LANGUAGE LEARNING
A Journal of Research in Language Studies
Language Learning ISSN 0023-8333

Language Learner Motivational Types: A Cluster Analysis Study

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The study aimed to identify different second language (L2) learner motivational types drawing on the framework of the L2 motivational self system. A total of 1,278 secondary school students learning English in Iran completed a questionnaire survey. Cluster analysis yielded five different groups based on the strength of different variables within their motivational configurations. Further analyses revealed that the motivational groups have different motivational, emotional, and linguistic characteristics. In the second part of the study, the sample was divided into promotion-focus and prevention-focus groups based on the self-regulatory focus theory. Partial correlation analysis showed that while the ideal L2 self and instrumentality promotion were associated with motivated learning behavior for both the promotion-focus and prevention-focus groups, only the ought-to L2 self and instrumentality prevention were associated with motivated behavior for the prevention-focus group. The study highlights the importance of considering motivational types in L2 motivation research.

Keywords L2 motivation; L2 motivational self system; cluster analysis; motivational types

Introduction

The introduction of the theory of the second language (L2) motivational self system (Dörnyei, 2005, 2009b) has been a promising turn in L2 motivation

The original study was conducted under the supervision of Zoltán Dörnyei, to whom we would like to express our genuine gratitude. We would like to thank all the anonymous reviewers for their constructive and thorough feedback on the earlier versions of the manuscript. We are also thankful to Pavel Trofimovich, the lead editor for the manuscript, for his generous and insightful feedback throughout the review process that resulted in substantial improvements in the work.

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DOI: 10.1111/lang.12065

research. Many studies have been conducted in recent years that have supported the validity and applicability of the theory in a variety of contexts (e.g., Csizér & Kormos, 2009; Papi, 2010; Ryan, 2009; Taguchi, Magid, & Papi, 2009). These studies have often focused on examining the relationships between the constituent components of the motivational self system model and learners' motivated learning behavior or other criterion measures (e.g., L2 achievement, language choice). This is mostly accomplished through statistical analyses such as correlation, multiple regressions, and structural equation modeling. Such methods have been highly instrumental in examining the construct validity of the newly proposed theory, the reliability of its scale measures, and the impact of its composite components on one's motivation and achievement. However, the studies carried out in this tradition have been criticized for presenting a selective and partial account of L2 motivation and its complex reality (Dörnyei & Ushioda, 2011). Such criticisms gain even more importance at the time of a socio-dynamic turn in L2 motivation research (Dörnyei & Ushioda, 2011). From the socio-dynamic perspective, researching the variability and complexity of L2 motivation with an emphasis on learners rather than variables as the units of analysis takes center stage (Dörnyei, 2009a; Dörnyei, 2010; Dörnyei & Ushioda, 2011). In this paradigm, one's performance is considered to be the outcome of a complex web of interrelated variables that continuously interact with the learning context, rather than the result of the impact of individual variables on behavior in a linear cause-and-effect fashion (de Bot, 2008; Dörnyei, 2009a; Ellis & Larsen-Freeman, 2009; Larsen-Freeman, 1997; Larsen-Freeman & Cameron, 2008).

The socio-dynamic perspective toward research on L2 motivation is in fact a reaction to the shortcomings of the traditional quantitative research that promoted a modular understanding of individual difference factors in L2 acquisition, especially L2 motivation. Within this modular approach, individual difference factors have been developed and studied on the theoretical assumption that each factor represents a distinct function of mind, for example, aptitude as a cognitive factor and motivation as an affective factor. However, it has been argued that these constructs typically function as a hybrid of cognitive, motivational, and affective components (Dörnyei, 2009a; Dörnyei & Tseng, 2009; Ellis, 2004). The traditional view has generally been criticized for being too simplistic to produce an accurate understanding of individual differences. L2 motivation in and of itself can be a complex combination of cognitive, affective, and behavioral factors.

A colloquium devoted to *Motivational Dynamics in Second Language Acquisition*, organized by Zoltán Dörnyei and Peter MacIntyre at the 2013

American Association for Applied Linguistics conference, the organization of an entire conference entitled *Motivational Dynamics and Second Language Acquisition* held at the University of Nottingham in 2014, along with a few published empirical studies within this perspective (e.g., MacIntyre & Legatto, 2011; Mercer, 2011) have been the first serious attempts to draw researchers' attention to this new approach in research on individual difference factors. From a methodological perspective, a qualitative approach is generally considered to be the best path for exploring the complexity of L2 motivation. However, we believe that the quantitative methods of research can still be very useful for this purpose.

In an attempt to take a step in this direction, the present study uses the data that were originally collected for a large-scale international study (Taguchi et al., 2009) and reexamines them from a completely different angle. Whereas the data have previously been analyzed using common variable-centered statistical techniques such as correlation and structural equation modeling, the statistical method that we use in the present study is cluster analysis. This rarely used statistical method exerts more power in predicting variability in language learners' motivated behavior, mainly by shifting the focus from the individual variables onto the language learners in order to identify the number and composition of distinct groups of learners based on strength of and relationships among several variables. Byrne (1998) recommended the use of cluster analysis as an appropriate analytic tool for revealing the complexity of such phenomena as L2 motivation when using quantitative survey data. Researching L2 motivation using cluster analysis could thus have rewarding outcomes, both theoretically and practically. Applied to L2 motivation research, cluster analysis can enable us to recognize the varied interrelationships of multiple motives across individuals, thereby allowing for the emergence of a variety of learner types with different motivational configurations. This type of classification is also common in the field of personality psychology, in which individuals are grouped into different personality types based on their shared traits (Csizér & Dörnyei, 2005). In pursuing this approach, we are also following Dörnyei's (2014) second research strategy proposed for identifying motivational conglomerates, although within the conventional quantitative research paradigm rather than a dynamic systems theory perspective. The establishment of motivational learner types can be a major contribution to L2 motivation research and can positively inform L2 acquisition research and practice. The current study, along with the study by Csizér and Dörnyei (2005), can be considered as an initial step in this direction.

The L2 Motivational Self System

As a response to the calls for expanding the realm of L2 motivation research and opening a new agenda for examining various cognitive, affective, and motivational factors (Crooks & Schmidt, 1991; Dörnyei, 1994; Oxford & Shearin, 1994), Dörnyei (2005) drew on Higgins's (1987) self-discrepancy theory in mainstream social psychology and other major L2 motivation theories (e.g., Noels, 2003; Ushioda, 2001) and proposed the theory of the L2 motivational self system. The L2 motivational self system is based on the idea that learners' drive to reduce the perceived discrepancy between one's here-and-now (actual) self and their future L2 selves provides the necessary motivation for language learning behaviors. The model builds on and overcomes the shortcomings of the former prominent motivation model, the integrative motive, proposed by Gardner and his associates (e.g., Gardner & Lambert, 1972; also Gardner, 1985). The theory also has in its core the concept of identity, an important construct that the central construct of integrativeness was deemed inadequate to explain (e.g., Norton Peirce, 1995).

The L2 motivational self system consists of three components, namely, the ideal L2 self, the ought-to L2 self, and L2 learning experience. The ideal L2 self concerns the L2 specific aspects of one's ideal self, representing one's aspirations, hopes, and wishes. It subsumes the traditional integrative and more intrinsic instrumental motives and has been shown to be a strong determinant of variance in students' motivated behavior (e.g., Csizér & Lukács, 2010; Islam, Lamb, & Chambers, 2013; Papi, 2010; Ryan, 2009; Taguchi et al., 2009). On the other hand, the ought-to L2 self refers to the attributes one believes one ought to possess, including one's obligations, responsibilities, and expectations, in order to avoid possible negative outcomes. Several studies have shown that the ought-to L2 self exerts considerably less impact on one's motivated behaviors than the ideal L2 self does (e.g., Islam et al., 2013; Papi, 2010; Taguchi et al., 2009). While the ideal L2 self and the ought-to L2 self are considered general motivational constructs, L2 learning experience, the third component of the model, deals with situated motives inherent in the immediate learning environment. Of the three constituent variables of the L2 motivational self system, L2 learning experience has been found to be most strongly associated with motivated learning behavior in the samples of instructed L2 learners that all motivation studies have investigated to date (e.g., Csizér & Kormos, 2009; Papi, 2010; Taguchi et al., 2009).

The L2 motivational self system includes cognitive, affective, and social aspects of the self at its core (MacIntyre, Mackinnon, & Clément, 2009).

According to Dörnyei (2009c), the three components of the system—ideal L2 self, ought-to L2 self, and L2 learning experience—can act as higher-order amalgams that can coordinate the direction and intensity of a learner's behavior. Cluster analysis can thus be a useful tool for revealing how different motivational, affective, and behavioral factors are combined with future L2 selves and shape learners of different types.

Precursor Studies Using Cluster Analysis in L2 Motivation Research

Among the few studies that have been done in L2 motivation research using cluster analysis (i.e., Csizér & Dörnyei, 2005; Dörnyei & Chan, 2013; Henry, 2011; Hiromori, 2009), we only found the study by Csizér and Dörnyei (2005) directly relevant to the present work.

Although Henry (2011) and Hiromori (2009) employed this technique to form clusters of learners, Henry did not explain what kind of motivational variables were used for the analysis, and Horimori used predecisional task-based factors (e.g., the *value* a learner attaches to a given task and the *expectancy* of success in that task) rather than general motivational factors for data analysis.

Dörnyei and Chan (2013) followed the retrodictive qualitative modeling technique proposed by Dörnyei (2014) in order to identify different motivational types and their motivational dynamics. They asked six secondary school teachers to identify theoretical learner types. The teachers identified seven prototypes (e.g., *a bright, competitive and critical learner* or *a problematic, unmotivated student with lower than average L2 proficiency*) and then picked one or two students typical of the identified prototypes. The students were then interviewed and their behavioral patterns were identified. However, there is a question whether the patterns from their study can be generalizable to other cases, and furthermore it is unclear whether classifying learners into different prototypes only based on the classroom behavior observed by their teacher would truly reveal their underlying motivational types. In other words, students with different motivational configurations may show similar classroom behaviors but different out-of-class behaviors to which teachers may be blind. Students' real behavioral differences can thus only be revealed when their learning behavior is considered in its entirety, that is both in and out of classroom. The theoretical validity of such classifications can thus be established only when the data used for such categorizations are triangulated with out-of-class

learning behaviors. In addition, even if the behaviors of the students, both in and out of the classroom, are similar, we cannot be sufficiently certain that the behaviors are the result of similar underlying motives. In other words, different motives might result in similar patterns of behavior at a certain point in time. In the present study, thus, we categorized learners based on their underlying motivational propensities rather than their surface motivated behaviors. And we used behavioral, affective, and linguistic factors to compare the motivational characteristics of the identified groups.

Most relevant to the present work is the study conducted by Csizér and Dörnyei (2005). On two occasions, they collected survey data from a total of 8,593 learners of English in Hungary. The questionnaire administered included items related to six constructs: integrativeness, instrumentality, cultural interest, vitality of L2 community, milieu, and linguistic self-confidence. They also included motivated behavior and language choice as criterion measures. Their analysis of the data uncovered four broad motivational clusters among Hungarian teenage students. The first group, deemed to be the least motivated group, showed the least amount of interest in foreign languages, cultures, and language learning. At the other end of the continuum, the fourth group, deemed to be the most motivated group, reported the highest scores for all the motivational dimensions. Group 4 was argued to have successfully developed an ideal L2 self, a construct which was not directly measured but was equated with the measured construct of integrativeness. The two remaining groups, Group 2 and Group 3, also showed some differences: While both groups were similar to each other, in that they showed little evidence of having developed a fully fledged ideal L2 self, they were different from each other in terms of the instrumental aspect of their motivation and their attitudes toward L2 community and culture. While Group 3 exceeded Group 2 on instrumentality, Group 2 reported higher scores on attitudes toward L2 community and culture than Group 3. With regard to the motivated behavior and language choice (the two criterion measures), it was found that (a) the motivated behavior increased consistently across the groups, with Group 1 having the lowest score and Group 4 having the highest score, and (b) positive attitudes toward a given target language, generally speaking, had negative effects on the choice of other languages, depicting a competition in which English easily turned out to be the winner over German, Russian, French, and Italian, the other foreign languages studied in Hungarian schools and included in the questionnaires. The relevance of this study for the present research is obvious. However, although Csizér and Dörnyei (2005) interpreted the results within the framework of the L2 motivational self system, their data did not include items related to the model simply because at the time the data

were collected the theory had not been fully proposed yet. Instead, they equated their measured variables with the components of the new theory (e.g., integrativeness was equated with ideal L2 self and scores of instrumentality were interpreted as the indicators of the ought-to L2 self).

Promotional Versus Preventional Orientations

Higgins's (1988) self-regulatory focus theory provides a strong framework for understanding the motivational differences across language learners. This framework proposes that differences arise from learners' sources of self-regulation or the way they go about achieving a goal. Based on Higgins's theory, learners with different self-regulatory orientations (i.e., promotional vs. preventional) will show differences in their motivational, emotional, and behavioral characteristics (Carver, Lawrence, & Scheier, 1999). The two orientations outlined in the self-regulatory focus theory are highly related to the two future selves in Dörnyei's (2005) theory.

According to Higgins (1998), learners can either have a promotional or a preventional regulatory orientation. The *promotion-focus* orientation is concerned with advancement, growth, and accomplishment and sensitive to the presence and absence of positive outcomes. On the other hand, the *prevention-focus* orientation is concerned with security and safety and sensitive to the presence and absence of negative outcomes (Higgins, 1987, 1997; Higgins, Shah, & Friedman, 1997). Such a distinction can provide a theoretical ground for understanding differences in the motivational and emotional propensities of language learners. Considering the ideal L2 self and the ought-to L2 self as two ends of a motivational continuum, those students who have a stronger ideal L2 self are predicted to have a promotional regulatory focus and enjoy moving toward gaining positive outcomes, and those who have a stronger ought-to L2 self are predicted to have a preventional regulatory focus and feel pressured to avoid negative consequences of not meeting certain expectations or obligations (Dörnyei, 2009b). For example, an ideal-self driven student may enjoy doing a learning task in order to master the language materials and get close to the imaginary picture of himself as a fluent speaker of the target language, whereas an ought-driven student may approach the same task in order to meet the performance standards of a course.

Previous research on L2 selves, however, has not taken account of such a distinction between learners' regulatory focus and has only examined the impact of the ideal and ought-to self guides on learner motivation. Such a distinction

of learners' motivational regulatory focus might provide a good explanation for inconsistent findings of studies, especially concerning the impact of ought-self guides on students' motivated behavior. Specifically, it would not be surprising if it turns out that the ought-to self guides of promotion-oriented students (if indeed they have any) have no impact on their motivated behavior, while the same motive would be a strong factor in the motivational system of those with a preventional regulatory orientation.

Objectives and Research Questions

Although conceptually similar to the work by Csizér and Dörnyei (2005), the current study contributes to our understanding of L2 motivation in a number of novel ways. Not only did the present study provide further evidence for the L2 motivational self system in a different context (i.e., Iran), it also featured the use of cluster analysis as a statistical technique to analyze the components of the L2 motivational self system. In addition, both of Higgins's (1988) preventional and promotional aspects of instrumentality, identified by Taguchi et al. (2009), were included in the current work. The inclusion of such a distinction is important in that these constructs relate to L2 selves of a different nature: While the promotional aspect of instrumentality has been found to be strongly related to one's ideal L2 self, instrumentality prevention has been identified as a part of one's ought-to L2 self (Taguchi et al., 2009).

Furthermore, in the present study differences of learners' motivational types were assessed not only in terms of their motivated behavior but in terms of other measures, including an affective and a linguistic measure. While motivated behavior is a common measure of motivation, we decided to include L2 anxiety as an affective factor given the relevance of emotions to the study of selves (e.g., Markus & Nurius, 1986). Anxiety has been shown as an emotional state associated with ought-to self in motivational psychology (e.g., Carver et al., 1999; Higgins, 1987; Leary, 2007) and in L2 motivation research (e.g., Papi, 2010). Therefore, the inclusion of this emotional factor seemed to act as a distinguishing factor between learners with different motivational characteristics, especially with regards to their self orientations. In addition, L2 proficiency, as a classic linguistic measure of success in language learning, has frequently been used along with motivation scales (e.g., Gardner, 2000; Kozaki & Ross, 2011). We thus included the self-reported version of this measure to see how motivational variables are translated into proficiency in the target language.

Adopting a change of focus from variables to language learners, and as a complementary approach to the previous research on L2 motivation, this study sought to identify how motivational variables collectively result in the linguistic (i.e., L2 proficiency), affective (i.e., L2 anxiety), and motivational (i.e., motivated behavior) states of learners of different motivational types. Therefore, in the first part of this study we identified the motivational types of a sample of Iranian learners of English as a foreign language. Those with similar emergent patterns of motivational properties were grouped together to investigate how such various combinations of interrelated motives result in different criterion outcomes. In the second part of the study, in order to classify the learners into two promotion-focus and prevention-focus groups, and considering the ideal L2 self and the ought-to L2 self to be the indicators pinpointing these orientations, the sample was first divided into two groups in terms of whether they had stronger ideal L2 selves or stronger ought-to L2 selves. Then, the resulting motivational configurations of the two groups were examined, taking into consideration the linguistic, emotional, and motivational outcomes of the language learning systems of these groups.

In line with the objectives presented above, the following research questions were addressed:

1. Do any distinct motivational types emerge from a sample of language learners based on the strength of their motivational/attitudinal variables?
2. If so, then how different are these groups in terms of their motivated learning behavior, L2 anxiety, and L2 proficiency?
3. How do the motivational configurations of the promotion-oriented students differ from those of prevention-oriented students?

Method

Participants

A total of 1,278 students learning English as a foreign language in the context of Iran participated in the present study. The participants of the study were selected from two educational levels, with 287 students from middle school and 991 students from high school. We chose our participants from public schools to ensure that the students had more or less similar learning environments in terms of curriculum, teaching and assessment methods, and materials, although there are always differences in terms of teacher and group dynamics. The sample was equally distributed in terms of gender (623 females, 655 males), and the age of the participants ranged from 13 to 18 with a mean of 15.

Educational Context

Students in Iran start official schooling when they are 7 years old. After 5 years of primary school, they go to the middle school for 3 years and then to the high school for 4 years. They start learning English in the 2nd year of the middle school, approximately at age 13, and have 2 to 3 hours of English instruction per week until they finish high school. A combination of the audiolingual and grammar translation methods is used for teaching English in public schools. However, many parents send their children to private language institutes, where more current, communicative teaching methods and materials are used, and where teacher recruitment is more competitive. After high school, students take part in a very competitive exam to get admitted to public universities, and English is one of the subjects included in it.

Instrument

The data were collected using a questionnaire survey developed specifically for the context of Iran. The questionnaire items can be found in Appendix S1 of the online Supporting Information.

The first part of the questionnaire included items measuring motivational and attitudinal variables, and the second part consisted of background information such as gender, age, private language institute attendance, and self-reported English proficiency. The scales of the questionnaires were adapted from Dörnyei's studies in Hungary (i.e., Dörnyei, Csizér, & Nemeth, 2006) and the previous studies on the L2 motivational self system in Japan and China (Taguchi et al., 2009). A 6-point Likert scale with 1 showing *strongly disagree* or *not at all* and 6 showing *strongly agree* or *very much* was used for measuring the items. The questionnaire was translated by the researchers into Persian, then backtranslated into English by two translation experts who had not seen the original English version of the questionnaire. Discrepancies between the original and the backtranslated versions resulted in the modification of some of the Persian items. The questionnaire was then piloted with over 100 participants who had the same age as the youngest participants of the main study. The pilot participants were also asked for feedback, which helped us improve a few more items.

The 10 variables examined in this study were the following, with the number of items representing each variable and the reliability coefficients of each of the variables given in parentheses:

1. *Ideal L2 Self,* which concerns a learner's desires and aspirations related to learning English (6 items, $\alpha = .77$).

2. *Ought-to L2 Self,* which measures "the attributes that one believes one ought to possess (i.e., various duties, obligations, or responsibilities) in order to avoid possible negative outcomes" (Dörnyei, 2005, p. 106; 6 items, $\alpha = .70$).
3. *L2 Learning experience,* which measures situation-specific motives related to the immediate learning environment and experience (6 items, $\alpha = .83$).
4. *Motivated learning behavior,* which concerns a learner's motivated behaviors toward learning English (6 items, $\alpha = .80$).
5. *Instrumentality-promotion,* which concerns the regulation of learning behavior in order to approach positive pragmatic outcomes such as satisfying the admission requirements of an international university (6 items, $\alpha = .67$).
6. *Instrumentality-prevention*, which concerns the regulation of learning behavior in order to handle duties and obligations such as avoiding failure in an exam (8 items, $\alpha = 73$).
7. *Family influence,* which examines active and passive parental roles (5 items, $\alpha = .67$).
8. *Attitudes to L2 community,* which concerns a learner's attitudes toward the target community (4 items, $\alpha = .74$).
9. *Cultural interest,* which reflects the appreciation of the cultural products associated with the particular L2 and promoted by the media (Csizér & Dörnyei, 2005; 4 items, $\alpha = .72$).
10. *Language anxiety,* which measures a learner's uneasiness and discomfort concerning the use of L2 (6 items, $\alpha = .66$).

The inclusion of the seven additional variables (i.e., variables 4 through 10 in the above list) alongside the three components of the L2 motivational self system in the present study was based on the findings of the previous research concerning their strong associations with the components of the model. Attitudes toward the culture and community and instrumentality promotion have been found to be strongly associated with, and possibly representing, the social and professional aspects of the ideal L2 self, while family influence and instrumentality prevention have been shown to be closely related to, and representing, the same aspects of the ought-to L2 self (e.g., Taguchi et al., 2009). Finally, in order to measure perceived language proficiency, participants were asked to rate their current overall proficiency in English by selecting one of five levels, from Beginner to Upper Intermediate and Over (for a description of each level, see Appendix S1 in the online Supporting Information). The selected levels were scored on a 5-point scale, from 1 for *Beginner* to 5 for *Upper Intermediate and Over*.

Procedures

We used a snowball sampling method (Dörnyei, 2007) to find as many participants as possible. We contacted our colleagues in different cities, informed them of the purpose of the study, and asked for their cooperation. Additionally, to obtain the consent of school authorities in which our colleagues were working, the research department of the Iranian Ministry of Education was contacted and informed about the purpose of the study and the procedures of collecting the data.

Having been granted written permission, the questionnaires were administered in a total of 42 classes in 14 schools. The number of students in each class ranged from 25 to 35. In case of remote cities, we sent an electronic copy of the questionnaire along with an instruction manual describing the procedures for its administration (e.g., informing students of their rights and the subjective nature of the survey, and so on) to our colleagues in different cities. The completed questionnaires were mailed back to us. Students were informed that their participation was voluntary, that it would have no effects on their grades, and that they could decide not to answer any questions and discontinue at any point during the study if they wished to do so. They were assured that their answers would be used solely for research purposes and that they did not need to provide any identifying information. The questionnaires were completed during the class time and it took about 15 minutes on average for students to answer all the questions.

Data Analysis

The data were cluster-analyzed using SPSS 18 (IBM). Cluster analysis is an exploratory method for classifying observations or cases into different homogenous groups or clusters without having any a priori speculations on the number of emergent clusters. In cluster analysis, cases or observants are grouped in an *n*-dimensional space, in which *n* represents the number of variables. The pattern of each cluster is thus based on the characteristics of the composite variables of the system as a whole (Byrne, 1998).

There are various methods of cluster analysis including *hierarchical* and *nonhierarchical* cluster analysis that have different clustering algorithms with their own advantages and disadvantages. In this study, we employed both methods for clustering our sample into different groups in order to increase both the internal and external homogeneities of our clusters (Hair & Black, 2000). Then, the existence of significant differences between the groups in terms of the composite variables was examined by means of one-way analyses of variance (ANOVAs). Finally, motivated learning behavior, perceived language

Table 1 Descriptive analysis of each cluster

	Group 1		Group 2		Group 3		Group 4		Group 5		Sum	
Participants	*n*	%	*n*	%	*N*	%	*n*	%	*n*	%	*n*	%
Total	222	17.4	308	24.1	286	22.4	154	12	308	24.1	1,278	100
Male	107	48.2	167	54.2	156	54.5	72	46.8	153	49.7	655	51
Female	115	51.8	141	45.8	130	45.5	82	53.2	155	50.3	623	49

proficiency, and language anxiety were included as our external criterion measures by which group differences were tested.

In the second part of this study, a group-difference method was used to divide the sample according to their promotional and preventional orientations. A *t* test was run to see if the groups were statistically different in terms of different motivational factors. In the final step, a series of partial correlational analyses were run to determine the strength of different motives within the motivational configurations of each group.

Results

Because the main purpose of the study was to identify distinct motivational types, a two-stage cluster analysis procedure was employed: the hierarchical cluster analysis and the *k*-means analysis. The hierarchical cluster analysis using Ward's method is employed in order to determine the optimum solution for the number of clusters. However, because hierarchical cluster analysis is not appropriate for large samples, as in our case, the method was initially run on the data from 100 randomly chosen participants. The clustering results of the hierarchical analysis suggested the existence of five clusters. This is shown in the resulting dendogram, which is a visual representation of the number of clusters, and which can be found in Appendix S2 of the Supporting Information online. Nonetheless, we tested a number of different models to check the validity of the obtained five-solution clusters by examining the clustering distances and the significant changes in the characteristics of the groups in each model. Finally, it was decided that five clusters would show meaningful differences and would appropriately represent the data.

In the next stage, cluster analysis was run using the *k*-means method with the number of clusters defined at five. The results of chi-square analyses showed that differences in gender composition between clusters were not significant (see Table 1). The participants' gender, thus, will not be discussed further.

Also a one-way ANOVA was used in order to confirm the between-group mean differences in terms of the measured variables. The means for all variables, along with the ANOVA results, are presented in Table 2.

Five Motivational Types

The five motivational clusters that emerged from the analysis are described numerically in Table 2. As shown, learners belonging in Group 1 exhibited the lowest scores in almost all of the motivational factors. The scores of this group on their ideal L2 self, ought-to L2 self, English learning experience, family influence, cultural interest, and attitudes toward the L2 community are all below 3.0. The only two variables that barely fall on the upper half of the Likert scale (i.e., $M > 3.0$) are the two instrumental orientations. In sharp contrast to Group 1, learners categorized in Group 5 have very high scores in almost all of their motivational factors. They have strong ideal and ought-to L2 selves, enjoy their language learning experience, hold highly positive attitudes toward the target community and culture, have both prevention-oriented and promotion-oriented instrumental reasons for learning, and are moderately influenced by their families.

In the middle of the continuum stands Group 3. The learners in this group have characteristics similar to Group 5, although the scores of the former group on all of the variables are relatively lower with a tendency toward the pragmatic and professional aspects of English learning. These learners seem to have moderately strong ideal and ought-to L2 selves, enjoy their learning experience, be somewhat influenced by their families, and have strong instrumental goals of both promotion and prevention types. However, in addition to the strength of the variables, another main difference between Group 3 and Group 5 is that the members of the former group do not hold very positive attitudes toward the L2 culture and community.

Group 2 learners have a weak ideal L2 self and even lower scores on the ought-to L2 self as well as family influence. They also seem to have moderate instrumental orientations and moderately positive attitudes toward their learning experiences and toward the L2 culture and community.

Finally, the learners belonging in Group 4 have strong ideal L2 selves, enjoy the learning process, hold positive attitudes toward the target culture and community, and have strong instrumental motives with a promotional tendency. Group 4 learners appear to have a lot in common with Group 5 in terms of their promotional motives, representing the desire to approach positive outcomes. The two groups have equally strong scores in the ideal L2 self, language

Table 2 ANOVA results comparing the mean scores of the motivational scales

	Group 1	Group 2	Group 3	Group 4	Group 5	*df*	Tukey's post-hoc tests	*F*-value/*p*	η^2
Ideal L2 self	2.94	3.88	4.51	5.04	5.09	4	1 < 2 < 3 < 4, 5	361.1 / .0001	.53
Ought-to L2 self	2.78	3.34	4.06	2.59	4.49	4	4 < 1 < 2 < 3 < 5	299.4 / .0001	.48
Learning experience	2.84	4.06	4.05	4.84	5.11	4	1 < 2, 3 < 4, 5	223 / .0001	.41
Instrumentality promotion	3.60	4.28	4.89	4.88	5.29	4	1 < 2 < 3, 4 < 5	271.1 / .0001	.46
Instrumentality prevention	3.95	4.27	4.90	3.24	4.99	4	4 < 1 < 2 < 3, 5	172.8 / .0001	.35
Family Influence	2.78	3.28	3.95	3.06	4.33	4	1 < 4 < 2 < 3 < 5	179.8 / .0001	.36
Cultural interest	2.22	3.52	2.53	4.87	4.75	4	1 < 3 < 2 < 4, 5	472.6 / .0001	.60
Attitudes to L2 community	2.46	4.14	3.51	5.08	5.07	4	1 < 3 < 2 < 4, 5	410.1 / .0001	.56

learning experience, and attitudes toward the L2 culture and community. Group 4 learners also have the second strongest score in instrumentality promotion after Group 5. The two groups are drastically different, though, when it comes to their preventional motives, representing the desire to avoid negative end-states. Group 4 learners have the lowest score on the ought-to L2 self and instrumentality prevention and the second lowest score in family influence among all the emerged groups whereas Group 5 learners have the highest scores on these variables.

Linguistic, Motivational, and Affective Characteristics of the Five Motivational Types

A good way of confirming the validity of group differences in cluster analysis is to compare them against other independent variables (Alexander & Murphy, 1999). In this study, we compared the resulting motivational groups in terms of their motivated behavior, language anxiety, and perceived language proficiency—these were our motivational, emotional, and linguistic criterion measures of the participants, respectively. We also included attendance at private language institutes as a variable in order to understand the results better. The results from the comparison of means across the five groups in terms of the measures, along with the groups' rates of attendance in private language institute, are presented in Table 3.

As Table 3 illustrates, the groups show a steady increase in terms of their motivated behavior, with Group 1 having the lowest score and Group 5 having the highest score, although the difference between Group 4 and Group 5 is not statistically significant. In terms of L2 anxiety, Group 4 learners have a significantly lower score than all the other groups. In addition, Group 1 learners are significantly less anxious than Group 3 learners. The rest of the differences do not reach statistical significance. There are also significant differences between the groups in terms of their self-ratings of L2 proficiency. Group 4 learners have the highest L2 proficiency rating, followed by Group 5, Group 2, Group 1, and finally Group 3 learners, who rank the lowest. However, the differences between Group 1 and both Group 2 and Group 3 are not significant. In terms of private language learning rates, Group 4 has the highest rate, with almost half of the learners going to private language institutes. Group 5 ranks next, with almost 30% of the learners in this group going to such language learning centers. Approximately 13% of Group 2 learners and only 6% of Group 3 and Group 1 learners learn English in these contexts.

Table 3 Differences in terms of the criterion measures in each group

	Group 1	Group 2	Group 3	Group 4	Group 5	*df*	Tukey's post-hoc tests	*F*-value/*p*	η^2
Motivated behavior	3.36	4.18	4.62	4.92	5.09	4	$1 < 2 < 3 < 4, 5$	157.6/ .000	.33
Language anxiety	3.26	3.45	3.59	2.91	3.49	4	$4 < 1, 2, 3, 5; 1 < 3$	15.1/ .000	.04
Language proficiency	2.19	2.44	2.08	3.28	2.81	4	$3 < 2 < 5 < 4; 1 < 4; 1 < 5$	30.1 / .000	.09
Institute attendance	6.3%	12.9%	6.2%	47.1%	29.9%	4	—	—	—

Table 4 Group differences in terms of motivational/attitudinal variables

	Promotion-oriented		Prevention-oriented				
	M	*SD*	*M*	*SD*	*t*	*df*	Cohen's *d*
Ideal L2 self	4.64	.87	3.36	.93	22.31**	1218	1.42
Ought-to L2 self	3.39	.98	4.03	.90	−10.27**	1218	.68
L2 Learning experience	4.36	1.14	3.72	1.16	8.62**	1218	.56
Instrumentality promotion	4.73	.81	4.30	.91	7.97**	1218	.50
Instrumentality prevention	4.30	1.01	4.64	.85	−5.47**	1218	.36
Family influence	3.51	.93	3.66	.98	−2.41	1218	.15
Cultural interest	3.72	1.37	3.00	1.22	8.33**	1218	.55
Attitudes to L2 community	4.21	1.20	3.58	1.30	7.95**	1218	.50

*$p < .006$; **$p < .001$.

Promotional Versus Preventional Tendencies

In the following analyses, we were interested in examining how learners with a general tendency toward the preventional or promotional regulatory focus vary in terms of their behavioral states and how those states are related to our measured variables. To divide the sample into the two broad motivational orientations, the participants' ought-to L2 self scores were subtracted from their ideal L2 self scores. Negative scores would show that the participants are more strongly attracted by their ought-to L2 self, that is, they have a stronger ought-to than ideal L2 self, representing a prevention tendency. Positive scores, on the other hand, would indicate that the participants are more strongly attracted by their ideal L2 self, that is, they have a stronger ideal than ought-to L2 self, representing a promotion-focus tendency. Such a difference-score methodology is used in motivational psychology to pinpoint the promotional and preventional orientations of individuals (e.g., Higgins et al., 1997; Lockwood, Jordan, & Kunda, 2002). The analysis produced two groups: The promotion-oriented group included 894 students while the prevention-oriented group contained 326 learners. Table 4 shows the results of independent samples *t* tests comparing the two groups in terms of the measured variables. In order to reduce the possibility of type-I error due to the use of multiple *t* tests, the Bonferroni-adjusted alpha level was set at .00625.

Table 5 Group differences in terms of motivational/attitudinal variables

	Promotion-oriented		Prevention-oriented				
	M	*SD*	*M*	*SD*	*t*	*df*	Cohen's *d*
Motivated behavior	4.59	.97	4.04	1.12	8.41**	1218	.52
Language anxiety	3.31	.96	3.59	.92	−4.59**	1218	.30
Language proficiency	2.58	1.30	2.31	1.27	3.04*	1129	.21
Private school attendance	207/ 23.2%			24/7.4%			

*$p < .006$; **$p < .001$.

As shown in Table 4, the promotion-oriented learners have significantly stronger scores in the ideal L2 self, L2 learning experience, instrumentality promotion, and attitudes toward the target culture and community. The prevention-oriented learners, on the other hand, have higher scores in their ought-to L2 self, instrumentality prevention, and family influence. Also significant differences were found in terms of the criterion measures between the two orientation groups, shown in Table 5. The promotion-oriented group had higher scores on motivated behavior and self-ratings of L2 proficiency. On the other hand, the prevention-oriented group had a higher level of language anxiety. Moreover, almost a quarter (23%) of the students in the promotion-focus group attended private language school, which is three times higher than the figure for the prevention-focus group (7.4%). These figures all show the superiority of the promotion-focus group in terms of the measured motivational, emotional, and linguistic outcomes. The question remains as to whether the outcome-motivated behavior of the two groups is produced by the same motivational factors or by qualitatively different motives.

Following the tradition in motivational psychology, in order to explore this question further, we ran partial correlation analyses. Partial correlations are used to measure the association between any two variables while controlling for the effects of other variables that might otherwise influence the results. As shown in Table 6, the results of partial correlation analysis for each group exhibited a different pattern. Having controlled for the effects of the ought-to L2 self and instrumentality prevention (as two prevention-oriented variables), the correlations between the two promotion-oriented motives (the ideal L2 self

Table 6 Partial correlations with motivated behavior in both promotion-focused and prevention-focused groups

	Motivated behavior	
Partialling out ought-to L2 self and instrumentality prevention	Promotion-oriented	Prevention-oriented
Ideal L2 self	.47**	.16*
Instrumentality promotion	.56**	.16**
Partialling out ideal L2 self and instrumentality promotion		
Ought-to L2 self	.03	.13*
Instrumentality prevention	.03	.18**

*$p < .006$; **$p < .001$.

and instrumentality promotion) and the motivated behavior were statistically significant for both groups, although the correlations for the prevention-oriented group were quite weaker than for the promotion-oriented group. Next, after controlling for the ideal L2 self and instrumentality promotion, the correlations between the ought-to L2 self and instrumentality prevention on the one hand and motivated behavior on the other were statistically significant only for the prevention-oriented group.

Discussion

The purpose of the current study was to examine whether language learners would form distinct motivational groups based on their common motivational characteristics, and if so, how these motivational configurations would vary in terms of their behavioral outcomes. Below we discuss the results of the clustering procedure and highlight crucial differences between the groups that emerged from the analyses in terms of outcome measures. Then we describe how the findings of the second part of the study confirmed our clustering results.

Five Motivational Profiles

Cluster analysis yielded five distinct motivational groups that varied in terms of their affective, motivational, and linguistic outcomes. Learners in Group 1 had the lowest scores in almost all of the motivational factors and can therefore be considered to be weak on all three central components of the motivational self system (henceforth, Group 1 can be called the –ideal L2 self, –ought-to L2 self,

–L2 learning experience group).[1] They also had the lowest level of motivated behavior, and the second lowest scores in L2 anxiety, L2 proficiency, and private language institute attendance. Such students do not see any relevance of English in their future life and think of it as an obligatory course in school to be passed. They do not enjoy the process of language learning in the school and project negative attitudes toward L2 community and its culture. They are a little anxious probably because of their concern about passing courses, and they do not typically attend private language institutes. These learners seem to be the equivalent of the learners in Csizér and Dörnyei's (2005) study who formed their first cluster and were named the least motivated group.

Learners in Group 2 (henceforth the –ideal L2 self, –ought-to L2 self, +L2 learning experience group) have weak scores on the ideal L2 self and the ought-to L2 self and moderate scores on the scales of instrumentality, L2 learning experiences, and attitudes toward the L2 culture and community. These students have not developed strong L2 selves but hold positive attitudes toward the target community and culture and seem to be motivated mainly by the executive motives in their language learning environment, which in turn might be related to their relatively higher attendance in private language institutes, compared to Groups 1 and 3. They do not show high levels of motivated behavior and are not very anxious about language learning. Csizér and Dörnyei (2005) also identified a group, who had quite comparable characteristics (their Group 2). Referring to such learners, they similarly argued that, "although they are positively disposed toward the target language, it simply does not reach the necessary level of relevance for them to develop into an ideal L2 self" (p. 638).

Learners in Group 3 (henceforth the +ideal L2 self, +ought-to L2 self, +L2 learning experience group) have moderate scores on most of the motivational scales and relatively high scores on both scales of instrumentality. Such students have recognized the pragmatic benefits of L2 learning. They have shaped the professional aspect of their ideal L2 self, are concerned about the negative consequences of failure, and do not hold positive attitudes toward the L2 community and its culture. They are also relatively more anxious than Group 1, rate their proficiency levels lower than all the other groups, and their private institute attendance is still the lowest along with Group 1. Nonetheless, Group 3 learners had higher scores on motivated behavior than Group 2, despite their significantly lower scores on attitudes toward the target language culture and community scales. This result runs against the previous findings associated with Gardner and his associates (e.g., Gardner & Lambert, 1972), namely, that language attitudes are the most important predictors of L2 motivation, and along with other results provides further support for the relevance of the concept of

the self to language learning motivation. Group 3 easily corresponds to Group 3 identified in the work by Csizér and Dörnyei (2005). Not unlike our Group 3, their Group 3 learners had a strong sense of the professional usefulness of L2 proficiency and did not hold very positive attitudes toward the L2 culture and community.

Learners in Group 4 (henceforth the ++ideal L2 self, ++ought-to L2 self, ++English learning experience group) have a strong ideal L2 self, high scores on instrumentality promotion, and highly positive attitudes toward the L2 community and culture. It seems that their ideal L2 self is fully rounded and contains both professional and social aspects. They highly enjoy their language learning experience and find themselves at a safe distance from their ought-to L2 self. In other words, they are not concerned about the negative consequences of failing to meet L2 performance expectations or obligations, if there are any, and have an exclusively promotional learning tendency. They have the highest rate of private language institute attendance, rate their own proficiency higher than all the other groups, are the least anxious students, and along with Group 5, have the highest levels of motivated behavior. Group 4 is the only group in the present study that does not have a match in the study by Csizér and Dörnyei (2005).

Learners in Group 5 (henceforth the ++ideal L2 self, ++ought-to L2 self, ++L2 learning experience group) have very high scores in all of their motivational factors. These students have a balanced self system. They have a fully fledged ideal L2 self, with both social and professional aspects, and at the same time a strong ought-to L2 self. Not unlike Group 4, they enjoy the learning process and have positive attitudes toward the L2 culture and community. Unlike Group 4, on the other hand, they have a strong sense of obligations or duties for language learning and want to avoid the negative consequences of failing to meet those obligations. Regarding their scores on the criterion measures, they also have the highest level of motivated behavior (along with Group 4), rate their L2 proficiency the second highest, and are the second most anxious group of learners. They also have the second highest private language institute attendance. A group with similar characteristics emerged in the study by Csizér and Dörnyei (2005), which was labeled the most motivated group.

The finding that our Group 5 showed the highest degree of motivated behavior appears to confirm the idea that a balance between the two future-self guides, the ideal L2 self and the ought-to self, will lead to higher levels of motivation for language learning (Dörnyei, 2009a; Hoyle & Sherrill, 2006). However, a close comparison of Group 4 and Group 5 questions the validity of the claim concerning the balanced self system being the most effective

motivational configuration. Despite the fact that Group 4 learners had the same scores on the promotion-focus variables as Group 5 and even a significantly lower score on instrumentality promotion and that they had significantly lower scores on all the prevention-focus variables than all the other groups including Group 5, the two groups had the same level of motivated behavior. This means that the prevention-focus variables have not given Group 5 learners any advantage in terms of language learning motivated behavior. In addition, Group 4 learners also had a significantly higher L2 proficiency rating and the lowest level of L2 anxiety. Their rate of private language learning was also more than 50% higher than Group 5. The combination of these results shows that although learners with a balanced self system might show the same amount of motivated behavior, the learner with an exclusively promotional orientation might have qualitatively superior emotional, linguistic, and behavioral characteristics suited for long-term language learning. In a recent study of English learners in private language institutes in the same context (i.e., Iran), Tahmouresi, Teimouri, and Papi (2013) found support for this claim. They showed that while both the ought-to and the ideal L2 self resulted in the traditional performance-related motivated behaviors, only the ideal L2 self resulted in the willingness to communicate in an L2, which is a highly internalized type of motivated learning behavior (see MacIntyre, Clément, Dörnyei, & Noels, 1998).

Overall, however, our results closely match the findings of the study by Csizér and Dörnyei (2005). In their study, the least motivated students, the students with positive attitudes, the instrumentally oriented students, and finally the most motivated students had the lowest through the highest levels of motivated behavior, respectively. That these researchers did not identify a group equivalent to our Group 4 might have been due to the fact that integrativeness, measured in their study, may not really be an exact equivalent of the ideal L2 self, measured in ours. While the desire to blend into the target language community might represent the social aspect of one's ideal L2 self, it may not satisfy the professional aspect of the ideal L2 self. Or the desire to integrate into an L2 community can be argued to be only a means to another end rather than an end in and of itself. The ideal L2 self, on the other hand, can be considered a highly internalized goal of developing a new identity with desirable social and professional aspects.

In terms of L2 anxiety, the emotional state measured in the study, Group 4 had the lowest score among all the groups, with this difference being statistically significant. The only other significant result emerged between Group 3 and Group 1, with the latter group having a significantly lower score than the

former. Considering that Group 1 learners do not seem to have any type of motivation for English learning, their low level of anxiety is not surprising. A closer look at the motivational configurations in each group reveals that L2 anxiety increases hand-in-hand with prevention-focus variables, especially the ought-to L2 self. The more anxious groups (i.e., Groups 3 and 5) also reported higher scores for the ought-to L2 self, and Group 4, which reported the least language anxiety in the class, also had the lowest score for the ought-to L2 self.

Extensive support for the association between ought-to selves and agitation-related emotions such as anxiety and fear has been shown in motivational psychology (e.g., Higgins, 1987, 1997; Higgins et al., 1997). This association between selves and emotions can be explained based on Higgins's (1987) self-discrepancy theory. According to this theory, matches and mismatches between one's ideal or ought-to selves and one's actual self have distinct emotional consequences (Higgins, 1998). Because ideal self has a promotional focus (concerned with the presence or absence of positive outcomes), a match or mismatch between one's actual self and his/her ideal self would evoke elation or dejection-related emotions (e.g., happiness or sadness), respectively. On the other hand, because ought-to self has a preventional focus (involving the presence or absence of negative outcomes), a match or mismatch between one's actual self and ought-to selves would lead to relaxation- or agitation-related emotions including comfort or anxiety, respectively. Notably, it is possible that L2 anxiety may have effects on learning behavior that are facilitative (e.g., Ehrman & Oxford, 1995; Young 1998; Horwitz, 1990) for ought-to-self driven learners, and yet debilitating for learners with strong ideal selves (Papi, 2010). In terms of the groups' self-reported English proficiency, an unexpected result was that Group 3 learners had the lowest rating among all the groups despite having a significantly higher score on the motivated behavior scale, compared to Group 2 and Group 1. The disagreement between self-rated proficiency and motivated behavior may confirm the recognition by some motivation researchers that "L2 motivation is not necessarily achievement-oriented but value-based and identity-oriented" (Ushioda, 2011, p. 221). Motivation can thus be seen as the driving force behind an ongoing process of language learning rather than something which will have an immediate impact on L2 competence. In other words, motivation is an antecedent of action and its relationship with linguistic measures such as L2 proficiency is indirect and influenced by other factors such as language ability and the quality and quantity of the learning experience.

The mismatch between the motivated behavior and self-ratings of L2 proficiency might also be due to our method of assessing language proficiency and the role that affective variables such as anxiety might play (see MacIntyre,

Noels, & Clément, 1997). In our study, language proficiency was measured subjectively through asking students to rate their L2 proficiency on a 5-point scale ranging from *beginner* to *upper-intermediate*, each with their own detailed descriptions (see Appendix S1 in the Supporting Information online). Although research has shown that language learners are capable of predicting their L2 abilities accurately especially when the skills to be assessed are described clearly and in detail (Blanche & Merino, 1989) and provided appropriate and specific assessment tools are used (MacIntyre et al., 1997), this is not always the case, and errors of judgment occur on the part of learners (MacIntyre et al., 1997). In addition, previous research has also found a negative relationship between anxiety and subjective and objective measures of language proficiency (Clément, Gardner, & Smythe, 1980; Clément & Kruidenier, 1983). Our Group 3 learners had a higher level of anxiety than Group 2 and Group 1, although their difference from Group 2 was not statistically significant.

The motivational groups emerging from our cluster analysis also showed distinguishing differences in terms of their attendance in private language schools.[2] Group 1, had the lowest attendance (6.3%) whereas almost half of the students in Group 4 had joined private language schools, which was the highest rate of attendance among all the groups. Group 5 had the second highest rate of attendance, which was 30%. Finally, only 6.3% of the students in Group 3 and 12% in Group 2 reported attending private language schools, figures which show a clear difference between these groups and Groups 4 and 5, as the most motivated groups. It should be pointed out that although attendance in private language institutes, where more communicative approaches to language teaching are prevalent, can be related to different factors including the socioeconomic class of the learners (Block, 2012), and thus cannot be trusted as a good measure of motivated behavior, the learning experience in such schools seems to have meaningful associations with the motivational profiles of the learners. Attendance in the private language institutes seems to be related to stronger ideal L2 selves and more positive learning experiences. However, we cannot ascertain whether attendance in the institutes is the outcome of having strong ideal L2 selves and having positive learning attitudes or it is the cause of positive learning experiences and developing ideal L2 selves.

The Role of Promotional and Preventional Orientations

In the second part of the study we divided the whole sample into two groups of different motivational regulatory focus (Higgins, 1998). One group was characterized by a stronger ought-to L2 self, representing a preventional focus,

and the other group was characterized by a stronger ideal L2 self, representing a promotional focus. The mean scores of the groups on the criterion measures were then compared using independent samples *t* tests. The results of the analyses showed that the promotion-focus group of learners had significantly higher scores on motivated behavior and L2 proficiency and was significantly less anxious.

To examine the associations between the motivational variables with different regulatory sources (i.e., ideal L2 self and instrumentality promotion vs. ought-to L2 self and instrumentality prevention) and the motivated behavior, partial correlation analyses were run. In contrast to many previous studies which provided evidence that ideal L2 self always has a stronger association with the motivated behavior than the ought-to L2 self does, we found that, for the prevention-oriented type of learners, the ought-to L2 self but not the ideal L2 self was significantly correlated with motivated behavior although the association was not strong. These results clearly show that the promotion-focus motives are stronger than the prevention-focus factors, because the former were associated with motivated behavior of both the promotion and prevention-oriented groups, while the latter only worked for the prevention-oriented group.

These results also confirmed our interpretation of the cluster analysis results, in that variables with a preventional regulatory source (e.g., the ought-to L2 self, instrumentality prevention) result in L2 anxiety, which in turn may drive learners to show some degree of motivated behavior in order to meet the expectation and obligations and avoid the possible negative consequences causing this level of anxiety. In other words, the desire to meet the expected performance standards in learners with the prevention-focus motives result in some degree of L2 anxiety and motivated behavior at the same time. On the other hand, variables with a promotional regulatory source produce higher levels of motivated learning behavior without creating negative feelings including anxiety (see Tahmouresi et al., 2013).

The rate of private language institute attendance among the promotion-oriented learners was also three times higher than that of the prevention-focus learners. As already alluded to, this might have been either a cause or a consequence of the learners' promotional tendencies. In other words, the learners' desire to realize their ideal English selves through mastering the language might have motivated them to attend private language classes. Or attendance in such institutes might have created the image of a highly proficient speaker of English in the mind of the learners. It should be noted that the higher proficiency ratings of the promotion-oriented group might have also been an outcome

of their higher rate of attendance in such institutes. Thus, the L2 proficiency ratings might either represent the real ability of the students or simply reflect the self-confidence they have gained as a result of learning English in such places. These results again confirmed our basic assumption that learners with different regulatory foci display different motivational, emotional, and linguistic characteristics.

Limitations, Research Directions, and Pedagogical Implications

In the present study, we used self-reported English proficiency ratings as the linguistic measure, which may not represent the actual ability of the participants. Triangulating the data with more objective measures of L2 proficiency can make the relevant results more robust in future studies. The five proposed motivational types are based on the data that we collected in the Iranian context. The types may not be easily generalizable to other samples of learners and therefore must be examined and empirically supported in different socio-educational contexts.

Our study highlighted the importance of distinguishing between learners of different motivational types in L2 motivation research, which can have fruitful implications for L2 motivation research and L2 pedagogy. Past research on motivation in mainstream psychology shows the significance of fundamental distinctions in motivation types in explaining how people pursue different goals or needs of different nature. Some of these fundamental motivational distinctions include conscious and unconscious motivation (Chartland & Bargh, 2002), approach and avoidance motivation (Elliot, 1999; Elliot & Covington, 2001), and promotion and prevention motivation (Higgins, 1998). L2 motivation research has lagged behind in this area due to its obsession with the impact of individual variables on learners' motivated behavior regardless of their general motivational orientations and the effects of individual variables on learners of different motivational types. Rather than mainly focusing on what variables may impact one's motivation, researchers may want to try to explain how such motivational variables fit in the students' motivational configurations and how these configurations result in different emotional, motivational, and linguistic states. L2 motivation researchers would do well to take account of such motivational distinctions in order to capture the complexity of students' motivation in pursing their goals.

The results of this study concerning motivational learner types can also have major practical implications for language teaching and teachers' motivational practices (see Guilloteaux & Dörnyei, 2008; Moskovsky, Alrabai, Paolini, & Ratcheva, 2013). Language teachers may wonder why, despite their efforts

in creating an image of successful learners and presenting the advantages of knowing an L2 to students, or despite highlighting the negative consequences of the failure to do so, many students seem to be quite indifferent and not motivated. Appropriate motivational strategies compatible with students' motivational types can be employed to gain optimal outcomes. It might be the case that imposing obligations on a strongly promotion-oriented student might have detrimental effects on them while a student without internalized motives may be thankful for being pushed to meet certain standards of performance. It is likely that the answer to the best motivational practices question might lie in our understanding of the different ways language learners of different motivational types approach the language learning process.

The application of cluster analysis helped us uncover some of the complex aspects of L2 motivation. It is hoped that researchers in this area make more frequent use of cluster analysis as a useful tool for researching different learner variables in different contexts. It would be interesting to see if similar motivational types would emerge in different socio-educational contexts. The findings can also be interpreted within the dynamic system theory recommended by Dörnyei (2014) for researching L2 motivation. From the perspective of the dynamic systems theory, each arising motivational cluster can thus constitute a conglomerate of elements capable of driving the behavioral state of each group (Byrne, 1998). The interactions among these different elements within these motivational conglomerates can be seen in the linguistic, motivational, and affective outcomes measured in the present study.

Conclusion

The results of the current study showed that there are learners of different motivational types and orientations who approach the learning process through different motivational paths, even in a single homogenous setting (in our case, the secondary schools in Iran). Overall, by highlighting learners rather than variables as the focus of analysis, this study presented a nuanced picture of language learners' motivational profiles. More specifically, the present study revealed that combinations of different motivational factors can result in the formation of learner groups with motivational configurations associated with qualitatively as well as quantitatively different motivational, emotional, and linguistic patterns.

Final revised version accepted 20 December 2013

Notes

1 − = weak; + = moderate; ++ = strong.
2 We discussed private language attendance as a factor that might help us understand potential differences in the motivational characteristics of learners although, as accurately pointed out by one of the anonymous reviewers, this factor can be strongly associated with the socio-economic status of the students.

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Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Appendix S1: Questionnaire Survey Items
Appendix S2: Dendogram with Five-Cluster Solution Resulting from Hierarchical Cluster Analysis Using Ward's Method with 100 Randomly-Chosen Participants