

A Five-Factor Model of Motivational Self-Guides: A Structural Equation Modeling Approach

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Abstract

The current study was undertaken to explore the interplay of motivational/attitudinal variables and L2 learners' motivated behavior through the lens of a revised model of L2 self-guides. This new model reconceptualizes Dornyei's (2005, 2009) original motivational self-system into a five-factor model consisting of the bifurcated ideal and ought-to L2 selves (i.e., ideal L2 self/own, ideal L2 self/other, ought L2 self/own and ought L2 self/other) and L2 learning experience (L2LE). In addition, two important antecedents of L2 self-guides (i.e., instrumentality-promotion and instrumentality-prevention) were also included in the new model. Data were collected from 856 students of English as a foreign language (EFL) at six Iranian universities. Fitness of the new model was supported by structural equation modeling (SEM), and all the paths were shown to be significant. Furthermore, SEM results indicated that ideal L2 self/own was the strongest factor predicting motivated behavior (considering its total effects). L2LE and ought-to L2 self/own were the second and third predicting factors in terms of the magnitude of their effects, respectively. The study provides a more nuanced understanding of learners' motivational self- system in foreign or second language learning.

Keywords: The revised model of L2 self-guides; L2LE; motivated behavior

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INTRODUCTION

Second language (L2) motivation has been a focal area for a great deal of research due to the crucial role it serves in the dynamic process of language development. Many L2 motivational theories have been proposed over the past few decades but perhaps the most important development in L2 motivation research has been Dornyei's (2005) conceptualization of L2 Motivational Self System (L2MSS). The L2MSS is a tripartite construct comprising ideal L2 self, ought-to L2 self, and the L2 learning experience (L2LE) that jointly accounts for L2 learners' motivated behavior and/or intended efforts. Ideal L2 self reflects a positive future self-conception of the kind of L2 learner that one envisions; ought-to L2 self relates to the attributes that L2 learners believe they need to possess to fulfill requirements; and L2LE is the individuals' own evaluations of their on-going experience of language learning (Ghorbani & Rashvand Semiyari, 2020).

For over a decade, a considerable amount of empirical research has been undertaken to validate Dornyei's (2005) three-factor model as a motivational framework across a number of different foreign/second-language learning settings in various countries (e.g., Csizer & Kormos, 2009; Magid, 2015; Papi, 2010; Ryan, 2009). In most previous studies, L2LE and the ideal L2 self have been identified as salient predictors of learners' motivated behavior (e.g., Csizer & Dornyei, 2005; Kim & Kim, 2014; Papi, 2010; Ryan, 2009; Taguchi et al., 2009), but the potential effect of the ought-to L2 self in accounting for learners' intended effort has not been transparent as some findings across the literature have shown little or no meaningful effect of ought-to L2 self (e.g., Andrade-Molina et al., 2022; Csizer & Kormos, 2009; Kim, 2012; Lamb, 2012; Taguchi et al., 2009). Other studies consider a potential role for ought-to self-guides in motivating L2 learning due to the fact that ought-to self-guides are very dependent on the sociocultural contexts in which learning occurs (e.g., Huang, 2017; Huang & Chen, 2017; Lin, 2016; Rashidi, Rahimi & Alimorad, 2013). These contradictory or inconclusive results may be attributed to the imperfect

operationalization of the ought-to dimension.

As Self-Discrepancy Theory (Higgins, 1987) maintains, when conceptualizing various kinds of discrepancies between current and future self-states, the two domains of the self (i.e., ought-to and ideal) and the two standpoints on the self (i.e., other and own) should be considered. However, Teimouri (2017) asserted that in the original process of item development, Dornyei (2005) only incorporated two dimensions of self: ought-to L2 self/other and ideal L2 self/own; while the other two aspects of self-guides (i.e., ought-to L2 self/own and ideal L2 self/other) were excluded. Teimouri (2017) sought to develop and validate a revised framework based upon Higgins's (1987) self-discrepancy theory. The result of his factor analysis supported only three constituents (i.e., ought-to L2 self/own, ought-to L2 self/other, and ideal L2 self).

Papi et al. (2019) also made another attempt at improving the L2 self-guides by testing a revised version of L2 self-guides. The L2 self-guides were again developed by taking into account the two principal dimensions (i.e., domains and standpoints) underlying the various forms of self-state representations. The results of Papi et al.'s (2019) research demonstrate that their quadro-component model has a better fit compared to other competing models. However, Papi et al. (2019) and Teimouri (2017) did not investigate the possible role of L2LE in the revised 4-factor model. Additionally, most previous studies have used a biased measure of intended effort, which is one of the most significant antecedents of learning outcome/achievement (Dornyei, 2005). As outlined by regulatory focus theory (Higgins, 1997), there are two basic strategic tendencies when striving toward goals: vigilant (prevention-focused) and eager (promotion-focused) strategies. A closer inspection of the intended effort measures used in related literature reveals a promotion bias which is evident in the operationalization of the scale (Papi et al., 2019). Thus, previous measures were biased against learners with a prevention regulatory focus and in favor of individuals with a promotion regulatory focus. Accordingly, to avoid the problems associated with 'intended effort to study the L2' as the most important measure of motivated

behavior, an improved measure with no regulatory bias is needed.

The aforementioned findings lend support to the importance of adopting symmetric models that take into account various forms of discrepancies between self-representations in the original L2MSS model. Indeed, considering the highly questionable findings of previous research relating to the validity of the tripartite self model, it may come as a surprise that just a handful of studies were undertaken to examine the dimensionality of the given self-constructs (e.g., Papi et al., 2019; Teimuri, 2017). Additionally, the role of L2LE, the third major constituent of Dornyei's (2005) original L2MSS model, has not been investigated in relation to the variables of the revised 4-factor model. Also, as few empirical studies (e.g., Papi et al., 2019; Papi, Khajavy, 2021) have undertaken to investigate the effect of the revised model on an improved and unbiased measure of intended effort, it was considered essential to fill the obvious shortage of investigations in this respect. Consequently, to address these important research gaps, by using SEM methodology, the present research aimed to investigate the effect of a five-factor model (i.e., the four L2 self-guide and L2LE) and two of their most important antecedents (i.e., instrumentality-prevention and instrumentality-promotion) on an improved measure of learners' motivated behaviors.

LITERATURE REVIEW

Motivational Self System: Conceptual and Practical Concerns

The L2MSS (Dornyei, 2005, 2009) is probably one of the most influential research endeavors to extend the depth and breadth of L2 motivation by reshaping and synthesizing the field's previous conceptualizations (e.g., the socioeducational model of motivation (Gardner, 1985) or the application of self-determination theory (Noels, 2001)) within the psychological theories of 'possible selves' (e.g., Higgins, 1987; Markus & Nurius, 1986). The findings of previous studies using L2 self-guides have provided strong support to the applicability and validity of the model (e.g., Csizer & Kormos, 2009; Ghorbani & Rashvand Semiyari, 2020; Lamb, 2012; Papi & Teimouri, 2012;

Taguchi et al., 2009). L2MSS is a three-factor model (i.e., ought-to L2 self, ideal L2 self, and L2LE) assumed to stimulate learners' interest in or enthusiasm for learning English. Ideal L2 self is concerned with learners' L2-related facet of their personal aspirations, desires and/or ideals. By contrast, ought-to L2 self signifies the attributes L2 learners think their close relatives, influential teachers or friends expect them to possess. This less-internalized component of the model is the manifestation of the things that second and/or foreign language learners ought or are bound to do (i.e., obligations or responsibilities). The third component, L2LE, shows the learner's attitudes to classroom processes (e.g., the impact of the curriculum, the teacher, learning materials, etc.). Of these three constituent components of the L2MSS, L2LE has been identified as exerting the strongest effect on L2 learners' motivated or goal-directed behaviors (e.g., Papi & Teimouri, 2012; Taguchi et al., 2009).

The second major factor contributing to L2 students' motivation has been found to be ideal L2 self which is also strongly connected to L2LE (e.g., Papi, 2010; Papi & Teimouri, 2012; Taguchi et al., 2009). Nevertheless, the findings regarding the relationship between learners' motivated behavior and their ought-to L2 self display a lack of consistency. Although some studies showed a positive relationship, their strength was small and not meaningful (e.g., Dornyei & Chan, 2013; Islam et al., 2013; Taguchi et al., 2009). Moreover, some researchers (e.g., Csizer & Kormos, 2009; Kormos et al., 2011; Papi & Teimouri, 2012) reported no relationship between respondents' ought-to L2 self and their intended learning efforts. Surprisingly, ought-to L2 self was not even accorded the status of a motivational construct in some studies (e.g., Csizer & Lukacs, 2010; Kormos & Csizer, 2008). Csizer and Lukacs (2010) considered the age range of their research participants the main cause of the problem. They argued that the ought-to dimension did not manifest itself in their study due to the fact that their participants (students of secondary school) were still relatively immature or inexperienced and not ready to internalize the pressures that the social and/or educational settings could possibly exert on them.

Another study, unable to identify an ought-to dimension, was that of

Kormos and Csizer (2008) who suggested that the ought-to dimension might manifest itself as a significant variable in rural environments in which “students experience little contact with English speakers and their cultural products” (p. 350). Accordingly, some researchers (e.g., Al-Hoorie, 2016; Henry & Cliffordson, 2015) decided to exclude the ought-to dimension in their investigations and just focus on the ideal dimension. The exclusion of the ought-to self-dimension and its insufficient motivational effectiveness, nevertheless cannot be justified based on theoretical and/or practical grounds as this dimension of the L2MSS is regarded as an important self-regulatory guide that is inductive to bringing out motivated behavior (Higgins, 1987, 1997). Higgins (1987) contends that all people are not motivated by ideal self dimensions by noting that “some may possess only ought self-guides, whereas others may possess only ideal self-guides” (p. 321). Therefore, for these ought-oriented students, the ought-to dimension is probably the only self-guide for regulating behavior (see Dornyei, 2005, 2009). Also, some studies (e.g., Apple et al., 2013; Lee et al., 2000) have found that in cultures advocating collectivism, ought-to dimensions are more widespread than ideal dimensions.

In a fairly recent study, Teimouri (2017) attempted to address the problems surrounding L2 learners’ ought-to self construct. He drew on Higgins’s (1987, 1997) theories (i.e., self-discrepancy theory and regulatory focus theory) and proposed a revision of the original model in which ought-to and ideal L2 self guides were each divided into two sub-dimensions with distinct standpoints (i.e., *own* and *other*). He analyzed his collected data through principal component analysis. The analysis, however, yielded only three components: two distinct ought-to selves (*own* and *other* versions) and a unitary ideal L2 self. Teimouri (2017) argued that ideal L2 self tends to be highly internalized, and as a result, the ideal component cannot easily be bifurcated into the *own* and *other* standpoints. Additionally, the findings of this study concerning the predictive validity of the revised model only supported the findings of past research: Ideal L2 self explained a high percentage of variance in motivated behavior ($B=.46$, $p < .001$), while both

ought-to L2 self/other ($B = .10, p < .05$) and ought-to L2 self/own ($B = .15, p < .001$) accounted for much smaller percentages of variance.

Similarly, in another study, Papi et al. (2019), following Teimouri's (2017) study, also attempted to revise the ideal and ought-to self-guides based on Higgins's (1987, 1997) theories in the form of a quadro-component construct, with ought-to L2 self and ideal L2 self each being divided into the *other* and *own* standpoints and being formulated on the basis of *prevention* and *promotion* regulatory inclinations, respectively. This study offered preliminary but promising evidence for the validity of the four-component self model and corroborated the main assumption in Higgins's (1987, 1997) self-discrepancy and regulatory focus theories that both prevention (i.e., ought) and promotion (i.e., ideal) self-guides can lead to motivation. Particularly important is their finding regarding the emergence of ought L2 self/own as the strongest factor predicting motivated behavior, which is at variance with previous L2MSS studies that have identified ideal L2 self as the strongest component of the L2 self-system (e.g., Kormos & Csizer, 2008; Moskovsky et al., 2016; Papi & Teimouri, 2012, 2014; Taguchi et al., 2009; Teimouri, 2017). The findings of Papi et al. (2019) further corroborate the validity of theories regarding the importance of ought-to self-guides as major motivators (Higgins, 1987, 1997), provided that they are conceptualized and operationalized accurately and unbiasedly. Also, they argued that their finding regarding learners' ought L2 self/own acting as the strongest predictor of motivation is probably context-specific and not generalizable to every context. Furthermore, although Papi et al.'s (2019) analysis supported the overall fitness of their revised model, closer scrutiny of their instrument suggests some deficits in their study. First, although ought-to L2 self/own and ideal L2 self scales (other and own) all contained 4 items, ought-to L2 self/other only contained two items. Thus, the representativeness of this particular ought-to construct can be questioned. Second, assessing the validity of their overall scale possibly suggests insufficient convergent and divergent validity that are essential for supporting the four different yet still associated components. For example, ought-to L2 self/other associated more strongly

with ideal L2 self/other ($r = 0.72$), a component from the opposite domain, than with ought-to L2 self/own ($r = 0.62$) which is from the same domain. This shows a possible lack of divergent validity between ought-to L2 self/other and ideal L2 self/other (Tseng et al., 2020).

Additionally, in the aforementioned studies the revised self-system is presented as just having ideal and ought-to self-guides as its components and L2 learning-experience dimension is completely ignored. But it is this ignored dimension of the self-system that reconciles the social context with the individual learner. Visions of L2 selves do not necessarily result in behavioral outcomes independently; it is the situating of the L2 selves within a community of practice - either imagined or actual - that provides the learner with the opportunity to enhance the visual imagery of the self-concept and then to transform it into motivated behavior (Ryan, 2008; also see Safdari, 2019). Obviously, a careful review of the relevant literature far highlights the existence of problems in previous conceptualizations and/or operationalization of L2 self-guides and also L2 self-measures. Particularly, the extent to which the four-factor model (i.e., own and other standpoints of ought and ideal self-guides) with the addition of L2LE, can be upheld in an EFL setting has largely remained unknown and awaits empirical investigation.

Problems of Intended Effort Measures

Most previous studies that have employed the intended effort scale as a measure of motivated behavior have not addressed two problems of these measures. The first problem relates to the biased regulatory focus of the measure. Regulatory focus theory (Higgins, 1997) delineates two general strategic tendencies when striving toward goals: eagerness and vigilance strategies. L2 learners possessing inclinations that predominantly promotion-focused draw on an “eagerness” strategy to increase gains and reduce nongains by making the most of every opportunity that may lead to positive outcomes. L2 learners who have a predominant prevention-focused

inclination take a “vigilance” strategy to decrease losses and increase nonlosses by keeping away from choices that may bring about negative consequences. Closer inspection of previous research reveals that there is an obvious promotion bias in the operationalization of the intended effort measures, as indicated in the phrasing of a number of items such as “I would like to study English even if I were not required” (Taguchi et al., 2009), and also “If an English course was offered in the future, I would like to take it” (Al-Shehri, 2009; Ryan, 2009). These two examples imply an eager strategic tendency which guarantees that L2 learners capitalize on potential opportunities (e.g., extra English classes and performing tasks or exercises willingly) to increase their learning gains and/or performance gains. Eager strategic tendency is represented by these strategies, and thus, such strategies are biased in favor of promotion-oriented learners and against prevention-oriented learners who are more motivated when felt obliged to perform duties and avoid negative outcomes.

The second problem of intended effort measures is their mostly hypothetical nature and, thereby, possible inapplicability to the present time. While some items of this measure are associated with the actual motivated behaviors of L2 learners (e.g., “I am working hard at learning English,” Ryan, 2009), some other items measure the amount of energy and time learners intend to expend on L2 learning (e.g., “I would like to spend lots of time studying English,” Taguchi et al., 2009), which may not be essentially similar to their actual language learning behavior (Sheppard et al., 1988). According to Fowler (1995), “questions about future behavior cannot reproduce the behaviorally relevant issues very well” (p. 80), therefore, utilizing hypothetical items may not be the best practice in questionnaire development. Better predictions about learners’ attainments can be made by measuring their real-time behavior than by estimating their future intended efforts. Future efforts could not be accurate on account of the variability of the future time and the regulatory bias in their assessment due to learners’ optimistic outlook, which is additionally a distinguishing attribute of promotion-oriented learners (e.g., Hazlett et al., 2011). These two problems have been partly responsible

for the emergence of ought and ideal L2 self-guides as weak and strong predictors of intended effort (respectively) in most previous studies. Accordingly, in the present study, attempts have been made to avoid the aforementioned problems of intended effort measures by using an improved measure of respondents' actual motivated behavior in real time without any regulatory focus issues.

The Current Study

Based upon the above literature, the current study undertook to investigate the role of the newly-bifurcated self-guides as well as L2LE on an improved measure of motivated behavior to provide empirical support for the validity and applicability of a five-factor model of L2MSS. To this end, the researchers of the present study applied SEM methodology and set up a model describing the interplay between newly-bifurcated L2 self-guides, L2LE, instrumentality promotion, instrumentality prevention and motivated behavior. The hypothesized model is shown in Figure 1. The bifurcated L2 self-guides (i.e., ought-to L2 selves (own and other) and ideal L2 selves (own and other)) and L2LE were linked to an improved criterion measure.

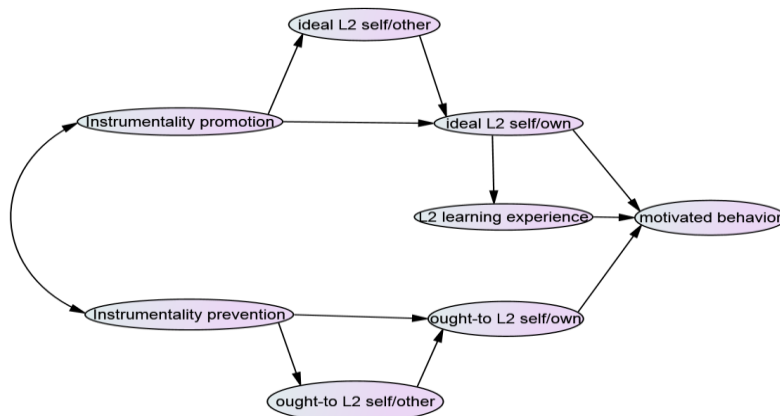


Figure 1: The hypothesized model of the five-factor L2MSS model

The ‘*other*’ facets of the L2 self-guides were considered to be less-internalized constructs than the ‘*own*’ facets (see Teimouri, 2017); thus, it seemed logical for the ideal L2 self/other to be one of the presumed causes of the ideal L2 self/own and also the ought L2 self/other to be one the presumed causes of ought L2 self/own. Additionally, many cognitive psychologists agree that external incentives do not directly influence the individual, but through how they are consciously perceived or discerned by the individual, thus emphasizing the role of the individual and his mind in the causal chain (Al-Hoorie, 2014). Drawing on this cognitive hypothesis, it can be argued that other-driven self guides do not affect motivated behaviors directly but only through how they are apprehended or taken in by L2 learners’ own-driven self guides.

Moreover, as L2LE has previously been found to exert the strongest effect on students’ motivated learning behaviors and to be only associated to ideal L2 self (e.g., Csizer & Kormos, 2009; Papi & Teimouri, 2012; Ryan, 2008; Taguchi et al., 2009) in the present study it was hypothesized that L2LE would also be affected by ideal L2 self/own. Instrumentality-promotion was hypothesized to affect both types of ideal L2 selves because of the congruency between the promotion-focused nature of these variables. Similarly, Instrumentality-prevention was hypothesized to affect both types of ought-to L2 selves because of the congruency between the prevention-focused nature of these variables (Higgins, 1997).

Moreover, although the causal directions of aforementioned paths are supported by the cited motivation literature, another competing model was also drawn and tested in our preliminary analyses to further support the findings of the present study regarding the final model in Figure 1. The competing model was identical to the model in Figure 1 with the addition of two more paths. The paths were drawn from ideal L2 self/other and ought-to L2 self/other to motivated behavior. The first relation (ideal L2 self/other → motivated behavior) turned out to be very small and negligible and the second relation (ought-to L2 self/other → motivated behavior) was non-significant and thus these paths were removed from the proposed model.

To address the objectives of this study, the following research questions were proposed:

- (1) Could the five-factor L2MSS model including the four bifurcated L2 self-guides and L2LE predict L2 learners' motivated learning behaviors?
- (2) What are the relationships among the attitudinal/motivational factors of the new model and learners' motivated behaviors in the EFL setting of Iran?

METHOD

Participants

A total of 856 Iranian EFL students participated in the current investigation by completing the new L2MSS questionnaire. They were recruited from six different Azad universities. The age range of the respondents was from 18 to 26 with a mean of 21.4, and both male and female students were well represented in the sample: 435 male and 421 female students. The average self-reported level of respondents' English proficiency was Intermediate Mid (ACTFL, 2012).

Instrumentation

Each of the eight factors in the hypothesized model was measured by some 6-point scale Likert-type survey items. The items were adopted and then adapted from Tseng et al. (2020), Papi et al. (2019) and Taguchi et al. (2009). The questionnaire was translated into the Persian language in order to be used for Iranian students. The questionnaire was piloted among a smaller group of university students which were very similar to the main research participants. The first section of the questionnaire was comprised of 31 items, measuring 8 attitudinal and motivational variables: ideal L2 self/other, ideal L2 self/own, ought-to L2 self/other, ought-to L2 self/own, L2LE, instrumentality promotion, instrumentality prevention, and motivated learning behavior. All variables were assessed by 4 items except instrumentality prevention that was

assessed by 3 items. All the responses were collected on a 6-point Likert scale with 1 indicating *strongly disagree* and 6 indicating *strongly agree*. The second section of the survey questionnaire elicited data about respondents' gender, age, and self-reported L2 proficiency level.

Procedure

The questionnaire was administered to our EFL students in a total of 25 classes, each including 30 to 40 students. Before handing out the questionnaire, the students were provided some information about the purpose of the study and how to answer the questionnaire items. Students were also assured that their responses would be kept confidential and would be used only for research purposes. The questionnaire was administered during their regular class hours, and on average, it took students 20 minutes to complete all the questions.

RESULTS

The main purpose of the current study for employing SEM was to explore the causal relations among the motivational/attitudinal variables comprising the components of the bifurcated L2 Self System and their immediate antecedents. Before striving to evaluate the structural models of the datasets, it was essential to first examine the validity of the measurement models. To this end, the present study was undertaken to assess three measurement models. The first model consisted of three latent or unobservable factors (ideal L2 self/own, ideal L2 self/other and instrumentality-promotion). The second measurement model was also comprised of three latent variables (ought-to L2 self/own, ought-to L2 self/other and instrumentality-prevention). Finally, the third model was comprised of two unobservable factors (L2LE and motivated behavior measure). The fit indexes showed that after making some model modifications all three aforementioned models fit the data well.

The next step in SEM was to integrate the measurement models so as

to have a full structural model. For the purpose of drawing the present study's structural model, the researchers drew upon Papi et al. (2019), Teimouri (2017), Taguchi et al. (2009) and Dornyei's (2005) L2MSS. The final model with standardized path coefficients is shown in Figure 2.

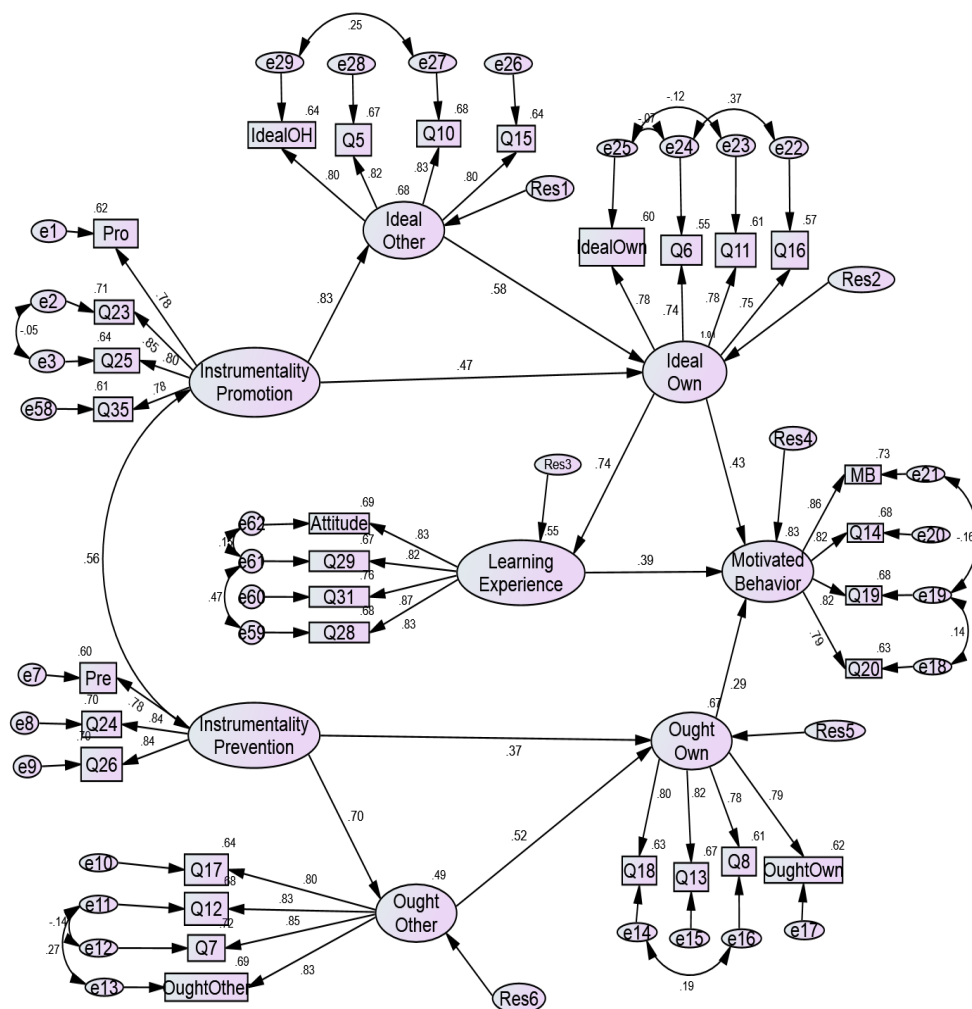


Figure 2: The final model with standardized estimates

Note: N=856. All path coefficients are significant at $p < 0.001$. $X^2(411) = 1301.178$, $p < 0.001$; TLI=.951; CFI=.957; RMSEA=.050.

The figure shows that all the causal paths are significant at the $p < 0.001$ level. Due to the large sample size of the present study, the chi-square test is significant, $X^2(411) = 1301.178$, $p < 0.001$. For sample sizes that are larger than 200, X^2 statistic is inherently biased (Schumacker & Lomax, 2016). However, other goodness-of-fit indexes indicate that the new five-factor model is appropriate to describe the sample. The values of TLI, CFI and RMSEA indices were 0.951, 0.957 and 0.050, respectively for our proposed model. Regarding TLI and CFI, generally values approaching 1.0 suggest a better fit. Values over 0.90 are considered indicative of good fit. Also, a cutoff close to 0.95 is recommended by some studies (e.g. Hu & Bentler, 1999). As far as RMSEA is concerned, a good model fit is indicated if a value of 0.05 or less is present (Browne & Cudeck, 1993). As the purpose of these cutoff criteria for fit indices is to offer general guidelines, Hair et al. (2014) suggested adjusting the cutoff values based upon the characteristics of the model, such as its sample size and its complexity. Therefore, given the complexity of our new model and our large sample size, the cutoff values can be less strict. The results of various fit indices and the standardized estimates of the various relationships in figure 2 indicate that the proposed model can be accepted as a good explanation of our dataset. It means the five-factor L2MSS model can effectively predict L2 learners' motivated behaviors (research question 1).

Table 1: Standardized Direct, Indirect, and Total Effects of new L2MSS variables on Motivated Behavior

Variable	Direct Effect	Indirect Effect	Total Effect
Ideal L2 self/own	0.427	.289	0.717
Ought-to L2 self/own	0.293	-----	0.293
L2LE	0.391	-----	0.391
Ideal L2 self/other	-----	.414	0.414
Ought-to L2 self/other	-----	.153	0.153
Instrumentality-promotion	-----	.683	0.683
Instrumentality-prevention	-----	.214	0.214

With regard to the second research question of the present study, Figure 2 and Table 1 demonstrate patterns of relationships among the attitudinal/motivational factors of the new model and learners' motivated behaviors. They show the standardized direct, indirect, and total effects of the all the predicting factors on motivated behavior. According to Table 1, the strong effect of ideal L2 self/own on motivated behavior is primarily direct (0.427) and secondarily indirect (0.289). L2LE partially mediates the effect of ideal L2 self/own on motivated behavior. Ideal L2 self/own plays the most significant role in determining motivated behavior. The total effect (standardized) of ideal L2 self/own on motivated behavior is 0.717. Its total effect consists of both direct (unmediated) and indirect (mediated through L2LE) effects on motivated behavior. It means when ideal L2 self/own goes up by 1 standard deviation (*SD*) unit, motivated behavior goes up by 0.717 *SD unit*. In contrast, ought-to L2 self/own and L2LE have strong and direct effects on motivated behavior (0.293 and 0.391 respectively). The model also suggests that ideal L2 self/other has a strong and indirect effect (0.414) on motivated behavior which is mediated by ideal L2 self/own. Ought-to L2 self/other also has an indirect effect on motivated behavior which is of moderate magnitude (0.153). Instrumentality-promotion also indirectly affects motivated behavior via both *own* and *other* dimensions of ideal L2 self. Its effect is of very strong magnitude (0.683). Finally, the effect of instrumentality-prevention on motivated behavior is fully mediated by ought-to self-guides. Its effect is of moderate magnitude (0.214).

DISCUSSION

The results of the proposed model of relationships between the variables of interest provide support for the new conceptualization of L2MSS in the university setting of Iran. The model demonstrates that the ideal L2 self/own, L2LE, and ought-to L2 self/own significantly contribute to motivated behavior in the investigated sample of students. The total effect of ideal L2 self/own on motivated behavior shows that this self guide is the strongest

predicting factor. This finding is consistent with previous studies which have reported that highly internalized motives with positive outcomes, as embodied by ideal L2 self/own, are stronger predictors of how much time and energy learners are eager to invest in learning than other types of motivation (e.g., Deci & Ryan, 1985, 2002).

The second most influential component of the proposed model in the current study was L2LE, which reflects learners' attitudes to the immediate learning environment. Past research within SLA motivation also shows contextual factors (e.g., the effect of teachers, peers and the L2 course) to exert considerable impact over what L2 experiences learners undergo and how much energy they are ready to expend in L2 learning process (Nikolov, 1999). Results of the current study also indicate that although it appears necessary for L2 learners to have internalized motives in learning, the role of the immediate learning environment is also very important. Positive attitudes toward teachers, peers, and the learning context accompanied by motivating tasks, activities, and materials seem to influence how eagerly students study and learn an L2. Thus, the findings of this study put additional emphasis on the importance of arguments put forward by Dornyei (2001) that it is mostly the teachers' responsibility to take the initiative and to motivate L2 learners.

Moreover, ought-to L2 self/own emerged as the third most influential predictor of L2 motivated learning behavior. Ought L2 self/own serves as duties and obligations that are imposed externally by others for L2 learning that are eventually shared or internalized by students for their personal value and/or meaning (Kim, 2009). These findings further support the validity of the main assumptions of present study and previous studies (e.g., Papi et al. 2019; Teimouri, 2017) that if reconceptualized and bifurcated correctly, the ought-to self-guides can also play salient roles in explaining motivated learning behaviors. Additionally, the emergence of ought L2 self/own as a strong predictor of L2 motivation indicates that L2 learners can effectively learn English if they are confronted by potential negative consequences for their educational, professional, and social lives. Thus, in addition to ideal L2 self/ own which is used by students to self-regulate their learning toward more

favorable outcomes, ought-to self/own can be used to effectively regulate their behavior away from unwanted and/or unpleasant end states.

Finally, the findings of this study regarding the effects of promotion-oriented instrumentality and prevention-oriented instrumentality on L2 motivation shows that they can be considered major antecedent factors leading to learners' ideal and ought-to self guides, and this finding is consistent with the results of previous research concerning the precursors of learners' ideal and ought-to L2 selves (e.g., Papi & Teimouri, 2012; Taguchi et al., 2009). Ideal and ought-to self guides can be considered future self-guides that exert important personal and social influences on L2 learners. Consequently, it can be maintained that the two own-driven L2 selves stand for the personal facets of learners' future self-guides, and the two other-driven L2 selves stand for the social facets of their future self-guides that significant others expect learners to strive for or would ideally hope them to possess.

CONCLUSION AND IMPLICATIONS

The present study sought to examine the nature of L2 learners' motivation by probing into the motivational dispositions of Iranian EFL students within the framework of the new L2MSS model. A five-factor model consisting of ideal L2 self/own, ideal L2 self/other, ought-to L2 self/own, ought-to L2 self/other, and L2LE was empirically explored and it was confirmed to be adequate via SEM analysis, with the attainment of a robust five-component construct. Good fit of the model to the data was achieved for all measurement and full structural models.

The previous L2MSS models led to unbalanced relationships between L2 self-guides and criterion variables, with L2LE and ideal L2 self emerging as major predicting factors and ought-to L2 self being a motive with little or no meaningful motivational effects. But the results of present study substantiated the important role of ought-to self guides alongside ideal L2 self-guides and L2LE in understanding the EFL students' motivated behaviors. The findings of the present research provided further evidence for the applicability and validity of the five-factor model and supported the main

hypothesis in self discrepancy theory (Higgins, 1987) that both prevention (i.e., ought-to) and promotion (i.e., ideal) self-guides can lead to motivated behaviors, an important regulatory distinction that has not been adequately investigated in previous L2 motivation studies. The present work, however, has its own limitations. As the current study was carried out within an EFL setting, the evidence provided in the study has yet to be cross-checked in different second or foreign language settings. Additionally, the participants of this study were recruited from university students. Therefore, more research needs to be undertaken with other groups of participants such as high school students to further substantiate the findings of this study.

Although the results of previous research strongly favor a promotional approach toward second or foreign language learning and teaching, the findings of present study recommend adopting a balanced view toward motivational practices. It is our belief that by making good use of both prevention and promotion motivational strategies, L2 learners' motivational efficacy can be maximized. Additionally, all L2 learners do not have similar goals and motivational tendencies and many of them may not even possess independent ideal self guides, and second or foreign language learning may simply represent a societal expectation or educational requirement. Thus, by using balanced motivational strategies, L2 teachers and practitioners can lead their students to gradually transform externalized motives (i.e., ought-to self guides) into internalized ones (i.e., ideal L2 self guides).

Disclosure statement

No potential conflict of interest was reported by the authors.

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