



Future selves, enjoyment and anxiety as predictors of L2 writing achievement

Somayeh Tahmouresi ^{*}, Mostafa Papi

Florida State University, United States

ARTICLE INFO

Keywords:

L2 writing selves
L2 writing anxiety
L2 writing joy
L2 writing motivation
L2 writing course grade

ABSTRACT

To further understand the role of individual differences in second language (L2) writing, this study investigated how motivation and emotions influence L2 writing achievement. More specifically, it examined how students' L2 writing future selves (i.e., ideal L2 writing self representing their aspirations, and ought L2 writing self representing their obligations) lead to qualitatively different emotions (anxiety and enjoyment), and how the future selves both directly and indirectly through anxiety and enjoyment affect L2 writing achievement. Questionnaire scales were developed using qualitative data to measure L2 writing selves. The new scales along with existing scales for examining L2 writing anxiety, joy, and motivation, were administered to 85 university students learning English as a Foreign Language (EFL) at a private university in Iran. Multiple regression results showed that the ideal L2 writing self positively predicted L2 writing joy, motivation, and achievement, whereas ought L2 writing self positively predicted L2 writing anxiety and motivation; L2 writing joy and anxiety both predicted L2 writing motivation positively; L2 writing anxiety predicted L2 writing achievement negatively but L2 joy did not. Overall, the findings highlight the qualitative differences in students' motivation and emotions in L2 writing achievement.

1. Introduction

A key contributor to students' second language (L2) writing achievements is motivation (e.g., [Fritzsche et al., 2003](#); [Hashemian & Heidari, 2013](#); [Tsao et al., 2017](#)). Motivation has been defined as "the primary impetus to initiate L2 learning and later the driving force to sustain the long, often tedious learning process" ([Dörnyei & Ryan, 2015, p. 72](#)). Highly motivated students, for example, spend more time on L2 writing tasks (e.g., [Hashemian & Heidari, 2013](#)), hold more positive attitudes toward L2 writing skills (e.g., [Tsao et al., 2017](#)), and seek more feedback on their L2 writing performance (e.g., [Papi et al., 2020](#); [Waller & Papi, 2017](#)). L2 writing success also depends on learner's emotional experiences in the writing process. An emotion is a mental state that is experienced in the form of a strong feeling associated with one's life situations. Emotions can be positive or negative. An example of a negative emotion is L2 anxiety, which has been found to negatively affect the process and product of L2 writing (e.g., [Cheng et al., 1999](#); [Cheng, 2002](#); [Teimouri et al., 2019](#)). L2 writing anxiety research has also shown that highly anxious students procrastinate their L2 writing assignments, feel unsatisfied with their writing experiences, avoid expressing complex ideas in their writing, expend less effort on improving their writing skills, and, subsequently, receive lower writing grades (e.g., [Fritzsche et al., 2003](#); [Tsao et al., 2017](#)). Previous studies have also found anxiety to reduce learners' cognitive processing and attentional resources, whereas positive emotions have

^{*} Corresponding author.

E-mail address: st17@my.fsu.edu (S. Tahmouresi).

been found to broaden their cognitive capacity and flexibility (e.g., Dewaele & MacIntyre, 2014). An example of a positive emotion is L2 enjoyment, which refers to the joy and pleasure that learners experience while learning a second language. L2 enjoyment has been found to be associated with ideal L2 selves (Teimouri, 2017), the eager use of the target language, and L2 achievement (e.g., Papi & Khajavy, 2021).

In the present study, we aim to further research on the role of motivation and emotions in L2 writing in three significant ways. First, the notion of future L2 selves has emerged over the last decade as the dominant motivational perspective within the field of second language acquisition since the introduction of Dörnyei (2005, 2009), L2 motivational self system (L2MSS). Future L2 selves represent the kind of L2 user that a learner wants to be in future. These future L2 selves act as desirable end-states that motivate learners to invest in learning a language. The desire to reduce the discrepancy between one's actual L2 self, representing their current level of L2 abilities, and their desired future selves, creates feelings of discomfort that motivate learners to work hard and approach their future L2 selves. Two general types of future L2 selves have been proposed in the field of second language acquisition (SLA). These include *ideal L2 selves* and *ought L2 selves*. Ideal L2 selves represent the ideal image of the kind of L2 user one (or their important others) wants to be in future (e.g., a fluent speaker of the target language) and ought L2 selves represent the kind of L2 user that a learner believes they have to be in order to meet their obligations and responsibilities and avoid negative consequences (e.g., failing in school, losing one's job).

In the field of L2 writing, only a few studies have examined students' L2 motivation through the lens of future L2 selves (e.g., Csizér & Tankó, 2017; Jang & Lee, 2019). These studies, however, have employed measures of general L2 selves rather than domain-specific scales for measuring "future L2 writing selves". Individual differences research in L2 writing, however, has shown that the general motivational and emotional characteristics of L2 learners cannot simply be transferred to L2 writing (e.g., Chen, 2004; Waller & Papi, 2017). In other words, while students might possess a future vision of themselves communicating fluently with others in the target language, the vision may not necessarily include writing fluently in the target language. Thus, the present study aims to develop a psychometrically valid instrument for the measurement of L2 writing future selves using the 2×2 Model of L2 Self-Guides (Papi et al., 2019), which is the latest model of future L2 selves in the field.

In addition, whereas there is a rich body of literature on the role of motivation and emotion as independent constructs in L2 writing, there is a lack of research establishing the links between the two in a theoretically meaningful way. The 2×2 Model of L2 Self-Guides provides a theoretical framework for such an integration. According to this model (Papi et al., 2019), which draws on the main tenets of self-discrepancy and regulatory focus theories (Higgins, 1987, 1998), the perceived discrepancy between one's current self and their future selves creates qualitatively different emotional experiences that motivate the learner to reduce such a discrepancy. Papi et al. (2019) have argued that successful pursuit of ideal L2 selves can reduce dejection-related emotions (e.g., sadness) and enhance elation-related emotions (e.g., joy, happiness), whereas the successful pursuit of ought selves may reduce agitation-related emotions (e.g., anxiety) and lead to quiescence-related emotions (e.g., calmness). The connection between the pursuit of future L2 selves and corresponding emotional reactions arguably creates the motivational power of L2 selves (MacIntyre & Gregersen, 2012; Teimouri, 2017).

A few studies have provided evidence confirming the existence of such connections between L2 selves and emotions. These studies have shown that ideal L2 selves predicted elation-related emotion such as L2 enjoyment, and the ought L2 selves predicted agitation-related emotions such as L2 anxiety (e.g., Jiang & Papi, in press; Papi, 2010; Papi & Khajavy, 2021; Teimouri, 2017). The present study, however, will be the first to investigate the hypothesized relationships between future L2 selves and the corresponding emotions of anxiety and enjoyment in the field of L2 writing. Exploring these connections can give us a more integrated and theoretically meaningful picture of the relationship between motivation and emotion in L2 writing and lay the foundations for the design and development of interventions that would potentially promote positive motivational and emotional experiences in L2 writing classes. Therefore, the current study investigates how future L2 writing selves and the emotions of L2 writing anxiety and enjoyment can result in L2 writing motivation and achievement; and whether the hypothesized paths between the future selves on the one hand and L2 writing motivation and achievement on the other hand, are mediated by L2 writing anxiety and enjoyment. This is an important connection from a theoretical perspective because based on the theoretical tenets of the 2×2 model, future selves lead to motivated behaviors and performance outcomes through creating emotional responses to the discrepancies perceived between the actual and future selves, a connection which has been confirmed in some L2 motivation studies (e.g., Papi & Khajavy, 2021; Teimouri, 2017). Therefore, this study explores how the L2 writing selves would contribute to L2 motivation and achievement either directly or through the medium of L2 anxiety and enjoyment.

1.1. Future L2 selves

The L2MSS was proposed by Dörnyei (2009) to theorize students' motivation in terms of their future L2 selves. According to Dörnyei, students will be motivated to reduce such a psychological gap between students' actual selves and their imagined future L2 selves. The L2MSS outlined two future self-guides: Ideal L2 self and ought-to L2 self. The ideal L2 self represented language-related aspects of students' hope and desires for learning an L2, whereas the ought-to L2 self referred to obligations imposed on students by others (e.g., parents, teachers, friends, classmates) for learning an L2. Both L2 selves have been found to be positive predictors of students' motivation (Papi, 2010; Taguchi et al., 2009; Teimouri, 2017). The L2MSS model also contains a *L2 learning experience* component that subsumes the motivational effects of situated factors such as the role of teachers and instructional materials. The L2 learning experience has been found to be the strongest predictor of students' motivation (e.g., Papi, 2010; Taguchi et al., 2009).

A few studies have examined students' writing motivation through their future L2 selves (e.g., Csizér & Tankó, 2017; Jang & Lee, 2019). For instance, Jang and Lee (2019) examined the links between L2 selves and L2 writing outcomes among 68 Korean EFL

university freshmen in South Korea. They measured students' general L2 selves using Taguchi et al.'s (2009) scales and assessed their writing skills via an essay writing task. The regression analysis results revealed that only students' ideal L2 self had positive effects on their writing skills. In their mixed-methods study, Csizér and Tankó (2017) examined the relationship between L2 selves and academic writing experiences among 222 first-year English majors at a large Hungarian university. Their results showed that students' selves were related to their willingness to take control of their own writing development as well as an increase in their self-efficacy.

Although past research in various parts of the world has provided evidence of the model's applicability in various contexts and its power to predict students' L2 motivation, it has received criticism, mainly because of the lack of consistent results regarding the role of the ought-to L2 self (see Papi et al., 2019; Teimouri, 2017). As a result, some scholars have proposed revisions to the model. Drawing on Higgins's (1987) self-discrepancy theory, Teimouri (2017) attempted to bifurcate each L2 self with respect to the standpoints of own vs. others. The results of principal component analysis yielded a trichotomies model of L2 selves: ideal L2 self, ought L2 self/own, and ought L2 self/others. The regression analysis results showed that while all the three L2 selves predicted students' motivation, the ideal L2 self had the most substantial effects.

In another study, Papi et al. (2019) re-operationalized and tested a 2×2 model of L2 selves using data collected from 257 international students learning English as a second language (ESL) in the United States. The results of confirmatory factor analysis supported the existence of four future L2 selves from two regulatory dimensions (ideal vs. ought) and two standpoints (own vs. others). In other words, the confirmatory factor analysis confirmed the construct validity of the model with four future selves: *Ideal L2 self/own* representing a learner's own hopes and aspirations for language learning; *ideal L2 self/other* representing a learner's important others' (e.g., parents) hopes and aspiration for him or her in relation to learning the L2; *ought L2 self/own* representing a learner's self-selected obligations and requirements in terms of language learning; and finally, *ought L2 self/other* representing the L2 learning obligations that a learner believes his or her important others' impose on him or her. In addition, and contrary to the results of the previous studies, multiple regression analyses revealed that ought L2 self/own was the strongest predictor of students' motivated behavior among the four types of L2 selves in the ESL context of the United States. In addition, whereas ideal L2 self/own led to an eager strategic inclination for maximal L2 use, ought L2 self/own led to a vigilant strategic inclination for minimal L2 use. The authors argued that the ideal vs. ought future selves not only lead to qualitatively different motivated behaviors but also to different emotional responses during the learning pursuit, connections that have also been confirmed in two other studies using the same model (i.e., Jiang & Papi, in press; Papi & Khajavy, 2021).

In the first study, Papi and Khajavy (2021) examined the theoretical underpinnings of the 2×2 Model by testing hypothesized relationships among chronic regulatory focus (Higgins, 1998), the four self-guides (Papi et al., 2019), the emotions of anxiety and enjoyment, eager and vigilant strategic inclinations, and finally language achievement. The study was conducted in the context of Iran using data collected from 324 Iranian EFL learners. Structural equation modeling results showed confirmed the theoretical predictions of the model. Ideal L2 self/own contributed to L2 enjoyment, which in turn led to eager L2 use whereas ought L2 self/other contributed to L2 anxiety, which in turn predicted vigilant L2 use. In addition, eager L2 use positively and vigilant L2 use negatively predicted L2 achievement. The findings of these study provided support for the qualitative differences in the emotional responses to ideal versus ought selves as well as learners' strategic behaviors and L2 achievement. These results which were also confirmed by Jiang and Papi (in press) who tested the relations between the four self-guides and the L2 anxiety in the context of China. Using data from 134 Chinese EFL learners, the researchers found that whereas ought L2 self/own and ought L2 self/other positively contributed to L2 anxiety, ideal L2 self/own negatively predicted it.

Given the results of these three studies, it appears that Papi et al.'s (2019) model not only can paint a more nuanced picture of possible future L2 selves than alternative models (Dörnyei, 2009; Teimouri, 2017) but also has the potential to contribute to the theoretically meaningful investigation of emotions such as anxiety and joy, which are important emotions involved in the L2 writing process (e.g., Kormos, 2012). The present study, therefore, aims to use this theoretical model to develop proper instruments for measuring future L2 writing selves and examine whether similar relationships between the selves on the one hand, and anxiety, enjoyment, motivation and achievement exist in the context of L2 writing. In addition, it will examine how anxiety and enjoyment may mediate the effects of the future selves on L2 writing motivation and achievement.

1.2. Anxiety

L2 anxiety has been defined as "the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning" (MacIntyre & Gardner, 1994, p. 284). This emotion has received extensive attention in L2 writing research and has been found to be negatively associated with L2 writing self-efficacy (Kirmizi & Kirmizi, 2015), motivation (Cheng, 2002), and strategy use (Tsao et al., 2017), the perceived value of written corrective feedback (Tsao et al., 2017), and L2 writing performance and achievement (Cheng, 2002; Teimouri et al., 2019).

In early research on the role of anxiety in L2 writing, Daly-Miller's Writing Apprehension Test (WAT) (Daly & Miller, 1975), a measure of anxiety in first language writing, or the general L2 anxiety measures, such as the Foreign Classroom Language Anxiety scale (FLCAS; Horwitz et al., 1986) were used to measure L2 anxiety. In an early study, Cheng et al. (1999) found evidence that anxiety inherent in L2 writing situations might differ from general L2 anxiety. They examined how the English-major students' L2 writing and L2 speaking anxiety influenced their L2 writing achievement. The results of their study confirmed that L2 writing anxiety is distinct from L2 speaking anxiety, measured using FLCAS (Horwitz et al., 1986). Besides, L2 writing anxiety negatively predicted the students' grade in both speaking and writing courses. Later, Cheng (2004, 2017) developed the Second Language Writing Anxiety Inventory (SLWAI), which has been the most frequently used measure in L2 writing anxiety research (Teimouri et al., 2019).

SLWAI, however, has not been the only one developed in the field. For instance, Tsao et al. (2017) studied the effects of anxiety on

EFL learners' attitude toward corrective feedback using the Chinese version of a measure that Tsai (2008) developed for measuring L2 writing anxiety, which had four subcomponents: (1) fear of writing test, (2) anxiety about making mistakes, (3) fear of negative evaluation, and (4) low confidence in English writing. Using data collected from 158 Taiwanese students, the study found that L2 writing anxiety subcomponents predicted the EFL learners' evaluative judgments about teacher and peer feedback. The results also showed that high-anxiety learners avoided expressing complex ideas because they were afraid of making mistakes and being judged as bad writers. High-anxiety learners were also found to be reluctant to improve their writing skills. Even though, research on the role of anxiety in SLA has been extensive, we have limited research on the motivational sources of this emotion, confirming that ought L2 selves can be positive and ideal L2 selves can be negative contributors to L2 speaking anxiety (e.g., Jiang & Papi, *in press*; Papi, 2010; Papi & Khajavy, 2021). In the present study, therefore, we aim to examine future L2 selves as a potential source of this negative emotion in the context of L2 writing and explore how it can affect L2 writing motivation and achievement.

1.3. Enjoyment

In recent years, SLA scholars have shifted their attention from the impact of negative to positive emotions on L2 learning (Dewaele & MacIntyre, 2014), including enjoyment, which is now considered "a complex emotion, capturing interacting dimensions of the challenge and perceived ability that reflects the human drive for success in the face of difficult tasks" (Dewaele & MacIntyre, 2016, p. 216). Enjoyment represents the feelings of pleasure and elation that individuals experience during an activity. Teimouri (2017) defined L2 enjoyment as "positive emotions that language learners experience in the process of learning or using the target language either within the boundary of a specific instructional context or in authentic real-life situations" (p. 689). A number of studies have examined learners' enjoyment in L2 classes and its relation to L2 anxiety. Dewaele and MacIntyre (2014), for example, revealed that language enjoyment has a negative correlation with language anxiety, suggesting that these two emotions are distinct. The results further showed that students feel more L2 enjoyment in class than L2 anxiety. Furthermore, students who knew more languages felt more enjoyment. The age and educational levels of the students were also associated with students' L2 enjoyment.

Likewise, Dewaele and Alfawzan (2018) investigated foreign language enjoyment and anxiety of L2 learners in London secondary schools ($N = 189$) and EFL learners in Saudi Arabia ($N = 152$). Their research findings confirmed that language enjoyment positively and language anxiety negatively affected L2 learners' language performance. Similarly, Khajavy et al. (2018) found that Iranian English learners experience more enjoyment than anxiety in L2 classes; they also found that foreign language enjoyment positively and language anxiety negatively predicted learners' willingness to communicate in English as a foreign language. The dynamic nature of language enjoyment was also examined in a few studies (Dewaele & Dewaele, 2017; Elahi Shirvan, & Talebzadeh, 2018). In their longitudinal study, for instance, Dewaele and Dewaele (2017) showed that L2 learners' language enjoyment was not stable and changed because of various socio-psychological and environmental factors.

Although the significance of positive emotions in L2 learning is gaining momentum (e.g., Dewaele & Dewaele, 2017; Dewaele & Alfawzan, 2018; Khajavy et al., 2018) and there are studies that highlight the role of ideal L2 selves as the potential sources of L2 enjoyment (e.g., Papi & Khajavy, 2021; Teimouri, 2017), we are not aware of any studies on the sources or impact of L2 enjoyment in L2 writing motivation and achievement. Therefore, the present study examines whether we can extend connections between the ideal L2 self and enjoyment to L2 writing and also explore how L2 writing enjoyment can affect learners' L2 writing motivation and achievement.

2. Objectives of the study

In this study, we investigate a theoretical model that includes L2 writing selves, L2 writing enjoyment, L2 writing anxiety, L2 writing motivation, and L2 writing achievement. We hypothesize that L2 learners with stronger ideal L2 writing selves are more likely to experience enjoyment and less likely to experience anxiety during the process of L2 writing, be more motivated, and have higher L2 writing course grade than L2 learners with stronger ought L2 writing selves (e.g., Papi, 2018; Papi & Teimouri, 2014; Teimouri, 2017). In the present paper, we aim to answer the following research questions:

- 1) How do ideal and ought L2 writing selves predict L2 writing anxiety, enjoyment, motivation, and achievement?
- 2) How do L2 writing enjoyment and anxiety predict L2 writing motivation and achievement?
- 3) Are the relationships between future L2 writing selves and L2 writing motivation and achievement mediated by L2 writing enjoyment and anxiety?

3. Methodology

3.1. Participants

In this study, we recruited 85 EFL university students. The sample was selected from undergraduate English-major students studying at a university in Iran. We recruited university-level students because they had enough English writing experience in their college courses, so they were assumed to be able to successfully complete the writing task in this study. The sample comprised 56 females and 28 males (gender was missing for one student), whose ages ranged from 20 to 53 ($M = 30.82$, $SD = 8.48$). Of note, the sample was recruited from second- and third-year students from a private university whose admission policies are less competitive than public universities and attracts students from a wider age range. To measure the students' English proficiency, we used Taguchi et al.

(2009) self-rated English proficiency scale. The scale consisted of 5 proficiency levels from 1 (Beginner level) to 5 (Upper Intermediate level and over). Most of the students ($n = 58$) self-reported their language proficiency as lower-intermediate and intermediate.

3.2. Instruments

The primary instrument of the present study was a questionnaire consisting of two sections. Section 1 contained 32 items measuring students' motivation and emotions in relation to L2 writing. All responses were elicited using six-point Likert scales anchored at 1 *strongly disagree or not at all* and 6 *strongly agree or very much*. All items were randomized throughout the questionnaire. Section 2 elicited background information, such as age, gender, and language proficiency; students also provided their writing course grades in this section. Below is a detailed description of the scales used in the questionnaire (see Online Supplementary Materials).

3.2.1. Measuring L2 writing selves

To measure the participants' future L2 writing selves, we followed Papi et al.'s (2019) suggestions and developed our questionnaire using open-ended and ideographic measures. According to Papi et al. (2019), this could be a "more scientifically sound" method of generating selves' questionnaire because of individual and contextual variations giving different meanings to different goals. Therefore, we created the L2 writing scales based on the data elicited from a sample of 48 English-major university students and a sample of 69 private English institute learners in a two-stage pilot study. At stage 1, we created the L2 writing selves questionnaire: First, we developed an open-ended questionnaire that asked students to list three of their desires, aspirations, and hopes as well as three of their responsibilities, obligations, and duties regarding learning English writing skills (See Online Supplementary File).

After creating an item-pool, we classified the items into four categories of self-guides as outlined by Papi et al. (2019): ideal-own, ideal-other, ought-own, ought-other. We also slightly modified some items' wordings to enhance the consistency and face validity of each scale. The elicited data, however, almost entirely included items from the learners' own standpoints. This was probably because the open-ended questions did not ask the students to list their important others' (e.g., parents) hope and obligations related to their English writing skills. Therefore, the items were categorized either as ideal L2 writing self/own (ideal L2 writing self, for short) or ought L2 writing self/own (ought L2 writing self, for short). Finally, we selected six most frequent items from the item pool representing the ideal L2 writing self (e.g., *I imagine a day that I am easily writing emails in English*) and the ought L2 writing self (e.g., *I must learn how to write in English; otherwise, I will face difficulties in my education*).

At the second stage of the pilot study, we pilot-tested our 12-item L2 writing selves questionnaires on a small sample of 27 EFL university students. To examine the preliminary validity and reliability of the L2 writing scales, we ran factorial and reliability analyses. The results of Principal Component Analysis (PCA) using the Direct Oblimin rotation method supported the validity of the two scales. The L2 writing scales achieved high Cronbach's alphas ($\alpha = .81$ and $\alpha = .84$). In sum, the results of preliminary statistical analyses on this pilot study provided initial evidence for the validity and reliability of the scales to be used in the main study.

3.2.2. L2 writing anxiety

Cheng's (2017) second language writing anxiety inventory was used in this study to assess the level of anxiety that students experience in relation to their L2 writing. The scale consisted of 12 items. A sample item is: *when writing in English, I often worry that I will make language mistakes*. The validity and reliability of the scale were established in Cheng's (2017) study.

3.2.3. L2 writing enjoyment

Due to a lack of language-specific instruments in L2 writing research to assess the construct of enjoyment, we modified Teimouri's (2017) joy scale (four items) to measure students' L2 writing enjoyment. In Teimouri's (2018) study, the L2 joy scale was tested among a total of 524 adolescent learners of English as a foreign language in Iran, and the results showed high reliability of the scale with its Cronbach's alpha reaching .80. A sample item is: *I really enjoy writing in English*.

3.2.4. L2 writing motivation

The scale measures the amount of time and effort students are willing to invest in their L2 writing skills. Four items were adopted from Waller and Papi's (2017) L2 writing motivation scale, which has shown good psychometric properties (Waller & Papi, 2017). A sample item is: *I would like to spend lots of time learning to write in English*.

3.2.5. L2 writing achievement

The students' L2 writing achievement was operationalized based on their writing course grades in a required course which was part of their major program (i.e., English). At the end of the questionnaire, the students were asked to write down their writing course grades in an allocated box. The students' writing course grades were calculated based on the sum of their mid-term and final essay writing scores during the 2018–2019 academic years. Their teachers graded both of their essays holistically based on their institutional rubrics. The final course grades ranged from 0 to 20.

3.3. Procedure

Data collection began after receiving approval from the institutional review board at Florida State University. The first author first contacted a colleague teaching at a private university in the city of Karaj in Iran about having access to his classroom for data collection. After his approval to collect the students' data, the questionnaires were administered to his students during class time. Prior

to filling out the questionnaire, students were informed about the purpose of the study, their right to voluntary participation, and the confidential nature of the responses. Students were reassured that their (non)participation would not influence their class grades. Students, on average spent 15 min completing the questionnaire.

3.4. Data analysis

The collected data were entered into an SPSS file (version 24) for statistical analyses. First, PCA was conducted to examine the items measuring ideal and ought L2 writing selves. Next, the internal consistency of each L2 writing self, as well as other motivational and emotional variables, was computed by calculating Cronbach's alpha coefficients. Finally, a series of multiple regression and mediation analyses were run to answer our research questions.

Before running PCA, assumptions underlying this statistical procedure were examined. Our sample of 85 students formed an acceptable sample size for running PCA (Plonsky & Gonulal, 2015; Tabachnick et al., 2007). The Kaiser-Meyer-Olkin measure of sampling adequacy of .78 and Bartlett's test of sphericity measure $X^2(45) = 343.89, p < .001$ further lent support to the factorability of the 12 items developed for measuring the L2 writing selves. Having met the assumptions successfully, all 12 items were submitted to PCA using Direct Oblimin rotations in the next step.

To determine the number of components, the scree plot and the Eigenvalues of items were consulted (Fig. 1). Both the scree plot and the Eigenvalues of items indicated the presence of two significant components. A closer look into the item-loadings revealed that two items had cross-loadings; after deleting these two problematic items, the remaining items loaded on two components. Taken together, Component 1 (Eigenvalue = 3.64) and Component 2 (Eigenvalue = 2.33) explained 60 % of variance in the data. We labeled the two components as *ideal L2 writing self* and *ought L2 writing self* after examining the content of all the items in each component (Table 1).

4. Results

Table 2 presents the results of both descriptive and reliability analyses. As can be seen, Cronbach's alphas above .75 suggest that all the scales have good levels of internal consistency (Field, 2013). In addition, the students reported higher scores for the ideal L2 writing self ($M = 4.83; SD = .85$) than the ought L2 writing self ($M = 4.12; SD = .90$); the results of a paired sample t -test showed the difference between ideal and ought L2 writing selves to be statistically significant ($t(84) = 5.80, p < .001$), suggesting that learning to write in English for this group of students is mostly rooted in their aspirations rather than in their obligations. Of note, however, the students' L2 writing motivation remains relatively low ($M = 3.49; SD = 1.05$). Also, the students reported significantly higher levels of L2 writing enjoyment ($M = 4.54; SD = .96$) than L2 writing anxiety ($M = 2.92; SD = .94; t(85) = 10.22, p = .000$).

To answer RQ1 (i.e., How do ideal and ought L2 writing selves predict L2 writing anxiety, enjoyment, motivation, and achievement?), multiple regression analyses using the standard Enter method were run with the future L2 writing selves as the predictors, year of study as the covariate, and L2 writing anxiety, enjoyment, motivation, and achievement as outcome variables one at a time (see Table 3 for inter-correlations). As presented in Table 4, ideal L2 writing self negatively predicted L2 writing anxiety and positively predicted L2 writing enjoyment, L2 writing motivation, and L2 writing achievement, whereas ought L2 writing self positively predicted L2 writing anxiety and L2 writing motivation.

To answer RQ2 (How do L2 writing enjoyment and anxiety predict L2 writing motivation and achievement?), two other multiple regressions were run with L2 writing anxiety and enjoyment as predictors and L2 writing motivation and achievement as outcome variables one at a time. The results, presented in Table 5, showed that both L2 writing anxiety and enjoyment positively predicted L2 writing motivation, with the latter having a standardized Beta value almost three times larger than the former. Besides, L2 enjoyment

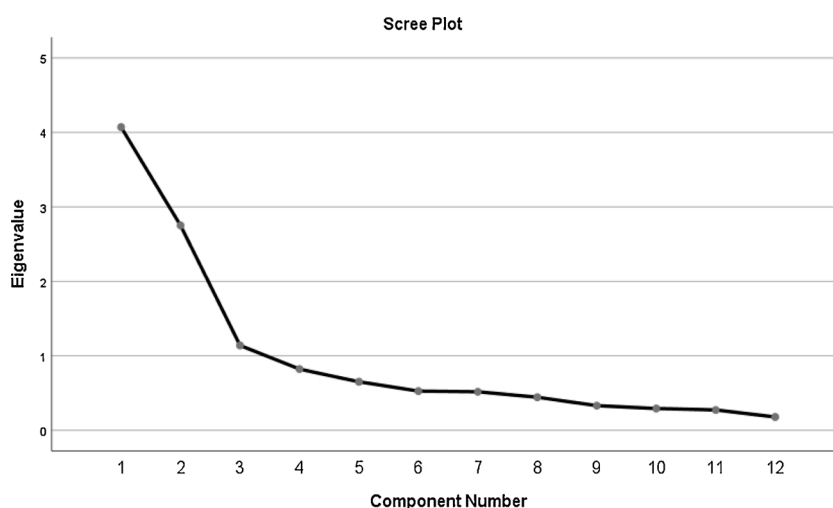


Fig. 1. The Scree plot of the items measuring the ideal and ought L2 writing selves.

Table 1

Factor loadings of the items measuring the ideal and ought L2 writing selves.

	Component	
	Ideal L2 Writing Self	Ought L2 Writing Self
Q1. I imagine a day that I am easily writing emails in English.	.87	
Q2. I can see a day that I can easily write down my thoughts and ideas in English.	.84	
Q3. I can see a day that I am posting materials in English on social networks.	.83	
Q4. I can see a day that I can easily fill out any forms in English	.81	
Q5. I can see a day that I can write in English fluently and accurately.	.78	
Q6. I must learn how to write in English; otherwise, I won't be able to get my degree.		.78
Q7. I must learn how to write in English; otherwise, I will fail my English course.		.77
Q8. I must be able to write in English; otherwise, I will have problems finding a job.		.76
Q9. I must learn how to write in English; otherwise, I will face difficulties in my education.		.64
Q10. I must learn how to write in English, otherwise, I will have difficulties in the future communicating with others overseas.		.58

Table 2The results of descriptive and reliability analyses for all variables ($N = 85$).

	Variables	Mean	SD	α	95 % CI	
1	Ideal L2 writing self	4.83	.85	.88	4.64	5.01
2	Ought L2 writing self	4.12	.90	.75	3.93	4.31
3	L2 writing motivation	3.49	1.02	.85	3.27	3.71
4	L2 writing enjoyment	4.54	.96	.87	4.33	4.75
5	L2 writing anxiety	2.92	.94	.88	2.72	3.12
6	L2 writing course grade	16.43	2.24	—	15.94	16.91

Note. L2 writing course grade range:0–20.

Table 3

Intercorrelations between all the measured variables.

	1	2	3	4	5
1. Ideal L2 writing self	—				
2. Ought L2 writing self	.17	—			
3. L2 writing enjoyment	.63**	-.02	—		
4. L2 writing anxiety	-.24*	.27*	-.19	—	
5. L2 writing motivation	.45**	.24*	.61**	.13	—
6. L2 writing achievement	.28**	.10	.15	-.36**	.01

* $P \leq 0.05$.** $P \leq 0.01$.

did not predict, and L2 writing anxiety negatively predicted L2 writing achievement.

To answer RQ3 (Are the relationships between future L2 writing selves and L2 writing motivation and achievement mediated by L2 writing enjoyment and anxiety?), stepwise regression analyses were run following Baron and Kenny's (1986) guidelines (see also Papi et al., 2019). According to Baron and Kenny (1986), there are three conditions necessary for mediation analysis. A variable can mediate the relationship between an independent and dependent variable if (A) the variable is significantly predicted by the independent variable, (B) the variable significantly predicts the dependent variable, and (C) when the variable's effect on the dependent variable is controlled for, the independent variable no longer significantly predicts the dependent variable. With L2 writing motivation as the outcome variable, both anxiety and enjoyment met the three conditions above and could function as mediators. That is, the previous analysis had shown a) ought L2 writing self predicted L2 writing anxiety and ideal L2 writing self predicted both L2 writing enjoyment and anxiety (Table 4), and b) Ideal L2 writing self was a significant predictor of L2 writing motivation, and ought L2 writing self approached statistical significance ($p = .08$) (Table 6), which according to Plonsky and Oswald (2014) can be considered statistically significant within the field of L2 research ($p < .10$). In Step 2, L2 writing enjoyment was added to the model to determine if the third condition was met. The results showed that Ideal L2 writing self lost statistical significance and ought L2 writing self became statistically significant with a notable increase in the standardized Beta value, suggesting that enjoyment mediates the relationship between ideal L2 writing self and L2 writing motivation positively and mediates the relationship between ought L2 writing self and L2 writing motivation negatively. When L2 writing anxiety was added to the model in the third step, the Beta value of ought L2 writing self dropped slightly but remained significant, suggesting partial mediation.

With L2 writing achievement as the outcome variable, L2 writing enjoyment did not qualify for mediation analysis as it did not predict the dependent variable (not meeting Condition B). The mediation analysis was thus run with L2 writing anxiety as the possible mediator as it was predicted by both L2 writing future selves (Condition A) and it predicted L2 writing achievement (Condition B). As

Table 4

Regression analyses with the future L2 writing selves as predictors and L2 writing anxiety, enjoyment, motivation, and achievement as criterion measures.

Variables	L2 writing anxiety				L2 writing joy				L2 writing motivation				L2 writing achievement			
			95 % CI				95 % CI				95 % CI				95 % CI	
	<i>B</i>	β	L	U	<i>B</i>	β	L	U	<i>B</i>	β	L	U	<i>B</i>	β	L	U
Ideal L2 Writing Self	-.32	-.30***	-.55	-.10	.73	.66***	.54	.93	.15	.42***	.26	.73	.61	.26**	.12	1.11
Ought L2 Writing Self	.33	.32***	.12	.55	-.15	-.14	-.33	.04	.20	.17	-.03	.42	.13	.06	-.34	.61
Class Level	-.02	-.02	-.26	.22	-.07	-.06	-.27	.13	.04	.03	-.21	.29	.32	.26	-.20	.85
R^2/F	.39/4.99***				.64/19.09***					.23/8.08***			.32/3.01*			
Cohen's f^2	.28				.39					.19			.24			

* $P \leq 0.05$.** $P \leq 0.01$.*** $P \leq 0.001$.

Table 5

Regression analyses with L2 writing emotions as predictors, and L2 writing motivation and achievement as the criterion measures.

Variables	L2 writing motivation				L2 writing achievement			
	B	β	95 % CI		B	β	95 % CI	
			L	U			L	U
L2 Writing Anxiety	.28	.26***	.10	.47	-.71	-.33***	-1.15	-.27
L2 Writing Enjoyment	.71	.66***	.53	.88	.18	.09	-.24	.61
Class Level	.10	.08	-.11	.31	.33	.13	-.18	.84
R^2 / F	.39/4.99***						.15/4.91***	
Cohen's f^2	.28						.13	

*** $P \leq 0.001$.**Table 6**

Stepwise regression analyses with the L2 writing selves (Step 1), L2 writing anxiety (Step 2), and L2 writing joy (Step 3) as predictors, and L2 writing motivation as the criterion measures.

Variables	Step 1				Step 2				Step 3			
	B	β	95 % CI		B	β	95 % CI		B	β	95 % CI	
			L	U			L	U			L	U
Ideal L2 writing Self	.50	.42***	.26	.73	.57	.48***	.33	.81	.10	.08	-.17	.36
Ought L2 Writing Self	.20	.17	-.03	.42	.12	.10	-.12	.35	.22	.19**	.02	.41
Class Level	.04	.03	-.21	.29	.05	.04	-.20	.29	.09	.07	-.12	.30
L2 Writing Anxiety	-	-	-	-	.24	.22***	.02	.47	.24	.22**	.05	.43
L2 Writing Enjoyment	-	-	-	-	-	-	-	-	.65	.61***	.43	.87
R^2 / F	.23/8.08***						.27/7.46***				.50/15.15***	
Cohen's f^2	.17						.21				.33	

** $P \leq 0.01$.*** $P \leq 0.001$.

presented in Table 7, in the base model, the ideal L2 writing self emerged as the only significant predictor of L2 writing achievement. When anxiety was added to the model, in step 2, ideal L2 writing self lost its significance, and its Beta coefficient dropped by more than 10 points, suggesting mediation.

5. Discussion

The relatively high mean scores for ideal L2 writing self and ought L2 writing self suggest that English can play an important role in the future academic and professional aspirations of Iranian college students. To further their studies at the graduate levels, Iranian college students must develop their English proficiency due to the fact that this language is part of their entrance exams at higher levels. In addition, university students in Iran must take English courses during their studies and be able to read scholarly texts that are mainly published in English. Therefore, English plays an important role in prospects of success for Iranian university students. In addition, it seems that the Iranian students view learning English as more of an aspiration than a requirement, as suggested by the significantly higher mean score for ideal L2 writing self than ought L2 writing self. The relatively low L2 writing motivation for these students, however, could reflect the lack of positive learning experiences in their classes or the fact that English writing skills are not considered as important as for instance reading or grammar skills at the undergraduate levels or in the national entrance exams for

Table 7

Stepwise regression analyses with the L2 writing selves (Step 1), L2 writing anxiety (Step 2), and L2 writing joy (Step 3) as predictors, and L2 writing achievement as the criterion measures.

Variables	Step 1				Step 2				Step 3			
	B	β	95 % CI		B	β	95 % CI		B	β	95 % CI	
			L	U			L	U			L	U
Ideal L2 writing Self	.61	.26*	.12	1.11	.36	.16	-.13	.85	.39	.17	-.24	1.02
Ought L2 Writing Self	.13	.06	-.34	.61	.39	.17	-.08	.86	.38	.17	-.10	.86
Class Level	.32	.13	-.20	.85	.31	.12	-.19	.80	.30	.12	-.20	.80
L2 Writing Anxiety	-	-	-	-	-.77	.36***	-1.22	-.31	-.77	-.36***	-1.22	-.31
L2 Writing Enjoyment	-	-	-	-	-	-	-	-	-.03	-.02	-.57	.50
R^2 / F	.32/3.01*						.46/5.32***				.21/4.21***	
Cohen's f^2	.24						.31				.26	

* $P \leq 0.05$.*** $P \leq 0.001$.

graduate programs in Iran.

The first research question asked about how learners' L2 writing selves predict their anxiety, joy, motivation, and achievement. The results showed that ideal L2 writing self predicted L2 writing joy, motivation, and achievement, whereas ought L2 writing self predicted L2 writing anxiety and motivation. This study showed that ideal L2 writing self positively predicted L2 writing enjoyment, motivation, and achievement and negatively predicted L2 writing anxiety. On the other hand, ought L2 writing self positively predicted L2 writing anxiety, which, in turn, predicted L2 writing motivation positively but L2 writing achievement negatively. The results suggest that students who were motivated by their ideal L2 writing selves enjoyed the process of L2 writing, felt less anxious, had stronger motivation, and received better grades in their English writing course. Those who were motivated by their ought L2 writing self, on the other hand, felt more anxious during L2 writing and had lower L2 writing grades even though they were somewhat motivated to learn how to write in English at the same time.

The connections between the ideal L2 writing self and enjoyment and between the ought L2 writing self and anxiety in the present study confirm the theoretical underpinnings of self-discrepancy theory (Higgins, 1987), according to which the desire to reduce the discrepancy between one's actual and ideal selves leads to elation-related emotions such as enjoyment whereas the desire to reduce the discrepancy between one's actual and ought selves leads to the experience of agitation-related emotions such as anxiety (see also Papi et al., 2019). These results also align with the findings of previous research studies in the field of SLA that have shown similar qualitative differences in the emotions that learners experience depending on the future L2 selves that motivate them. For example, some studies have found the ideal L2 self to predict positive emotions like enjoyment (Papi & Khajavy 2021; Teimouri, 2017), and some have found the ought L2 self to be associated with negative emotions like anxiety (e.g., Jiang & Papi, in press; Papi, 2010; Papi & Teimouri, 2012, 2014; Teimouri, 2017).

The paths from ideal L2 writing self and ought L2 writing self to motivation were also expected. The two future selves were major components in different motivation models in the field of SLA (Dörnyei, 2009; Papi et al., 2019; Teimouri, 2017) and have been shown to contribute to different levels of motivated behavior, with the ideal self being the stronger predictor especially in foreign language contexts (e.g., Dörnyei & Chan, 2013; Taguchi et al., 2009; Papi, 2010; You & Dörnyei, 2016). The results suggest that the motivational strength of the future L2 selves can also be extended to the L2 writing context, with ideal L2 writing self functioning as a stronger motivator than ought L2 writing self. The stronger predictive power of the ideal L2 self can be explained with reference to the specific sample of this study that consisted of English-major university students. For this population of EFL learners, learning how to write proficiently in English can help them progress to higher academic levels (e.g., graduate school) or achieve professional success (e.g., working at an international institution). Such academic and professional accomplishments seem to motivate these students more than the negative consequences of failure to become a proficient English writer (e.g., course failure).

The second research question concerned how L2 writing enjoyment and anxiety predicted L2 writing motivation and achievement. The results showed that L2 writing enjoyment and anxiety positively predicted learners' motivation. In addition, whereas enjoyment did not predict L2 writing achievement, anxiety was a negative predictor. The strong and positive association between enjoyment and motivation was expected because traditionally, enjoyment in language learning has been associated with the most intrinsic types and highest levels of motivation (e.g., Noels et al., 2003). In addition, similar results have been found in recent years on the connection between enjoyment and motivation (e.g., Papi et al., 2019; Papi & Khajavy, 2021; Teimouri, 2017). The positive path from anxiety to motivation, however, was not quite expected. This is because, in the context of L2 writing, anxiety has been associated with lower self-efficacy (Kirmizi & Kirmizi, 2015), less frequent use of self-regulation strategies (Tsao et al., 2017), and even diminished cognitive capacity and attentional flexibility (e.g., Dewaele & MacIntyre, 2014). There are, however, studies that have documented a positive connection between anxiety and motivation. For instance, Bailey (1983) found that anxiety made some students work harder. MacIntyre (1995) found that moderate levels of anxiety could motivate learners. Papi (2010) found that L2 anxiety contributed to motivation among EFL learners in Iran. Papi and Teimouri (2014) found similar relationships and suggested that L2 anxiety could be facilitative for learners who are motivated by prevention-focused motives such as ought selves. It is, therefore, likely that the anxiety level of this specific group of English-major EFL learners has had a facilitative effect on their level of motivation.

The negative path from anxiety to achievement was also expected, even though enjoyment was expected to be a positive predictor. Whereas there have not been studies on the relationship between L2 writing enjoyment and achievement, the negative association of L2 writing anxiety with L2 writing achievement and performance has been documented in a few studies (Cheng, 2004; Rahimi & Zhang, 2019; Zabihi et al., 2020; for a meta-analysis see Teimouri et al., 2019). The lack of a direct path from enjoyment to achievement, on the other hand, could be due to the indirect effect that the former might have on the latter. In other words, the impact of enjoyment on L2 writing achievement could arguably materialize through the medium of motivated learning behavior. Such an indirect path has been documented by Papi and Khajavy (2021), who reported that L2 enjoyment predicted L2 achievement only indirectly and through the mediation of eager use of the target language.

The third research question asked whether the paths from future selves to motivation and achievement were mediated by anxiety and enjoyment. The results showed that enjoyment strongly mediated the path from ideal L2 writing self to motivation, and anxiety weakly mediated the relationship between ought L2 writing self and motivation. In addition, anxiety was found to negatively mediate the relationship between ideal L2 writing self and achievement. Enjoyment's mediation of the effects of ideal self on motivation, which in turn positively predicted achievement, appears to suggest that enjoyment positively has affected learners' motivation in the L2 writing process, which in turn has contributed to their L2 writing achievement. On the other hand, it seems that ought L2 self has influenced learners' motivation both directly and indirectly through the mediation of anxiety. Given the negative mediation of anxiety for the relationship between ideal self and achievement, it can be argued that whereas the anxiety associated with ought self has led to the increase of motivation, its effects can override the positive impact of ideal self on L2 writing motivation and achievement.

These findings align with the motivation-as-quality perspective that has recently been proposed in the field of SLA (Papi, 2016,

2018; Teimouri, 2017). It has been argued that qualitative differences in an individual's source of motivation can influence their motivation not only in terms of quantity and intensity but also in terms of quality (Papi, 2016, 2018; Teimouri, 2017). Such qualitative "motivational differences not only direct individual's goal preferences but also influence the processes and strategic means that they employ in their goal pursuits" (Papi, 2018, p. 709). Applied to the present study, the qualitative differences between the source of the learners' motivation—either their ideal selves with a promotion focus or ought selves with a prevention focus—have led to qualitatively different emotional, motivational, and learning outcomes (Papi et al., 2019; Teimouri, 2017). Ideal L2 writing self has led to the experience of enjoyment whereas ought L2 writing self has contributed to the students' anxiety, emotions which both positively predicted motivation. However, whereas students motivated by the ideal self have displayed higher levels of L2 writing achievement, ought self has deteriorated the students' achievement levels. It appears that whereas the experience of enjoyment has positively contributed to L2 writing course grade through its positive impact on students' motivation and learning experiences, the anxiety that has motivated students pursuing ought selves to invest more time and effort in learning how to write in a second language has simultaneously decreased the quality of their L2 writing experience and achievement possibly through its negative effects on L2 writers' cognitive and attentional resources (e.g., Dewaele & MacIntyre, 2014), self-efficacy (Kirmizi & Kirmizi, 2015), and use of self-regulation strategies (Tsao et al., 2017). The negative impact of anxiety on L2 writing achievement has been documented in the field (for a meta-analysis, see Teimouri et al., 2019).

Similar to these results, Papi et al. (2019) found that whereas ideal L2 selves led to the eager and maximal use of the target language, ought L2 selves resulted in vigilant and minimal L2 use to avoid making mistakes. In a follow-up study, Papi and Khajavy (2021) found whereas the eager L2 use, which was predicted by L2 enjoyment, led to higher L2 achievement, vigilant L2 use, which was predicted by L2 anxiety, negatively affected L2 achievement. Similarly, the ideal L2 self has been found to result in willingness to communicate in a second language (e.g., Khajavy & Ghonsooly, 2017), whereas ought L2 self has been associated with low class participation (e.g., Papi & Abdollahzadeh, 2012). Therefore, even though the anxiety to avoid negative consequences (e.g., failing the course) might have led learners to invest more time and effort in their English writing course, it could have led to their minimal and cautious use of the target language, which in turn has negatively influenced their class performance. Learners motivated by their ideal L2 writing self, on the other hand, have experienced joy in L2 writing, which has led them to take advantage of various opportunities to improve their L2 writing skills.

5.1. Pedagogical implications

The results of this study have important pedagogical implications. Overall, teachers could adopt motivational strategies and practices that aim at enhancing students' promotion-related motives, such as their ideal L2 writing selves. For instance, teachers can help students see their L2 writing goals as part of their ideal L2 selves rather than ought L2 selves. Teachers could also use different strategies to strengthen students' visions of themselves as competent English writers in the future (see Dörnyei, 2014). As has been emphasized by Dörnyei (2009, Dörnyei & Chan, 2013; Dörnyei & Ryan, 2015), students' visions play an important part in keeping them energized toward their future goals. Several studies have shown the success of vision enhancement interventions to promote students' motivation. For instance, Safdari (2021) employed a six-step program which included activities such as creating a vision of learners' ideal English self through reflection, discussion and scripted imagery, strengthening the vision through creating their future autobiographies, interviewing successful English learners, and doing mini-projects. The findings revealed that these activities significantly improved the L2 learners' motivation and ideal L2 self. Such a promotion-oriented approach will foster a sense of eagerness in students, helping them (1) form positive attitudes toward class (e.g., Papi et al., 2019; Teimouri, 2017), (2) become more willing to take risks to engage in class activities (e.g., Khajavy & Ghonsooly, 2017), and (3) seek more feedback on their L2 writing (Papi et al., 2019, 2020).

5.2. Limitations and future research

Although this study yielded important findings regarding the effects of a set of motivational and emotional factors on the students' writing motivation and achievement, it also had limitations. First, the data were collected from a sample of English-major university students in Iran. The findings of this study, thus, may not be generalized to other populations until more studies are conducted in other L2 writing contexts. In other words, the patterns of results might be different if the study was conducted among non-English-major students or high school students in other foreign or second language contexts. Next, we were able to recruit a sample of only 85 students enrolled in EFL writing classes, which may not represent the entire population of English-major university students in Iran. Using a larger sample size can add to the generalizability of the results of similar studies. We used course grades as a measure of the students' writing achievement. The course grades were calculated based on the students' writings, which were graded holistically by their teacher. As such, inter-rater reliability of if the grades could not be computed; future research can also measure the writing achievement of the students more directly based on the quality of their written products (see Brown et al., 2018). Limitations of the self-reported scale to measure the students' language proficiency in the study should also be noted. Our qualitative data elicitation procedures led to the emergence of only two future L2 writing selves from the "own" perspective. Exploring the future selves from the perspective of the "others" can further our understanding of other dimensions of the future writing self.

In this study, we only examined the effects of non-cognitive factors (motivation and emotions) on students' L2 writing course grades. Future research should also examine how these non-cognitive factors interact with cognitive factors within the context of L2 writing. For instance, it would be interesting to see how the L2 writing anxiety or enjoyment predicted by learners' future selves influence their working memory during writing task performance. Future research can also cluster students' profiles in terms of

motivation, aptitude, and emotions and see how different profiles might influence L2 writing achievement and performance (see Papi & Teimouri, 2014). Longitudinal studies are also welcome in future research to examine how students' L2 writing motivation, emotions, and goals change over time and how those changes might contribute to their L2 writing course grade.

6. Conclusion

According to Papi et al. (2019; see also Higgins, 1987), ideal L2 selves, which have a promotion focus concerned with accomplishments, advancement, and growth, lead to elation-related emotions like joy, which in turn enhance the quantity and quality of learners' motivated behavior and performance. On the other hand, ought L2 selves, which have a prevention focus concerned with security, safety, and calmness, lead to agitation-related emotions such as anxiety, increase the intensity of motivation at the expense of the quality of learning behaviors and performance. In other words, learners who are motivated by their ideals, enjoy the learning process and are more likely to employ learning strategies that improve their L2 skills, whereas those who are motivated by their oughts are more likely to work hard but feel anxious and employ learning strategies that inhibit the growth of their L2 skills.

The results of the present study confirmed the predictions of the 2×2 model of future L2 self-guides (Papi et al., 2019) in the context of L2 writing. The ideal L2 writing self positively predicted L2 enjoyment, motivation, and achievement. Ought L2 writing self positively predicted L2 anxiety and motivation. L2 writing enjoyment and anxiety predicted L2 writing motivation positively while L2 writing anxiety predicted L2 writing course grade negatively. Whereas our findings confirm the results of the previous studies in the field of SLA (e.g., Papi et al., 2019; Papi & Khajavy, 2021; Teimouri, 2017), the present study was the first to apply the domain-specific notion of future selves in the field of L2 writing. Our results confirmed the hypothesized connections between selves, emotions, motivation, and achievement and provided an integrated understanding of these concepts in the field of L2 writing.

The findings of the study support the proposal that the quality of motivation matters in L2 writing motivation and achievement (e.g., Papi, 2018; Papi et al., 2019; Teimouri, 2017). Research on L2 writing motivation, therefore, should broaden its scope of inquiry from the limited view of motivation as the intensity of wanting to motivation as preferences that direct goal-related actions in qualitatively different manners. The exploration of motivation as quality in L2 writing can lead to theory-driven and effective strategies that could aim to enhance effective L2 writing strategies and minimize the thoughts and actions that do not contribute to L2 writing development and performance. Such a view can also present learners as self-regulating agents of their own learning; that is, as individuals who have goal preferences, make decisions based on those preferences, experience distinct emotions based on their success or failure in their goal pursuit, and adopt strategies that serve those preferences and enhance their L2 writing skills.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.jslw.2021.100837>.

References

- Bailey, K. M. (1983). Competitiveness and anxiety in adult second language learning: Looking at and through the diary studies. *Classroom oriented research in second language acquisition* (pp. 67–102). <https://doi.org/10.12691/education-6-6-21>.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. <https://doi.org/10.1037/0022-3514.51.6.1173>.
- Brown, A. V., Plonsky, L., & Teimouri, Y. (2018). The use of course grades as metrics in L2 research: A systematic review. *Foreign Language Annals*, 51(4), 763–778.
- Cheng, Y. S. (2002). Factors associated with foreign language writing anxiety. *Foreign Language Annals*, 35(6), 647–656. <https://doi.org/10.1111/j.1944-9720.2002.tb01903.x>.
- Cheng, Y. S. (2004). A measure of second language writing anxiety: Scale development and preliminary validation. *Journal of Second Language Writing*, 13(4), 313–335. <https://doi.org/10.1016/j.jslw.2004.07.001>.
- Cheng, Y. S. (2017). Development and preliminary validation of four brief measures of L2 language-skill-specific anxiety. *System*, 68, 15–25. <https://doi.org/10.1016/j.system.2017.06.009>.
- Cheng, Y. S., Horwitz, E. K., & Schallert, D. L. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning*, 49(3), 417–446. <https://doi.org/10.1111/0023-8333.00095>.
- Csizér, K., & Tankó, G. (2017). English majors' self-regulatory control strategy use in academic writing and its relation to L2 motivation. *Applied Linguistics*, 38(3), 386–404. <https://doi.org/10.1093/applin/amv033>.
- Daly, J. A., & Miller, M. D. (1975). The empirical development of an instrument to measure writing apprehension. *Research in the Teaching of English*, 9(3), 242–249.
- Dewaele, J. M., & Alfawzan, M. (2018). Does the effect of enjoyment outweigh that of anxiety in foreign language performance? *Studies in Second Language Learning and Teaching*, 8(1), 21–45. <https://doi.org/10.14746/sslt.2018.8.1.2>.
- Dewaele, J. M., & Dewaele, L. (2017). The dynamic interactions in foreign language classroom anxiety and foreign language enjoyment of pupils aged 12 to 18. A pseudo-longitudinal investigation. *Journal of the European Second Language Association*, 1(1), 12–22. <https://doi.org/10.22599/jesla.6>.
- Dewaele, J. M., & MacIntyre, P. (2014). The two faces of Janus? Anxiety and enjoyment in the foreign language classroom. *Studies in Second Language Learning and Teaching*, 4(2), 237–274. <https://doi.org/10.14746/sslt.2014.4.2.5>.

- Dewaele, J., & MacIntyre, P. (2016). Foreign language enjoyment and foreign language classroom anxiety: The right and left feet of the language learner. In P. MacIntyre, T. Gregersen, & S. Mercer (Eds.), *Positive psychology in SLA* (pp. 215–236). Bristol, UK: Multilingual Matters. <https://doi.org/10.1177/1362168817692161>.
- Dörnyei, Z. (2009). The L2 motivational self-system. In Z. Dörnyei, & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 9–42). Clevedon, UK: Multilingual Matters.
- Dörnyei, Z. (2014). Future self-guides and vision. In K. Csizér, & M. Magid (Eds.), *The impact of self-concept on language learning* (pp. 7–18). Bristol, UK: Multilingual Matters.
- Dörnyei, Z., & Chan, L. (2013). Motivation and vision: An analysis of future L2 self images, sensory styles, and imagery capacity across two target languages. *Language Learning*, 63(3), 437–462. <https://doi.org/10.1111/lang.12005>.
- Dörnyei, Z., & Ryan, S. (2015). *The psychology of the language learner revisited*. New York: Routledge.
- Dörnyei, Zoltan (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Mahawah, NJ: Lawrence Erlbaum.
- Elahi Shirvan, M., & Talebzadeh, N. (2018). Exploring the fluctuations of foreign language enjoyment in conversation: An idiodynamic perspective. *Journal of Intercultural Communication Research*, 47(1), 21–37. <https://doi.org/10.1080/17475759.2017.1400458>.
- Field, A. (2013). *Discovering statistics using IBM SPSS statistics*. New York, NY: Sage.
- Fritzsche, B. A., Young, B. R., & Hickson, K. C. (2003). Individual differences in academic procrastination tendency and writing success. *Personality and Individual Differences*, 35(7), 1549–1557. [https://doi.org/10.1016/S0191-8869\(02\)00369-0](https://doi.org/10.1016/S0191-8869(02)00369-0).
- Hashemian, M., & Heidari, A. (2013). The relationship between L2 learners' motivation/attitude and success in L2 writing. *Procedia-Social and Behavioral Sciences*, 70, 476–489. <https://doi.org/10.1016/j.sbspro.2013.01.085>.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, 94(3), 319–340. <https://doi.org/10.1037/0033-295X.94.3.319>.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (vol. 30, pp. 1–46). New York: Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60381-0](https://doi.org/10.1016/S0065-2601(08)60381-0).
- Horwitz, E. K., Horwitz, M. B., & Cope, J. (1986). Foreign language classroom anxiety. *The Modern Language Journal*, 70(2), 125–132. <https://doi.org/10.1111/j.1540-4781.1986.tb05256.x>.
- Jang, Y., & Lee, J. (2019). The effects of ideal and ought-to L2 selves on Korean EFL learners' writing strategy use and writing quality. *Reading and Writing*, 32(5), 1129–1148. <https://doi.org/10.1007/s11445-018-9903-0>.
- Jiang, C. & Papi, M. (in press). The motivation-anxiety interface in language learning: A regulatory focus perspective. *International Journal of Applied Linguistics*.
- Khajavy, G. H., & Ghonsooly, B. (2017). Predictors of willingness to read in English: Testing a model based on possible selves and self-confidence. *Journal of Multilingual and Multicultural Development*, 38(10), 871–885. <https://doi.org/10.1080/01434632.2017.1284853>, 1-15.
- Khajavy, G. H., MacIntyre, P. D., & Barabadi, E. (2018). Role of the emotions and classroom environment in willingness to communicate: Applying doubly latent multilevel analysis in second language acquisition research. *Studies in Second Language Acquisition*, 40(3), 605–624. <https://doi.org/10.1017/S0272263117000304>.
- Kirmizi, Ö., & Kirmizi, 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. <https://doi.org/10.5430/ijhe.v4n2p57>.
- Kormos, J. (2012). The role of individual differences in L2 writing. *Journal of Second Language Writing*, 21(4), 390–403. <https://doi.org/10.1016/j.jslw.2012.09.003>.
- MacIntyre, P. D. (1995). How does anxiety affect second language learning? A reply to Sparks and Ganschow. *The Modern Language Journal*, 79(1), 90–99. <https://doi.org/10.2307/329395>.
- MacIntyre, P. D., & Gardner, R. C. (1994). The subtle effects of language anxiety on cognitive processing in the second language. *Language Learning*, 44(2), 283–305. <https://doi.org/10.1111/j.1467-1770.1994.tb01103.x>.
- MacIntyre, P. D., & Gregersen, T. (2012). Emotions that facilitate language learning: The positive-broadening power of the imagination. *Studies in Second Language Learning and Teaching*, 2(2), 193–213. <https://doi.org/10.14746/ssllt.2012.2.2.4>.
- Noels, K. A., Pelletier, L. G., Clément, R., & Vallerand, R. J. (2003). Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning*, 53(S1), 33–64. <https://doi.org/10.1111/0023-8333.00111>.
- Papi, M. (2010). The L2 motivational self-system, L2 anxiety, and motivated behavior: A structural equation modeling approach. *System*, 38(3), 467–479. <https://doi.org/10.1016/j.system.2010.06.011>.
- Papi, M. (2016). *Motivation and learning interface: How regulatory fit affects incidental vocabulary learning and task experience*. Unpublished doctoral dissertation. East Lansing, MI: Michigan State University.
- Papi, M. (2018). Motivation as quality: Regulatory fit effects on incidental vocabulary learning. *Studies in Second Language Acquisition*, 40(4), 707–730. <https://doi.org/10.1017/S027226311700033X>.
- Papi, M., & Abdollahzadeh, E. (2012). Teacher motivational practice, student motivation, and possible L2 selves: An examination in the Iranian EFL context. *Language Learning*, 62(2), 571–594. <https://doi.org/10.1111/j.1467-9922.2011.00632.x>.
- Papi, M., & Khajavy, G. H. (2021). Motivational mechanisms underlying second language achievement: A regulatory focus perspective. *Language Learning*, 71(2).
- Papi, M., & Teimouri, Y. (2012). Dynamics of selves and motivation: A cross-sectional study in the EFL context of Iran. *International Journal of Applied Linguistics*, 22(3), 287–309. <https://doi.org/10.1111/j.1473-4192.2012.00312.x>.
- Papi, M., & Teimouri, Y. (2014). Language learner motivational types: A cluster analysis study. *Language Learning*, 64(3), 493–525. <https://doi.org/10.1111/lang.12065>.
- Papi, M., Rios, A., Pelt, H., & Ozdemir, E. (2019). Feedback-seeking behavior in language learning: Basic components and motivational antecedents. *The Modern Language Journal*, 103(1), 205–226. <https://doi.org/10.1111/modl.12538>.
- Papi, M., Bondarenko, A. V., Wawire, B., Jiang, C., & Zhou, S. (2020). Feedback-seeking behavior in second language writing: Motivational mechanisms. *Reading and Writing*, 33(2), 485–505. <https://doi.org/10.1007/s11445-019-09971-6>.
- Plonsky, L., & Gonulal, T. (2015). Methodological synthesis in quantitative L2 research: A review of reviews and a case study of exploratory factor analysis. *Language Learning*, 65(S1), 9–36. <https://doi.org/10.1111/lang.12111>.
- Plonsky, L., & Oswald, F. L. (2014). How big is “big”? Interpreting effect sizes in L2 research. *Language Learning*, 64(4), 878–912. <https://doi.org/10.1111/lang.12079>.
- Rahimi, M., & Zhang, L. J. (2019). Writing task complexity, students' motivational beliefs, anxiety and their writing production in English as a second language. *Reading and Writing*, 32(3), 761–786. <https://doi.org/10.1007/s11445-018-9887-9>.
- Safdari, S. (2021). Operationalizing L2 motivational self system: Improving EFL learners' motivation through a vision enhancement program. *Language Teaching Research*, 25(2), 282–305.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5, pp. 481–498). Boston, MA: Pearson.
- Taguchi, T., Magid, M., & Papi, M. (2009). The L2 motivational self-system amongst Chinese, Japanese, and Iranian learners of English: A comparative study. In Z. Dörnyei, & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 66–97). Clevedon: Multilingual Matters. <https://doi.org/10.21832/9781847691293>.
- Tsai, H. M. (2008). The development of an English writing anxiety scale for institute of technology English majors. *Journal of Education and Psychology*, 31(3), 81–107.
- Teimouri, Y. (2017). L2 selves, emotions, and motivated behaviors. *Studies in Second Language Acquisition*, 39(4), 681–709. <https://doi.org/10.1017/S0272263116000243>.
- Teimouri, Y. (2018). Differential roles of shame and guilt in L2 learning: How bad is bad? *The Modern Language Journal*, 102(4), 632–652. <https://doi.org/10.1111/modl.12511>.
- Teimouri, Y., Goetze, J., & Plonsky, L. (2019). Second language anxiety and achievement: A meta-analysis. *Studies in Second Language Acquisition*, 41, 363–387. <https://doi.org/10.1017/S0272263118000311>.
- Tsao, J. J., Tseng, W. T., & Wang, C. (2017). The effects of writing anxiety and motivation on EFL college students' self-evaluative judgments of corrective feedback. *Psychological Reports*, 120(2), 219–241. <https://doi.org/10.1177/0033294116687123>.

- Waller, L., & Papi, M. (2017). Motivation and feedback: How implicit theories of intelligence predict L2 writers' motivation and feedback orientation. *Journal of Second Language Writing*, 35, 54–65. <https://doi.org/10.1016/j.jslw.2017.01.004>.
- You, C. J., & Dörnyei, Z. (2016). Language learning motivation in China: Results of a large-scale stratified survey. *Applied Linguistics*, 37(4), 495–516. <https://doi.org/10.1093/APPLIN/AMU046>.
- Zabihi, R., Mousavi, S. H., & Salehian, A. (2020). The differential role of domain-specific anxiety in learners' narrative and argumentative L2 written task performances. *Current Psychology*, 39, 1438–1444. <https://doi.org/10.1007/S12144-018-9850-6>.

Somayeh Tahmouresi is an adjunct professor of Foreign and Second Language Education in the School of Teacher Education at Florida State University. Her main areas of expertise include the role of individual differences, especially, motivation and emotions in L2 writing achievement.

Mostafa Papi is an Assistant Professor of Foreign and Second Language Education in the School of Teacher Education at Florida State University. His research interests include the role of motivation, personality, and emotions in second language learners' strategic, cognitive and behavioral engagement in the language learning processes and outcomes.