The L2 motivational self system, L2 anxiety, and motivated behavior: A structural equation modeling approach

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Abstract

The present study takes the initiative to test a theoretical model that subsumes the *ideal L2 self*, the *ought-to L2 self*, and the *L2 learning experience* in Dörnyei's (2005, 2009) L2 motivational self system, as well as *English anxiety* and *intended effort* to learn English. A number of 1011 Iranian high school students completed a questionnaire survey specifically developed to be used in the context of Iran. Using AMOS version 16.0, structural equation modeling was run to analyze the proposed model. Based on several goodness-of-fit criteria, the results confirmed the validity of the anticipated construct. It was found that all the variables in the model significantly contributed to intended effort; however, while the ideal L2 self and the L2 learning experience decreased students' English anxiety, the ought-to L2 self significantly made them more anxious. The results are discussed based on the socio-educational context of Iran.

1. Introduction

Second language (L2) learning motivation is one of the most elusive concepts in second language acquisition (SLA) research, and its complexity and multi-faceted nature have often resulted in conflicting findings in the past. Despite the rich literature in the area, and due to the fact that different conceptualizations of L2 motivation, especially until the cognitive movement in 1990s, have generally been overshadowed by Gardner's classic concept of the integrative motive (Gardner and Lambert, 1972; Gardner, 1985), there has not been much space to integrate various facets of L2 motivation and other affective variables such as L2 anxiety into a coherent framework. The L2 motivational self system, a recent theory of L2 motivation proposed by Dörnyei (2005, 2009), provides a good opportunity to explore this underresearched territory. This broad framework was intended to build on previous conceptualizations of L2 motivation while addressing at the same time some of the problematic aspects of previous constructs: As shown by several recent studies, the L2 motivational self system is widely applicable across different linguistic and cultural settings (e.g., Al-Shehri, 2009; Csizér and Kormos, 2009; Ryan, 2009; Taguchi et al., 2009); justifiable at the current age of globalization and in the light of emerging conceptualizations of identity (e.g., Lamb, 2009; Segalowitz et al.,

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2009; Yashima, 2009); relatable to other major theoretical frameworks in SLA (e.g., Kim, 2009); congruent with other important recent conceptualizations of L2 motivation (see Dörnyei, 2009); and compatible to mainstream theoretical frameworks in general motivational psychology, especially the theory of *possible selves* (Markus and Nurius, 1986) and the *self-discrepancy theory* (Higgins, 1987).

Emotions, on the other hand, are also important in the study of learner selves because conflicts and discrepancies within the self-concept lead to emotional states as well. As Markus and Nurius (1986) claim, "to the extent that individuals can or cannot achieve particular self-conceptions or identities, they will feel either positively or negatively about themselves" (p. 958). It is reasonable to assume that this is also the case in second language learning situations, and L2 self-discrepancies, as sources of motivation, can also lead to the arousal of emotional states like L2 anxiety in language learners. Therefore, viewing language learning from the self perspective may not only offer a better explanation of L2 learners' motivation, but can also provide insights into the sources of L2 anxiety, which is "a major obstacle to be overcome in learning another language" (Horwitz et al., 1986, p. 125).

The purpose of this study is to use structural equation modeling to explore this new and potentially fruitful area in L2 motivation research by evaluating a motivational model which subsumes some hypothesized links between (a) Dörnyei's tripartite model (*ideal L2 self, ought-to L2 self,* and *L2 learning experience*), (b) *English anxiety*, acknowledged as the most misunderstood affective variable of all (Scovel, 2001), and (c) learners' *intended effort* to learn English, known as a mediating factor between motivation and success. As such, this study is a response to Dörnyei and Ushioda's (2009a) call for examining the relationship between *emotions* and future L2 self-guides.

2. Review of literature

2.1. From the integrative motive to the L2 motivational self system

Up until the 'cognitive revolution', L2 motivation research had strongly been overshadowed by the seminal works of Canadian social psychologists, Robert Gardner and his associates (e.g., Gardner, 1985; Gardner and Lambert, 1972). Inspired by the complex and overwhelming effect of inter-ethnic and inter-cultural dynamics of the Canadian context as a multicultural setting, they proposed a major theory of second language learning motivation the cornerstone of which was the concept of *integrativeness/integrative motive* that, although at first assumed to be a general positive orientation or an "outlook, reflecting a sincere and personal interest in the people and culture represented by other group" (Gardner and Lambert, 1972, p. 132), later on came to be known as an inclusive umbrella term that was supposed to contain all or most of the attitudinal, cognitive-situational, and motivational variables believed to predict success or failure in second language learning (Gardner, 1985).

Nonetheless, despite the huge importance attached to the construct of integrativeness, many criticisms soon came from different fronts, having their origin in a period that Dörnyei (2003a) calls the 'cognitive-situated' phase in L2 motivation research. Inapplicability to the educational contexts (e.g., Crooks and Schmidt, 1991), failure to integrate the cognitive theories of learning motivation (e.g., Dörnyei, 1994; Oxford and Shearin, 1994), illegibility at the current age of globalization (e.g., Dörnyei and Csizér, 2002; Lamb, 2004; McClelland, 2000), and, as a result, the inability to capture the complexity of the new conceptualizations of social identity (e.g., McNamara, 1997; Norton, 1995) were the main drawbacks that led to the strong criticism of Gardner's theory of L2 motivation.

After many years of hosting hot debates over the confusing and contradictory findings for and against the most-discussed and at the same time the most enigmatic concept in L2 motivation literature, integrativeness (e.g., Gardner, 1985), L2 motivation research seems to be experiencing a promising restructuring with the entry of an entirely new and comprehensive theoretical framework labeled 'the L2 motivational self system' (Dörnyei, 2005, 2009).

Drawing on theoretical paradigms from both motivational psychology (Higgins, 1987; Markus and Nurius, 1986) and L2 motivation research (e.g., Noels, 2003; Ushioda, 2001) as well as his own empirical research, Dörnyei (2005, 2009) proposed the L2 motivational self system as a model that has three main dimensions, the *ideal L2 self*, the *ought-to L2 self*, and the *L2 learning experience*:

- The *ideal L2 self,* according to Dörnyei (2005), is "the L2-specific aspect of one's ideal self" (p.106). It represents an ideal image of the kind of L2 user one aspires to be in the future. If one wants to be a fluent L2 user who interacts with international friends, for instance, the imaginary picture of one's *self* as a fluent L2 user might act as a powerful motivator to reduce the discrepancy between the here-and-now or actual self and this

ideal image. Studies by Taguchi et al. (2009) and Ryan (2009) showed that this dimension of the L2 motivational self system not only significantly correlates with integrativeness but also explains more variance in learners' intended effort.

- The *ought-to L2 self* is the L2-specific aspect of one's ought-to self. This less-internalized aspect of the L2 self refers to the attributes that one believes one *ought-to* possess as a result of perceived duties, obligations, or responsibilities (Dörnyei, 2005). For instance, if a person wants to learn an L2 in order to live up to the expectation of his/her boss or teacher, the ought-to L2 self can act as the main motivator for L2 learning. In the aforementioned comparative study conducted by Taguchi et al. (2009) in Japan, China, and Iran, it was found that in all the three countries family influences and the prevention-focused aspects of instrumentality (e.g. learning the language to avoid failing an exam) impinged upon this variable, but its overall effect on learners' motivated behavior was considerably less than that of the ideal L2 self. In a study conducted in Hungary, Csizér and Kormos (2009) found a positive relationship between parental encouragement and the ought-to L2 self. The ought-to L2 self is also believed to be a close match to the extrinsic constituents in Noels (2003) and Ushioda's (2001) taxonomies (see Dörnyei, 2005, 2009).

- The *L2 learning experience* concerns learners' attitudes toward second language learning and can be affected by situation-specific motives related to the immediate learning environment and experience. In the studies mentioned above (Csizér and Kormos, 2009; Taguchi et al., 2009), this dimension of the L2 motivational self system showed the strongest impact on motivated behavior. As Dörnyei (2009) explains, for some language learners the initial motivation to learn a language does not come from internally or externally generated self images but rather from successful engagement with the actual language learning process. As such, this motivational dimension has close links with the *actional phase* of Dörnyei and Ottó's (1998) process-oriented model, is related to Noels' (2003) and Ushioda's (2001) intrinsic categories (see Dörnyei, 2005, 2009), and can be influenced by situation-specific motives such as the curriculum, the L2 teacher, the peer group, and the teaching materials.

2.2. L2 anxiety and motivation

L2 anxiety is conceived of as "the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning" (MacIntyre and Gardner, 1994, p. 284). This multi-faceted feeling is generally viewed as the affective factor that most frequently impedes the learning process (Arnold and Brown, 1999). Most recent studies on this construct have consistently yielded negative correlations between L2 anxiety and various L2 achievement measures (e.g., Aida, 1994; Coulombe, 2000; Gardner, 2005; Saito and Samimy, 1996). Over and above its direct negative impact on language achievements, foreign language anxiety is generally seen as a notorious variable with a variety of indirect effects. For example, anxious students have been found to show avoidance behaviors such as missing class and postponing homework (Horwitz et al., 1986); they have been shown to take more time to learn vocabulary items and recall them with more difficulty (MacIntyre and Gardner, 1989), and are less likely to volunteer answers in oral activities (Ely, 1986).

L2 anxiety has been described using various terminologies and categorizations, with *facilitating* vs. *debilitating* anxiety (Scovel, 1978) and *state* vs. *trait* anxiety (Spielberger, 1983) being two well-known dichotomies. The former is based on the recognition that anxiety is not always detrimental to performance, and in certain situations it can even exert a positive influence on behavior. Thus, whereas debilitating anxiety has negative effects on performance, facilitating anxiety is likely to promote learners' performance. In the latter dichotomy, state anxiety refers to some temporary and passing feeling of anxiety which may fluctuate over time and vary in intensity, whereas trait anxiety is a rather stable tendency to become anxious across different situations. Finally, in an attempt to pave the way for more straightforward research on such a multi-faceted concept, Horwitz et al. (1986) proposed that foreign language anxiety comprises three performance-related components: communication apprehension, test anxiety, and fear of negative evaluation. As the names suggest, communication apprehension concerns a fear or anxiety about communicating with others; test anxiety stems from a fear of what is perceived as failure in test performance; and fear of negative evaluation, which is a similar but broader concept than test anxiety, refers to the anxiety originating from various appraisal situations. However, Horwitz and her associates do not view foreign language anxiety simply as a transfer of these anxieties to the L2 classroom. Rather, they conceive of it as a "distinct complex of self perceptions, beliefs, feelings, and behaviors arising from the uniqueness of the language learning process" (p. 128).

In so far as its relationship with L2 motivation is concerned, L2 anxiety in the literature has been examined either as a distinct individual factor or as a secondary factor contributing to variables such as self-confidence. As a separate variable, it has consistently been negatively associated either with L2 learning motivation (e.g., Gardner and Lalonde, 1983; Gardner et al., 1997; Hashimoto, 2002) or with other variables such as 'Willingness to Communicate (WTC) (e.g., MacIntyre, 1994; MacIntyre et al., 2002; MacIntyre and Charos, 1996) that have a positive correlation with L2 motivation. As a constituent variable, L2 anxiety has been studied, for instance, by Clément and his associates (e.g., Clément, 1980, 1986) as a central factor in their model of linguistic self-confidence. In their conceptualization, a lack of anxiety is a key determinant of self-confidence and thereby a prominent characteristic of motivated language learners.

Regarding the L2 motivational self system, there has been little research conducted to explore the influence of different facets of the L2 self on specific L2 related emotional states such as L2 anxiety. However, similar studies have a long history in psychology (for extensive reviews, see Higgins, 1987; Leary, 2007). Higgins in particular has taken the initiative in addressing how various discrepancies between the self-concept and one's 'self-directive standards' are related to different emotional problems. He provided ample evidence and hypothesized that the discrepancies between the actual and ideal self-states are associated with dejection-related emotions (e.g., depression, disappointment), while the discrepancies between the actual and ought self-states are associated with agitation-related emotions including anxiety. With an additional self facet, the *feared self*, borrowed from Markus and Nurius (1986), Carver et al. (1999) conducted a similar study. Overall, they found that while discrepancies from both the feared and ought self-states predicted anxiety and guilt, the discrepancies from the feared selves were much stronger as they preempted the role of ought self-discrepancies.

2.3. Intended effort as the criterion measure

Motivation is only indirectly related to learning outcome/achievement as it is by definition an antecedent of behavior rather than of achievement (which is itself determined by multiple factors); the current study thus included 'intended effort' as the criterion measure which examines the amount of effort learners intend to put into learning English. Dörnyei's studies in Hungary (e.g., Csizér and Dörnyei, 2005; Dörnyei and Clément, 2001; Dörnyei and Csizér, 2002; Dörnyei et al., 2006) showed that variance in this variable is most strongly explained by integrativeness, which in turn has been equated with the ideal L2 self. In addition, several studies in Dörnyei and Ushioda's (2009b) recent anthology (e.g., by Al-Shehri; Csizér & Kormos; Ryan; Taguchi et al.) showed that this variable is significantly related to all the three constituents of the L2 motivational self system in contexts as different as China, Iran, Hungary, Japan, and Saudi Arabia.

3. The initial hypothesized model

Based on the above literature and earlier analysis of the data, the initially hypothesized model of L2 motivation and anxiety was formed by five latent variables (ideal L2 self, ought-to L2 self, English learning experience, English anxiety, and intended effort); the directional links among these variables are schematically represented in Fig. 1. The nine hypothesized causal paths are shown by single-headed arrows and the only correlational path (between the ought-to L2 self and the ideal L2 self) is a double-headed one. The three paths from the ideal L2 self, the ought-to L2 self, and the English learning experience leading to intended effort are explained by the fact that as these are constituent components of L2 motivation, they are logically expected to result in effortful behaviors. This assumption is also supported by sufficient empirical evidence (e.g., Csizér and Kormos, 2009; Taguchi et al., 2009).

The three paths from the same variables (ideal L2 self, ought-to L2 self, English learning experience) to English anxiety, nonetheless, display a different pattern. Our hypotheses concerning the impact of the three variables on English anxiety are based on the general assumption that the more self-determined the motivational forms through which students are motivated, the less anxiety they experience (Noels et al., 1999). Therefore, considering the internal basis of the ideal L2 self and English learning experience and the external basis of the ought-to L2 self, described above, I would hypothesize two negative paths from the ideal L2 self and the English learning experience and a positive path from the ought-to L2 self to English anxiety. The negative hypothesized path from English learning experience to English anxiety is also confirmed by a number of studies (e.g., Aida, 1994; Young, 1991) which have found that negative second language experiences, both inside and outside the classroom, result in the increase of
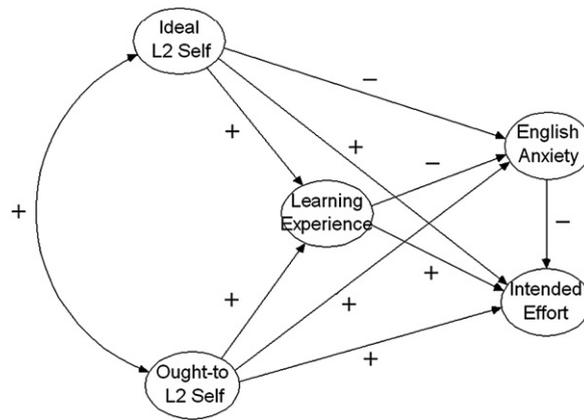
Fig. 1. The hypothesized model of the L2 motivational self system, English anxiety, and intended effort. *Note.* The plus sign (+) and the minus sign (−) show positive and negative paths, respectively.

language anxiety, and in a similar vein, positive learning experiences decrease the students' level of anxiety. This hypothesis is still in accordance with the assumption that negative experiences in L2 contexts may lead students to associate the L2 with feelings of apprehension (e.g., Gardner and Smythe, 1975; Horwitz et al., 1986; MacIntyre and Gardner, 1989). The hypothesized positive path from the ought-to L2 self to English anxiety is also supported by a number of studies in personality psychology which have uncovered parallel connections. For instance, Higgins (1987) and Carver et al. (1999) found that the discrepancies related to the ought-to self are strongly associated with anxiety (see also Leary, 2007).

Based on the research literature on L2 anxiety, its influence on intended effort is hypothesized to be negative. Finally, a further hypothesized data-driven correlational path was drawn between the ought-to L2 self and the ideal L2 self. According to Markus and Nurius (1986), possible selves are created under the influence of their respective socio-cultural and historical context. Therefore, considering the specific socio-cultural atmosphere of Iran, in which individual and social values even among the university students, who are known as the largest group of public intellectuals in the country, significantly overlap (Ghorbani et al., 2003), drawing this correlational path for the younger participants of the present study, who might be more easily influenced by their significant others, seemed quite realistic. In other words, since venerating and practicing the traditional values of the society and conducting behaviors based on collective standards in order to strengthen and sustain solidarity and unity among the people are highly appreciated in Iran, the social standards and ideals may be endorsed by people as personal ideals constituting what is known as "social ideal self" in the literature.

4. Method

4.1. Participants

In selecting our participants, quota sampling method (Dörnyei, 2007) was followed. Based on this method, firstly the sampling frame (high school students) was chosen. Then the main proportions of the subgroups defined by parameters including gender, year of study, and residential status were determined. Finally, I tried to meet the quotas by selecting and approaching the participants I had access to. A number of 1011 Iranian senior high school students (473 female and 538 male) participated in this study. The participants ranged in age from 14 to 19 with a mean age of 15.7 and were studying English as a compulsory subject. Table 1 presents the descriptive statistics (e.g., age, year of study) of the sample. As can be seen in this table, the participants' exposure to native English teachers, their overseas experiences, and their self-reported English proficiency levels were at a low level, adequately representing a typical foreign language environment in general. In order to minimize any school biases and to make the sample as representative as possible, participants were selected from high schools from all over Iran, including rural areas and remote towns, as well as the central parts of Tehran − 417 urban students (242 female, 176 male) from five cities including Tehran and 594 rural students (231 female, 362 male) from five remote areas. To avoid the possible wash-back effect

Table 1
Sample's statistics (*N*: 1011).

Category	Sub-category	Number	Percent
Nationality	Iranian	1011	100%
	Non-Iranian	0	0%
Age	14	133	13.2%
	15	253	25%
	16	367	36.3%
	17	147	14.5%
	18	53	5.2%
	19	8	.8%
	Missing	50	4.9%
Year of study	First	271	26.8%
	Second	416	41.1%
	Third	315	31.2%
	Missing	9	.9%
Native teacher	Yes	34	3.4%
	No	972	96.1%
	Missing	6	.5%
Overseas experience	Yes	19	1.9%
	No	986	97.5%
	Missing	6	.6%
Self-reported proficiency level	Beginner	231	22.8%
	Post-beginner	247	24.4%
	Lower-Intermediate	161	15.9%
	Intermediate	214	21.2%
	Upper-intermediate & above	80	7.9%
	Missing	78	7.7%

stemming from the public university entrance examination, 4th-grade high school (pre-university) students were not included in the study, and first and second-year high school students were preferred to third-year ones.

4.2. Instrument

The questionnaire used in the survey was developed and administered following Dörnyei's (2003b) guidelines, and was comprised of two major parts: the first part consisted of items measuring the learners' attitudes, motivation, and anxiety concerning English learning; the second part consisted of questions about the learners' background information (e.g., nationality, native English teacher experience, overseas experience, and self-rated English proficiency levels). The main variables were selected on the basis of Dörnyei et al.'s (2006) Hungarian studies (e.g., intended effort) and the L2 motivational self system (i.e., ideal L2 self, ought-to L2 self, and attitudes to learning English), to which L2 anxiety was added along with some other variables that are not reported in this study. Most of the items of the questionnaire were developed based on the studies previously conducted in Japan and China (see Taguchi et al., 2009) and some were newly designed. They were measured either by six-point Likert scales or six-point rating scales with 1 showing *not at all* and 6 showing *very much* anchoring each end of the scale. The questionnaire was piloted among 100 high school students. The Appendix contains all the variables and items that have been submitted to the structural equation analysis, and Table 2 presents the Cronbach Alpha internal consistency reliability coefficients of the specific scales based on the data collected from the 1011 participants of the main study.

4.3. Procedure

After choosing the target schools (usually on the basis of personal contacts), I first approached the selected centers, providing information about the purpose of the survey and the details of the actual administration procedure. Once informed permission was granted, I contacted the teachers of the selected classes individually and asked for their cooperation. In the case of remote cities and rural areas, after learning about the colleagues' willingness to take part in the study, I e-mailed them an electronic copy of the questionnaire together with an administration manual, and the

Table 2
Composites of variables with Cronbach Alpha coefficients, means and standard deviations.

Scale	Item no.	α	Mean/std. deviation
Ideal L2 self	9, 17, 25, 33, 41, 51	.77	4.3/1
Ought-to L2 self	1, 10, 18, 26, 34, 43	.71	3.6/1.2
English learning experience	54, 59, 63, 67, 71, 75	.85	4.2/1.2
Intended effort	8, 16, 24, 32, 40, 50	.80	4.5/1
English anxiety	55, 60, 64, 68, 72, 76	.67	3.4/1

completed questionnaires were mailed back to me. All the questionnaires were filled in during class time and answering the items took the students approximately 15 min on average. After collecting the data, all the participants were thanked either in person or by sending letters of appreciation.

4.4. Data analysis

The collected data were first submitted to SPSS 16.0 in order to prepare them as data input usable for running the structural equation modeling (SEM) analysis using "Analysis of Moment Structures" (AMOS) version 16.0. Since in working with AMOS only fully-crossed datasets can be used, in order to handle any missing data, an expectation-maximization algorithm was employed. The estimation of parameters was based on the maximum likelihood method. An SEM model is in general comprised of two parts, *the measurement model* and *the structural model* (Kunnan, 1998). At the measurement phase, which is a variant of confirmatory factor analysis and purports to test the validity of 'latent variables → measured variables' relationships, a number of modifications were made – nine observable variables (questionnaire items) were deleted and nine intra-scale correlational paths were drawn between the items – in order to satisfy the basic validity requirements of the model.

Several criteria were used to evaluate the validity of the full structural model. Following what is conventional in SEM studies, in addition to chi-square statistics, the use of which for such large samples can be debatable, other coefficients were also obtained, such as chi-square to degrees of freedom ratio (χ^2/df), factor loadings and residuals, and the overall model fit indices. Among the variety of the overall model fit indices that AMOS provides, the following indices were chosen in this study by referring to Tseng et al. (2006): goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normal fit index (NFI), incremental fit index (IFI), Tucker-Lewis index (TLI), comparative fit index (CFI), and root mean square error of approximation (RMSEA). The usually recommended value >.90 on a scale of 0–1.0 for all but the last one of these indices is generally indicative of good fitness; as to the last index, RMSEA, a value ≤.05 is considered to be good.

5. Results and discussion

Fig. 2 presents the schematic representation of the final model with standardized path coefficients. As can be seen in the figure, the values of factor loadings and residuals, and the overall model fit indices are all acceptable, and all but one (i.e., the ought-to L2 self → English learning experience) of the hypothesized paths are significant at least at the .05 level. As can be seen in Table 3, due to the large size of our sample, the chi-square is significant, indicating insufficient model fit. However, a conventional way of dealing with this effect on the chi-square statistics is the employment of the chi-square to degrees of freedom ratio (χ^2/df), which in our study displays a value below the acceptable level of 3; furthermore, all the selected model fit indices show very good levels. Thus, it can be concluded that the final version of this model is an acceptable representation of our dataset concerning the measured variables.

By taking a closer look at the obtained structural equation model and reflecting on the current state of language learning in the context of Iran, we can gain insights into the internal structure of the L2 motivational system and become more familiar with the motivational characteristics of Iranian adolescent learners of English. Three of the significant paths indicating the impacts of the ideal L2 self, the ought-to L2 self, and the L2 learning experience on intended effort confirm the results obtained in previous studies (e.g., Csizér and Kormos, 2009; Taguchi et al., 2009). The strength of these influences on intended effort is also in line with the findings of these studies, with English learning experience having the highest impact and the ideal English self being the first and the second strongest predictors of intended effort, respectively. Similarly, the role that the ideal L2 self plays is two-dimensional as it also
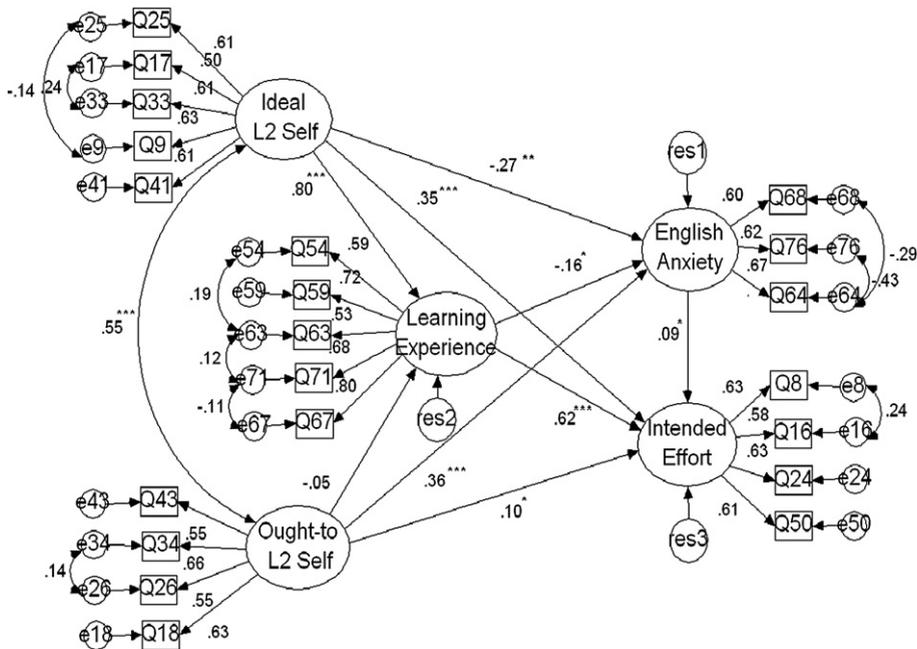
Fig. 2. The final model of the L2 motivational self system, English anxiety, and intended effort. *Note.* $N = 1011$. Flagged path coefficients are significant at $*p < .05$. $**p < .01$. $***p < .001$. $\chi^2(170) = 401$, $p < .001$.

contributes to intended effort indirectly, via impacting the students' English learning experience — this impact is the strongest causal path found in the present study. Among the components of the L2 motivational self system, the ought-to English self has the least effect on intended effort, and also has no impact on English learning experience.

Given the strong impact of the ideal L2 self on English learning experience, and the unquestionable effect of English learning experience on the learners' motivated behavior, it appears that the role of Iranian students' future self-guides in increasing learners' effort to learn English is mainly mediated by their attitudes toward the immediate learning environment and experience. This explanation seems more obvious if we look at the correlation coefficients among the variables in Table 4. As can be seen in the table, the correlation between the ideal L2 self and intended effort is considerably stronger than the causal effect of the ideal L2 self on the same variable in the structural model — the SEM results suggest that the bulk of this association is mediated through the learning experience variable. Thus, this finding bears out the claim that the desired future self does not necessarily result in motivation unless it is perceived as 'available' and 'accessible' through the specific learning channels (cf. Norman and Aron, 2003); in other words, future

Table 3
Selected fit measures for the final model.

Index	Current level	Accepted level	Evaluation
χ^2	$p < .001$	$p > .05$	Very poor
χ^2/df	2.35	< 3	Very good
GFI	.96	$>.90$	Very good
AGFI	.95	$>.90$	Very good
NFI	.93	$>.90$	Very good
IFI	.96	$>.90$	Very good
RFI	.92	$>.90$	Very good
TLI	.95	$>.90$	Very good
CFI	.96	$>.90$	Very good
RMSEA	.037	$<.05$	Very good

Note. GFI = Goodness of Fit Index; AGFI = Adjusted Goodness of Fit Index; NFI = Normal Fit Index; IFI = Incremental Fit Index; RFI = Relative Fit Index; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation.

Table 4
Correlations between the measured variables.

		Ideal L2 self	Ought-to L2 self	L2 learning experience	Intended effort	L2 anxiety
Ought-to L2 self	Pearson correlation	.35**	1			
L2 learning experience	Pearson correlation	.57**	.27**	1		
Intended effort	Pearson correlation	.62**	.33**	.72**	1	
L2 anxiety	Pearson correlation	−.03	.22**	−.01	−.02	1

**p < .01, two-tailed.

self-guides need to be equipped with appropriate behavioral strategies (cf. Oyserman, 2008; Oyserman et al., 2006) in order to facilitate goal attainment.

The impact from the ideal L2 self on intended effort is much stronger than the impact from the ought-to L2 self on intended effort, confirming the general assumption in L2 motivation literature that the more intrinsic and self-internalized a motive is, the more motivated students are to achieve it (e.g., Noels et al., 1999). Furthermore, the results of this study show that the ought-to L2 self increases anxiety, a finding that might partly explain the secondary role of the ought-to L2 self in leading to L2 learning achievement.

An important result of this study is the confirmation of the findings in personality psychology (e.g., Higgins, 1987) that the ideal self and ought-to self, though in opposite directions, show significant impacts on anxiety. In our case, while the ought-to L2 self significantly contributes to English anxiety, the ideal L2 self shows a negative relationship. This finding suggests that the more the students' behavior is motivated through their ought-to L2 self in learning English, the more anxious they are; on the other hand, the more developed the students' ideal L2 self, the less anxious they become in using and learning English.

The strong association between the ought-to L2 self and L2 anxiety not only confirms the findings of the previous studies in personality psychology (e.g., Higgins, 1987; Leary, 2007; Carver et al., 1999), but also supports some views of anxiety as a characteristic of those "who are highly concerned about the impressions that others tend to form of them" (Gregersen and Horwitz, 2002). Horwitz et al. (1986) define 'fear of negative evaluation', one of the three components of foreign language anxiety, as "apprehension about others' evaluations, avoidance of evaluative situations, and the expectation that others would evaluate oneself negatively" (p. 128). Also, Horwitz (2000) concludes that her consistent explanation for language learners' anxiety has been the disparity between how we see ourselves and how we think others see us. In addition, the negative link between these two variables (i.e., the ideal L2 self and English anxiety) was quite expected given the internal origin of ideal self and the external and others-directed foundation of anxiety.

The negative effect of English learning experience on L2 anxiety (see Fig. 2) is another predictable finding of the present study. This finding confirms the result of the studies in which Aida (1994) and Young (1991), for instance, found that negative second language experiences lead to the increase of L2 anxiety, whereas positive learning experiences make the students less anxious. In addition, according to Dörnyei (2005, 2009), English learning experience is related to Noels' (2003) and Ushioda's (2001) intrinsic categories and can be considered among the intrinsic and self-internalized motivational forms, which are themselves associated with lower levels of L2 anxiety (see e.g., Noels et al., 1999). The negative relationship between L2 learning experience and L2 anxiety was thus not unexpected.

Interestingly, English anxiety in this study contributed to intended effort. This finding is supported by a study in which Price (1991; see also Horwitz et al., 1986) found that anxious students study more than the students who experience less anxiety. However, this finding can be interpreted in different ways. The English anxiety that the students show might simply have a facilitating effect on their motivation to learn English. Yet, this effect might be limited to the students' intended and self-reported effort rather than their actual effort (which was not assessed in this study). Or, even if the actual behavior is also increased, this increase might fail to lead to increased learning success because of the possible detrimental effect of anxiety on the quality of learning. Therefore, to capture a clearer image of the effects of English anxiety, future research needs to assess it in the presence of various learning-specific factors such as the quantity and quality of actual effort, the learning process, and/or the L2 performance in order to ascertain whether its effect on these factors is negative or positive.

The data-generated correlational link between the ideal L2 self and the ought-to L2 self is another interesting finding of this study. There seems to be a certain amount of overlap between these two future self-guides (see Table 4

and Fig. 2), a finding that might be expected with regard to the specific age range of our sample, representing a transitional period from adolescence to adulthood. The participating students might have not yet developed an established self-internalized image of what they desire to become that is entirely distinct from what they ought to become. Another explanation might be that due to the collective nature of interpersonal relationships in Iranian society with minimal opportunities for self recognition (Fukuyama, 1992; see also Tamadonfar, 2001), Iranian learners of English may internalize the social standards and ideals endorsed by their society or significant others as their own ideal selves. This argument is supported by a cross-cultural study by Ghorbani et al. (2003) in which a positive correlation was found between the individual and collective values of Iranian university students. Central to this discussion is their belief that "the more a culture evolves institutionally along exclusively collectivistic lines, the more that culture would frustrate idiocentric aspirations" (p. 443).

6. Conclusion

This study examined a model that contains the main components of Dörnyei's L2 motivational self system in relation to L2 anxiety and intended effort. Overall, the results showed that all the constituent elements of the L2 motivational self system, though to different degrees, motivated language learners to put more effort into learning English, thereby offering validity evidence to Dörnyei's tripartite construct of the L2 motivational self system; however, their impact on L2 anxiety showed a different picture. While the ideal L2 self and the L2 learning experience displayed a significant negative causal relationships with English anxiety, the ought-to L2 self-driven students were significantly more anxious. Whereas L2 anxiety is known as a rather situation-specific factor related to the immediate L2 learning environment, in this study the variance explained by each of the two future self-guides of the L2 motivational self system was higher than the one explained by the L2 learning experience. This finding points to the conclusion that anxiety is closely related to the students' motivational regulations – without exploring the anxiety-specific impact of the approach/avoidance tendencies inherent in the students' motivational self system we cannot obtain a full picture of the students' emotional state. In other words, that the students are motivated through a self-internalized, inner-directed imaginary view of their future L2 self or through an other-directed, less-internalized picture visualized to fulfill others' expectations seems to make a real difference in the students' emotional propensities including L2 anxiety. The current study was intended to provide some initial results in this new line of enquiry.

6.1. Educational implications and directions for future research

The motivation of Iranian learners of English seems to be dependent on their attitudes toward English learning. Providing a positive and motivating classroom by teachers and educational authorities seems to be an urgent necessity. Hence the strong impact from the ideal L2 self on English learning experience, intended effort and anxiety, generating and priming this aspect of L2 self (see Dörnyei, 2008) through employing specific strategies can be effective in increasing language learners' motivation and diminishing their anxiety. Not unlike many previous works, the present study focused on the impact from some motivational variables (i.e., ideal L2 self, ought-to L2 self, and English learning experience) on the extent of effort that learners report they intend to put into learning English; further research is needed to examine the links between these variables and learners' actual effort. The findings of this study are based on the data collected from participants of different socio-educational backgrounds and constitute only an overall picture of the participants' characteristics in terms of the measured variables. The possible differences between various subgroups of the sample are thus simply neglected. Conducting similar studies on more specific samples can lead to more clarifying results.

Acknowledgements

Appendix

Scales for statement-type items: 1 (Strongly disagree), 2 (Disagree), 3 (Slightly disagree), 4 (Slightly agree), 5 (Agree), and 6 (Strongly agree)

Scales for question-type items: 1 (not at all), 2 (not so much), 3 (so-so), 4 (a little), 5 (quite a lot), and 6 (very much)

Ideal L2 self items

9. I can imagine myself speaking English as if I were a native speaker of English.
17. I can imagine myself speaking English with international friends or colleagues.
25. Whenever I think of my future career, I imagine myself using English.
33. I can imagine myself studying in a university where all my courses are taught in English.
41. I can imagine myself writing English e-mails/letters fluently.
51. I can imagine myself living abroad and using English effectively for communicating with the locals.

Ought-to L2 self items

1. I study English because close friends of mine think it is important.
10. If I fail to learn English, I'll be letting other people down.
18. I consider learning English important because the people I respect think that I should do it.
26. Studying English is important to me in order to gain the approval of my peers/teachers/family/boss.
34. Learning English is necessary because people surrounding me expect me to do so.
43. Studying English is important to me because other people will respect me more if I have the knowledge of English.

English learning experience items

54. Do you like the atmosphere of your English classes?
59. Do you find learning English really interesting?
63. Do you think time passes faster while studying English?
67. Do you always look forward to English classes?
71. Would you like to have more English lessons at school?
75. Do you really enjoy learning English?

Intended effort items

8. I would like to spend lots of time studying English.
50. I would like to study English even if I were not required.
24. I would like to concentrate on studying English more than any other topic.
32. If an English course was offered in the future, I would like to take it.
40. If my teacher would give the class an optional assignment, I would certainly volunteer to do it.
16. I am prepared to expend a lot of effort in learning English.

English anxiety items

55. How tense would you get if a foreigner asked you for directions in English?
60. How uneasy would you feel speaking English with a native speaker?
64. How nervous and confused do you get when you are speaking in your English class?
68. How afraid are you of sounding stupid in English because of the mistakes you make?
72. How worried are you that other speakers of English would find your English strange?
76. How afraid are you that other students will laugh at you when you speak English?

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