

49. Investigating the relationship between the perception of self-efficacy and the use of self-regulated learning strategies in the English writing skill

Sevda BALAMAN¹

APA: Balaman, S. (2021). Investigating the relationship between the perception of self-efficacy and the use of self-regulated learning strategies in the English writing skill. *RumeliDE Dil ve Edebiyat Araştırmaları Dergisi*, (23), 768-796. DOI: 10.29000/rumelide.949696.

Abstract

This study is intended to investigate (a) English as a foreign language (EFL) learners' self-efficacy perceptions, (b) their use of self-regulated strategies, and (c) whether a possible link exists between their self-efficacy perceptions and self-regulated strategy use in English writing skill. The data were collected with the participation of 50 EFL learners from the Department of Translation and Interpretation through quantitative methods. The instruments used in this research include a tool used for assessing self-efficacy beliefs (Teng, 2016; Teng, Su, & Xu, 2018) and another tool for exploring self-regulated strategies in English writing (Teng, 2016; Teng & Zhang, 2016). The collected data were analyzed quantitatively by performing descriptive statistical analyses and correlation tests. The results demonstrated that participants' perceived self-efficacy levels fell into the *high* range. In addition, the findings also displayed that self-regulated writing strategy deployment was in the *slightly high* range. As for the correlation between these two constructs, a linear, positive relationship was confirmed between self-efficacy perceptions and self-regulated writing strategies. A number of strong, positive correlations were also found between the sub-components of the two variables. The resulting information of this study can be helpful for those who aim at designing an effective writing curriculum that can enable learners to become more self-efficacious and to frequently employ an array of self-regulatory strategies in English writing.

Keywords: Sself-efficacy, self-regulated learning, strategy, writing

İngilizce yazma becerisindeki öz-yeterlik algısı ve öz-düzenlemeli öğrenme stratejilerinin kullanımı arasındaki ilişkinin incelenmesi

Öz

Bu çalışma, İngilizce yazma becerisinde (a) yabancı dil olarak İngilizce öğrenen öğrencilerin öz-yeterlik algılarını, (b) öz-düzenlemeli strateji kullanımlarını ve (c) öz-yeterlik algıları ile öz-düzenlemeli strateji kullanımları arasında olası bir bağlantı olup olmadığını araştırmayı amaçlamaktadır. Veriler, nicel yöntemlerle, Mütercim-Tercümanlık Bölümünden, yabancı dil olarak İngilizce öğrenen 50 öğrencinin katılımıyla toplanmıştır. Bu araştırmada kullanılan veri-toplama araçları, İngilizce yazma becerisindeki öz-yeterlik algılarını değerlendirmek için kullanılan bir ölçek (Teng, 2016; Teng, Su & Xu, 2018) ve öz düzenlemeli stratejileri araştırmak için kullanılan bir diğer anketten (Teng, 2016; Teng & Zhang, 2016) oluşmaktadır. Toplanan veriler, betimleyici istatistiksel analizler ve korelasyon testleri yapılarak nicel olarak analiz edilmiştir. Sonuçlar, katılımcıların algıladıkları öz-yeterlik düzeylerinin *yüksek* aralıkta olduğunu göstermiştir. Ek olarak, bulgular

¹ Dr. Öğr. Üyesi, Sivas Cumhuriyet Üniversitesi, Edebiyat Fakültesi, Mütercim Tercümanlık Bölümü (Sivas, Türkiye), sevdabalaman58@gmail.com, ORCID ID: 0000-0002-1492-2538 [Araştırma makalesi, Makale kayıt tarihi: 10.03.2021-kabul tarihi: 20.06.2021; DOI: 10.29000/rumelide.949696], ETİK: Sivas Cumhuriyet Üniversitesi Hukuk Müşavirliği, 30.12.2020, E-60263016-050.06.04-499477.

ayrıca öz-düzenlemeli yazma stratejisi kullanımının *biraz yüksek* aralıkta olduğunu göstermiştir. Bu iki yapı arasındaki korelasyona bakıldığında ise, öz-yeterlik algıları ile öz-düzenlemeli öğrenmeye yönelik yazma stratejileri arasında doğrusal, pozitif bir ilişki olduğu doğrulanmıştır. İki değişkenin alt bileşenleri arasında da bir dizi güçlü, pozitif korelasyon bulunmuştur. Bu çalışmadan ortaya çıkan bilgiler, öğrencilerin İngilizce yazmada daha öz-yeterli olmalarını ve daha sık bir şekilde bir dizi öz-düzenleyici strateji kullanmalarını sağlayabilecek etkili bir yazma müfredatı tasarlamayı amaçlayanlara yardımcı olabilir.

Anahtar kelimeler: Öz-yeterlik, öz-düzenlemeli öğrenme, strateji, yazma

1. Introduction

Writing is often deemed as a highly challenging language skill to acquire (Lin, 2019; Mulugeta, 2018; Santangelo, Harris, & Graham, 2007; Zhang, 2013; Zhang & Guo, 2012) because the composing process has a complex, multifaceted, dynamic (Hirvela, Hyland, & Manchón, 2016; Hyland, 2002, 2015), non-linear (Nightingale, 1988), strategic (Asmari, 2013), and recursive nature (Teng & Zhang, 2020; Zhang, 2013) developed in the long run (Zimmerman & Bandura, 1994) by activating various higher-order skills (Giraldo de Londoño & Perry, 2008; Teng, 2016) including, but not limited to, critical thinking, organization, creativity, problem-solving (Lin, 2019), concentration, summarizing (Golparvar & Khafi, 2021), analyzing, or criticizing skills (Ur, 1996). Students' success or failure in the learning-to-write process is shaped by diverse factors such as social, linguistic, psychological (Kormos, 2012), affective, and cognitive factors (Zabihi, 2018). Therefore, a writer needs to self-regulate cognitive, meta-cognitive, motivational and linguistic skills to succeed in the composing process (Boscolo & Hidi, 2007; Zimmerman & Risemberg, 1997) whose tasks are mainly scheduled by the writer herself/himself, necessitating long-term individual performance and exertion of creativity, which often generates unsatisfactory end-products, to be subjected to repeated revisions in order for meeting the individual quality standards (Zimmerman & Bandura, 1994, p. 846). In this sense, self-regulation is highlighted as an important concept which impacts the writing process by various researchers (e.g., Teng, 2016; Zimmerman, 1990; Zimmerman & Risemberg, 1997), upon acknowledging that writing is a “self-planned, self-initiated, and self-sustained” process (Zimmerman & Risemberg, 1997, p. 73).

The concept of self-regulation within the context of writing refers to a system where learners regulate “their cognitive processes in writing, their knowledge of writing, and the differential demands of different genres” (Wong, 1999, p. 184). Built on social cognitive theory (SCT) (Bandura, 1986), self-regulation is a metacognitive process during which the self-exploration of the thinking process is necessary for understanding and assessment of the outcomes of learners' performance and planning potential ways to achievement (Pajares, 2008, p. 118). This process works through a range of psychological sub-skills (Bandura, 1986) that enable one to self-monitor, judge, and guide efforts and learning (Zimmerman & Bandura, 1994, p. 846; Zimmerman & Martinez-Pons, 1986), which emphasizes the function of self-efficacy perceptions in the self-regulatory mechanism (Teng, 2016; Zimmerman, 2002), “as an important set of proximal determinants of human self-regulation” (Bandura, 1991, p. 257).

Bandura describes self-efficacy as “people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (1986, p. 391), which is an essential contributor to one's success or failure in writing (Bai & Guo, 2018; Golparvar & Khafi, 2021)

by predicting competence in the composing process (Bruning, Dempsey, Kauffman, McKim, & Zumbunn, 2013; Pajares, 2003). Additionally, self-efficacious learners have been reported expending more efforts and persisting in the task longer when faced difficulties as compared to those with low efficacy for writing (Pajares, 2003; Schunk & Zimmerman, 2007; Zimmerman, 2000b). Self-efficacy, a multidimensional construct (Teng et al., 2018), is among the significant segments of the self-regulation system (Teng, 2016) where composing skills are often regarded as intentional and purposeful activities (Zimmerman & Risemberg, 1997). Especially in English as a second language (ESL) and EFL writing contexts where the given tasks constitute a challenge and students' motivational orientations are quite inefficient, a sense of self-efficacy seems to be a vital source of facilitating better academic achievement in writing (Schunk & Pajares, 2010) by enabling learners to guide their writing processes by means of deploying various self-regulated learning (SRL) tactics for writing toward their goals (Kim, Wang, Ahn, Bong, & 2015; Teng, 2016; Zimmerman & Martinez-Pons, 1986; Zimmerman & Risemberg, 1997), another important component in the self-regulation system (Teng, 2016; Zimmerman & Bandura, 1994).

The conceptualization of self-regulated writing (SRW) strategies specifically refers to “deliberate, goal-directed attempts to make writing enjoyable, less challenging and more effective” (Teng & Zhang, 2016, p. 680). Influenced by SCT (Bandura, 1986) and SRL theory, self-regulatory writing strategies are affected by the triadic interplay of behaviors, environment, and persons which interacts with each other reciprocally (Zimmerman, 2013; Zimmerman & Risemberg, 1997). Upon this theorization, Teng and Zhang ground the concept of SRW strategies in a higher-order model embracing “cognition, metacognition, social behavior, and motivational regulation” (2016, p. 682).

Both self-efficacy beliefs and the employment of diverse strategies prove a salient role in depicting self-regulated learners (Kim et al., 2015), specifically in writing (Bai & Guo, 2018; Teng, 2016) because it is necessary to activate self-regulatory skills in order to produce constructive ideas and strategies pertaining to writing and handle such negative feelings as anxieties faced by the writer in text-producing (Bruning et al., 2013, p. 29). Even though SCT by Bandura (1986) posits that the more efficacious the learners become, the higher tendency they show towards using SRL strategies, the theory also underlines that the SRL strategy use also predicts a sense of self-efficacy (Bandura, 1997; Zimmerman, 2000c), suggesting that these two constructs have a two-way relationship, meaning that one is the predictor of the other variable, particularly in the writing domain (Bai & Guo, 2018). However, the bilateral interplay of these variables has not received much attention in the related literature. Moreover, the investigation of the link between the two foci within the SRL framework remains relatively unexplored in the EFL/ESL writing settings, specifically in the Turkish EFL context. Because of the paucity of the research within this context, this current research aims at investigating (a) learners' perceived writing self-efficacy levels, (b) their reported utilization of writing strategies for SRL, and (c) whether a possible link exists between these two variables in the Turkish EFL setting.

2. Literature review

2.1. Self-efficacy for SRW

Success in writing, regarded as the most difficult language skill to acquire (Harris, Santangelo, & Graham, 2010; Teng, 2016), is dependent on not only the cognitive components, but also the affective conditions such as self-efficacy beliefs (Boscolo & Hidi, 2007). The composition process necessitates the mastery of both micro- and macro-level features of writing (Brown, 2007) and having confidence

in dealing with challenges faced in the writing process (Pajares & Valiante, 2006), including, for example, cognitive, psychological, social (Zimmerman & Risemberg, 1997), or linguistic problems (Kormos, 2012). In this sense, positive self-efficacy seems to be effective in regulating the challenges encountered (Teng et al., 2018), by expending extra efforts as to the solving of the problems (Lavelle, 2006). Additionally, the previous research indicates that the self-efficacy construct can correlate with the value attached to the task by the writer (Pajares, 2003), and writing outcome in both first language (L1) contexts (Bruning et al., 2013; Zimmerman & Risemberg, 1997) and foreign language (FL) settings (Golparvar & Khafi, 2021; Sun & Wang, 2020; Zabihi, 2018). Moreover, it has been noted that the functions of effort, perseverance, and success are constructively affected by an increase in self-efficacy, which also has a notable effect on the three-staged self-regulation process, namely self-reflection, performance, and forethought (Schmitz & Wiese, 2006; Zimmerman, 2002; Zimmerman & Campillo, 2003, p. 239).

By acknowledging that a positive sense of self-efficacy is of essence in self-regulation as a vital component in the underlying mechanism of the process (Teng, 2016; Zimmerman & Risemberg, 1997), in the recent years, self-efficacy for writing has been aligned to SRL theory (Teng, 2016; Teng et al., 2018; Zimmerman, 2013), by opposing “an isolated view of writing self-efficacy with a focus on writing skills or self-regulation” (Teng et al., 2018, p. 919). In this respect, “as contrasted with a more global sampling view” (Bruning et al., 2013, p. 25), the construct of self-efficacy has started to be seen as a multidimensional (Teng et al., 2018) or a multifactor structure (Bruning et al., 2013).

In the related literature, even though there are some research studies indicating that positive perceptions of self-efficacy toward writing are associated with success in the writing competence in L1 arena (e.g., Bruning et al., 2013; Pajares, 2003) and in FL settings (e.g., Woodrow, 2011), the number of studies aiming to explore self-efficacy perceptions in writing within the tenets of self-regulation is relatively limited (Teng & Huang, 2019).

In this sense, Teng et al. (2018) investigated the self-efficacy construct and its underlying mechanism, with a special focus on writing by conceptualizing the component within the framework of SRL theory (Zimmerman, 2013) and SCT (Bandura, 1986). The study aimed at validating a scale designed to test the different dimensions of the construct particularly for EFL contexts. Data were collected with the participation of 609 university level EFL students from China through three instruments: one for assessing self-efficacy developed by the researchers (Teng et al., 2018), Pintrich, Smith, Garcia and McKeachie’s (1991) questionnaire aiming at revealing the motivational orientations of participants, and a writing test. Research data and results highlighted that self-efficacy for writing has a multifaceted structure with three dimensions, namely self-regulatory, linguistic, and performance self-efficacy dimensions (Teng et al., 2018, p. 932). The findings also demonstrated that “the multidimensional self-efficacy scale can also be directly linked to composing processes, cognitive engagement, and metacognitive control in the learning-to-write process” (Teng et al., 2018, p. 935).

2.2. SRL strategies

SRL strategies are referred as “self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals” (Zimmerman, 2000a, p. 14). Driven by the SCT (Bandura, 1986; Zimmerman, 2013), SRL is heavily associated to learning environments where learners are depicted as “self-controlled, self-instructed and self-reinforced” with an ability to learn autonomously and motivation to do so (Zimmerman & Martinez-Pons, 1986, p. 615) by utilizing

various learning strategies. Zimmerman and Martinez-Pons define SRL strategies by referring to “actions directed at acquiring information or skill that involve agency, purpose (goals), and instrumentality self-perceptions by a learner” (1986, p. 615).

The concept of SRL strategies is seen as more dynamic than learning strategies (Rose, Briggs, Boggs, Sergio, & Ivanova-Slavianskaia, 2018), because self-regulation is underlining the students’ purposeful strategic techniques to regulate their accomplishment by means of personal beliefs and processes (Zimmerman & Risemberg, 1997, p. 105). Therefore, the learning strategies framework has been reconceptualized within the scope of self-regulation (Rose et al., 2018) in a way that encompasses more self-regulated processes in which participants become more active in their learning (Dörnyei, 2005; Tseng, Dörnyei, & Schmitt, 2006).

In some previous studies, the use of SRL strategies has been tested in a number of domains and language learning environments are not an exception to this phenomenon in that the earlier research has already investigated the effectiveness of SRL strategies in L1 (Pintrich et al., 1991) and FL contexts (Wang, Schwab, Fenn, & Chang, 2013). Even though the SRL strategy use in various language skills has been gaining momentum, the research which specifically aims at exploring the effect of SRL strategies on the writing discipline is rather scarce (Teng & Zhang, 2016, 2020). Given the context-specific nature of the SRL strategies (Pintrich, 2004; Schunk, 1991; Teng, 2016), more studies exploring the deployment of SRW strategies within the L2/EFL contexts (Teng & Huang, 2019) are needed.

2.2.1. Writing strategies for SRL

Good writers frequently employ a plethora of writing strategies than their less-proficient counterparts (Bai, Hu, & Gu, 2014) in order for coping with challenges encountered in writing which is comprised of mainly three stages, namely planning, drafting and writing, and reviewing, as asserted by Flower and Hayes (1981). Originally, the process writing approach itself is built on the cognitive theory (Flower & Hayes, 1981) and necessitates the deployment of various learning strategies for success in writing (Bai & Guo, 2018; Manchón, 2001). Prior examinations assessed the L2 composing procedure from the aspect of cognition-oriented learning strategies by emphasizing the stages of planning, composing, and revising, but later, in addition to cognitive, metacognitive, and motivational orientations, the importance of social-behavioral processes has also been recognized (Teng & Zhang, 2016, p. 681).

In this sense, with an attempt to add social dimensions to the composing process, the concept of writing strategies has been redefined “in terms of the socio-cognitive nature of writing activities” (Teng & Zhang, 2016, p. 677) and the integration of self-regulation to the composing process has become essential in this standpoint (Teng, 2016; Teng & Zhang, 2016). Accordingly, the newly-suggested model of writing strategies leaves cognitive orientation for social-cognitive paradigm of the writing domain in which both cultural and contextual factors interplay, foregrounding the writing process in a multidimensional, (Silva & Matsuda, 2010) “socially situated, cognitive, communicative activity” (Manchón, Roca de Larios, & Murphy, 2007, p. 229). And the revisited view of SRL strategies for writing lies in the idea that defines writing from a socio-cognitive perspective necessitating the students to have a recognition of the expectation of the audience and to eagerly allocate personal time and effort for the revision of the end-product to the point it reaches effective communication. (Zimmerman & Risemberg, 1997, p. 76). This indicates that writing successfully depends on self-regulated strategies in order to send the intended message to the readers (Teng & Zhang, 2016, 2020).

In accordance with the socio-cognitive view (Bandura, 1986), the SRW process incorporates an interdependent triadic system in which environmental, behavioral and personal factors interact by employing self-initiated skills in achieving multiple tasks for better writing outcomes (Zimmerman & Risemberg, 1997). That is to say, this process is based on the triadic interplay of the dimensions as to the regulation of the social context which writers address to, overt motoric activities linked to writing, and cognitive and affective states (Dinsmore, Alexander, & Loughlin, 2008). As a result, L2 writing methods for SRL can be defined as encompassing some underlying mechanisms such as cognitive, metacognitive, social-behavioral, and motivational processes (Teng & Zhang, 2016, p. 682). Accumulating research has also indicated the fact that writing is a “recursive, strategic, and multidimensional” (Harris et al., 2010, p. 226) activity in which learners incorporate a number of sub-functions (Teng & Zhang, 2016).

In this regard, Bai et al. (2014) explored how writing strategy use and English writing proficiency are linked in an EFL context. The participants were 1618 pupils from two primary schools. The research collected data via a 46-item-questionnaire that the researchers designed and the questionnaire had three main categories of SRL strategies for writing as meta-cognitive strategies (*self-initiation, planning, and monitoring and evaluating*), cognitive strategies (*revising, text-generating, and resourcing*), and social-affective strategies (*help-seeking and affect managing*) (Bai et al., 2014, p. 362). Research findings reported that the participants utilized various writing strategies at medium frequency and a wide range of writing strategies were correlated with English writing proficiency (Bai et al., 2014).

Teng and Zhang (2016) conducted a research study intended for validating an instrument that they developed in order to assess writing strategies for SRL, established on a multi-structured model in the EFL setting (p. 674). The questionnaire was applied to a total of 790 university students in Northeast China. The confirmatory factor analysis (CFA) extracted the nine-factor structure of writing strategies for SRL in the given context, with the self-regulation “as a higher order construct” (Teng & Zhang, 2016, p. 674). The subsequent CFA explained the four-correlated solution reflecting the four broader dimensions of SRL writing strategies (*cognitive, meta-cognitive, social behavioral, and motivational regulation strategies*) on which the nine sub-strategies loaded in further analyses (Teng & Zhang, 2016, p. 689). In the study, 6 out of 9 strategies were reported as predictors of writing proficiency. This research is one of the pioneering studies attempting to apply SRL theory to the L2/FL learning, specifically focusing on writing (Teng & Zhang, 2016, p. 674).

Likewise, Teng and Huang (2019) researched to what extent writing strategies for SRL can predict EFL writing performance with a sample size including 682 secondary school students. In the study, data were gathered through a questionnaire developed by Teng & Zhang (2016), aiming to explore the multidimensional nature of writing strategies, and a writing test. Through performing CFA, out of 40 items, nine SRL strategies for writing that were categorized in four dimensions of self-regulation established on SCT (Bandura, 1986) were extracted. These four dimensions were broader categories of the nine-writing strategies extracted. The findings of the study revealed that these nine writing strategies for SRL positively affected English writing competence (Teng & Huang, 2019).

In conclusion, these studies confirm the validity of a multidimensional structure of EFL writing by proposing a higher-order model of SRL strategies, primarily from the aspect of “cognition, metacognition, social behavior, and motivational regulation” (Teng & Zhang, 2016, p. 682).

2.3. Relationship between self-efficacy perceptions and strategy use for SRL in English writing

Self-regulated students are often portrayed as the ones who apply strategies in their learning and self-evaluate their skills for developing their existing performance (Kim et al., 2015, p. 137). The nature of the self-regulatory skills employed is partly dependent on a few underlying components including self-efficacy beliefs (Schunk & Ertmer, 2000) which motivate and guide learners in exerting efforts and using various strategies to reach diverse learning purposes (Schunk & Zimmerman, 2007).

Both the self-efficacy construct that is an impetus for learners to start and maintain self-regulation (Zimmerman & Schunk, 2001) and the utilization of learning strategies are fundamental constituents of the self-regulation process (Bandura, 1991). These two constructs are established on SCT (Bandura, 1986), which emphasizes the “triadic reciprocity in which behavior, cognitive and other personal factors, and environmental events all operate as interacting determinants of each other” (Bandura, 1986, p. 18) and they are the elements inherent in self-regulation and the essential inter-dependent mechanisms of the SRL process (Duckworth, Akerman, MacGregor, Salter, & Vorhaus, 2009).

As the research confirms, a logical connection exists between one’s deployment strategy use and self-efficacy beliefs in EFL/ ESL settings by indicating possible correlations between the two constructs (e.g., Gahungu, 2007; Magogwe & Oliver, 2007; Saito, 2020). As for the writing domain, some research findings maintain that self-efficacy in writing contributes to one’s use of writing strategies (Raofi, 2014; Stewart, Steifert, & Rolheiser 2015). In this sense, Golparvar and Khafi (2021) explored how self-efficacy could promote the integrated writing strategy employment. The research data were gathered from 191 university level students by using the following instruments: a scale for assessing self-efficacy in writing, a scale for measuring participants’ summarization skills, and a summarization task. The yielded data showed that positive self-efficacy perceptions in writing contributed to the participants’ writing skills, specifically in the summary writing genre. Moreover, the research confirmed a sense of self-efficacy as the determinant of strategy use in summary writing (Golparvar and Khafi, 2021).

In addition, there are also other few studies reporting that students’ strategy use in writing promotes self-efficacy in writing. For example, Bai and Guo (2018) investigated the SRW skills in an EFL setting with the participating 155 young learners of English in Hong Kong, with an aim to test whether the use of SRL strategies impacts self-efficacy beliefs in writing. For the data collection, the research used two instruments (one for SRL strategies for writing and the other scale for assessing participants’ self-efficacy in writing). The findings illustrated that learners employing more SRL strategies reported having greater self-efficacy in English writing (Bai & Guo, 2018, p. 534).

Similarly, Teng and Zhang (2020), contributed to the related literature through another study performed in a quasi-experimental research design. The research targeted at scrutinizing how the five-month strategy-based writing instruction impacted on L2 proficiency, self-regulated strategies, and academic self-efficacy in English composition. The data were gathered pre-, post-, and delayed post-writing tests as well as questionnaires administered to the 80 university English-major students before and after the study experiment (p. 1). Research findings displayed that the experiment group scored higher as compared to the control group in writing outcomes, resulting from participating into the implementation. In addition, the research shows the strategy-based writing instruction was effective

for enhancing self-efficacy, especially in performance and linguistic self-efficacy perceptions (Teng & Zhang, 2020).

As seen, while Bai and Guo (2018) and Teng and Zhang (2020) provide conclusive data considering how SRW strategies contributed to self-efficacy, Golpalvar and Khafi (2021) confirm to what extent self-efficacy promotes the self-regulated strategy use. According to the aforementioned studies, it is clear that these two variables are interdependent on each other, highlighting that there is a two-way correlation between them and accordingly a positive increase in one variable score can in turn affect the other construct in the positive way (Bai & Guo, 2018). In line with this, more evidence-based research conducted in various contexts is needed to confirm the interdependent link between the mentioned two foci in order to enhance writing competence in EFL learning environments. To this end, this current study might build on the relevant literature by exploring if there exists a significant link between learners' self-regulatory skills and their perceptions of self-efficacy in the EFL writing setting.

2.4. Research questions (RQs)

This study focuses on the RQs below:

1. What is the reported level of EFL (language-major) learners' self-efficacy perceptions of English writing?
2. What is the reported use of EFL (language-major) learners' English writing strategies for SRL?
3. Is there a relationship between the variables of English writing strategies for SRL and self-efficacy for English writing?

3. Methodology

This section provides information regarding the participants, the instruments used in data-collection, the data-gathering procedure, and data analysis.

3.1. Participants

The current research was conducted with 50 EFL second-year students of the Department of Translation and Interpretation at Sivas Cumhuriyet University (SCU). Table 1 indicates demographic information about the research participants:

Table 1- Demographic distribution of the participants by gender and age

Demographic information	Percentage	Frequency
Gender		
Male	38%	19
Female	62%	31
Age		
18-21	62%	31
22-25	34%	17
26-30	0	0
30+	4%	2

The participating students have majored in translation and interpreting in English and French, from and into the direction of Turkish language. This current study was conducted with these participants, namely the language-major students, enrolled in the English Writing Techniques I course in the fall term of the 2020-2021 academic year, where the instructor of the course (the researcher of this current study) and students met once a week. The course was given online via a distance learning program, Microsoft Teams (n.d.), which is a video-conferencing application allowing its users to meet, share, communicate, and learn both synchronously and asynchronously (Çankaya & Durak, 2020). This online writing course lasted for 15 weeks with an objective to enhance learners' essay English writing skills. Prior to this course, in the first year, the students had received English reading and writing courses based on developing reading skills as well as their paragraph writing skills in English in two academic terms. This suggests that the participating students had already been engaged in and thus becoming familiar with both paragraph and essay writing genres in English before the data of this current study were collected.

3.2. Instruments

Data were obtained quantitatively by means of research tools below. Along with the questionnaires below, two demographic questions were included pertaining to the participants' gender and age.

Instrument 1

Data for self-efficacy perceptions toward writing were elicited through the *Second Language Writer Self-Efficacy Scale (L2WSS)*, designed and validated by Teng (2016) and Teng et al. (2018). Teng (2016) and Teng et al. (2018) consulted the relevant literature (e.g., Bruning et al., 2013; Pajares & Valiante, 1999; Pintrich et al., 1991; Shell, Murphy, & Bruning, 1989; Zimmerman & Bandura, 1994) and carried out interviews with students in generating items of the L2WSS. The L2WSS, which comprises 20 Likert-scale items ranging from 1 to 7 (1=*not at all true of me*, 7=*very true of me*), asks the participants to evaluate participants' self-efficacy perceptions in English writing (Teng, 2016; Teng et al., 2018). By the researcher of this current study, a few minor changes were applied to some of the items in the L2WSS to make the items more comprehensible (For example, the expression "in writing" in the original scale was reworded as "in English writing").

In the development and validation process of the L2WSS, Teng (2016) and Teng et al., (2018) conducted factor analyses which resulted in the three-factor-solution. In this current study, these three

factors were regarded as the three sub-dimensions of the self-efficacy construct (Teng, 2016; Teng et al., 2018).

The first sub-component, *linguistic efficacy*, is based on having confidence in correct use of lexical, grammatical, and organizational aspects of the text and conducting necessary self-revisions in text-processing. *Self-regulatory efficacy*, the second sub-component, refers to having a metacognitive control and awareness of goals and different ways to plan and to direct the composing process and also conducting overall evaluations about whether the targets are attained. Lastly, *performance efficacy* is concerned with gaining an understanding of basic and complex materials and concepts and producing an excellent end-product by using knowledge and strategies presented in the course. In sum, the first dimension is about evaluating the surface-level structures of the text, in addition to organizational patterns. The second dimension is largely based on the goal-setting and planning phases in the composing activities. Lastly, the third dimension has a focus on the self-judgment of the overall writing skills in the composing process (Teng, 2016, p. 142; Teng et al., 2018, pp. 932-933).

Table 2 indicates these three sub-dimensions (Teng, 2016; Teng et al., 2018) as follows:

Table 2- Sub-dimensions of the self-efficacy construct

Sub-dimensions	Number of items	Cronbach's Alpha
Linguistic self-efficacy	7 items	.838
Self-regulatory efficacy	6 items	.814
Performance efficacy	7 items	.894

For checking the reliability scores of the items in the 20-item-scale, the Cronbach's Alpha score was estimated and it was found that the instrument had .93 α (alpha) score, indicating a strong reliability value. The reliability scores were also measured for each sub-scale and the results showed that the three sub-dimensions reported relatively high reliability coefficients (Table 2).

Instrument 2

In this study, data as to the English writing strategies for SRL were gathered through the *Writing Strategies for Self-Regulated Learning Questionnaire* (WSSRLQ), prepared and validated by Teng (2016) and Teng and Zhang (2016), with an aim for measuring the participants' reported deployment of English writing strategies for SRL. Teng (2016) and Teng and Zhang (2016) consulted the relevant literature (e.g., Pintrich et al., 1991; Wolters, 1999; Zimmerman & Martinez-Pons, 1986) and conducted interviews with students in the item-generating phase of the WSSRLQ.

The WSSRLQ is composed of 40 Likert-scale items ranging from 1 to 7 (*1=not at all true of me, 7=very true of me*) (Teng, 2016; Teng & Zhang, 2016). Some of the items of this scale were slightly modified by the researcher of this current study to make the items more comprehensible for the participants (For example, the expression "when writing" in the original scale was reworded as follows: "when writing in English").

This questionnaire was originally designed by Teng (2016) and Teng and Zhang (2016) in a categorization of SRW strategies around four dimensions, i.e., metacognitive, cognitive, social behavior, and motivational behavior strategies (Teng, 2016, p. 79; Teng & Zhang, 2016, p. 682).

Cognitive strategies refer to activating literary devices, applying micro- and macro-level aspects of text composing, and utilizing knowledge rehearsal techniques in order to remember the related content taught in class. *Meta-cognitive strategies* are concerned with planning, monitoring, researching, evaluating, and goal-setting skills in the writing process. And *social-behavior strategies* are based on revising and developing the text with teacher and/or peer feedback and using tactics for peer-learning. Lastly, *motivational regulation strategies* refer to coping strategies for overcoming negative feelings, persuading oneself to keep up writing, cultivating motivation, sustaining willingness to and interest in writing, and expending efforts to further the writing process (Teng, 2016, pp. 135-136; Teng & Zhang, 2016, pp. 691-693). Also, Teng (2016) and Teng and Zhang (2016) applied further tests of the CFA and elicited nine-factor-solutions indicating sub-SRL strategies. These nine factors extracted by Teng (2016) and Teng and Zhang (2016) were labelled as the sub-SRL writing strategies. Likewise, in this current study, these nine factors illustrated in Table 3 (Teng, 2016, p. 128; Teng & Zhang, 2016, p. 691) were identified as sub- SRL writing strategies:

Table 3- Sub-categories of the SRW strategies

Sub-categories of SRW strategies	The number of items	Cronbach's Alpha scores
Cognition		
Text processing	6 items	.797
Course memory	3 items	.556
Meta cognition		
Idea-planning	3 items	.597
Goal-oriented monitoring and evaluating	6 items	.864
Social behavior		
Peer learning	3 items	.855
Feedback handling	4 items	.712
Motivational regulation		
Interest enhancement	4 items	.713
Motivational self-talk	8 items	.910
Emotional control	3 items	.794

The internal consistency of the instrument was assessed by Cronbach's alpha (α) scores and it was found that the 40-item-instrument had .950 alpha value, showing that the tool had a very high coefficient score. The internal consistency scores of the sub-dimensions of the instruments were also calculated. As seen from Table 3, except for the subscales of *course memory* and *idea planning*, the rest of the subscales reported higher alpha scores than the cut-off value, which is .70 (Teng & Zhang, 2020). Although these two subscales (*course memory* and *idea planning*) had slightly lower coefficients than the rest of the subscales of the instrument, the calculated alpha scores for these subscales still represent acceptable internal consistency values (George & Mallery, 2003; Hinton, Brownlow, McMurray, & Cozens, 2004; Yusoff, 2012).

Both *the L2WSS* (Teng, 2016; Teng et al., 2018) and *the WSSRLQ* (Teng, 2016; Teng & Zhang, 2016) were originally designed in English. But before the administration of the instruments to the participants of the current research, the instruments were translated into Turkish by the researcher to enable the participants to answer the related items more easily. The translated versions of the two questionnaires were reviewed by an English language lecturer from School of Foreign Languages at SCU, who is largely experienced in foreign language education and has a MA degree in the same field. In line with the feedback as to the translated versions of the questionnaires, some necessary alterations were applied by re-wording of the ambiguous items.

The interpretation of the average values derived from the two questionnaires was made possible by using the range scores calculated with an assumption that the interval width of the seven ranges is equal by using the following formula: Interval width= The highest score of the Likert scale – The lowest score /7 = 7 - 1/7=0.857 (Akgün, 2019, p. 47; Kaplanoğlu, 2014, p. 139).

Based on this formula, the cut-points of each interval were specified, according to the related literature (Akgün, 2019, p. 47; Gerber, 2009; Kaplanoğlu, 2014, p. 139), as follows (Table 4):

Table 4- Cut-points and their descriptors

The lowest	The highest	Descriptor
1.00	1.85	Very Low
1.86	2.71	Low
2.72	3.57	Slightly low
3.58	4.43	Moderate
4.44	5.29	Slightly High
5.30	6.14	High
6.15	7.00	Very High

Research data gathered from the questionnaires were analyzed and interpreted in accordance with the cut-points and their descriptors presented here (Table 4).

3.3. Data collection procedures

After officially obtaining the ethical approval for conducting this research study from the Committee for Scientific Research and Publication Ethics in Social and Humanities Sciences at SCU (Date: 21/12/2020; Decision Number: 24; Document Number: E-60263016-050.06.04-499477), the data were gathered online through administering the instruments, namely *the L2WSS* (Teng, 2016; Teng et al., 2018) and *the WSSRLQ* (Teng, 2016; Teng & Zhang, 2016), with additional two demographic information items, to the participants in one session via the Google Forms application (n.d.). The very first page of the data-collection instruments consisted of a consent form which informed the participants about the purpose of the research as well as the nature of the study designed on the confidentiality and voluntariness. Below the form, there was an item which asked the participants whether or not they would voluntarily take part in the survey. Only the students who ticked the positive response box in the item could be able to continue in the survey.

3.4. Data analysis

The quantitative research data obtained from the questionnaires were analyzed through using the IBM SPSS (Statistical Packages for Social Sciences) program, Version 25. For the first research question aiming to report the participants' self-efficacy level in writing, and second research question intended to assess learners' SRW strategy uses, descriptive statistics were measured by calculating the overall score of each construct and also the sub-dimensions reflected in the two scales. Lastly, the correlation tests were conducted to explore the possible correlations between the researched foci.

4. Results

This section provides the findings of each research question of this current study.

4.1. The reported level of EFL learners' self-efficacy perceptions of English writing

The central aim of the first research question is evaluating self-efficacy beliefs of participants regarding English writing. The data were collected quantitatively from the participants' responses for the *L2WSS* (Teng, 2016; Teng et al., 2018). In line with Teng's (2016) and Teng et al.'s (2018) conceptualization, there were three subscales in the self-efficacy perception part. Participants' overall scores for three self-efficacy sub-scales were computed by averaging their mean scores on each of the items in the composite sub-scale. To give an example, the score of each participant for the sub-scale of *linguistic self-efficacy* was assessed by averaging the mean scores of their responses for seven items in this sub-scale.

Prior to making an analysis as to the descriptive statistics of the whole questionnaire and its three sub-scales, whether the data elicited for this section were normally-distributed or not was firstly assessed by preliminary normality tests. The assumption of normality for perceived self-efficacy scores was satisfied, as evaluated by Kolmogorov-Smirnov and Shapiro-Wilk's test ($p > .05$). Then, descriptive statistics was calculated and it was revealed that the whole self-efficacy section had the mean score of 5.56 (above the range of 5=*slightly true of me*) ($SD = .84$), suggesting that the participants' perceived self-efficacy level in the English writing domain fell into the *high* frequency, according to the cut points (See Table 4 for cut-points).

Additionally, Kolmogorov-Smirnov and Shapiro-Wilk tests were also assessed separately for the sub-scales in this section and it was found that except for one sub-scale (*Self-regulatory efficacy*), the rest of the other two sub-scales had non-normal data distribution ($p < .05$). Therefore, in addition to mean and standard deviation measurement, medians and inter-quartile range scores were also calculated, as part of descriptive statistical analysis. Table 5 shows the related descriptive statistics below:

Table 5- Descriptive statistics of writing self-efficacy sub-scales

Sub-scales	Min	Max	Mean	SD	Mdn	IQR
Linguistic Self-efficacy	3.86	7.00	5.72	0.87	5.71	1.50
Self-regulatory Efficacy	3.33	7.00	5.57	1.01	5.66	1.21
Performance Self-efficacy	2.14	7.00	5.39	0.91	5.42	1.36

Note: Min= Minimum; Max= Maximum; SD= Standard Deviation; Mdn= Median; IQR= Interquartile Range

Table 5 presents that students' responses for the perceived self-efficacy in English writing fluctuated from the median score of 5.42 to the median score of 5.71 (from *slightly true of me* to *true of me*), demonstrating that participants reported *high* level of writing self-efficacy (See Table 4 for cut-points). This table also shows that, out of three sub-scales, students reported feeling the most efficacious in *linguistic self-efficacy* ($Mdn = 5.71, IQR = 1.50$). As for the subscale with the lowest median value, it seems that *performance self-efficacy* obtained the lowest score ($Mdn = 5.42, IQR = 1.36$), indicating that participants felt slightly less confident in their abilities for accomplishing a writing task in a learning environment. Further, correlation tests were also run to determine how these sub-components are related to each other. As the data for the two of the subscales had non-normal data distributions, Spearman's correlation tests were run and it was revealed that all the three sub-components had significant correlations with each other. Table 6 shows the results:

Table 6- Correlation coefficients of self-efficacy sub-components

Self-efficacy sub-components	1	2	3
Linguistic Efficacy	—	.579**	.683**
Self-regulatory Efficacy	.579**	—	.737**
Performance Efficacy	.683**	.737**	—

** $p < .01$

Table 6 shows that all the three sub-scales correlated with each other at the $p < .01$ level, suggesting that self-efficacy for the writing construct is multifaceted in that these sub-components do not operate in isolation, but work closely and simultaneously (Pintrich, 2004; Teng & Zhang, 2018).

4.2. The reported use of EFL learners' English writing strategies for SRL

The aim of the second research question is to assess language-major EFL learners' SRW strategies in the Turkish context. To answer this research question, data were quantitatively gathered by the participants' responses to the WSSRLQ (Teng, 2016; Teng & Zhang, 2016). There were nine SRW strategies, regarded as the subcomponents of the self-regulated strategies in writing. Each participant's overall scores for each of the nine SRW strategy sub-scales were computed by averaging their mean scores on each of the items in the composite sub-scale. For instance, each participant's score for the sub-scale of *text processing* was assessed by averaging the mean scores of their responses for six items in this sub-scale.

In order to obtain an overall average score for the whole writing strategy section, descriptive statistical analysis was carried out. However, initially, it was checked whether the data elicited for this section were normally-distributed or not. The assumption of normality for scores of SRW strategy uses was met, based on Kolmogorov-Smirnov and Shapiro-Wilk's tests ($p > .05$). On average, descriptive statistics indicated that participants responses for the writing strategies for SRL centered on the range of 5 (*slightly true of me*) with a mean score of 5.25 ($SD = .88$), presenting that the participants reported *slightly high* use of SRW strategies (See Table 4 for cut-points). Moreover, for conducting statistical analysis of the four dimensions of writing strategies for SRL, Kolmogorov-Smirnov and Shapiro-Wilk tests were also run and it was confirmed that the research data in some scales had non-normal data distribution ($p < .05$). Therefore, in addition to measuring mean and standard deviation scores, median and inter-quartile range values were also calculated, as part of descriptive statistical analysis. Table 7 shows the related descriptive statistics below:

Table 7- Descriptive statistics of SRW strategy dimensions

SRL Dimensions	Min	Max	Mean	SD	Mdn	IQR
Cognitive Strategies	3.44	7.00	5.62	0.84	5.55	1.11
Metacognitive strategies	3.00	7.00	5.32	0.99	5.44	1.00
Social behavioral strategies	2.29	6.71	5.12	1.14	5.07	1.50
Motivational regulation strategies	2.53	7.00	5.06	1.09	5.03	1.47

Note: Min= Minimum; Max= Maximum; SD= Standard Deviation; Mdn= Median; IQR= Interquartile Range

Table 7 illustrates that given responses in the four writing dimensions ranged from the median score of 5.03 to the median score of 5.55, showing that participants' responses for these strategy types fluctuated from *slightly high* to *high* frequency range. Additionally, while Table 7 indicates that participants reported using *cognitive strategies* in the highest score, *motivation strategies* were the least-frequently used strategy types. Moreover, Spearman's correlation tests were also calculated in order for analyzing if these sub-dimensions of the SRW strategy section had significant associations. Table 8 shows the findings in this sense:

Table 8- Correlation coefficients of SRW strategy sub-dimensions

Sub-dimensions	1	2	3	4
Cognitive Strategies	—	.726**	.421**	.709**
Metacognitive strategies	.726**	—	.461**	.768**
Social behavioral strategies	.421**	.461**	—	.465**
Motivation strategies	.709**	.768**	.465**	—

** $p < .01$

This table shows that all sub-scales correlated with each other at the $p < .01$ level, meaning that the SRW strategy construct has a multifaceted structure in that these sub-components do not act in isolation, but there exists a reciprocal interplay between the variables promoting each other (Teng & Zhang, 2020).

In addition to the four SRW strategy types, descriptive statistical analysis for nine writing strategy types under these four dimensions was also performed, which might be seen in Table 9 (See Table 3 for the higher-order model of writing strategies and the related sub-strategies):

Table 9- Descriptive statistics of SRW strategies sub-scales

Sub-scales	Min	Max	Mean	SD	Mdn	IQR
Feedback Handling	3.25	7.00	5.87	1.03	5.87	1.31
Text Processing	3.33	7.00	5.74	0.88	5.83	0.83
Idea Planning	2.00	7.00	5.65	1.01	5.66	1.33
Interest Enhancement	1.00	7.00	5.24	1.15	5.50	1.31
Course memory	2.33	7.00	5.38	1.17	5.33	1.75
Goal-Oriented Monitoring and Evaluating	2.00	7.00	5.15	1.11	5.33	1.21
Motivational Self-talk	1.38	7.00	5.02	1.26	5.18	1.94

Emotional Control	1.00	7.00	4.92	1.46	4.66	2.08
Peer Learning	1.00	6.33	4.11	1.53	4.16	2.00

Note: Min= Minimum; Max= Maximum; SD= Standard Deviation; Mdn= Median; IQR= Interquartile Range

Table 9 illustrates that students' responses for the SRW strategy use fluctuated from the median score of 4.16 (*moderate*) to the median score of 5.87 (*high*), which indicates that students reported from *moderate* to *high* use of writing strategies for SRL.

Table 9 also presents that, out of nine strategies, students reported the most frequent use of *feedback handling* strategy type (*Mdn* = 5.87, *IQR* = 1.31). Following this, the subscales of *text processing*, *idea planning*, *interest enhancement* got the other highest median scores (*Mdn* = 5.83, *IQR* = .83; *Mdn* = 5.66, *IQR* = 1.33; *Mdn* = 5.50, *IQR* = 1.31), respectively. All in all, it can be noted that the participants tend to use these strategies more frequently than other ones.

Regarding the subscales with the lowest median scores, it seems that the sub-scales of *peer learning*, and *emotional control* are the least frequently-used writing strategies (*Mdn* = 4.16, *IQR* = 2.00; *Mdn* = 4.66, *IQR* = 2.08), respectively.

4.3. The possible relationship between the variables of English writing strategies for SRL and self-efficacy for English writing

This research question sought to answer how the two variables (*self-regulatory strategy uses* and *self-efficacy perceptions in English writing*) are associated in the Turkish EFL context. For assessing the possible relationship between these two foci, a Pearson's product-moment correlation test was utilized (the data of the two sections indicated normal-distribution, as validated by Kolmogorov-Smirnov and Shapiro-Wilk tests) and a statistically significant, strong positive correlation was found between the two variables, $r = .689$, $p < .01$, with self-efficacy perceptions in English writing explaining 47% of the variation in the use of SRW strategies.

Additionally, whether or not the self-efficacy construct was related to the four dimensions of writing strategies for SRL was also evaluated by further correlation tests. Since the data in the sub-categories of SRW strategies were not-normally distributed according to Kolmogorov-Smirnov and Shapiro-Wilk tests ($p > .05$), Spearman's rank-order correlation tests were calculated. The findings indicated that the growth in the writing self-efficacy scores was strongly in correlation with the increase in the resting three writing strategy types, except for the *social behavior* strategy type. Writing self-efficacy obtained the highest correlation coefficient *with motivational regulation strategies*, $r_s = .716$, followed by *meta-cognitive strategies*, $r_s = .668$, and *cognitive strategies*, $r_s = .657$, at the $p < .01$ level.

Regarding the sub-dimensions of the self-efficacy construct, additional Spearman's rank-order correlation tests were run and the results noted that except for the *social behavior* strategy type, multiple associations were revealed between the three self-efficacy dimensions and the three writing strategy types. Table 10 shows the results:

Table 10- Correlation scores between self-efficacy and SRW strategy sub-components

Self-efficacy sub-components	Cognitive strategies	Meta-cognitive strategies	Social behavior strategies	Motivational regulation strategies
Linguistic efficacy	.608**	.484**	.233	.615**

Self-regulatory efficacy	.628**	.664**	.230	.564**
Performance efficacy	.507**	.665**	.273	.694**

** $p < .01$

Table 10 demonstrates that *linguistic efficacy* had the strongest correlation scores with *motivation strategies*, $r_s = .615$, $p < .01$, and with cognitive strategies $r_s = .608$, $p < .01$, but the lowest association score with *metacognitive strategies*, with a medium effect size, $r_s = .484$, $p < .01$. *Self-regulatory efficacy* was significantly correlated with *metacognitive strategies* with the highest coefficient, $r_s = .664$, $p < .01$, and with the *motivational regulation strategies* with the lowest coefficient, $r_s = .564$, $p < .01$. As for *performance efficacy*, it is revealed that this sub-component was significantly, strongly correlated with *motivation strategies*, $r_s = .694$, $p < .01$, followed by *metacognitive*, $r_s = .665$, $p < .01$, and *cognitive strategies*, $r_s = .507$, $p < .01$.

Lastly, the data were further analyzed by running the correlation tests conducted between the three self-efficacy dimensions and nine sub-strategies categorized under the four aspects of SRL, namely metacognition, cognition, social behavior, and motivational regulation (Teng & Zhang, 2016, p. 682). Table 11 shows the results:

Table 11- Correlation scores between self-efficacy sub-components and SRW strategy types

Self-efficacy sub-components	TP	CM	IP	GM	PL	FH	IE	MS	EC
Linguistic Efficacy	.684**	.416**	.261	.600**	.163	.291*	.358*	.629**	.579**
Self-regulatory Efficacy	.645**	.440**	.617**	.617**	.118	.342*	.473**	.467**	.614**
Performance Efficacy	.526**	.439**	.450**	.694**	.220	.350*	.397**	.614**	.712**

* $p < .05$

** $p < .01$

Note= TP: Text Processing; CM: Course Memory; IP: Idea Planning; GM: Goal-oriented Monitoring; FH: Feedback Handling; IE: Interest Enhancement; MS: Motivational Self-talk; EC: Emotional Control

As seen from Table 11, multiple associations were found between the sub-dimensions of the two constructs. An interesting finding is that each self-efficacy sub-dimension indicated significant positive correlations with almost all sub-scales of the SRW strategies, except for the *peer learning* sub-scale (r_s ranged from .397 to .712, at $p < .01$ level and from .291 to .358, at $p < .05$ level). Among these correlation scores, the strongest association was revealed between *performance efficacy* and *emotional control*, $r_s = .712$, $p < .01$. The lowest correlation scores were calculated between the *feedback handling* sub-scale and all the three self-efficacy sub-components ($p < .05$). Additionally, it was found that the *peer learning* sub-scale indicated no significant correlation coefficients with any self-efficacy sub-component, $p > .05$.

As for the in-depth analysis of each sub-dimension of the self-efficacy construct, *linguistic efficacy* had significant correlations with almost all subscales in the writing strategy section, except for the *peer learning* sub-scale, with the highest correlation score assessed for *text processing*, $r_s = .684$, $p < .01$, and with the lowest score for *feedback handling*, $r_s = .291$, $p < .05$. Out of nine writing strategies, *self-regulatory efficacy* significantly correlated with eight sub-scales of the writing strategy construct, with the highest correlation coefficient assessed for *text processing*, $r_s = .645$, $p < .01$, with the lowest correlation value for *feedback handling*, $r_s = .342$, $p < .05$. Finally, it was revealed that the *performance self-efficacy* sub-component correlated with eight writing strategies, except for the *peer*

learning sub-scale. *Performance efficacy* showed the highest correlation score with the *emotion control* sub-scale, $r_s = .712$, $p < .01$, and the lowest correlation coefficient with *feedback handling*, $r_s = .350$, $p < .05$.

In sum, it can be concluded from all these correlation scores that self-efficacy perceptions are significantly related to writing strategies for SRL in the English writing domain, by calculating different associations among different sub-scales of the foci. This finding notes that an increase in one variable might result in a rise in the other variable, implying that these two constructs are orchestrated concurrently, but may not be activated in isolation (Teng & Zhang, 2018).

5. Discussion

This study explored (a) language-major EFL learners' perceived self-efficacy beliefs, (b) their reported SRW strategy uses, (c) and whether these two variables were related to each other in the (English) writing domain. Data were collected quantitatively and analyzed with the help of IBM SPSS software, version 25. To begin with, the research findings of the present study demonstrated the participants had *high* levels of self-efficacy perceptions towards writing in English. This finding is not consistent with the previous research (Bektaş-Çetinkaya, 2020; Kırmızı & Kırmızı, 2015; Sun & Wang, 2020), which reports writing self-efficacy at the medium level. The higher levels of efficacy revealed within the present study can be linked to the fact that students are from a language-major department; hence feeling relatively competent for and experienced in various aspects of writing.

Additionally, the results indicated that the average scores of the three self-efficacy dimensions fell into the same range, above 5 (*slightly true of me*), meaning that the participants' responses were in the "high" frequency in all the three subdimensions of the self-efficacy construct, according to the cut-points presented in Table 4. Specifically, *linguistic efficacy* obtained the highest average score, followed by *self-regulatory* and *performance efficacy*. This result resonates with the finding of the research by Golparvar and Khafi (2021), who also reported the average scores of the sub-components in the same order in the three-dimension model of the self-efficacy construct.

The highest *linguistic efficacy* score can be attributed to the assumption that because this efficacy type is mostly concerned with one's judging his/her competence in the micro-level skills as to the surface-level structures of the text such as creating grammatical sentences or producing a well-organized text (Teng et al., 2018), it could be much easier for someone to achieve such features in text-processing, compared to the macro-level aspects of writing such as including the relevant content, achieving meaningful unity in a text, writing to the point, or conveying the message in the appropriate form and style (Brown, 2007). And it would also be easier for someone to monitor if s/he has the related skills in such observable conditions (e.g., forming a piece of writing with an effective control over the structure). Additionally, the creation of a text meeting the standards in grammatical structures might have enabled the participants to feel a sense of accomplishment in the end-products, in turn positively affecting mastery experience (Bandura, 1997), which might accordingly influence *linguistic efficacy*.

But more importantly, this high score can also be tied to the overall nature of typical writing pedagogies offered in many EFL contexts, which are still embedded in product-oriented practices to some extent, where mastering accuracy in a text is sometimes over-emphasized, by comparison with the efforts expended in promoting the learning-to-write process (Oraif, 2016; You, 2004; Zhan, 2012), although the value of process-oriented approaches has already been acknowledged in writing (Flower

& Hayes, 1981; Hayes & Flower, 1986). Such an assumption was verified by Sun and Wang (2020), who reported that learners felt more confident in surface-level skills than other performance-related orientations, because of the influence of product-oriented writing approaches adopted in the Chinese EFL context.

The reason for this comparably-low level in *performance efficacy* might be that this subcomponent is about the overall judgment of the skills and knowledge necessary in the writing skill (Teng et al., 2018), which is perceived by many EFL learners as a relatively challenging process to acquire (Santangelo et al., 2007; Teng, 2016) and a positive self-evaluation as to the competence in this difficult skill can only be achieved in the long run with successful experiences in different writing occasions. As argued by Bandura (1997), the mastery experience, which is shaped by one's positive or negative experiences in a performance, constitutes a crucial source of the self-efficacy component. In this sense, gaining self-efficacy in the overall writing competence can be accomplished with the exposure to successful writing experiences, which is possible only in the long-term process and the ones who might lack such successful experiences to be gained over a sustained period might have felt slightly less confident in their entire writing competency.

In sum, this study scrutinized the three-level structure of the construct, namely *linguistic*, *performance*, and *self-regulatory efficacy* (Teng, 2016; Teng et al., 2018) by assessing the average score of each sub-component. The study also revealed strong correlation scores among all the sub-dimensions of the construct (see Table 6). This finding lends credence to the previous research, which demonstrates that an increase in one dimension might lead to a rise in another dimension, by conceptualizing the construct in a multifaceted, dynamic model in which different focal conditions interact with each other concurrently (Teng et al., 2018).

As for the utilization of SRW strategies, the overall average score of the section displayed that students' reported use of these strategies was in the *slightly-high* frequency range. This finding partly supports the previous research that documents moderate to slightly-high use of writing strategies (Abadikah, Aliyan, & Talebi, 2018; Nabhan, 2019), but it is not much agreement with the earlier studies which reported the medium-level use of writing strategies (Bai & Guo, 2018; Teng, 2016) in different EFL contexts. The possible explanation for participants' not reporting "very high" use of SRW methods might be that many university students are not much exposed to the explicit strategy-based instruction in writing (Teng, 2016; Woodrow, 2011; Zhang, Aryadoust, & Zhang, 2016) and therefore, they may not have enough experience regarding how to benefit from the related strategies or in what contexts those strategies should be implemented, even if they may have an idea of what these strategies refer to (Zhang, 2008).

In regard to the average scores of the four SRW strategy dimensions, the results indicated that the averages fell into the range of above-5 (from *slightly true of me* to *true of me*), showing that participants tended to use these strategy types from the *slightly high* to *high* range (See Table 4 for cut-points). Additionally, participants also reported using *cognitive strategies* the most frequently, yet *motivational regulation strategies* were the least-frequently used strategy types.

The highest score assessed for *cognitive strategies*, referring to the strategies used for producing a good quality text which meets the lexical, syntactic, and discourse-level standards (Teng, 2016; Teng & Zhang, 2016), can be best explained with the highest value assessed for *linguistic efficacy* in that both sub-scales are heavily under the influence of the linguistic knowledge for composing a standardized

written text and the students in this context consistently scored the highest in these two sub-dimensions. Generating a good-quality text requires the mastery of micro-level aspects and the participants appeared to prioritize these features in text-processing.

Unlike some previous research (e.g., Teng, 2016), the lowest score was calculated for *motivational regulation strategies*. The possible reason can be linked to the argument that students could have low level of motivation and less willing to write in EFL contexts (Aryanika, 2016; Rahayu, 2021; Vadia & Anwar, 2018), presumably because writing is regarded as a difficult (Lin, 2019; Mulugeta, 2018; Santangelo et al., 2007), complex, multifaceted, dynamic process (Hirvela, Hyland, & Manchón, 2016; Hyland, 2002, 2015), developed in the long run (Zimmerman & Bandura, 1994) by utilizing an array of higher-order skills in harmony (Giraldo de Londoño & Perry, 2008; Teng, 2016). In this sense, these possible negative attitudes may have eventually led students to the infrequent activation of motivation strategies which help learners to overcome the negative feelings that they can encounter in the composing process.

Regarding the averages of the most and the least frequently used sub-SRL strategies in writing, it was revealed that students reported using these nine strategies at an imbalanced level, which confirms the previous research (Teng, 2016; Teng & Zhang, 2016) in this sense. Some strategy types such as *feedback handling*, *text processing*, *idea planning*, and *interest enhancement* were reported as being used more frequently than the rest of the subscales. Out of nine sub-strategies, *feedback handling*, a sub-strategy of social behavior dimension, appeared as the most-frequently used strategy type. But interestingly, the lowest score in the nine sub-strategies was calculated for *peer learning*, the other sub-strategy of *social behavior* dimension in the SRW strategies section. As the two strategy types from the same higher-dimension, namely *social behavior*, the explanation for the highest score for *feedback handling*, but far less score for *peer learning*, can be made by referring to the overall nature of the writing instruction provided to the participants of this current study, who took this writing course online. With the high score of *feedback handling*, it seems that students had positive attitudes toward receiving feedback whether it be teacher or peer feedback. But the reason for the comparably-low score in the *peer-learning* subscale could be that because this course is taught online, the students might not have obtained enough opportunities to take part in peer-learning techniques such as brainstorming, collaborating or cooperating with each other in different phases of writing (Teng & Zhang, 2016), which might have eventually caused the infrequent use of such strategy type.

But despite calculating some comparably low scores in a few sub-strategy types, it is noteworthy stating that students in this EFL context had a large repertoire of writing strategies for SRL that act as “distinct but inter-connected” sub-constructs (Teng & Huang, 2019, p. 242). Moreover, given the result which displays that all four strategy types were correlated with each other significantly (See Table 8), it seems that students who tend to use one strategy type have also an inclination to use at least one other strategy type at the same time. Thus, this study lends support to the previous research which underpins the multifaceted structure of the self-regulation model in the EFL writing domain, where cognition, meta-cognition, social behavior and motivational regulation behavior reciprocally interact (Teng & Huang, 2019; Teng, 2016; Teng & Zhang, 2016, p. 682).

As for the link between the two main variables of the research, the findings indicated that between self-efficacy perceptions and the use of SRW strategies, there exists a strong positive relationship, implying that the higher efficacy level is, the more frequently writing strategies are regulated. This result supports the previous research (e.g., Bai & Guo, 2018) which confirms the linear positive relation

between the variables in English writing. Correlation scores also revealed that three sub-dimensions of the self-efficacy construct obtained positive, significant relationships with three types of SRW strategies, in exception for *social behavioral strategies*. The three self-efficacy sub-components also showed significant correlations with almost all the sub-strategy types, but not with the *peer learning* subscale. In line with these positive correlation scores, it can be highlighted that the belief system of self-efficacy is “not as an omnibus trait but as a differentiated set of self-beliefs linked to distinct realms of functioning” (Bandura, 1986, p. 36).

For *linguistic efficacy*, the highest correlations were assessed with *motivational regulation*, and *cognitive strategies*, revealing consistencies with the results of the previous research (Golparvar & Khafi, 2021; Magogwe & Oliver, 2007; Teng, 2016). Because writing is, in its essence, a cognitive activity (Flower & Hayes, 1981), influenced by other dimensions such as personal, social, and environmental factors which interact with each other (Cumming, 2009), finding a connection between *linguistic efficacy* and *cognitive strategies* sub-scales is expected. The more a learner feels efficacious in the cognitive and structural aspect of composing a text, the more s/he applies cognitive strategies referring to the use of linguistic, structural and discourse-level techniques for generating a text, as conceptualized by Teng et al. (2018).

In regard to *self-regulatory efficacy*, it was demonstrated that this sub-dimension correlated the strongest with *meta-cognitive strategies*, in agreement with the previous research results (Golparvar & Khafi, 2021; Magogwe & Oliver, 2007; Teng, 2016). This result is not surprising in that *self-regulatory efficacy* “deals with student writers’ ability to have metacognitive control of their writing process, i.e., to monitor and evaluate this process in a goal-directed way” (Golparvar & Khafi, 2021, p. 3) and unsurprisingly, one who tends to have confidence in executive control of the composing process seems to benefit more from planning, organizing, regulating, monitoring, and evaluating activities, categorized as *metacognitive strategies* (Oxford, 1990; Peñuelas, 2012).

Another noteworthy finding is that *performance efficacy* had the strongest correlations with *motivational regulation strategies*. Teng et al. (2018) conceptualized this efficacy type by consulting SCT (Bandura, 1986), which sees writing as “a generative activity requiring motivation” (Hayes, 1996, p. 5) and SRL theory acknowledging the importance of the exertion of personal efforts for controlling the overt behavior (Zimmerman, 2013). In line with this, *performance efficacy* is assumed to have associations with extrinsic motivation (Golparvar & Khafi, 2021), which can explain the possible reason for the highest correlation score between *performance efficacy* and *motivation regulation strategies*. Given these underlying mechanisms operating in *performance efficacy*, it is not unexpected to find a high correlation, meaning that the ones who report feeling confident in the expectation of success in observable behaviors (e.g. task-related performance) also appear to benefit from *motivation strategies* in writing. As for the *social behavior strategies*, no correlations were extracted between any of self-efficacy sub-components and *social behavioral strategies*. However, the present research also revealed that all self-efficacy subcomponents extracted moderate, yet significant correlations with *feedback handling*, a social behavioral sub-strategy, indicating that students who tend to feel confidence in EFL writing are also willing and open to receiving feedback. This finding corroborates the previous research which advocates that feedback constitutes one of the central parts of the self-regulation mechanism (Teng, 2016; Zimmerman, 2013). However, *peer learning*, which is also the other social behavioral sub-strategy, showed no correlations with any self-efficacy components. The possible explanation for such a finding can be that since peer feedback has not received much attention in regular writing classes (Wang, 2014; Zhao, 2010), students might not have

too much experience in how to compose or revise a text based on the peers' help, which might have led to the infrequent use of peer learning strategy and accordingly no associations in the self-regulatory system.

All in all, the positive correlations calculated between the writing self-efficacy construct and SRW strategies cast light on the self-regulation mechanism from a socio-cognitive (Bandura, 1986) and SRL theoretical perspectives, acknowledging the triadic interplay between behavioral, personal, and environmental processes (Zimmerman, 2011, 2013).

6. Implications and conclusion

This study attempted to evaluate the multi-dimensional portrayal of the self-efficacy and SRW strategy constructs by reflecting on different perspectives of the composing process (Teng, 2016; Teng et al., 2018; Teng & Zhang, 2016, 2020), in agreement with the tenets of SCT by Bandura (1986) and SRL theory by Zimmerman (2011). In line with this theorization, the present research is likely to expand our knowledge and understanding in regard to the writing theory acknowledging that the composing process is established on a higher-order model (Teng & Zhang, 2016) under the influence of the triadic interactions of personal factors, environmental assets, and social behaviors (Zimmerman, 2011).

The findings document the most important indicators of writing self-efficacy construct by delineating a multi-structural model with three sub-dimensions (Teng et al, 2018) and also show students' perceived levels in these sub-functions. This finding can be utilized by educators as diagnostic information (Teng & Zhang, 2020) to nurture the self-efficacy sub-components that need more emphasis. Additionally, with the help of the results, writing teachers can spot which writing strategies for SRL are frequently implemented and which ones necessitate more explicit instruction to help learners add these strategy types into their repertoire (Teng, 2016).

More importantly, this study holds conclusions that a positive self-efficacy perception and the employment of SRW strategies are closely related to each other in different layers, suggesting that an increase in one variable can predict a rise in the other variable (Bai & Gu, 2018). Revealing a range of combinations of sub-components of the two constructs can open a new insight into the roots of the variables, which can, in turn, enable educators to gain an awareness of how to promote the related foci.

This study also indicates that even though the incorporation of writing strategies and feeling a sense of writing efficacy are distinct processes, they do not act in isolation, yet work synchronously (Teng & Zhang, 2018). In light of this, education practitioners can design effective composing environments, where learners are exposed to the explicit instruction helping them not only gain confidence in different phases of writing, but also deploy a range of SRW strategy types (Teng & Zhang, 2020). For this purpose, as argued by Schunk and Zimmerman (2007), modelling by teachers is likely to be an effective method to promote learners become more independent and thus becoming self-regulated learners who are more efficacious for writing and employ a range of different writing strategies.

Additionally, based on the findings, another noteworthy point is that students need special assistance as to the importance of peer-feedback to generate a quality-text. Having regard to the vital importance of peer-learning for enhancing writing skills (Keh, 1990), education practitioners can scaffold learners by creating a learning setting where special attention is given to teaching peer-learning strategies.

Another surprising pattern is that students reported the least frequently use of motivation strategies, referring to the techniques used for monitoring, sustaining, managing and supporting affective conditions whether they be positive or negative in order to enhance the willingness, interest, or efforts expended throughout the writing process (Teng & Zhang, 2018; Zimmerman, 2008). Therefore, considering the critical role of motivation strategies in writing pedagogy (Zhang, 2016), students should be explicitly and extensively trained about how to activate and internalize the tactics for cultivating motivation and for overcoming negative feelings in their learning processes.

Although this research adds a lot to the literature regarding the multi-dimensional nature of the writing process (Teng, 2016; Teng et al., 2018; Teng & Zhang, 2016; 2020), it is not without limitations. First, the study has a small number of participants, hence a new research study can be replicated with considerably more participants in order for yielding more conclusive results. Second, since this current study is not formed in an experimental design, an empirical study in a quasi-experimental research model can produce more concrete evidence as to the relations between the two foci. Lastly, the present research does not aim at testing the predictive potential of the variables in writing proficiency. In this respect, future research that has a specific concentration on how these variables might influence the writing competence can also add a lot to the relevant literature in that sense. But despite these limitations, this study still offers valuable contributions to the literature by underpinning the writing theory grounded in a socio-cognitive view (Bandura, 1986) and SRL theory (Zimmerman, 2013) of L2 writing. Considering that today the education systems are headed to the distance learning models at an unprecedented rate, by adopting different learning alternatives where learners are expected to regulate their learning more than ever (Dhawan, 2020; Sulisworo, Fatimah, Sunaryati, & Sanidi, 2020), the resulting information from this paper can show the promise for the innovation of writing instruction in which both SRL strategies and related self-efficacy perceptions regarding writing in English are promoted synchronously. Hence, the findings of the study presented herein can serve as evidence for the motivation of education practitioners in different EFL contexts to shape the regular writing practices, by paving the way toward SRW practices where the writers can feel more competent, self-directed, autonomous, goal-oriented and become equipped with an array of SRL strategies (Teng & Zhang, 2020).

References

- Abadikhah, S., Aliyan, Z., & Talebi, S. H. (2018). EFL students' attitudes towards self-regulated learning strategies in academic writing. *Issues in Educational Research*, 28(1), 1–17.
- Akgün, F. (2019). Öğretim elemanlarının bilgi ve iletişim teknolojilerine yönelik kabulleri ve teknostres algıları arasındaki ilişkinin incelenmesi. *Eğitim Bilimleri Araştırmaları Dergisi - Journal of Educational Sciences Research*, 9(2), 40–66.
- Aryanika, S. (2016). The correlation between the students' writing motivation and the writing ability. *Inggris, English Education: Jurnal Tadris Bahasa*, 9(1), 215–232.
- Asmari, A. Al. (2013). Investigation of writing strategies, writing apprehension, and writing achievement among Saudi EFL-major students. *International Education Studies*, 6(11), 130–143.
- Bai, B., & Guo, W. (2018). Influences of self-regulated learning strategy use on self-efficacy in primary school students' English writing in Hong Kong. *Reading and Writing Quarterly*, 34(6), 523–536.
- Bai, B., Hu, G., & Gu, P. Y. (2014). The relationship between use of writing strategies and English proficiency in Singapore primary schools. *Asia-Pacific Education Researcher*, 23(3), 355–365.

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs: Prentice Hall.
- Bandura, A. (1991). Social cognition theory and self-regulation. *Organizational Behavior and Human Decision Processes*, 50(2), 248–287.
- Bandura, A. (1997). Exercise of personal and collective efficacy in changing societies. In A. Bandura (Ed.), *Self-efficacy in changing societies* (pp. 1–45). New York: Cambridge University Press.
- Bektaş-Çetinkaya, Y. (2020). Writing self-efficacy in English as a foreign language: Turkish Context. *International Journal of Language Studies*, 14(2), 89–102.
- Boscolo, P., & Hidi, S. (2007). The multiple meanings of motivation to write. In P. Boscolo & S. Hidi (Eds.), *Writing and motivation* (pp. 1–14). Oxford: Elsevier.
- Brown, H. D. (2007). *Teaching by principles: An interactive approach to language pedagogy*. White Plains, NY: Pearson Education.
- Bruning, R., Dempsey, M., Kauffman, D. F., McKim, C., & Zumbrunn, S. (2013). Examining dimensions of self-efficacy for writing. *Journal of Educational Psychology*, 105(1), 25–38.
- Çankaya, S., & Durak, G. (2020). Integrated systems in emergency distance education: The Microsoft Teams. *Necatibey Faculty of Education Electronic Journal of Science and Mathematics Education*, 14(2), 889–920.
- Cumming, A. (2009). The contribution of studies of foreign language writing to research, theories and policies. In R. Manchón (Ed.), *Writing in foreign language contexts: Learning, teaching, and research* (pp. 209–231). Buffalo, NY: Multilingual Matters.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5–22.
- Dinsmore, D. L., Alexander, P. A., & Loughlin, S. M. (2008). Focusing the conceptual lens on metacognition, self-regulation, and self-regulated learning. *Educational Psychology Review*, 20(4), 301–409.
- Dörnyei, Z. (2005). The psychology of the language learner: Individual differences in second language acquisition. In *The Psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Erlbaum.
- Duckworth, K., Akerman, R., Macgregor, A., Salter, E., & Vorhaus, J. (2009). Self-regulated learning: a literature review (Centre for Research on the Wider Benefits of Learning Research Report No.33). London, UK: Institute of Education, University of London.
- Flower, L., & Hayes, J. R. (1981). A cognitive process theory of writing. *College Composition and Communication*, 32(4), 365–387.
- Gahungu, O. N. (2007). *The relationship among strategy use, self- efficacy, and language ability in language ability in foreign language learners* (Unpublished Doctoral Dissertation). Northern Arizona University.
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update* (4th edition). Boston: Allyn & Bacon.
- Gerber, O. (2009). *Curiosity, exploration, and strategies for dealing with uncertainty amongst psychologists-in-training* (Unpublished Master's Thesis). Nelson Mandela Metropolitan University, South Africa.
- Giraldo de Londoño, M., & Perry, R. (2008). Treating ESL writing errors: Balancing form and content. *HOW*, 15(1), 107–123.
- Golparvar, S. E., & Khafi, A. (2021). The role of L2 writing self-efficacy in integrated writing strategy use and performance. *Assessing Writing*, 47(January), 1–15.
- Google Forms (n.d.). Retrieved from <https://www.google.com/forms/about/>

- Harris, K. R., Santangelo, T., & Graham, S. (2010). Metacognition and strategies instruction in writing. In H. S. Waters & W. Schneider (Eds.), *Metacognition, strategy use, and instruction* (pp. 226–256). New York, NY: The Guilford Press.
- Hayes, J. R. (1996). A new framework for understanding cognition and affect in writing. In C. M. Levy & S. Ransdell (Eds.), *The science of writing: Theories, methods, individual differences, and applications* (pp. 1–27). Mahwah, NJ: Lawrence Erlbaum.
- Hayes, John R., & Flower, L. S. (1986). Writing research and the writer. *American Psychologist*, 41(10), 1106–1113.
- Hinton, P. R., Brownlow, C., McMurray, I., & Cozens, B. (2004). *SPSS explained*. East Sussex: Routledge.
- Hirvela, A., Hyland, K., & Manchón, R. (2016). Dimensions in L2 writing theory and research: Learning to write and writing to learn. In R. Manchón & P. Matsuda (Eds.), *Handbook of Second and Foreign Language Writing* (pp. 45–64). Berlin, Boston: De Gruyter Mouton.
- Hyland, K. (2002). *Teaching and researching writing*. Harlow: Longman.
- Hyland, K. (2012). Teaching and researching writing. In *Teaching and Researching Writing* (2nd edition). Harlow: Pearson Education Limited.
- Kaplanoglu, E. (2014). Mesleki stresin temel nedenleri ve muhtemel sonuçları: Manisa ilindeki SMMM'ler üzerine bir araştırma. *Muhasebe ve Finansman Dergisi*, 64(Ekim), 131–150.
- Keh, C. L. (1990). Feedback in the writing process: a model and methods for implementation. *ELT Journal*, 44(4), 294–304.
- 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.
- Kırmızı, Ö., & Kırmızı, G. D. (2015). An investigation of L2 learners' writing self-efficacy, writing anxiety and its causes at higher education in Turkey. *International Journal of Higher Education*, 4(2), 57–66.
- Kormos, J. (2012). The role of individual differences in L2 writing. *Journal of Second Language Writing*, 21(4), 390–403.
- Lavelle, E. (2006). Teacher's self efficacy for writing. *Electronic Journal of Research in Educational Psychology*, 8(4), 73–84.
- Lin, C. J. (2019). An online peer assessment approach to supporting mind-mapping flipped learning activities for college English writing courses. *Journal of Computers in Education*, 6(3), 385–415.
- Magogwe, J. M., & Oliver, R. (2007). The relationship between language learning strategies, proficiency, age and self-efficacy beliefs: A study of language learners in Botswana. *System*, 35(3), 338–352. <https://doi.org/10.1016/j.system.2007.01.003>
- Manchón, R. (2001). Trends in the conceptualizations in the second language composing strategies: A critical analysis. *International Journal of English Studies*, 1(2), 47–70.
- Manchón, R., Roca de Larios, J., & Murphy, L. (2007). A review of writing strategies: Focus on conceptualizations and impact of first language. In A. Cohen & E. Macaro (Eds.), *Language learner strategies: Thirty years of research and practice* (pp. 229–250). Oxford: Oxford University Press.
- Microsoft Teams* (n.d.). Retrieved from <https://www.microsoft.com/tr-tr/microsoft-teams/group-chat-software>
- Mulugeta, H. (2018). *Students' beliefs writing, their writing strategy use and writing performance* (Unpublished Doctoral Dissertation). Addis Ababa University, Indonesia.

- Nabhan, S. (2019). Pre-service teachers' self-regulated learning strategy, motivation, and revision behaviors in EFL academic writing. *Jurnal Pendidikan Bahasa*, 8(2), 193–209.
- Nightingale, P. (1988). Understanding processes and problems in student writing. *Studies in Higher Education*, 13(3), 263–283.
- Oraif, I. M. (2016). The right approach in practice: A discussion of the applicability of EFL writing practices in a Saudi context. *English Language Teaching*, 9(7), 97-102.
- Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. New York: Newbury House.
- Pajares, F. (2003). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading and Writing Quarterly*, 19(2), 139–158.
- Pajares, F. (2008). Motivational role of self-efficacy beliefs in self-regulated learning. In D. H. Schunk & B. J. Zimmerman. (Eds.), *Motivation and self-regulated learning: Theory, research, and applications* (pp. 111–139). New York, NY: Erlbaum.
- Pajares, F., & Valiante, G. (1999). Grade level and gender differences in the writing self-beliefs of middle middle school students. *Contemporary Educational Psychology*, 24, 390–405.
- Pajares, F., & Valiante, G. (2006). Self-efficacy beliefs and motivation in writing development. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 158–170). New York, NY: Guilford Press.
- Peñuelas, A. B. C. (2012). The writing strategies of American university students: Focusing an memory, compensation, social, and affective strategies. *Estudios de Linguística Inglesa Aplicada (ELIA)*, 12, 77–113.
- Pintrich, P. R. (2004). A conceptual framework for assessing motivation and self-regulated learning in college students. *Educational Psychology Review*, 16(4), 385–407.
- Pintrich, P. R., Smith, D., Garcia, T., & McKeachie, W. (1991). *A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ)*. Ann Arbor: The University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.
- Rahayu, R. A. P. (2021). Effect of collaborative writing combined with blog online learning on Indonesian EFL learners' writing skill across motivation. *SALEE: Study of Applied Linguistics and English Education*, 2(1), 87–98.
- Raofi, S. (2014). *L2 writing self-efficacy, task-value, and strategies of Malaysian undergraduate students*. Universiti Putra Malaysia, Malaysia.
- Rose, H., Briggs, J. G., Boggs, J. A., Sergio, L., & Ivanova-Slavianskaia, N. (2018). A systematic review of language learner strategy research in the face of self-regulation. *System*, 72, 151–163.
- Saito, A. (2020). Strategy use, self-efficacy beliefs, and self-regulatedness in adult foreign language learning. *Australian Journal of Applied Linguistics*, 3(2), 152–167.
- Santangelo, T., Harris, K., & Graham, S. (2007). Self-regulated strategy development: A validated model to support students who struggle with writing. *Learning Disabilities: A Contemporary Journal*, 5(1), 1–20.
- Schmitz, B., & Wiese, B. S. (2006). New perspectives for the evaluation of training sessions in self-regulated learning: Time-series analyses of diary data. *Contemporary Educational Psychology*, 31(1), 64–96.
- Schunk, D. H. (1991). Self-Efficacy and Academic Motivation. *Educational Psychologist*, 26(3), 207–231.
- Schunk, D. H., & Ertmer, P. A. (2000). Self-regulation and academic learning: Self-efficacy enhancing interventions. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 631–649). San Diego, CA: Academic Press.

- Schunk, D. H., & Pajares, F. (2010). Self-Efficacy Beliefs. In *International Encyclopedia of Education*. Elsevier.
- Schunk, D. H., & Zimmerman, B. J. (2007). Influencing children's self-Efficacy and self-regulation of reading and writing through modeling. *Reading and Writing Quarterly*, 23(1), 7–25.
- Shell, D. F., Murphy, C. C., & Bruning, R. H. (1989). Self-efficacy and outcome expectancy mechanisms in reading and writing achievement. *Journal of Educational Psychology*, 81(1), 91–100.
- Silva, T., & Matsuda, P. K. (Eds.). (2010). *Practicing theory in second language writing*. West Lafayette, IN: Parlor Press.
- Stewart, G., Seifert, T. A., & Rolheiser, C. (2015). Anxiety and self-efficacy's relationship with undergraduate students' perceptions of the use of metacognitive writing strategies. *The Canadian Journal for the Scholarship of Teaching and Learning*, 6(1).
- Sulisworo, D., Fatimah, N., Sunaryati, S. S., & Sanidi. (2020). A quick study on srl profiles of online learning participants during the anticipation of the spread of COVID-19. *International Journal of Evaluation and Research in Education*, 9(3), 723–730.
- Sun, T., & Wang, C. (2020). College students' writing self-efficacy and writing self-regulated learning strategies in learning English as a foreign language. *System*, 90(3), 102221.
- Teng, & Huang, J. (2019). Predictive effects of writing strategies for self-regulated learning on secondary school learners' EFL writing proficiency. *TESOL Quarterly*, 53(1), 232–247.
- Teng, L. S. (2016). *Fostering strategic second-language writers: A study of Chinese English-as-a-Foreign-Language (EFL) writers' self-regulated learning strategies, self-efficacy and motivational beliefs* (Unpublished Doctoral Dissertation). The University of Auckland, New Zealand.
- Teng, L. S., Sun, P. P., & Xu, L. (2018). Conceptualizing Writing Self-Efficacy in English as a Foreign Language Contexts: Scale Validation Through Structural Equation Modeling. *TESOL Quarterly*, 52(4), 911–942.
- Teng, L. S., & Zhang, L. J. (2016). A questionnaire-based validation of multidimensional models of self-regulated learning strategies. *Modern Language Journal*, 100(3), 674–701.
- Teng, L. S., & Zhang, L. J. (2018). Effects of motivational regulation strategies on writing performance: a mediation model of self-regulated learning of writing in English as a second/foreign language. *Metacognition and Learning*, 13(2), 213–240.
- Teng, L. S., & Zhang, L. J. (2020). Empowering learners in the second/foreign language classroom: Can self-regulated learning strategies-based writing instruction make a difference? *Journal of Second Language Writing*, 48(100701), 1-14. <https://doi.org/10.1016/j.jslw.2019.100701>
- Tseng, W. T., Dörnyei, 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.
- Ur, P. (1996). A course in language teaching. In *A course in language teaching*. Cambridge: Cambridge University Press.
- Vadia, M. N., & Anwar, D. (2018). Using classroom blog to teach writing to senior high school students. *Journal of English Language Teaching*, 7(1), 187–193.
- Wang, C., Schwab, G., Fenn, P., & Chang, M. (2013). Self-efficacy and self-regulated learning strategies for English language learners: Comparison between Chinese and German college students. *Journal of Educational and Developmental Psychology*, 3(1), 173–191.
- Wang, J. (2014). A synthesis of the studies on L2 writing in the Chinese context. In J. Wang & D. Lin (Eds.), *Teaching and researching EFL writing from psycho-cognitive and socio-cultural perspectives: Proceedings of the 8th International Conference on Teaching and Researching EFL Writing in China* (pp. 37–69). Beijing, China: FLTRP.

- Wolters, C. A. (1999). The relation between high school students' motivational regulation and their use of learning strategies, effort, and classroom performance. *Learning and Individual Differences*, 11(3), 281–299.
- Wong, B. Y. L. (1999). Metacognition in writing. In R. Gallimore, L. P. Bernheimer, D. L. MacMillan, D. L. Speece, & S. R. Vaughn (Eds.), *Developmental perspectives on children with high-incidence disabilities* (pp. 183–198). Mahwah: Lawrence Erlbaum Associates Inc.
- Woodrow, L. (2011). College English writing affect: Self-efficacy and anxiety. *System*, 39(4), 510–522.
- You, X. (2004). New directions in EFL writing: A report from China. *Journal of Second Language Writing*, 13(4), 253–256.
- Yusoff, M. S. B. (2012). Stability of DREEM in a sample of medical students: A prospective study. *Education Research International*, 2012, 1–5. <https://doi.org/10.1155/2012/509638>
- Zabihi, R. (2018). The role of cognitive and affective factors in measures of L2 writing. *Written Communication*, 35(1), 32–57.
- Zhan, J. (Ed.). (2012). *English writing in social-cultural contexts: Proceedings of the 7th International Conference on Teaching and Researching EFL Writing in China*. Beijing, China: FLTRP.
- Zhang, L. J. (2008). Constructivist pedagogy in strategic reading instruction: Exploring pathways to learner development in the English as a second language (ESL) classroom. *Instructional Sciences*, 36(2), 89–116.
- Zhang, L. J. (2013). Second language writing as and for second language learning. *Journal of Second Language Writing*, 22(4), 446–447.
- Zhang, L. J., Aryadoust, V., & Zhang, D. (2016). Taking stock of the effects of strategies-based instruction on writing in Chinese and English in Singapore primary schools. In R. E. Silver & W. Bokhorst-Heng (Eds.), *Quadrilingual education in Singapore: Pedagogical innovation in language education* (pp. 193–244). New York, NY: Springer.
- Zhang, Y., & Guo, H. (2012). A study of English writing and domain-specific motivation and self-efficacy of Chinese EFL learners. *Journal of Pan-Pacific Association of Applied Linguistics*, 16(2), 101–121.
- Zhao, H. (2010). Investigating learners' use and understanding of peer and teacher feedback on writing: A comparative study in a Chinese English writing classroom. *Assessing Writing*, 15(1), 3–17.
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25(1).
- Zimmerman, B. J. (2000a). Attaining self-regulation: A social cognitive perspective. In B. Monique, R. P. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). San Diego, CA: Academic Press.
- Zimmerman, B. J. (2000b). Self-efficacy: An essential motive to learn. *Contemporary Educational Psychology*, 25(1), 82–91.
- Zimmerman, B. J. (2000c). Theories of self-regulated learning and academic achievement: an overview and analysis. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives* (pp. 1–37). Lawrence Erlbaum Associates Publishers.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. In *Theory into Practice* (Vol. 41, Issue 2, pp. 64–70). Ohio State University Press. https://doi.org/10.1207/s15430421tip4102_2
- Zimmerman, B. J. (2013). From cognitive modelling to self-regulation: A social cognitive career path. *Educational Psychologist*, 48(3), 135–147.

- Zimmerman, B. J., & Bandura, A. (1994). Impact of self-regulatory influences on writing course attainment. *American Educational Research Journal*, 31(4), 845–862.
- Zimmerman, B. J., & Campillo, M. (2003). Motivating self-regulated problem solvers. In J. E. Davidson & R. Sternberg (Eds.), *The nature of problem solving* (pp. 233–262). New York: Cambridge University Press.
- Zimmerman, B. J., & Martinez-Pons, M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational Research Journal*, 23(4), 614–628.
- Zimmerman, B. J., & Risemberg, R. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology*, 22(1), 73–101.
- Zimmerman, B. J., & Schunk, D. H. (2001). Theories of self-regulated learning and academic achievement: An overview and analysis. In B. J. Zimmerman & D. H. Schunk (Eds.), *Self regulated learning and academic achievement: Theoretical perspectives* (pp. 1–36). Mahwah, NJ: Lawrence Erlbaum.