or lack of motivation. In a similar vein to the researcher instructor, Nisa postulated that the thought processes of some students were superficial. As this was the case, she emphasized that the training should provide greater support for these students. However, she stated that factors such as students' motivation and their willingness to develop self-regulated learning skills also played a crucial role in this regard. Nisa also commented that some students, unfortunately, developed presuppositions that their self-regulated learning skills and language skills would not develop although they tried hard. These self-sabotaging thinking patterns prevented students from taking an active part in the activities of training.

These points mentioned by the instructors are closely in relation to the last code of the implementation theme, which is the role of motivation in the instruction. Both instructors deduced that in order for the student participants to be engaged actively in the instruction, they should have at least a moderate level of motivation. The rationale behind this thought was explained by Nisa:

I think there is a correlative relationship between self-regulated learning skills and motivation. If the student has a higher level of motivation, I have observed that self-regulated learning skills training yields more benefits. The students need to have some idea regarding how to learn English in a better way and how to develop these ways through self-regulation.

The researcher also commented that “Self-regulated learning skills training works better with students who are motivated for self-improvement.” She stated that low motivation hindered the students from taking action for learning and taking action was an indispensable part of self-regulated learning. To exemplify, a student with low grades told the instructor that he did not aim to develop his language skills, and he exhibited no indication of interest in the training. Concerning the students with high motivation, on the other hand, Nisa highlighted that these highly motivated students attended all activities, completed the weekly journals in an effective way, evaluated themselves for their

strengths and weaknesses, and tried to develop strategies for better learning outcomes. Namely, they were the highly motivated students who benefited most from the instruction. In conclusion, both instructors emphasized the role of motivation in effectively implementing self-regulated learning integrated L2 instruction .

4.3.2 Benefits of instruction. The dialogic interview of the instructors revealed that the instruction yielded benefits for both the student participants and the instructors themselves. Thus, the two main codes of this theme are the benefits of the instruction for language learners and instructors. The findings related to these codes are presented respectively.

The benefits of the instruction for language learners is the first code under this theme. The instructors mentioned that the instruction produced many positive outcomes, including awareness of self-regulated learning and its importance in language learning, being involved in better self-evaluation processes, reflective thinking about effective learning, and enhanced writing skills in English.

Nisa, the instructor of the experimental lower-level English group, highlighted that the instruction helped the student participants gain awareness regarding self-regulated learning, and for most of them, it was the first time they heard about the terms self-regulation and self-regulated learning. Nisa elaborated on this with the following comment:

Although self-regulated learning skills have many advantages in the learning process, they are not included in curricula in higher education or K-12. Thus, thanks to this training, the students have learned the concept of self-regulation, the skills and strategies it includes, and the advantages of self-regulated learning skills. In a way, we have prepared a foundation for them regarding self-regulated learning skills, although they may not have fully used these skills so far.

The researcher instructor agreed with Nisa in that she thought that this instruction provided an introduction to the use of these skills. The researcher received comments from the students such as *although the use of self-regulated learning skills has not become a habit for us, we have developed an awareness*. Hence, it can be concluded that the

instruction introduced the concept of self-regulated learning and laid the basis for further usage of these skills.

Another important issue regarding the benefits of the instruction is concerning the importance of self-regulated learning skills in foreign language learning. Nisa indicated that in the language learning process, the learner should know how he/she learned effectively, evaluate his/her learning, define some useful methods and strategies, think about when and where to learn best, and which language skills need to be developed. Self-regulated learning skills had the potential to provide the learners with this invaluable knowledge. In addition, she emphasised that “Self-regulated learning should be a fundamental component of the language learning process.” and with this fundamental component, the language learning process would gain momentum.

The researcher instructor also highlighted the importance of asking self-evaluative and reflective questions about one’s language learning process, which was of great impact on learning. The questions such as ‘which habits or strategies of mine are effective or ineffective in language learning’ were stated to be the first steps in constructing an efficient learning process. This inquiry into one’s own learning was indicated to result in successful language learning by the researcher. Setting goals, identifying strategies, self-evaluation, and taking action accordingly were suggested by the instructors as the key pillars of language learning.

Enhanced writing skills were considered a by-product of the instruction. The reason was that the aim of the instruction was not to develop a certain language skill of the student participants. However, thanks to weekly journals, the instruction helped the student participants overcome their negative feelings about writing and served as a writing practice for which they could receive feedback from their instructors. The researcher indicated that the practice of writing fostered their writing skills, especially for students with higher levels of English proficiency. Nisa also elaborated that the weekly journals created a platform where the student participants individually thought about themselves and their learning process; if they had not been instructed, they would not have done so. In addition, she observed that the student participants developed their reflective writing when she compared the journals of the first weeks and the last weeks.

Regarding the benefits of instruction for the instructors, both instructors commented that the instruction produced benefits for them as well as the student participants. Nisa expressed that being a part of such instruction contributed to her knowledge of self-regulated learning skills. Although she was sceptical about to what extent she was self-regulated, she stated that she learned strategies about planning and goal setting and asked herself self-evaluative questions. From that perspective, she also benefitted from the instruction.

In addition, the instruction allowed the instructors to know the students better by observing them closely, talking about their weaknesses, strengths, strategies, goals, and plans. The weekly journals in which the student participants discussed their language learning processes, analysed their strategies, and addressed self-evaluative questions created a communicative platform between the students and the instructors. In relation to the rapport that was built through the training, Nisa commented:

Thanks to this instruction, I had the opportunity to view the students as a whole. Talking and reading about their self-perspectives affected me deeply because sometimes, due to the heavy workload and fast pacing, you do not have time to get to know your students. This instruction enabled me to build a good rapport with my students, and I believe if you have a close relationship with your students, you can encourage them to learn.

As is clear from Nisa's comments, the instruction sessions, together with weekly journals, initiated a space where the instructors and the students shared more than just regular classes. The instruction itself helped instructors develop stronger relationships between the instructors and the students.

4.3.3 Implications. The last theme from the instructors' dialogic interview was the implications. There main codes were gathered under this theme, which are implications for the future uses of the instruction, teacher training on self-regulated learning, and lastly, instructor effect on the implementation of the instruction.

In the code implications for the future uses of the instruction, the instructors mentioned several important points to consider for the future applicants of the instruction. The first point concerns the integration of the instruction into the assessment. Since the

implementation of the instruction was part of a research study and based on voluntary participation, the attendance of some students was superficial rather than full engagement. In order to prevent this, Nisa suggested the following application:

The instruction might be a part of the assessment in a way that students should be evaluated on the activities as complete/incomplete or submit a portfolio in which they present the outputs and reflections of the activities. Thus, the students may immerse themselves in the instruction and benefit from it more effectively.

The researcher also indicated that the idea of voluntary participation and not considering the instruction as a part of the curriculum hindered the full engagement of some students. The researcher's solution from time to time was not to mention some activities as an activity of the instruction but as if they were additional activities in the curriculum. The researcher inferred that the students devoted themselves more if it was not part of the instruction. The instructors' observations were consistent with each other on this issue.

Another implication for the later implementation of the instruction suggested by Nisa was increasing the out-of-class working time of the students for the training. She offered that the students might be assigned to watch videos, do research, and sometimes prepare presentations as if they were included in flipped learning. In that way, the students would be more prepared about that day's topic, and classroom discussions would be more effective. Nisa asserted that this flipped learning method might deepen their internalization of self-regulated learning skills.

The assignments and research into some activities were applied by the researcher in the implementation. This difference between the researcher and Nisa may result from the profiles of the experimental groups. As indicated above, Nisa's experimental lower-level English group was less disciplined in doing homework and out-of-class studies. Consequently, Nisa worked more through group work, whereas the researcher could assign homework for the activities, which might have produced more fruitful outcomes. To exemplify, Nisa's comments regarding an activity are presented below:

There was an activity about useful sites and applications that were efficient in language learning. As they did not investigate them at home, I made them do

research in their groups and then make a presentation. However, I think their suggestions for the sites and applications were all known, and they were not novel. Thus, we could not suggest new applications that might catch the attention of the students.

The same activity was realized by the researcher, similar to Nisa's suggestion. The researcher instructor first assigned the students to investigate some sites and applications that might help them develop their language skills. After preparing their lists, they shared them with their friends in the group work. Hence, they created an archive of useful sites and applications which were novel.

Although the implication mentioned below may differ according to the students' profiles, it is closely related to the duration spent on the activities. In order to increase the engagement of the students in the instruction, both instructors suggested spending more time on the activities, especially for brainstorming. The researcher instructor made the following comment regarding this issue:

It would have been better if we could allocate more time to students' thinking and preparation in order to dig into their ways of learning, developing strategies, setting goals, and self-evaluation. However, time restrictions due to curricular obligations have made us shorten this brainstorming time.

Nisa also addressed the same issue by stating, "I would prefer a more flexible weekly schedule so that I could dedicate more time for the activities." The superficial responses from some of the students might be suggested to be prevented with more time allocation. As an implication from both instructors, more flexible curricula and more time allocation might produce more effective outcomes.

Another significant point raised by the instructors concerned initiating some of the activities as an instructor. The self-regulated learning skills instruction required the student participants to share their ways of thinking, goals, habits, strengths, and weaknesses. This kind of opening might make the students feel shy, especially introverted students. Thus, it was recommended by instructors to initiate the discussions by talking about their learning journey. The researcher instructor stated that:

Talking about self-regulated learning skills may be considered private by some students. In order to break this, I started the instruction by stating that I chose self-regulated learning skills because I had difficulties in self-regulation, especially goal setting and procrastination. This reveal made the students feel that I was one of them, and I was also trying to improve my self-regulated learning skills as a Ph.D. candidate. This kind of start closed the gap between the students and me and positioned me as a learner rather than an instructor or trainer.

Nisa also elaborated on instructor initiation. She asserted that such activities as strengths or weaknesses might be started with examples from the instructors. This initiation would give the students a sense of familiarity and various ideas for the discussions. Telling the students about our own self-regulated learning skills as instructors was suggested to be an effective starting point for the activities.

Teacher training on self-regulated learning skills emerged as another code in the analysis. Nisa stated that teachers who were planning to apply the program should have knowledge of theoretical foundations concerning self-regulated learning skills. She explained this necessity by saying:

My background for self-regulated learning skills was based on a course given in my master's studies. During the piloting stage of this instruction, I learned more. However, I think that if I had not taken any courses and been included in the piloting, I would have needed more information regarding the instruction and self-regulated learning skills. Thus, if the instruction is given by instructors who have no background information, in-service training should be provided.

Nisa elaborated that the instruction would produce more effective results if the instructors knew the theoretical basis of the activities. In addition, she postulated that expectations from the outputs and goals of the activities would be clearer to the instructors if they were informed on the instruction. She asserted that "Sometimes, I found my way through the intuition of being a teacher." However, as she indicated, in-service training might help instructors feel themselves more confident in the implementation of the self-regulated learning skills training. In order to provide that, Nisa offered an introduction meeting followed by one or two weeks of in-service training which would inform the

instructors about the theoretical background, the activities in the instruction, and the expected outcomes from the instruction.

The researcher instructor had a different point of view on in-service training. According to the researcher, her position and relationship with the instructor were of high importance because, firstly, a voluntary instructor carried out the piloting and implementation of the training. Secondly, both the researcher instructor and the other instructor, Nisa, worked at the same SoFL. Thus, the researcher instructor did not want to be in the 'trainer' position. Rather, she preferred to provide information when and where necessary as a 'co-instructor'. Yet, the researcher instructor believed in the necessity of in-service training if the self-regulated learning integrated L2 instruction was implemented with more instructors. From this perspective, she stated that:

The main aim of the current research is not teacher training but rather designing effective training that will help language learners develop their self-regulated learning skills. However, in order to receive efficient outputs, we have to ensure that the implementation is realized in its best possible version. Consequently, it is important to introduce self-regulated learning and training to the instructors, especially those who do not have any background.

As is clear from the comments, giving information about the background of self-regulated learning, activities, expected outcomes, and ways to implement the instruction in various contexts should be included in teacher training which was offered to take place before the self-regulated learning skills.

The last issue raised by Nisa was the relationship between the instructors who implemented the instruction and the researcher instructor. She indicated that she could ask any questions to the researcher instructor during the piloting and implementation, and this made her feel relaxed without worries on how to implement the activities. Moreover, she was pleased to make adaptations to the activities so that they were more suitable for her class. She suggested that self-regulated learning skills instruction was flexible to modify, and the researcher instructor welcomed the comments and modifications. From that perspective, the close relationship and understanding approach to suggestions paved the way for more efficient implementation of the instruction.

The final code under the implication theme of the analysis was instructor effect on the implementation of the self-regulated learning skills instruction. Both instructors who piloted and implemented the instruction emphasized the significance of instructor effect concerning the relationship with the students. The researcher instructor observed that students could express themselves freely if they knew the instructor and their relationship was close enough. The observations were realized on many occasions, first when the researcher instructor entered the other experimental group to introduce the research and self-regulated learning skills. Later, during the instructive presentations and for some feedback provided for the students of the other group besides the feedback of the instructor, the researcher instructor felt herself as an 'outsider' and perceived that the student participants did not open up regarding their self-regulated learning skills. She elaborated on this issue by saying:

The topic of self-regulated learning skills may be considered private, and talking about one's self-regulated skills may not be that easy from the students' perspective. They are asked about their habits, emotions, strengths, and weaknesses. In order for students to express themselves comfortably, they should develop a bond with the instructor. An outsider in the role of a trainer may not be as effective as a well-known instructor. Hence, I believe that the trainer who will give the self-regulated learning skills training should be the instructor of this group of students who has strong communication with the students.

In addition to knowing the instructors well, the classroom atmosphere was stated to play a crucial role in the implementation of the instruction. The instructors highlighted that they should try to create a friendly and supportive classroom environment with no negative judgments. Consequently, an instructor's role in creating such a positive learning atmosphere was suggested to be of great importance.

Nisa also addressed another important issue regarding the instructor effect. She indicated that mutual sharing of ideas with the students rather than being in the role of 'trainer' contributed a lot to the students' openness. Nisa asserted that:

I observed that students were having difficulty in writing their weekly journals and reflecting on their developments. Consequently, I showed them my doctoral dissertation, telling them that I was also a student and how much I was struggling

in the process of writing it. They understood that every student, even the instructors, was going through difficulties in writing and that was the natural process of learning a language.

In a similar vein, the researcher instructor explained the importance of constructing a 'sharing' classroom environment for the instruction by stating:

I shared some of the strategies for my own procrastination problem and observed that they took these strategies seriously as they were proven to be working by their instructor. In addition, sharing information about experiencing the same problems with the students rather than being a trainer fosters closer relationships with the students.

As is clear from the instructors' comments, the instructors should build a constructive, friendly, and sharing classroom environment for the training to be effective. Moreover, there should be a closer bond between the instructors and the students, and the trainer is suggested to be a well-known instructor rather than an outsider.

4.4 Findings Related to Research Question 4

In the current study, the fourth research question aimed to unveil the perspectives of the student participants regarding self-regulated learning integrated L2 instruction. In order to investigate their perspectives, a total of 22 students were asked questions in four focused group semi-structured interviews. The students were expected to share their opinions in relation to the self-regulated learning integrated L2 instruction and whether it was beneficial to their language learning process. In addition, the students were requested to comment on whether the instruction led to any changes in their routines. The responses of the student participants were transcribed and then analysed using inductive thematic analysis on MAXQDA. In compliance with the questions directed in the interview, the student participants mentioned the benefits of the instruction, which can be categorised into the *enhancement in self-awareness and self-evaluation, self-regulated learning skills awareness, change in routines and thinking, and contributions of the instruction to foreign language performance*. Although it was not within the scope of the study and one of the aims of the self-regulated learning integrated L2 instruction, the students postulated that the instruction contributed to their writing thanks to the journals kept weekly. Hence, the

contributions of the instruction to foreign language performance also emerged in the data. Table 36 displays the themes and their frequencies.

Table 36

The Emerging Themes Regarding the Benefits of the Training

Theme	Frequency
Enhancement in self-awareness and self-evaluation	24
Change in routines and thinking	12
Self-regulated learning skills awareness	10
Contributions of the instruction to foreign language performance	7

4.4.1 Enhancement in self-awareness and self-evaluation. The most frequent benefit put forward by the student participants was enhancement in self-awareness and self-evaluation. The students indicated that self-regulated learning integrated L2 instruction and increased their self-awareness and self-evaluation owing to questions directed to them, topics of the journals, and classroom discussions. Most of the students remarked that the instruction made them ask questions, which resulted in better self-exploration. One of the students stated, “The journals, presentations, and classroom activities encouraged me to ask questions to myself: whether and to what extent I do them (referring to strategies) or what I should. Hence, I can say that for self-awareness and self-evaluation, the activities were helpful.” Similarly, another student indicated that learning about self-regulated learning enabled him to explore his strengths and weaknesses and realize the wrong and right things he did in his learning.

Self-awareness and self-evaluation were found to increase when the student participants expressed their thoughts in classroom activities or journals. Although the students might feel their weaknesses, the activities provided them a free space where they could share them and find more effective ways and overcome them. In line with this, one of the student participants made the following remarks:

The instruction helped me in my process of self-identification and self-exploration. Actually, I was internally aware of my weaknesses and areas of improvement. However, articulating them externally served as a source of motivation for me.

Namely, knowing them internally does not make me take action. Yet, stating them loudly and sharing them with others supported my personal growth.

Another student also commented on the benefits of explicit expression on her self-awareness during the implementation of the instruction. She revealed that:

The instruction worked for me because sometimes, in order to acknowledge something, someone needs to ask you or say it to your face explicitly. For example, once, you asked us whether we were satisfied with our exam results. Encountering different questions and trying to reflect on them was making a difference. This process made me look inward and understand, 'Yes, this is my weakness.' Sometimes, I was aware of them, but I had never acknowledged them. From that sense, it was really helpful for me to identify my weaknesses and reflect on them.

Regarding the benefits of the instruction in self-evaluation of the language learning process, one of the students highlighted the importance of self-evaluation in strategy use. She elaborated on the issue with the following remarks:

The instruction helped us with self-evaluation. Sometimes, we do not pay much attention to how we learn things; we blindly learn English. Whether we use appropriate strategies is something we may ignore. However, this process made us recognize our ineffective strategies. Keeping journals was especially significant because writing weekly demonstrated to us whether we were on the right or wrong track.

Reflection on the effectiveness of strategies through self-evaluation provided the students with an opportunity to evaluate their learning process as a whole. Rather than regulation, which lacked consciousness, the instruction was stated to facilitate more strategic language learning, including eliminating ineffective strategies.

Feedback from the instructors during the activities and as a response to journals was also reported to contribute to self-awareness. It was indicated that observation of the self-regulated learning process by the instructors strengthened self-awareness. In relation to this, one of the students asserted:

Once, I wrote about some methods which I considered useful for language learning. However, you asked me the extent to which I employed these methods. Then, I realized that although I thought I employed them, how aware I was about these methods. After this feedback, I was more careful and aware of the use of these methods.

As indicated by the comment above, the students might employ certain methods without questioning their efficacy. In addition, they might presume the usefulness of their methods in their language learning process. Yet, thanks to the instructors' feedback and questions, the students had a chance to re-evaluate their practices and opt for more beneficial methods, thereby fostering self-awareness.

Another student also put forward her ideas in relation to the effect of instructor feedback on self-awareness. She emphasized that instructor feedback enhanced self-awareness. Elaborating on it, she made the following remarks:

The instruction, for sure, increased my self-awareness. I was already aware that I did not have an appropriate study routine, but I realized the degree of inappropriateness and insufficiency. The feedback and the comments made a big difference. Instead of writing things down on my own, being seen by someone like a teacher was more meaningful and effective. It was also a source of motivation for me.

As the comments suggested, self-regulated learning integrated L2 instruction enhanced the self-awareness of the student participants by making them consider their learning process, question themselves in relation to their strategies, and evaluate their efficiency. The journals, classroom activities, and discussions paved the way for self-exploration, including the strengths and weaknesses. Instructor feedback was also stated to contribute to the self-awareness and self-evaluation of the student participants.

4.4.2 Change in routines and thinking. Another theme emerging in the data was the change in routines and thinking of the student participants due to the self-regulated learning integrated L2 instruction. Except for two students, other students who shared their opinions in this regard asserted that the instruction resulted in certain changes in their habits and ways of thinking. Based on the responses of the student participants, it was

noticeable that procrastination was the most prevalent behaviour which was aimed to be changed. The students reported a decrease in their procrastination inclination due to the training. In line with this, one of the students commented:

The instruction was beneficial in that I used to procrastinate a lot. Actually, I procrastinated as much as I could. I think I have changed that, and I have quit procrastination to some degree. It is valid for both my study routine and daily life. To put it simply, for tidying up the house and doing other chores, I do not procrastinate anymore.

Another student also noted that after she received low grades on the exam, the instructor asked her in a journal whether she would think about changing her studying habits. She came to the realization that her studying at the last minute for the exams due to procrastination led to such grades. For the following exams, she gave importance to studying regularly and tried not to procrastinate.

In addition to procrastination, the data revealed that the student participants changed their thinking in relation to acknowledging the importance of problems. The students indicated that before the instruction, they had demonstrated a tendency to underestimate the difficulties and problems they were experiencing. Yet, they realized they should take their difficulties seriously in their learning process. One of the students elaborated on the issue with the following remarks:

The instruction had such an effect on me: I take the issues seriously now. Sometimes, we may not recognize or confess them. We may believe that we can handle them in time, but we do not take action. However, when I express them in the journals or in the classroom, I think these issues may be important and should be handled immediately. I realize that I should acknowledge their importance, question them, and work on them. This helped me a lot. It is not only related to study habits, but it refers to my daily life problems as well.

Similarly, another student shared her ideas regarding the effects of instruction on her ways of thinking. As for the taking the issues seriously, she reported that:

I do not brush things off anymore and say, 'Never mind.' My weaknesses and my needs occupy my mind much more. I know that this semester has ended, and we

are having our final exam tomorrow. Although the semester is officially over, I plan to start studying more seriously.

The comments of the student participants highlighted that the instruction led to certain changes in their habits and ways of thinking. It was understood from their remarks that procrastination and ignoring difficulties, problems, and weaknesses decreased owing to the training. In addition to the elimination of certain behaviours, some students adopted habits which were expected to contribute to their language learning process. While thinking about the features of a good language learner, he recognized that he lacked the feature of assertiveness. In order to overcome this weakness, he decided to take the initiative. He expressed his opinions with the following statements:

Once, we had an activity for the features which a language learner should have. I try to integrate the features I wrote in this activity into my life, for example, to be assertive and to talk with foreigners. I experienced this with an Egyptian man on the subway; we talked for 10-15 minutes. It was an effective English practice. If I have other opportunities like this, I will certainly seize them.

Several students shared similar comments indicating that thanks to their identification of weaknesses, they tried to be more initiative and assertive, especially to overcome their difficulties in speaking.

As mentioned before, two students reported that the instruction did not lead to any changes in their habits, although their ways of thinking regarding their learning were transformed. They highlighted that the instruction helped them with developing self-awareness; however, it did not contribute to establishing new and effective habits. They highlighted that they might see its effects in the long run.

4.4.3 Self-regulated learning skills awareness. The analysis of the data revealed that the student participants acquired awareness regarding self-regulated learning and its sub-skills such as strategy use, setting goals, and motivation and taking action. The students indicated that although they employed some aspects of self-regulated learning, they were not aware of self-regulated learning. In relation to this, one of the students stated:

Actually, we have been using some of these strategies. However, after the instruction, since we knew that these are included in self-regulated learning, we may have been making well-founded decisions. For example, we think about a rational solution in stressful situations and when we are anxious. The training has contributed to that.

In a similar manner, another student reported that he employed the self-regulated learning skills covered in the lessons and presentations. Yet, the instruction enabled him to understand they were of great importance, and these skills became indispensable for this student.

As for strategy use, one of the students emphasized the significant role of the training in her strategy use. She expressed her opinions with the following reflections:

I generally consider myself as an organized person. However, after the instruction, I pay more attention to it. To exemplify, when I am learning something, I make strategic decisions, such as spending time more efficiently and productively. In addition, I analyse my weaknesses and strengths more carefully. From that perspective, the instruction has had a positive impact on me.

As is clear from the comments of the student, the instruction enhanced strategic thinking in her habits with more analysis of her weaknesses and strengths. Thus, the instruction might be stated to contribute to self-awareness and the development of more effective and personalized strategies.

In addition to strategy use, the students reported that the instruction was beneficial in terms of goal setting and planning. One student stated that she could maintain better focus on her goals during the instruction, as it continuously bolstered her goals. Furthermore, another student emphasized the impact of the instruction on goal setting and planning with the following statements:

After that presentation, I may have started planning more. When I create a plan and follow it, I feel a greater sense of achievement. This demonstrates the benefits of planning, that is why I am trying to integrate it into my daily life.

Lastly, one student from the experimental lower-level English group expressed his pleasure to be included in the instruction. Although he was sometimes hopeless, the training motivated him in terms of language learning. He revealed the following remarks in his journal:

Firstly, I want to thank you for a this activity. I think it will encourage to learning English. I thought many plans but at the last term, I had did not do anything. I have worried about it because I want to improve my English with social life. Well, I did not. I was disappointed. Because of these and made new plans for this term.

4.4.4 Contributions of the instruction to foreign language performance. The instruction in the current study was designed to develop self-regulated learning skills of foreign language learners, specifically four sub-skills which are strategy use and evaluation, planning and goal-setting, motivation and taking action, and autonomy in learning. The instruction did not address a specific language skill or aim to enhance the language performance of the participants directly. Yet, when the student participants put forward their opinions in terms of the instruction, they indicated that the weekly journals helped them with their writing skills; writing journals served as a writing practice they would not have realized had there been no training. In addition, weekly journals played a significant role in fostering their self-confidence in writing. Regarding this, one of the students asserted, “I was not self-confident in writing, and I thought I was not able to write in English. While writing journals, I developed myself.” In a similar vein, another student realized that he was able to write with more ease as he overcame his insecurities, thanks to the weekly journals.

In addition to writing performance, one student from the experimental higher-level English group remarked that the weekly journals increased his speaking performance in that he wrote the journals as if he had been talking. As the weekly journals did not require the student participants to use formal language, he asserted that the journals contributed to his speaking skills. In relation to this, he stated, “I felt the writing journals as speaking practice as we did not use a formal structure like essays. As we wrote as if we had been speaking, it was beneficial for my speaking skills.”

The question which explored the opinions of the student participants in terms of the self-regulated learning skills training mostly revealed the benefits the training provided. Among these benefits, the student participants frequently mentioned the enhancement in self-awareness and self-evaluation in their language learning process. In addition to self-awareness and self-evaluation, the student participants changed some of their habits and ways of thinking which were enabled through self-exploration. It was evident in the data that the students could identify their weaknesses and strengths. Consequently, they sought more effective habits for themselves. Moreover, the student participants asserted that the instruction informed them regarding self-regulated learning. Although the student participants employed some strategies, they stated that they were now knowledgeable about the background of these strategies. Lastly, the student participants reported that they improved their writing and speaking skills in the foreign language even though it was not one of the aims of the instruction. The weekly journals were believed to have contributed to boosting their self-confidence in writing, and the journals served as writing and speaking practice.

Chapter 5

Discussion and Conclusion

5.1 Discussion of Findings for Research Questions

The purpose of the current study was to develop self-regulated activities that would be integrated into L2 instruction at SoFL and investigate their effectiveness in improving students' self-regulated learning skills. In line with the aims of the study, first, the activities in the self-regulated learning integrated L2 instruction were designed. After the instruction was piloted and necessary modifications were completed, the activities were implemented in two experimental groups with lower and higher English levels. The data were collected through several instruments. The Self-Regulated Learning Skills Questionnaire was administered as a pre-test, post-test, and delayed post-test to measure the effectiveness of the self-regulated learning integrated L2 instruction. The qualitative data came from semi-structured interviews with the students and a dialogic interview with the instructors. In addition to the interviews, the weekly journals of the students provided details regarding their use of self-regulated learning skills. The following sections present the discussion of the findings in relation to the literature.

5.1.1 Discussion of the findings related to the RQ 1. The first research question in the study was: “To what extent does self-regulated learning integrated L2 instruction have an effect on the development of self-regulated learning skills of EFL students at the SoFL?” This research question aimed at investigating the extent of effectiveness regarding the self-regulated learning activities developed within the scope of the study.

In order to answer the first research question, quantitative data was received through the Self-Regulated Learning Skills Questionnaire. The questionnaire was administered three times in total, two times as a pre-test and a post-test. Lastly, the experimental higher-level English participants took the questionnaire as a delayed post-test. The analysis of the data was conducted through various analysis methods. Firstly, a paired samples T-test was run to detect any statistical significance between the pre-test and post-test results of the groups. The results indicated no significant difference in terms

of their self-regulated learning skills. Then, one-way ANCOVA was conducted to compare the post-test results of the control and higher-level experimental groups. The results received from this analysis indicated that there was no statistically significant difference between the scores of the groups. ANCOVA was also run to detect any differences in the sub-dimensions of the questionnaire, which included four sub-skills of self-regulated learning. According to this analysis, only in the autonomy in learning sub-dimension, the experimental group outperformed the control group. In addition to the comparison of the control and experimental groups, the post-test scores of the two experimental groups, lower-level English and higher-level English, were compared. The findings indicated the impact of the self-regulated learning skills integrated L2 instruction on the self-regulated learning skills of the participants was evident in the higher-level English group. The analysis of the sub-dimensions of the sub-skills of self-regulated learning, on the other hand, did not reveal any difference regarding the effect of the self-regulated integrated L2 instruction. Lastly, the delayed post-test was administered to the higher-level English experimental group, and the results were analysed through repeated measures ANOVA. The results in the pre-test, post-test, and delayed post-test did not differ significantly in terms of the self-regulated learning skills of the higher-level English experimental group.

The results from the quantitative analysis partly comply with many studies in the literature. In most of the studies, interventions for self-regulated learning have proven to be significant fully or partly in the development of self-regulated learning skills of the participants (Akeren, 2022; Canbay, 2022; Cousins, Bol, & Luo, 2022; Dörrenbächer & Perels, 2016; Gümrükçü-Bilgici, 2021; Sitzman & Elly, 2011; Sontag & Stoeger, 2015; Yang, Wang, & Yang, 2025).

The significant difference between the control and experimental groups in the autonomy in learning sub-dimension was consistent with the literature. It was also indicated in various studies that self-regulated learning skills implementations fostered autonomous learning (Ambinintsoa & Castro, 2024; Paethrangsi, Teekasap, Khiewpan, & Jandaboue, 2024; Papamitsiou & Economides, 2019). These implementations provide students with learning environments in which they can learn independently with guidance and support from both instructors and their peers. In addition, Papamitsiou and

Economides postulated that students with higher control over their time management and awareness of their goals tend to take more opportunities in learning autonomously. To this end, self-regulated learning skills instruction may assist learners in gaining effective time management and goal-setting skills.

Despite the tendency towards the positive outcomes of interventions or instructions, in some studies, self-regulated learning instructions or strategy training did not result in significant differences in the self-regulated learning skills of the participants (Khamidulina & Maloshonok, 2025; Vandeveld, Van Keer, & Merchie, 2017). The underlying reasons for the partly significant effects of the interventions and instructions are addressed by some researchers.

Firstly, the age of the participants might have impacted the effectiveness of the instruction. The participants in the current study consisted of tertiary-level students between the ages of 17 and 22. The students at these ages might have already developed certain degrees of self-regulated learning skills (Cazan, 2022). In addition, these students passed a demanding university entrance exam in Türkiye with high points and were placed into a prestigious state university. Thus, their self-regulated learning skills might have been developed before the instruction. The pre-test mean scores of the participants might be considered an indicator of their improved self-regulated learning skills. The pre-test mean scores of the groups were already high in the 5-point Likert-type questionnaire: 3.64 ($SD=.33$) for the control group, 3.54 ($SD=.41$) for the experimental lower-level English group, and 3.80 ($SD=.51$) for the higher level English experimental group. Thus, the instruction might not have created a significant effect on participants who might have good study skills (Alcara & Santos, 2015; Araújo, Santos, Noronha, Zanon, Ferreira, & Almeida, 2016; Ganda & Boruchovitch, 2018).

The second reason might be related to the design of the instruction, although the design and duration were in compliance with the remarkable highlights suggested by researchers. It was put forward that content-specific instructions proved more effective (Cazan, 2022), and the instruction in the current study was incorporated into foreign language learning curricula and was based on language skills. In terms of duration, the instruction lasted ten weeks rather than in the form of a workshop. The literature also

supported long-term instruction due to its effectiveness (Dignath & Büttner, 2015). Moreover, implicit instructions were suggested to be more efficient in terms of both outcomes and time (Orhan, 2008; Veenman, Van Hout-Wolters, & Afflerbach, 2006). Thus, implicit instruction was more emphasised, although the design in the current study included explicit components. However, when literature regarding teaching self-regulated learning is examined, it is also offered that the role of explicit instruction should not be ignored. Dignath and Veenman (2020) stressed the importance of explicitly teaching self-regulated learning strategies, which would assist learners in developing metacognitive skills and integrating them into their learning process. Moreover, in their study, Kistner, Rakoczy, Otto, Ewijk, Büttner, and Klieme (2010) indicated that explicit teaching in self-regulated learning was very rare, and most of the teaching was realised in implicit ways. However, they emphasised that explicit instruction in self-regulated learning is also effective in gains in performance, and teachers should integrate explicit strategy teaching with supportive learning environments. Another support for explicit instruction in teaching self-regulated learning skills came from Mallipa and Murianty's study (2022), which was conducted in online learning environments. The study suggested that explicit instruction encouraged learners to use self-regulated learning skills in their learning process. Thus, in light of the research mentioned, more explicit components could be inserted into the self-regulated learning L2 instruction, considering the age of the participants in the current study. Lastly, a recent study offered student-related factors for ineffective interventions and instructions. According to Khamidulina and Maloshonok (2025), students' individual characteristics intervene in features of the instruction, such as task difficulty and impact learning outcomes. In addition, students' motives for attending the instruction and their attitudes towards the instruction were suggested to lead to heterogeneous effects of the self-regulated learning instructions. The researchers postulated that personalising instructions and adaptive support, which addressed the needs of the students, might increase the effectiveness of self-regulated learning instructions.

The last but not the least remarkable factor which might have influenced the quantitative result is the nature of the instrument which was administered to collect the data. The Self-Regulated Learning Skills Questionnaire (Turan, 2009) is classified as a self-report questionnaire. Self-report questionnaires are convenient to use, especially with

larger numbers of participants to aggregate data. However, due to their nature, self-report questionnaires bear some disadvantages, which are also articulated in the literature. Firstly, there are concerns regarding the accuracy and validity of the responses gained through self-reports (Panadero, Klug, & Järvelä, 2016) as participants may not report their use of strategies accurately (Panadero, Alonso-Tapia, & Huertas, 2012). This inaccuracy may emerge deliberately or not deliberately. Sometimes, participants may feel unmotivated to respond to the questionnaires. Deliberate inaccuracy, on the other hand, may result from social desirability as participants may feel urged to pretend they employ strategies (Boekaerts & Corno, 2005; Jex, 2002; Zimmerman, 2011). In the current study, the high mean scores in the pre-test may be related to this flaw in the self-report questionnaires. The participants, especially in the control group, might assume that they employed the self-regulated learning strategies without thinking comprehensively about whether they really employed them. Their responses might be biased as they were based on their interpretations, which also distorted accuracy (Veenman, 2011). Another concern regarding the self-reports is their appropriateness for the measurement of interventions or instructions in relation to their effectiveness (Panadero et al., 2016). Although the current study included sub-skills of self-regulated learning, which were measured by the self-report questionnaire, Boekaerts (1997) suggested that questionnaires might not capture the changes in students' behaviours. Thus, the Self-Regulated Learning Questionnaire used in the study might not be precise enough. The last concern as for the self-report questionnaires addresses domain specificity. Domain specificity refers to the measurement of self-regulated learning pertaining to a broader or more specific context (Wolters & Won, 2018). In the present study, the self-report questionnaire was not specifically designed for language learning but applied to domains in general. However, it was indicated that it was easier and more accurate for students to recall their use of strategies when the questionnaire addressed a specific time and a specific domain (Wolters & Won, 2018). Another questionnaire specific to foreign language learning might provide more accurate results without the concerns mentioned above.

In spite of the fact that self-report questionnaires bear certain disadvantages, they are still employed widely, especially when it is significant to receive students' perceptions with regard to their self-regulated learning skills (Rovers, Clarebout, Savelberg, de Bruin,

& van Merriënboer, 2019). In order to reach more accurate conclusions regarding the self-regulated learning skills of students, it is suggested that data from self-report questionnaires are triangulated and supported with other measurement tools with a multi-method approach (Cazan, 2022; Winnie & Perry, 2000).

5.1.2 Discussion of the findings related to RQ 2. The second research question of the current study sought to answer the question, ‘To what extent do EFL students employ the sub-skills of self-regulated learning, and how do they employ them? The data for this question included the weekly journals and interviews of the student participants in the experimental groups with both lower and higher levels of English. The data was analysed through deductive content analysis; the responses of the student participants were coded and then categorised into the sub-skills of self-regulated learning, which were the focus in the study. The data revealed 786 instances of self-regulated learning sub-skills: 516 registers for strategy use and evaluation, 137 registers for motivation and taking action, 97 registers for planning and goal setting, and 35 registers for autonomy in learning. In addition to the number of instances, the data also encompassed the ways in which these sub-skills were employed by the student participants.

To start with, the results received from the data were observed to be in line with some of the fundamental studies and theories in the self-regulated learning literature. The strategies employed by the student participants complied with the findings in Zimmerman and Martinez-Pons’ study (1986). In that study, the researchers examined and identified the types of self-regulated learning strategies used by high school students. Similar to that study, it was evident that the student participants in the current study self-evaluated themselves, organised the instructional materials, set goals, sought information, took notes, arranged the physical setting, rehearsed and reviewed the material, and sought social assistance from peers, adults, or teachers. The close ages of the participants in the current study and in Zimmerman and Matinez-Pons’ study might lead to overlapping categories for the self-regulated learning strategies.

In addition to this pivotal study, the employment of self-regulated learning skills by the student participants in the current study conformed to Pintrich’s conceptual framework for self-regulated learning in the college classroom (2000). The sub-skills of

self-regulated learning mentioned by the student participants addressed all phases and areas of self-regulated learning suggested by Pintrich. To exemplify, in the forethought, planning, and activation phase, they self-evaluated their prior knowledge to select strategies and evaluated their performance, made attributions regarding the reasons for the difficulties, and adapted strategies when necessary. In addition, they sometimes quit strategies and changed the context conditions. These actions were indicators of the control phase in Pintrich's conceptual framework. They demonstrated selective choice when they sought help; they contacted the teacher when the learning material was completely unknown to them; however, they asked for assistance from their peers when they had some prior knowledge. Monitoring their cognition, which included metacognitive awareness of their cognition and monitoring of effort, time, and need for help, was observed in the responses of the student participants. Lastly, their reflections regarding their performances and motivation provided evidence of the reaction and reflection phase of Pintrich's conceptual framework. The student participants mentioned their learning difficulties, such as rote memorisation or differences between their first language (L1) and L2, which showed cognitive judgements, and their fluctuating level of motivation, which also demonstrated affective reactions, were classified in the conceptual framework, as well.

The data also revealed the use of metastrategies, which were stated by Oxford in her S²R Model (2011). The student participants indicated in their journals and interviews that they endeavoured to manage their L2 learning process mainly by monitoring and controlling their cognition, maintaining their motivation, and interacting with other people in various contexts with the aim of learning. The use of a number of cognitive strategies, such as note-taking or using applications like YouTube and adjusting strategies when they were not found effective, is included in the metacognitive metastrategy. Reminding the motives behind their learning L2, such as the importance of English in their future profession or reaching up-to-date knowledge, is classified in the affective dimension of Oxford's S²R Model. The student participants' preference to learn their L2 in a collaborative community rather than individual learning, seeking help, and communicating information are explained within the socio-cultural dimension in the model.

As is clear from the explanations above, the results of the current study followed the principles of the prominent frameworks in self-regulated learning. The student participants demonstrated similar tendencies with these models in regard to their use of self-regulated learning skills. Although there are various classifications within the frameworks, the descriptive data received in the study fell into common classifications which are shared by these frameworks, validating the findings.

The student participants' employment of self-regulated learning skills in terms of frequency and implementation unfolded in the data. Within the scope of this study, it can not be clearly stated whether or not the student participants developed self-regulated learning skills during the instruction because the design of the study did not include interviews before the training. In addition, due to the implicit nature of self-regulated learning skills, it might not be possible to measure the degree of their knowledge or their prior knowledge of self-regulated learning skills. Nevertheless, the observations of the instructions and analysis of the weekly journals suggested improvement in relation to self-regulated learning skills. To exemplify, the student participants elaborated on their employment of these skills, their learning practices, strategies, and affective conditions more reflectively towards the end of the instruction. Moreover, some of the students pointed out that the instruction facilitated their fluctuating motivation in the long and tiring language learning process. Thanks to the elaboration on their ways of learning through instruction, the students could select useful strategies, and with suggestions from peers and instructions, they could meet more novel and effective strategies. Lastly, they stated that they took more proactive and deliberate actions in case of learning difficulties. Thus, with the comments of the instructors and student participants, it might be inferred that self-regulated learning integrated L2 instruction contributed to students' self-regulated learning skills.

From that perspective, the results of the study are in line with the literature on self-regulated learning supporting the implementation of instructions due to their significant role in enhancing self-regulated learning skills. Self-regulated learning skills instructions have proved to contribute to the L2 learning process in many aspects. In their journal article, Zhang and Zou (2024) reviewed studies which investigated the impacts of various self-regulated learning instructions on both L2 performance and self-regulated learning

skills of the participants. The researchers concluded in their review that the application of instructions was especially influential in affective domains such as self-efficacy, motivation, and learning attitudes. The academic contributions were not discussed in this chapter as L2 performance is not within the scope of the current study.

Regarding metacognitive strategies instruction, Chen, Wang, and Kim (2020) observed in their study that the use of metacognitive strategies enabled students to identify their errors better and complete the tasks on time. The reasons were stated to be related to self-regulated learning skills because learners using these strategies exhibited a tendency to examine the tasks, evaluate and reflect on their performance, and question the effectiveness of their methods. Thus, they could identify their mistakes and incorrect use of their methods. The student participants in the present study also mentioned that they could have better control of their L2 learning process thanks to the instruction as they evaluated their methods and kept or quit a certain strategy according to its effectiveness.

Procrastination was another issue raised by the student participants. They stated that they had difficulties with overcoming their habit of procrastination. However, learning about self-regulated learning reduced their procrastination in their lives. In a similar vein, Shadiev, Hwang, and Liu's study (2018) revealed that instruction on metacognitive strategies assisted the participants in controlling their learning pace; as a result, they tended to procrastinate less.

The fluctuating level of motivation during their language learning process and the positive effects of the instruction on their motivation were also mentioned by the student participants. The research also provided evidence for increased levels of motivation with the help of motivational strategies. Teng, Yuan, and Sun (2020) asserted that having knowledge of motivational strategies enabled learners to maintain their efforts to learn due to decreased negative emotions and increased confidence and motivation. These strategies were also suggested to contribute to a sense of achievement and persistence, which improved engagement and motivation in language learning (Tan, Chen, & Lee, 2019; Teng & Zhang, 2020). Metacognitive strategies, on the other hand, were also postulated to be influential in the affective states of the learners (Bai & Guo, 2018). The researchers remarked that metacognitive strategies aid learners in better focusing on their

goals and needed steps, thereby better capturing their whole learning process. Thus, this better sense of control led to increased confidence and positive emotions for learning (Bai & Guo, 2018). The issue of learning from peers and instructors regarding novel strategies in their language learning also emerged in the data. Many student participants indicated that the suggestions and feedback from their pairs enhanced their reflection on their language learning and contributed to their knowledge of strategies which were helpful in learning. Behavioural strategies such as peer learning and seeking help proved to provide instructional support and opportunities for L2 use (Hromalik & Koszalka, 2018). Creating a positive classroom environment, including peer learning, for example, facilitated a connection with others in the classroom and led to a willingness to communicate in language learning (Hu & Zhang, 2017). The activities consisting of group work and in-class discussions in the present study might be one of the factors that enhanced the motivation of student participants.

The key role of strategy instruction in helping the students gain various strategies which would enhance their language learning process was also addressed in another study by Przybyl (2023). In his study, he designed an intervention with explicit and implicit self-regulatory intervention techniques with stages of planning, monitoring, control, and reflection. The results of the study revealed that the intervention led to changes in language learners' employment of language learning strategies, which was in a similar vein to the current study. The intervention was stated to increase the involvement of the learners through its contribution to motivation. As indicated by the student participants of the present study, the intervention was helpful in equipping language learners with the most suitable language learning strategies.

Apart from conforming to notable studies and frameworks, the study's findings raised another important issue, which was the transferability of self-regulated learning skills. In the interviews and weekly journals, the student participants remarked that they tested some of the strategies which they employed in their previous learning experiences. This knowledge of strategies was a kind of background information for them. After testing the effectiveness of these strategies in their language learning process, they decided to keep or quit them. In line with the remarks of the student participants, Cazan (2022) investigated the transferability of trained strategies into new learning contexts. The

findings of the study demonstrated that the students could transfer their knowledge of cognitive and metacognitive strategies, such as critical thinking and metacognitive self-regulation skills, to different learning contexts. It was evident in the study that although the intervention was context-dependent, it was possible to transfer the skills to another context. Cazan (2022) explained this transferability with the depth of the metacognitive strategies. The learners who practised metacognitive strategies could test their usefulness and could generalise their use in other contexts. This study confirmed the finding of the current study in that the student participants transferred their self-regulated learning skills from their previous learning experiences and displayed the possibility of transferring the self-regulated skills which they learned in the instruction to other learning contexts.

5.1.3 Discussion of the findings relating to the RQ3. The third research question investigated the perceptions of the instructors who applied the self-regulated learning integrated L2 instruction from two perspectives: instruction design and self-regulated skills of their students. The data from the dialogic interviews of the instructors revealed three main themes, which were implementation, benefits of the training, and implications. The findings are discussed in light of the literature.

To start with, the self-regulated learning integrated L2 instruction was designed as an integrated part of the curriculum; namely, it was not a separate unit of training, but it was placed into the daily practices of the instructors. As the instructors indicated in the dialogic interview, the natural integration of the instruction did not distort the flow of the lesson, and this natural integration was stated to be a strength of the instruction. The contemporary approaches to self-regulated learning instructions also support domain-specific integration of the instructions (Boekaerts & Corno, 2005). This incorporation into the classroom context with domain-specific designs was stated to increase the contextualised nature of the instructions. In addition to contextualisation of the integration, as Li and Mark (2022) postulated, integrated instructions also contributed to the active participation of the students in instruction in the regular classroom settings. Li and Mark's findings were confirmed by the instructors in the current study. The instructors suggested that this integrated nature of the instruction enabled them to make adaptations in the implementation. Nisa, for example, stated she made some decisions according to students' behaviours and degree of engagement. She distributed more motivated students

into different groups for the group work and placed more emphasis on group work rather than individual work. The researcher instructor, on the other hand, could work with students individually or assign the students some research before or after the activities. The instructors thought that this integrated nature allowed them to make arrangements, and these arrangements promoted the engagement of the students. The adaptations based on the features of the students in the classroom, such as more group work, assignments, and the length of the weekly journals, led to the instruction which was tailored for the needs and characteristics of the students.

Apart from the strength of integrated instruction, the instructors mentioned the benefits the instruction provided for the students. Firstly, they remarked that self-regulated learning integrated L2 instruction raised awareness of the students in terms of self-regulated learning. Both in the piloting and implementation process of the instruction, the students stated that they had never heard of the term self-regulated learning. Although they applied some strategies in their study routines, they had not identified them as self-regulated learning. In addition, the instructors asserted that the student participants gained an understanding of the importance of self-regulated learning in language learning. They commenced to self-evaluate their language learning process and take necessary steps to improve it. They reached the conclusion that effective language learning consisted of crucial components, such as setting goals, the use of various strategies, and autonomy. The benefits mentioned by the instructors in the current study were also observed in other studies which were based on instructions or interventions. In her meta-analysis, which investigated the effectiveness of self-regulated training programs for tertiary-level students in 49 studies, Theobald (2021) mentioned that self-regulated learning training programs proved beneficial in the attainment of self-regulated learning strategies. Goal setting and planning strategies were especially observed to improve thanks to the programs. In addition, Yang et al.'s study (2025) suggested that the students who received the intervention outperformed the control group in using language strategies, which regulated their language learning process. These findings also supported other research claiming that self-regulated learning interventions contributed to the use of language learning strategies by foreign language learners in various contexts (Chen, 2022; Şeker, 2016).

Regarding the self-evaluation and reflection benefit of the instruction, the instructors observed that the student participants developed their self-evaluation skills and became more reflective towards the end of the instruction. The instructor, Nisa, stated that weekly journals demonstrated improved self-evaluation and reflective thinking. By virtue of self-evaluation and reflective thinking, the student participants were expected to have control of their language learning process. The observations of the instructors are in line with the thoughts of other researchers. Su et al. (2023) also discussed that the command of self-regulated learning skills led to the identification of weaknesses in language learning and the promotion of autonomy over their learning. The increased autonomy and active engagement due to self-regulated learning skills were associated with improvement in language learning outcomes and learner satisfaction (Y. Zhang et al., 2022). The ability to adapt the language learning process through self-regulated learning strategies, such as goal setting, planning, and self-evaluation, resulted in better outcomes (Su et al., 2019).

The role of motivation and learners' beliefs in the engagement of the student participants in the instruction was one of the issues discussed by the instructors. Both instructors in the present study expressed that in order for the students to engage effectively in the instruction, they should have at least a moderate level of motivation. The motivation mentioned here encompassed the motivation to learn a foreign language and also the motivation and positive feelings to improve the weaknesses detected in the language learning process. The instructors mentioned that some students demonstrated an unwillingness to develop their language skills, and they were low achievers in general. These unmotivated students were also not eager to participate in the activities of the self-regulated learning integrated L2 instruction. In the literature, the role of these beliefs and motivation and their association with self-regulated learning skills have been discussed. To start with, Wang and Zhang (2021) argued that when the students had positive feelings regarding their language competence, they demonstrated more effort. These feelings were also reflected in the self-regulated learning skills of the students. If the students were motivated to learn and struggled for better outcomes, they demonstrated increased self-regulated learning skills. They further explained that beliefs regarding motivation, such as interest in foreign language learning and perceived value of the foreign language, were decisive in the use of self-regulated learning skills of the participants. Bandura (1991) and

Zimmerman (1990) postulated that positive learner beliefs had an important impact on self-regulated learning in that self-regulated learning was highly dependent on the sense of self-efficacy and the beliefs to attain proficiency in the foreign language. In addition, the findings of Yang et al.'s study (2025) indicated that high-achieving students employed the learning strategies more compared to low-achieving students. High-achieving students were found to take more proactive steps, set challenging and specific goals, and make detailed personal plans to achieve these goals. In the current study, the student participants in the lower-level English group were also observed to be less engaged in the instruction compared to the student participants in the high-level English group. In line with the literature, lower engagement of low achievers in instruction and foreign language lessons might be connected to their motivational beliefs. Thus, it was postulated that intervention programs which addressed low achievers might enhance strategic competence and independent learning, thanks to which they could increase their academic performance (Wang & Zhang, 2021). Similarly, the instructors in the present study expressed their ideas that students with low motivation should be provided with better encouragement in the implementation of instructions.

Closely related to the motivation levels of the students, individual differences were suggested to play a significant role in the effectiveness of the instructions on the students (Lapka, Wagner, Schober, Grading, & Spiel, 2011; McInerney, McInerney, & Marsch, 1997). Dörrenbächer and Perels (2016) put forward that students with moderate self-regulated learning skills profiles benefited from the instructions; however, students with low and high profiles did not benefit from the instruction. In addition, the researchers indicated that lower test anxiety, lower neuroticism, higher levels of agreeableness, extraversion, conscientiousness, and openness to experiences resulted in better outcomes in self-regulated learning skills training. In a similar vein, González-Pienda, Fernández, Bernardo, Núñez, and Rosário (2014) investigated the pre-conditions of the students in terms of their self-regulated learning skills, and their results revealed that students with low levels of self-regulated learning skills benefitted from the training more. As the researchers remarked, the difference in the attitudes of the students towards the instruction in the current study might have impacted the effectiveness of the instruction. These findings were in line with the observations of the instructors. The instructors also

mentioned that the students who were not eager to participate in the activities and did not demonstrate engagement might not have benefited from the instruction. They also offered to support such students and provide better encouragement for them. As a solution to this concern, the importance of developing adaptive and flexible training as for self-regulated learning skills profiles and individual differences was highlighted, which had an impact on the effectiveness of training (Dörrenbächer & Perels, 2016; Kokkinos, Kargiotidis, & Markos, 2015). The design of the instruction in the current study was stated to enable the instructors to make adaptations easily to address individual differences of the students.

Regarding the time devoted to self-regulated learning integrated L2 instruction, the instructors suggested sparing more time for self-regulated learning activities could enhance the outcomes in terms of gaining self-regulated learning skills. In addition, both instructors agreed that out-of-class working time on self-regulated learning could be increased, which would contribute to the autonomy of the students. Nisa suggested that implementations such as flipped classrooms might be beneficial for increasing out-of-class working time. In the literature, the increased effect of long-term interventions and supporting the students for longer periods of time has proved to lead to long-lasting achievements as for self-regulated learning skills (Dignath & Büttner, 2015). Although the time allocated to the self-regulated learning instruction rather than the actual teaching of English was disputed, given the benefits of self-regulated learning instruction, Yang et al. (2025) offered that the time dedicated to training was worthwhile. Thus, allocating more time to self-regulated learning skills both in the classroom or out of the classroom was believed to provide more learning opportunities for students.

The last important issue raised by Nisa concerned the teacher training, which should be provided for the teachers before they were expected to give self-regulated learning instruction. Nisa indicated that teachers should be given background knowledge about self-regulated learning, which should encompass the theoretical background of self-regulated learning, their roles and responsibilities in the instruction, and the activities which would be applied during the implementation process. She asserted that she could manage the process thanks to a course she received in her graduate school and the support from the researcher instructor. Thus, she believed that teacher training and follow-up support would enhance the effectiveness of the self-regulated learning integrated L2

instruction. The literature also reinforces Nisa's ideas regarding teacher training from two perspectives. Firstly, teachers' unawareness of the benefits of integrating self-regulated learning skills into their academic performance and learning skills might hinder the implementation of instruction. Secondly, teachers might not possess adequate knowledge regarding how to implement self-regulated learning skills and instruct students (Spruce & Bol, 2015). However, it was demonstrated that teachers' knowledge and beliefs about self-regulated learning were projected in their classroom practices, which also impacted their teaching abilities to teach self-regulated learning (Kramarski & Revach, 2009; Maggioni & Parkinson, 2008; Perels, Merget-Kullman, Wende, Schmitz, & Buchbinder, 2009). In a similar vein to Nisa, the literature suggests teacher training to teach teachers how to self-regulate and then transfer this knowledge to their students. It has been shown that teachers need preparation courses as a part of their continuing professional development (Spruce & Bol, 2015) for their own personal practices and implementation of self-regulated learning skills (Liyanage & Bartlett, 2010).

5.1.4 Discussion of the findings related to the RQ 4. The fourth research question of the current study focused on the opinions of the student participants who were involved in the self-regulated learning integrated L2 instruction. The responses of the 22 students who took part in semi-structured interviews were analysed inductively. Such themes as enhancement in self-awareness and self-evaluation, change in routines and thinking, self-regulated learning skills awareness, and contributions of the instruction to foreign language performance emerged in the data. Overall, the student participants mentioned that the instruction benefitted them in terms of self-awareness and gaining knowledge on self-regulated learning. In addition, the instruction enabled them to change their routines and thinking to manage their language learning process better. Lastly, they suggested that they developed their writing and speaking skills.

The benefits of self-regulated learning instructions have been frequently analysed from the perspectives of the instructors or measured by pre-post test designs. The opinions of the participants regarding the instructions have been sought in several studies. The findings of the current study are discussed in relation to the scarce number of studies below.

To start with, the present study revealed that the self-awareness of the student participants was improved, especially by the direction of self-evaluative questions. They had an opportunity to explore and reflect on their strengths and weaknesses. When they were explicitly asked about their weaknesses and their strategies to overcome them, they had a chance to think about these issues seriously. The literature on the perspectives of participants regarding the benefits of self-regulated learning instructions was in line with the findings of the current study. Firstly, Ateş-Akdeniz (2023) also investigated the impacts of self-regulated intervention on students' self-awareness and use of self-regulated learning strategies. The students remarked that the intervention was beneficial in 'self-analysing' as they expressed that they became aware of themselves. The intervention was stated to be a chance for them to analyse themselves better. In addition, the students mentioned learning about their abilities and desires, which contributed to their self-efficacy and self-discovery. Regarding self-awareness, self-evaluation, describing weaknesses and strengths, the studies received similar results.

In a similar vein, in a study by Boyd, Besche, Goldhammer, Alblooshi, and Coleman (2022), the student participants revealed the importance of self-reflection, especially through the instructors' support. The explicit questions on students' strategies and their management of the learning process were found beneficial as they created a space for self-reflection. In addition, Boyd et al. (2022) discussed the importance of reflecting on learning strategies, areas for improvement, and progress for students who were experiencing an academic transfer, such as starting a new level or transition to university. The researchers highlighted that this kind of self-regulated learning applications was beneficial, especially for these students. The student participants in the current study were also at a transition stage in that SoFLs are the first steps to the faculty. Thus, student reflection might be more needed in this transition period.

Another issue raised by the student participants related to the awareness of self-regulated learning. The students in the present study remarked that thanks to the instruction, they perceived the role of strategy use in language learning, could identify their goals, and focus on goal achievement better. Although they had employed some strategies in the past, they expressed that their language learning was, in a way, 'blinded'. The instruction enabled them to gain more personalized and influential strategies. In the

literature, self-regulated learning instructions have also been suggested to contribute to the increased strategy use, awareness of various learning methods, and suitable employment of these methods (Ateş-Akdeniz, 2023; Boyd et al, 2022; Thomas, Bennett, & Lockyer, 2016). These gains of the students, especially planning goals and monitoring them in the learning process, were postulated as an important factor which enhanced learning efficiency (van den Hurk, 2006).

Motivation was also reported to increase thanks to the self-regulated learning integrated L2 instruction. Setting goals, learning about new strategies, and reflections on their language learning process were mentioned as some factors for increased motivation and self-efficacy. In addition, being involved in peer or group work and realizing that they were experiencing the same difficulties reduced the feeling of hopelessness. Another important determinant of motivation was instructors' feedback. The students asserted that their attempts were being seen, discussed, and finally validated by the instructors. The feeling of validation enhanced their motivation. The student participants' opinions about the impact of the instruction on motivation were also articulated in other studies. Ateş-Akdeniz (2023) also emphasized the role of interaction with peers as it created a space for sharing positive and negative experiences. The feeling of going through the same stories was indicated to decrease their frustration due to the struggle of learning. Sharing the experiences in a non-threatening environment led to a decrease in feeling lonely and enhanced self-efficacy of the students (Bilgin & Akkapulu, 2007). The support from the couch was also stated to be a 'push'; namely, a drive factor for the students. The students who received such support were found to implement learning goals more often with the assistance of their coaches in reflecting, validating, and interpreting the challenges, which also improved the well-being of the students (Wolff et al., 2020). In relation to language learning, Teng and Zhang (2020) and Su et al. (2023) agreed on the role of self-regulated learning on motivation due to better monitoring, self-control, persistence, and increased willingness.

The change in routines of the student participants was also one of the issues highlighted. The students stated that their habit of procrastination was lessened due to the instruction. Moreover, they started acknowledging the importance of their problems rather than ignoring them. Lastly, two of the students indicated that they became more assertive

in taking the chance to develop their language skills. The instructions were offered to result in changes in routines and behaviours. Regarding procrastination, Shadiev, Hwang, and Liu (2018) also postulated that instruction on metacognitive strategies helped students have control over their learning, and they were inclined to procrastinate less. Dörnyei (2005) suggested that the employment of metacognitive control strategies prevented procrastination. Taking action and proactive steps, such as students' more assertive behaviours, was also offered to be enhanced through self-regulated learning instructions. Learning better strategies, improving self-efficacy, and self-reflective behaviours might have resulted in proactive behaviour (Boekaerts & Corno, 2005; Machado & Boruchovitch, 2015; Panadero, Klug, Jarvela, 2016).

Lastly, regarding the impacts of the instruction, the student participants revealed that the instruction contributed to their writing and speaking performance in language learning. Although it was not one of the aims of the current study, this effect could be considered a by-product. The weekly journals provided them with a chance to practice their writing skills, and they overcame the fear of writing. In addition, one of the students stated that these weekly journals might have improved his speaking, as these journals were free writing space for him; so, this free writing contributed to his fluency. The positive effects of self-regulated learning on language performance have been confirmed by a number of studies. The recent studies by Trujillo and Roman (2024), Dong and Habok (2024), and Yang, Wang, and Yang (2025) and a review study by Su et al. (2023) put forward how self-regulated learning skills positively affect various components of language learning, such as speaking, listening, writing, vocabulary.

5.2 Conclusions

The current study contributes to the self-regulated learning literature by offering a self-regulated learning integrated L2 instruction which is to be implemented at SoFL. The empirical evidence for the instruction came from qualitative and quantitative data including pre-, post-, delayed post-tests, interviews, and weekly language journals of the student participants.

Turning to the quantitative section of the study, the Self-Regulated Learning Skills Questionnaire (Turan, 2009) was administered as a pre- and post-test to three groups: the

control group, the experimental lower-level English proficiency group, and the experimental higher-level English proficiency group. The experimental higher-level English group took the questionnaire as a delayed post-test six months after the implementation. The total results from the questionnaire revealed no significant statistical differences between the self-regulated learning skills of the control group and the higher-level experimental groups. The sub-dimension of autonomy in learning, on the other hand, was found to be significantly higher in the higher-level experimental group. In addition, the lower-level and higher-level English groups were compared in relation to their post-test scores. The higher-level English group surpassed the lower-level English group regarding their self-regulated learning skills scores in the post-test. As for the sub-dimensions, no significant difference was found between the experimental low-level and high-level English proficiency groups. In terms of the delayed post-test conducted with the experimental high-level English group due to accessibility reasons, statistical analysis indicated a non-significant difference between the pre-, post, and delayed post-test results of the experimental high-level English group. The partly significant results were discussed in the light of the literature to address the plausible explanations. The nature of the instruction, which is more based on implicit components, a self-report questionnaire to collect quantitative data, student-related factors such as age, the level of motivation, and already high level of academic achievement could potentially underlie the results obtained.

Another focus of the study was to uncover the frequency and the ways of employing the self-regulated learning sub-skills in language learning, strategy use and evaluation, planning and goal setting, motivation and taking action, and autonomy in learning in the context of the current study. Among these four sub-skills of self-regulated learning, strategy use and evaluation emerged as the most prevalent strategy, while autonomy in learning accounted for the lowest frequency. Regarding the use of self-regulated learning sub-skills in language learning, the results indicated that the use of self-regulated learning sub-skills complied with the existing body of literature, especially with pivotal models such as Pintrich's model of self-regulation and Oxford's S2R Model. The various usages of self-regulated learning strategies to increase motivation, prevent

procrastination, and achieve better learning outcomes were observed to be employed by student participants.

The voices of the instructors who were involved in the piloting and implementation processes of the self-regulated learning integrated L2 instruction provided valuable insights, especially regarding the benefits of the instruction. The instructors observed that their students familiarized themselves with self-regulated learning and gained knowledge of various strategies, which would enhance their language learning process. In addition, the integrated nature of the instruction was stated to contribute to the flow of the lesson and implementation of the instruction. The findings from the dialogic interview also pointed to several considerations concerning the implementation of the instruction, which were also offered in the literature. The motivation level of students who were targeted for the instruction should possess a minimum of moderate-level motivation for better engagement in the instruction. In line with the literature, the findings from the interview referred to the impact of individual differences on the effectiveness of the instruction. Lastly, the results also underscored the importance of teacher training in the implementation of self-regulated learning integrated L2 instruction, which would also promote the overall success of the instruction.

With regard to students' opinions, the instruction was found to be beneficial by student participants in several ways. The data, both from the interviews and the weekly journals, revealed that the students gained awareness in terms of self-regulated learning in addition to sound knowledge of various strategies. This knowledge was projected in their routines and thinking during their language learning process. Although it was not aimed in the study, consistent with the previous research, the results indicated a development in the writing and speaking skills of the students.

Overall, the study shed light on the ways in which self-regulated learning is integrated into L2 instruction in SoFL. The significant results in the sub-dimensions of the questionnaire and a significant difference between the low- and high-level English groups suggest certain pedagogical implication regarding the employment of self-regulated learning skills in higher education language classrooms.

5.3 Implications

Given the benefits provided by self-regulated learning instruction, self-regulated learning should be promoted at every level of education. Regarding the language learning process, the study puts forward that such an instruction will benefit the language learners. In a long and tiring language learning process, self-regulated learning strategies have the potential to serve as a guide which will regulate the behaviours, cognition, and affect of language learners. In addition, it is evident in the data, which is also in line with the literature, that self-regulated learning skills are transferable. This evidence suggests that teaching self-regulated learning skills may foster the outcomes in other learning objectives.

In order to teach self-regulated learning skills, the findings of the study call for certain actions to be taken. Firstly, as it was also addressed by the instructors participating in the study, teacher training should be an indispensable part of self-regulated learning skills instruction. The instructors are suggested to be provided with background knowledge regarding self-regulated learning. Besides that, based on the design of the instruction, they should be informed in terms of the effective ways of integrating self-regulated learning skills into their content. Such teacher training is believed to contribute to the positive outcomes of self-regulated learning skills instructions.

It is also worth noting that self-regulated learning skills instructions prove impactful only when students are motivated enough to be involved in such instruction. Hence, the importance and benefits of self-regulated learning should be conceived by students for better engagement in the instruction. Before the instruction commences, it is recommended students be informed about the advantages of being a self-regulated learner and the contributions of self-regulated learning to their learning outcomes. Being aware of these advantages and contributions will promote student engagement in the instructions.

The last but not least, the duration of the instructions is of high importance. Self-regulated learning skills literature has demonstrated the more beneficial and long-lasting results of longer instructions compared to workshops or one-shot training. Thus, in line with the literature, instruction designs with longer periods of time are suggested. In addition to the duration of the instructions, follow-up self-regulated learning skills

activities are considered necessary in order to maintain the positive outcomes of the instructions in the long term. Although the students in the current study were found to retain their skills in the delayed post-test, several studies demonstrated that self-regulated learning skills had an inclination to decline over time (Vandeveldt et al., 2017). In order for students to maintain positive outcomes, the instructions are encouraged to be designed with follow-up activities which are aimed at supporting students in the long run.



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