

**Assoc. Prof. Dr. Gökçe Kurt<sup>1</sup>**  
English Language Teaching, Marmara University  
Istanbul, Turkey

**Dr. Burak Tomak<sup>2</sup>**  
School of Foreign Languages, Marmara University  
Istanbul, Turkey

Original scientific paper  
UDC: 37.018.43  
DOI: 10.5937/IstrPed2202433K

---

## EXPLORING UNIVERSITY STUDENTS' SELF-REGULATION IN ONLINE FOREIGN LANGUAGE EDUCATION

**Abstract:** With the spread of the Covid-19 pandemic, online education has been embraced as an instructional delivery mode to ensure continuity in all levels of education including higher education. Given the fact that the success of online learning heavily relies on the learner's ability to autonomously regulate their learning, this study focuses on self-regulatory behaviors of tertiary level EFL learners enrolled in an online intensive language preparatory program. Quantitative and qualitative data were gathered to explore learners' perceived levels of online self-regulation; the predictive role of online learning self-efficacy beliefs in their self-regulation; and the strategies they used to regulate their learning in online education. Findings revealed learners' moderate level of online self-regulation predicted by their self-efficacy beliefs. Moreover, EFL learners used a variety of strategies to regulate their learning before, during and after synchronous online classes.

**Keywords:** self-regulation; online education; online self-efficacy beliefs; EFL context.

### Introduction

Self-regulation and the use of self-regulatory strategies in educational environments have been suggested as significant predictors of learners' academic achievement (Bradley, Browne, & Kelley, 2017). Self-regulated learning (SRL) pertains to the degree to which a learner participates metacognitively, motivationally and behaviorally in the learning process and involves the use of strategies such as planning, monitoring and regulation of learning, setting goals for learning and making efforts to reach them, and adjusting one's conduct during learning, including management of time and study environment or help-seeking (Schunk & Zimmerman, 2011; Zimmerman, 2011).

Over the past three decades, several models with different constructs have been proposed to study SRL. For example, the model introduced by Winne and Hadwin (1998) views self-regulated students as managing their own learning by using (meta)cognitive strategies. Goals and motivation-based models proposed by Boekaerts (1992) and Pintrich (2000) involve emotions, learning, motivation, metacognition and self-concept and highlight the relationship between SRL and motivation. Hadwin, Jarvela and Miller, (2011)'s model supports the view that socially shared regulation of learning occurs when groups co-construct plans or align monitoring perceptions to establish a shared evaluation of progress. Socio-cognitive models focus on how students learn by observing others and as a result of their social interaction (Usher & Schunk, 2018). Under the socio-cognitive

---

<sup>1</sup> gokce.kurt@marmara.edu.tr, <https://orcid.org/0000-0002-9022-1258>

<sup>2</sup> buraktomak@marmara.edu.tr, <https://orcid.org/0000-0001-6678-431X>

perspective, Zimmerman's three models, i.e., Triadic, Cyclical and Multi-level, emphasize the interaction between person, behavior and environment; embrace the forethought, performance and self-reflection phases to describe the key processes that come into play during SRL; and trace four stages (e.g., observation, emulation, self-control and self-regulation) during which learners develop self-regulatory competency (Zimmerman, 2000). Despite their different conceptualizations of SRL, the theoretical perspectives on academic self-regulation (SR) commonly accept that (1) SR involves behavior, cognitive, metacognitive and motivational participation in learning and performance; (2) goal setting helps learners focus on tasks and related activities; (3) SR is dynamic and involves a similar cyclic process of self-regulatory phases as preparatory, performance and appraisal; (4) motivation is critical for learning and might affect goals; and (5) emotions are important for SR and pursuing goals (Panadero, 2017; Puustinen & Pulkkinen, 2001; Schunk & Greene, 2018).

The significance of SR in both face-to-face and online learning environments has been revealed in a considerable number of studies (e.g., Ally, 2004; Artino, 2008; Tomak & Seferoglu, 2021; Tsai, 2013; Zheng, Liang, Li, & Tsai, 2018). Given the need for a high degree of student autonomy resulting from the instructor's physical absence and the decreased interaction with the instructor and peers, the effective use of SRL strategies is more essential in online educational settings (Ally, 2004). As Dabbagh and Kitsantas (2004) state, "in a web-based learning environment, students must exercise a high degree of self-regulatory competence to accomplish their learning goals, whereas in traditional face-to-face classroom settings, the instructor exercises significant control over the learning process and is able to monitor student attention and progress closely" (p. 40). Social cognitive models of SRL have been found to be particularly useful in online education due to (1) the emphasis given to motivational factors such as self-efficacy beliefs and goal orientation along with the learning strategies that benefit students in highly independent learning situations; and (2) the recognized importance of social and environmental factors on student success in online education (Artino, 2008).

With its focus on SRL in online education, the present study adopts Zimmerman's cyclical model grounded in the socio-cognitivist theory as the theoretical framework. Following the model, it is assumed that, in the forethought phase, learners analyze the task at hand in order to set goals and identify task-related strategies while simultaneously reviewing the expected outcomes and analyzing their own beliefs in their ability to control the outcomes. In Zimmerman's model, motivation is also included as part of forethought. Students' motivational beliefs including their self-efficacy beliefs, outcome expectations, preference or enjoyment for a task and goal orientation support their SRL. As they perform the task, they implement strategies related to the task, monitor their performance and/or the effectiveness of their strategies, and act upon environmental conditions such as distractions. During the final phase of self-reflection, learners evaluate their performance and reflect upon their previous and future actions and strategies related to the task. They think through how to adapt strategies for the next learning task emphasizing the cyclical nature of self-regulation (Zimmerman, 2000).

### **Self-regulated Learning in Online Higher Education**

There has been a recognized shift toward technology-supported learning with many higher education institutions adopting fully online or blended courses (Hadullo, Oboko, & Omwenga, 2018). Given the fact that the success of online learning heavily relies on a learner's ability to autonomously and actively engage in the learning process, online learners are required to be equipped with the self-generated ability to control, manage and plan their learning actions in online learning environments that afford high levels of learner autonomy and low levels of teacher presence (Nikolaki, Koutsouba, Lykesas, Venetsanou, & Savidou, 2017).

A considerable amount of research has recently investigated self-regulation in online higher education learning environments and focused on its relationship to learners' academic achievement. For example, Cho and Shen (2013) explored the relationship between SRL and achievement in an undergraduate online course and found that learners' intrinsic goal orientation and academic self-efficacy beliefs were positively associated with their achievement. Broadbent and Poon (2015) reviewed 12 studies that examined the relationship between SRL strategies and online academic success and concluded that metacognition, time management, effort regulation and critical thinking were directly related to online academic success. Bradley, Browne and Kelley (2017) examined the influence of self-regulatory skills on achievement and found that self-regulatory behaviors were significant predictors of academic success in online courses.

Learners' self-regulatory behaviors were also studied in relation to learner characteristics. Wang and Zhan (2020) suggested that stronger learner beliefs of self-efficacy promoted learning motivation and self-regulation in an online learning context. The findings of Lee, Watson, & Watson (2020) revealed self-efficacy as a significant predictor of the use of SRL strategies in online education. Cho and Shen (2013) also found a positive correlation between learners' self-efficacy beliefs and SRL strategies in an online course. In a similar vein, the studies of Artino and Jones (2012) and Shea and Bidjerano (2010) revealed that self-efficacious learners were more likely to use SRL strategies in online learning. Artino and Stephens (2006) also discovered a positive correlation between online learners' task value beliefs and use of cognitive strategies. When learners found the tasks in online courses interesting, important or useful, they used SRL strategies more frequently.

### **Statement of the Problem**

The COVID-19 pandemic has dramatically affected educational systems from kindergarten to tertiary level worldwide, leading to closures for an indefinite time. As a response to the breakdown in education, UNESCO (2020) endorsed the use of distance learning programs, open educational applications and platforms to reach learners remotely. On account of this recommendation, several countries have embraced distance or online education as an instructional delivery mode to ensure continuity in education. Higher education institutions had to move their educational activities on online platforms in the middle of the semester though they were not prepared for such an abrupt transition due to their lack of infrastructure and strategies (Zhang, Wang, Yang, & Wang, 2020).

Having already experienced online education for over three semesters and overcome initial problems, today universities are more concerned about increasing the quality of online education and designing learning and teaching environments conducive to better learning opportunities. Given the fact that a lack in SRL skills poses a challenge to successful online learning outcomes (Acquaro, 2020), it would be significant to focus on online SRL behaviors of learners experiencing online education for the first time in their lives.

The present study focused on the self-regulatory behaviors of tertiary level EFL learners enrolled in an intensive language preparatory program which was traditionally conducted face-to-face but switched to online modality due to the pandemic. Self-regulation has long been discussed as one of the critical factors for learners' successful language learning experiences (Dornyei & Ryan, 2015; Tseng, Dornyei, & Schmitt, 2006) and thus several studies have probed into learners' self-regulation in various EFL contexts. However, most of these studies were carried out in traditional classroom-based learning environments (e.g., Kim, Wang, Ahn, & Bong, 2015; Li & Wang, 2010, Tomak & Seferoglu, 2021). Thus, there is a need to focus on EFL learners' self-regulation in online higher education delivered under pressing circumstances due to the pandemic. The present study aims to answer the following research questions:

- (1) What are EFL learners' perceived levels of self-regulation in online education?
- (2) What predictive role does EFL learners' online learning self-efficacy play on their online learning self-regulation?
- (3) What specific strategies do EFL learners use to regulate their learning in online education?

## **Methodology**

### **Context and Participants**

Following a case-study methodology, the present study employed a mixed-method, descriptive approach to understand EFL learners' online self-regulatory behaviors in a mandatory online synchronous program. For the purposes of the study, an English preparatory program of a mixed Turkish-English medium state university in Istanbul, Turkey was selected as the unit of analysis. English is traditionally taught at Turkish universities in a one-year preparatory program offering intensive English instruction and then through language support classes during undergraduate programs. The preparatory year is compulsory for all English medium instruction (EMI) and Turkish-English medium instruction (T-EMI) programs while it is voluntary for Turkish medium instruction (TMI) ones. All EMI and T-EMI students are eligible for a preparatory English program unless they are exempted because they perform well in the language proficiency test that they take upon their admission to university or they have a certain score in an accepted international English language exam such as IELTS or TOEFL. TMI students, on the other hand, can either start their undergraduate courses straight or choose to study in the preparatory school.

The present study was conducted in the second semester of the 2020/2021 academic year. At the time of the study, the preparatory program was operating remotely via an online platform as part of the measures taken by the Council of Higher Education in Turkey to reduce the spread of COVID-19. Participants were recruited via an informative email that explained the purpose of the study and provided a link to the online survey. Out of 1050 registered EMI and T-EMI students, 757 of them agreed to participate voluntarily and completed the survey. An informed consent form was obtained from the participant students electronically. Of all the participants, 414 (54.7 %) were female and 343 (45.3%) were male. Their average age was 18.3. All students owned a computer, a tablet or a smartphone and had access to the Internet. None of them had experienced learning English online before or received training on online learning. These students started the program either at A1 or A2 level of English and they were expected to reach to B2 at the end of the academic year. While the A1 level students received 25 hours of weekly online English instruction, it was 20 hours for the students in the A2 level. The fully synchronous online program included four-skills instruction as well as a separate focus on the development listening and speaking and reading and writing skills.

For the qualitative phase of the study, six students were purposefully selected to be interviewed based on their perceived levels of self-regulation, willingness to participate, engagement in the online classes and gender. Students in the classes of one of the authors of this study were informed about the interviews and invited for participation. Among the volunteering ones, three female and three male students who scored high on the self-regulation survey and demonstrated a high degree of engagement in online classes were selected. The degree of students' self-regulation depends on the degree to which students are active in the learning process (Kadioglu-Akbulut & Uzuntiryaki-Kondakci, 2021). Thus, they were considered as information-rich cases that would best provide in-depth information about their self-regulation strategies in online education.

### **Data Collection and Analysis**

Quantitative data came from the Turkish versions of the Online Self-regulated Learning Questionnaire (OSLQ; Barnard, Lan, To, Paton, & Lai., 2009) and Online Learning Self-Efficacy Scale

(OLSES; Zimmerman & Kulikowich, 2016). The 24-item OSLQ scale was answered on a 5-point Likert scale and higher scores indicated better SR in online learning by students. It consisted of six subscales structured around the six phases outlined in Zimmerman's SRL cycle as environment structuring, goal setting, time management, help seeking, task strategies, and self-evaluation. Environment structuring and goal setting are usually associated with the forethought phase, time management and task strategies and help seeking with the performance phase and self-evaluation with the self-reflection phase (Barnard-Brak, Paton, Lan, 2010). The translated version of the scale was adopted from Kilis and Yildirim (2018). In their study, internal consistency value measured via Cronbach alpha was .95 for the whole instrument and ranged between .67 and .87 for its six subscales. In the current study, Cronbach alpha value of the overall scale was found to be .91. The values for the subscales ranged from .62 to .83.

The OLSES with 22 items was developed to determine university students' self-efficacy perceptions in online learning environments. The Turkish version of the scale (Yavuzalp & Bahcivan, 2020) had a high reliability coefficient of .99 for the overall scale. The original scale was answered on a 6-point Likert scale while a 5-point one was used in the translated version. In the present study, Cronbach's alpha was found to be .91 for the overall scale.

Qualitative data were collected via one-on-one semi-structured interviews with six purposefully selected students. Each interview lasted 40 to 50 minutes and began with an introductory talk about the aim and focus of the study, expected duration of the interview and how the data would be used. During the interviews, students were queried about the strategies they used to self-regulate their online learning based on Zimmerman's SRL model (Zimmerman, 2000). For sample interview questions, please see the Appendix. All interviews were conducted online via Zoom and recorded with the permission of the participants for transcription purposes. The interviews were conducted in Turkish and then translated into English for analysis.

For the quantitative data, SPSS version 27.0 was used to conduct descriptive statistics and multiple regression analysis. Qualitative data were analyzed through both deductive and inductive thematic analysis. Braun and Clarke's (2012) six-phase approach to thematic analysis was implemented as follows: First, the recordings of individual interviews were transcribed by one of the authors who had conducted the interviews and the transcribed data were read for familiarization purposes. Then, initial codes were generated and grouped into themes deductively based on the categories of SRL included in the online-self regulation survey used in this study, following Zimmerman's cyclical model. Further analysis focused on the generation of subthemes inductively. In order to enhance the analysis process, data were coded by the two authors independently, following the recommendation of Joffe (2012). Finally, the themes and subthemes were reviewed to ensure that they worked well in relation to the data and the research question and finalized them for reporting purposes. In the case of inconsistency of coding, consensus was utilized to decide on a final code. To provide confidentiality, each student was assigned an identification number in the process of data analysis.

## Results

### EFL Students' SR levels

Self-regulation levels of the students were descriptively investigated to answer the first research question. Higher scores on the scale indicated better self-regulation in online learning. The Shapiro-Wilk's test ( $p > .05$ ) and a visual inspection of the histograms and box plots revealed that the scores for the SR scale were normally distributed. Values of mean and standard deviation were considered to interpret students' levels of self-regulation for the overall scale and the subscales. The mean score for the total scale ( $M = 3.17$ ,  $SD = .68$ ) was moderate. The subscale of environment structuring had

the highest mean score ( $M= 3.89$ ,  $SD= .88$ ), followed by goal setting ( $M= 3.53$ ,  $SD= .85$ ). In other words, students' self-regulation in these two subscales were at a high level. The lowest mean score was obtained for the self-evaluation subscale ( $M= 2.76$ ,  $SD= .95$ ) indicating a moderate level of self-evaluation in the online learning environment. The findings for task strategies ( $M= 2.96$ ,  $SD= .92$ ), time management ( $M= 2.89$ ,  $SD= 1.03$ ) and help-seeking ( $M=2.80$ ,  $SD= .90$ ) demonstrated that the mean scores were similarly moderate.

### Online Learning Self-efficacy as a Predictor of Self-regulation

The second research question aimed to investigate, through multiple regression, how much of the variability in the dependent variable, i.e., EFL students' SR in online learning, could be accounted for by the independent variable, online self-efficacy. Prior to conducting the analysis, all assumptions for multiple regression were checked and met. Examination of a normal predicted probability plot and the scatter plot revealed normality, linearity, and homoscedasticity as well as independence of residuals. The correlation between the two variables was .50 and the value of tolerance was 1.000, indicating that the multicollinearity assumption was also met. The regression analysis of the model predicting students' online SR revealed a significant regression equation  $R^2 (.247)$ ,  $F(1, 755)= 247.40$ ,  $p < .001$ ). This indicates that online learning self-efficacy beliefs explain 25% of the variance in students' online SR scores (see Table 1).

**Table 1.** Regression analysis regarding the prediction of students' online self-regulation

Variables	B	$\beta$	t	p	R	$R^2$	Adjusted $R^2$
Online self-efficacy	.544	.497	15.729	.001	.497	.247	.246

### EFL Students' SR Strategies

In relation to the third research question focusing on EFL students' self-regulation in online education, six students were individually queried about their strategies.

#### Preparation phase

*Environmental structuring:* All students were engaged in environmental structuring before attending their synchronous online classes. In this study, environment referred both to physical and online learning environments. Students' responses in relation to the organization of the environment were grouped under three subthemes as organization of course materials, creating a quiet setting and avoiding distractors. As S1 mentioned, "Before the lesson starts, I get my books and notebook ready and put them in front of my computer." S2 said he opened an online thesaurus on the screen to check the meaning of the new words he would encounter during the lesson. S6 preferred a quiet learning environment and arranged her place accordingly as reflected in her comment: "I need a quiet environment to better concentrate on my lesson, so I close the door and warn everyone in the house to be quiet while I am attending the online class." S4 and S6 focused on the distractors in their comments and said they put away disturbing objects prior to the lesson. As S4 explained, "Before the online lesson, I remove photos or colorful objects from my study desk as they can easily distract my attention." S6 put away her mobile phone as the messages appearing on the screen distracted her attention even if the phone was muted.

*Goal setting:* Students' responses to the question focusing on the reasons for attending the online classes revealed their intrinsic and extrinsic goals. Students with intrinsic goals expressed their reasons as follows:

I attend the classes to be exposed to and improve my English. Outside the classroom, I do not listen to songs or watch movies in English, but we do them often in the online classroom. (S6)

As my vocabulary is insufficient to express myself clearly in English, I want to learn new words during the lessons. (S4)

On the other hand, some students' goals resulted from obligation and necessity. For example, S3 said he attended the lessons due to the mandatory attendance policy while S5 stated his need to learn English for his EM department and future job.

*Task strategies:* As a preparation for their synchronous online English classes, students used some facilitation strategies such as the exploration of the subject of the forthcoming class and activation of prior knowledge. Students explored the unit to be studied in the coming class in terms of its topic and vocabulary. S3 said, "I check the subject of the next unit in the coursebook to familiarize myself with it." S5 commented that she looked up for the meaning of new words before online lessons. Some students activated their prior knowledge through revision and homework completion. S4 said she revised grammar points they had already covered before online classes while S1 flipped the pages of the previous unit on the coursebook to remember what had already been covered. S4 mentioned that "I do my homework regularly to be better prepared for the online classes I attend." S6 also said he found and completed extra exercises on the web as a preparation.

#### *Performance phase*

*Task-strategies:* Students' strategies to deal with online learning were grouped under three subthemes as recording, information seeking and memorizing. Almost all students mentioned note-taking to keep the record of important points mentioned by the teacher as well as the newly encountered words. As S4 stated "I take very detailed notes of the grammar rules that my teacher explains and list the new words I hear. I also use highlighters to underline the important points in my notes." S2 took screenshots when she found the information on the screen significant. S3 used a Word document to note down the new words he encountered during the live classes to be able to revise them later. Students also used some online tools for information seeking purposes. For example, they used online dictionaries or "Google Translate" to translate any unknown word, phrase or a sentence in reading or listening texts or teacher instruction. Some students also used the strategy of memorization to regulate their learning in online classes. S2 repeated sentences several times to make them stay in his mind while S3 repeated words after the teacher to practice their correct pronunciation..

*Help-seeking:* When students were asked about their strategies to deal with learning problems that occurred during the online classes, they mentioned immediate help-seeking from their peers and teachers. As S2 said, "when I do not understand something during the lesson or feel confused, I text my friends on WhatsApp instantly." S5 said, once, she asked the teacher on Zoom chat to repeat unclear points and the teacher repeated her explanation. Students commonly stated that their first choice was consulting their friends rather than the teacher due to the reasons illustrated in their comments:

I do not ask my questions to the teacher as it is hard to communicate online. (S2)

I rarely ask my questions to the teacher as I don't feel comfortable communicating with her. (S4)

I prefer to talk to my friends about the questions in my mind. I cannot develop a close relationship with the teacher online. (S6)

*Self-monitoring:* During the online lessons, students were engaged in self-monitoring for the evaluation of their learning and performance. S6 said, "I am not satisfied with my performance in live classes. I often find myself lost." S5 expressed her opinions as follows: "I am not happy with my performance in online classes. During the lessons I realize that I do not participate often and I do not ask the questions in my mind." Similarly, S3 mentioned that when he could not answer a question or do the given task during the lesson, he questioned himself and tried to find the reason for his failure. In a similar vein, S4 added that "When I do not understand the talk going on or do not participate in classroom discussions, I criticize myself and try to find a justification for my poor performance." (S4)

#### *Post phase*

*Task strategies:* Following their online classes, students used several SR strategies grouped under the subthemes of reviewing records, doing the assigned homework and doing extra practice on the Web. Students used the notes or the screenshots they took during the live lessons to review the points learned. As S1 said, "I go over my notes and the screenshots after the lesson. I read the sentences I recorded again and again to internalize their structure." Similarly, S3 used the notes of the new vocabulary items encountered during the lesson and tried to use them in sentences to better remember their meaning and use. He also read out the words loud to practice their pronunciation. As another strategy, students completed the given homework assignments to reinforce their learning. They completed the exercises in their workbooks or wrote the assigned essays. Students were also engaged in extra practice to consolidate their in-class learning. S2's comment below illustrates this point:

I revisit my notes after class and write them in my notebook in a more organized way. If that day my notes are, for example, on a grammar topic, I search the Web to find some supplementary sources about it. I read about the rules and complete exercises online.

*Help-seeking:* Students used different help-seeking strategies following their online classes. S6, for example, watched instructional videos on YouTube to address the questions in her mind. S3 read forums on ELT websites and added that "I feel so much better when I learn on my own and I think I can retain that knowledge much longer in my memory." S2 also searched Google when he needed more information on the topic covered in the class. Students also asked their peers and the teacher for help though they mostly preferred to talk to their friends first. S3 said: "If I cannot find satisfactory answers to the questions in my mind, I first talk to my friends. Only when I really need it, I contact my teacher for help."

*Self-evaluation:* All students were engaged in self-evaluation following their online lessons. Some students reflected on their in-class performance as a self-evaluation strategy while others focused on their mastery of content as an evaluation criterion. S5 made the following comment:

I ask myself about my performance in the lesson. If I do not find it satisfactory, I seek ways of improving it. For example, if I hesitate too much in the classroom, I realize my weakness in speaking and try to improve it.

S3 evaluated himself based on his achievement in homework assignments. In his own words, "If I can answer the questions easily or write an essay using a variety of vocabulary, I feel that I have learned well." S2's self-evaluation depended on his exam scores and the feedback he received on his writing assignments. He said he valued an evaluation of the teacher as an expert.

*Time-management:* When students talked about task strategies, they mentioned setting a specific goal and allocating a specific amount of time for its achievement. S3, for example, said:

I aim to improve my academic writing skills as I am planning to do Ph.D. in the future. So, I have to study regularly to become a better writer. I spend almost one hour on writing practice after I complete homework assignments.

Similarly, S4, as an English language teacher candidate, specifically aimed to become a fluent English speaker and worked towards its attainment: "I allocate two hours for self-study on each weekday. I start with revision and homework. I use the remaining time for speaking practice." To manage her learning out of the classroom, S5 kept an agenda. She wrote down all homework and assignments and planned her tasks. This way, she said, she could manage her time more effectively.

### Discussion

The present study aimed to explore self-regulatory behaviors of tertiary level EFL learners enrolled in a fully online intensive language preparatory program. Students' responses to the online SR questionnaire revealed their moderate level of self-regulation in the overall scale. The strategies of environment structuring and goal setting were the most frequently used ones by the participant students. Students' use of SR strategies was significantly predicted by their online self-efficacy beliefs. In other words, students' perceived efficacy beliefs in online learning environments contributed to their self-regulatory behaviors in the online education they received.

The relationship between students' self-regulatory behaviors in online education and self-efficacy beliefs has been established in a considerable amount of research (Artino & Jones, 2012; Cho & Shen, 2013; Shea & Bidjerano, 2010; Wang & Zhan, 2020). Among different self-efficacy types, online learning self-efficacy beliefs refer to perceptions of one's abilities to successfully complete required online tasks (Zimmerman & Kulikowich, 2016). In the present study, online learning self-efficacy beliefs of the students were found to be a significant predictor of their self-regulatory behaviors in online English classes. Students had no prior experience in online learning and they did not receive any training on the technologies used for synchronous language education. Hodges (2018) indicates the necessity to study self-efficacy in online learning environments as one's confidence in using the technologies required relates to student behaviors and the effectiveness of online education. This significant finding, thus, provides support for previous research that links self-efficacy to online self-regulation.

The qualitative data focused on the specific strategies EFL students with perceived high levels of SR used to regulate their learning prior to, during and following their online lessons. Before attending the synchronous online classroom, students organized their environments, had either an extrinsic or intrinsic goal for participation, and were engaged in task strategies to facilitate their learning in the upcoming class. Goal-setting and environment structuring typically occur in the forethought phase of the development of SRL skills and strategies (Zimmerman & Schunk, 2001). Therefore, the participant students might be considered as forethought-endorsing self-regulators, borrowing the term from Barnard-Brak et al. (2010), as they arranged their workplace according to their own needs and learning preferences and showed goal orientation. Research has shown that skillful learners set specific goals that focus on learning (Ertmer & Newby, 1996; Zimmerman, 2013). Student motivation is considered to be both the source and outcome of self-regulation processes (Jossberger, Brand-Gruwel, van de Wiel, & Boshuizen, 2020). The participant students were driven by their motivation in goal-setting. They were willing to participate in online classes and make efforts to fulfil their goals. Intrinsic and extrinsic motivation were the reasons for their active engagement in online education and urged them to regulate their learning by using some preparation strategies such as activating their prior knowledge on the new topic of study, doing homework regularly or checking the meaning of new words to facilitate their learning. As Zimmerman (2013) indicates, the forethought phase requires personal initiative and persistence and thus requires high levels of key self-motivation beliefs.

In the performance phase, EFL learners employed task strategies such as recording, information seeking and memorization to self-regulate their learning. Students were also engaged in self-monitoring, like the learners in the study of Jossberger et al. (2020). Students' monitoring helped them realize the problems they had and seek help to find solutions. Highly self-regulated learners value external support and solicit help as they face difficulties (Zimmerman, 2013). Students' common help-seeking strategy was seeking peer help. They preferred to talk to their peers before the teacher and they justified their preference by referring to the sense of distance they felt toward the teacher. This can be discussed in relation to the theory of transactional distance which refers to the "distance of understandings and perceptions, caused in part by the geographic distance" (Moore, 1991, p 3). The degree of distance perceived by the learners depends on the amount of dialogue exchange between students and teachers, students and students, and students and the content, structure of the course design and learner autonomy. In the present study, the students felt distant to the teacher as they never met their teacher in person and never had an opportunity to have one-to-one communication. Despite the synchronous classes they had and the obligation to keep the cameras on during the lessons, the distance felt by the students toward the teacher was not reduced.

In the post-phase, students self-regulated their learning by reviewing the covered topics, completing homework and doing extra practice on the Web. They reflected on their learning for self-evaluation purposes and their most preferred help-seeking strategy was self-help. They, for example, watched YouTube videos to address their learning needs. Toven-Lindsey, Rhoads, & Lozano (2015) claim that, in online education, students become more individualistic in their learning. To conclude, it is generally agreed by researchers that students should conduct different SRL activities before, during and after the learning process. However, this sequence should not be followed linearly. Rather, an adaptive cyclical approach to learning should be adopted (Zimmerman, 2002). These phases are interdependent so that changes in the preparatory phase have an impact on the performance control, which, in turn, affect self-reflection phase processes (Clearly et al., 2012). In other words, students take into account and are influenced by their previous performance for the next one (Zimmerman, 2011). In this study, students seemed to repeat their SRL activities. Their perceived performance in a task had an influence on the strategy they used in future tasks. They were engaged in self-assessment during and after the online lessons so that they could adjust their plans, goals and strategies accordingly, which is considered to be an effective self-regulating behavior (Schunk & Zimmerman, 1998).

### **Limitations and Future Research**

There are some limitations of this study that should be noted. For example, the current study relied on self-report of students with which there are inherent limitations. Future research can collect additional data, preferably an observational one. In the qualitative phase of the study, the interviewed students were the ones who self-reported to be highly self-regulated learners. Future research might also focus on understanding the strategies of learners with low SR levels for comparison purposes. Finally, the participants in the current study were all enrolled in the same language preparatory program of a state university. More research might be conducted to explore online self-regulatory behaviors of EFL learners in other educational settings adopting different approaches to online education during the COVID-19 pandemic.

## References:

- Acquaro, P. (2020). Structuring and scaffolding the online course: A practical development. *International Journal of Online Graduate Education*, 3(1), 1-16.
- Ally, M. (2004). Foundations of educational theory for online learning. In: T. Anderson (Ed.) *The theory and practice of online learning* (pp.15-44). Edmonton, CA: Athabasca University Press.
- Artino, A. R. (2008). A conceptual model of self-regulation online. *Academic Exchange Quarterly*, 12(4), 21-27.
- Artino, A. R., & Stephens, J. M. (2006). Learning online: Motivated to self-regulate. *Academic Exchange Quarterly*, 10(4), 176-182.
- Artino, A. R., & Jones, K. D. (2012). Exploring the complex relations between achievement emotions and self-regulated learning behaviors in online learning. *The Internet and Higher Education*, 15(3), 170-175.
- Barnard, L., Lan, W. Y., To, Y. M., Paton, V. O., & Lai, S. L. (2009). Measuring self-regulation in online and blended learning environments. *The Internet and Higher Education*, 12(1), 1-6.
- Barnard-Brak, L., Paton, V. O., & Lan, W. Y. (2010). Profiles in self-regulated learning in the online learning environment. *International Review of Research in Open and Distributed Learning*, 11(1), 61-80.
- Boekaerts, M. (1992). The adaptable learning process: Initiating and maintaining behavioural change. *Applied Psychology*, 41(4), 377-397.
- Bradley, R. L., Browne, B. L., & Kelley, H. M. (2017). Examining the influence of self-efficacy and self-regulation in online learning. *College Student Journal*, 51(4), 518-530.
- Braun, V., & Clarke, V. (2012). Thematic analysis. In: H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57-71). American Psychological Association.
- Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *The Internet and Higher Education*, 27, 1-13.
- Cho, M. H., & Shen, D. (2013). Self-regulation in online learning. *Distance education*, 34(3), 290-301.
- Cleary, T. J., Callan, G. L., & Zimmerman, B. J. (2012). Assessing self-regulation as a cyclical, context-specific phenomenon: Overview and analysis of SRL microanalytic protocols. *Education Research International*, 2012, 1-19.
- Dabbagh, N., & Kitsantas, A. (2004). Supporting self-regulation in student-centered web-based learning environments. *International Journal on E-learning*, 3(1), 40-47.
- Dornyei, Z., & Ryan, S. (2015). *The psychology of the language learner revisited*. Routledge.
- Ertmer, P. A., & Newby, T. J. (1996). The expert learner: Strategic, self-regulated, and reflective. *Instructional Science*, 24(1), 1-24.
- Hadullo, K., Oboko, R., & Omwenga, E. (2018). Factors affecting asynchronous e-learning quality in developing countries university settings. *International Journal of Education and Development using ICT*, 14(1). Open Campus, The University of the West Indies, West Indies.
- Hadwin, A. F., Jarvela, S., & Miller, M. (2011). Self-regulated, co-regulated, and socially shared regulation of learning. *Handbook of self-regulation of learning and performance*, 30, 65-84.
- Hodges, C. (2008). Self-efficacy in the context of online learning environments: A review of the literature and directions for research. *Performance Improvement Quarterly*, 20(3-4), 7-25.
- Joffe, H. (2012). Thematic analysis. *Qualitative research methods in mental health and psychotherapy: A guide for students and practitioners*, 1, 210-223.
- Jossberger, H., Brand-Gruwel, S., van de Wiel, M. W., & Boshuizen, H. P. (2020). Exploring students' self-regulated learning in vocational education and training. *Vocations and Learning*, 13, 131-158.

- Kadioglu-Akbulut, C., & Uzuntiryaki-Kondakci, E. (2021). Implementation of self-regulatory instruction to promote students' achievement and learning strategies in the high school chemistry classroom. *Chemistry Education Research and Practice*, 22(1), 12-29.
- Kilis, S., & Yildirim, Z. (2018). Online self-regulation questionnaire: Validity and reliability study of Turkish translation. *Cukurova University Faculty of Education Journal*, 47(1), 233-245.
- Kim, D. H., Wang, C., Ahn, H. S., & Bong, M. (2015). English language learners' self-efficacy profiles and relationship with self-regulated learning strategies. *Learning and Individual Differences*, 38, 136-142.
- Lee, D., Watson, S. L., & Watson, W. R. (2020). The relationships between self-efficacy, task value, and self-regulated learning strategies in massive open online courses. *International Review of Research in Open and Distributed Learning*, 21(1), 23-39.
- Lehmann, T., Hahnlein, I., & Ifenthaler, D. (2014). Cognitive, metacognitive and motivational perspectives on prelection in self-regulated online learning. *Computers in Human Behavior*, 32, 313-323.
- Li, Y., & Wang, C. (2010). An empirical study of reading self-efficacy and the use of reading strategies in the Chinese EFL context. *Asian EFL Journal*, 12(2), 144-162
- Moore, M. G. (1991). Editorial: Distance education theory. *The American Journal of Distance Education*, 5(3), 1-6.
- Nikolaki, E., Koutsouba, M., Lykesas, G., Venetsanou, F., & Savidou, D. (2017). The support and promotion of self-regulated learning in distance education. *European Journal of Open, Distance and E-learning*, 20(1).
- Panadero, E. (2017). A review of self-regulated learning: Six models and four directions for research. *Frontiers in Psychology*, 8, 422. doi: 10.3389/fpsyg.2017.00422.
- Pintrich, P. R. (2000). Issues in self-regulation theory and research. *The Journal of Mind and Behavior*, 21(1-2), 213-219.
- Puustinen, M., & Pulkkinen, L. (2001). Models of self-regulated learning: A review. *Scandinavian Journal of Educational Research*, 45(3), 269-286.
- Schunk, D. H., & Zimmerman, B. J. (Eds.). (1998). *Self-regulated learning: From teaching to self-reflective practice*. Guilford Press.
- Schunk, D. H., & Zimmerman, B. (Eds.). (2011). *Handbook of self-regulation of learning and performance*. Taylor & Francis.
- Schunk, D. H., & Greene, J. A. (2018). *Handbook of self-regulation of learning and performance*. Routledge
- Shea, P., & Bidjerano, T. (2010). Learning presence: Towards a theory of self-efficacy, self-regulation, and the development of a communities of inquiry in online and blended learning environments. *Computers & Education*, 55(4), 1721-1731.
- Tomak, B., & Seferoglu, G. (2021). Self-regulated learning strategies of learners of English in a Turkish state university to improve their language proficiency. *Advances in Language and Literary Studies*, 12 (3), 22-27.
- Toven-Lindsey, B., Rhoads, R. A., & Lozano, J. B. (2015). Virtually unlimited classrooms: Pedagogical practices in massive open online courses. *The Internet and Higher Education*, 24, 1-12.
- Tsai, C. W. (2013). An effective online teaching method: The combination of collaborative learning with initiation and self-regulation learning with feedback. *Behaviour & Information Technology*, 32(7), 712-723.
- Tseng, W. T., Dornyei, Z., & Schmitt, N. (2006). A new approach to assessing strategic learning: The case of self-regulation in vocabulary acquisition. *Applied linguistics*, 27(1), 78-102.
- UNESCO (2020). COVID-19 Educational Disruption and Response. Online at <https://en.unesco.org/covid19/educationresponse>.
- Usher, E. L., & Schunk, D. H. (2018). Social cognitive theoretical perspective of self-regulation. In: D. H. Schunk & J. A. Greene (Eds.), *Handbook of self-regulation of learning and performance* (pp. 19-35). Routledge/Taylor & Francis Group.

- Wang, W., & Zhan, J. (2020). The relationship between English language learner characteristics and online self-regulation: A structural equation modeling approach. *Sustainability*, 12(7), 3009, 1-25.
- Winne, P. H., & Hadwin, A. F. (1998). Studying as self-regulated learning. In: D. J. Hacker, J. Dunlosky, & A. C. Graesse (Eds.) *Metacognition in educational theory and practice* (pp. 277-304). Hillsdale, NJ: Erlbaum.
- Yavuzalp, N., & Bahcivan, E. (2020). The online learning self-efficacy scale: its adaptation into Turkish and interpretation according to various variables. *Turkish Online Journal of Distance Education*, 21(1), 31-44.
- Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk and Financial Management*, 13(55), 1-6.
- Zheng, C., Liang, J. C., Li, M., & Tsai, C. C. (2018). The relationship between English language learners' motivation and online self-regulation: A structural equation modelling approach. *System*, 76, 144-157.
- Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In: M. Boekaerts & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13-39). Elsevier: Academic Press.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-70.
- Zimmerman, B. J. (2011). *Handbook of self-regulation of learning and performance*. Routledge.
- Zimmerman, B. J. (2013). From cognitive modeling to self-regulation: A social cognitive career path. *Educational psychologist*, 48(3), 135-147.
- Zimmerman, W. A., & Kulikowich, J. M. (2016). Online learning self-efficacy in students with and without online learning experience. *American Journal of Distance Education*, 30(3), 180-191.
- Zimmerman, B. J., & Schunk, D. H. (Eds.). (2001). *Self-regulated learning and academic achievement: Theoretical perspectives*. Routledge.

## Appendix

### Sample Interview Questions

1. Do you make any preparations for your online English classes? How?
2. Why do you prefer or not to join the online classes?
3. Do you use any strategies to facilitate your online language learning experience? What are these strategies?
4. How do you deal with the problems related to your online learning experience?
5. How do you manage your time in your online learning process?
6. Do you evaluate your performance in the online learning process? If yes, how?

### Biographical notes:

**Gökçe Kurt** is an associate professor in the Department of English Language Teaching at Marmara University, Istanbul. Her research interests include pre-service and in-service teacher education and technology integration in English language teaching and learning.

**Burak Tomak** got his BA from Marmara University in English Language Teaching department in Istanbul, Turkey. He got his MA and Ph.D. degrees at the same department from Middle East

Technical University in Turkey. He is currently working at Marmara University as an instructor at the School of Foreign Languages teaching academic English for prep students and as a lecturer in the Faculty of Education training prospective foreign language teachers. His research interests are culture teaching, teacher identity, foreign language learning strategies, teacher education, and teaching writing.