

## EFL learners' motivational beliefs and their use of learning strategies

**Abbas Ali Rezaee**

(Associate Professor, University of Tehran, Iran)

**Shiva Kaivanpanah**

(Associate Professor, University of Tehran, Iran)

**Sedigheh Najibi\***

(PhD, Faculty Member, Columbia College, Fairfax, Virginia, USA)

\*Corresponding author email: najibise@yahoo.com

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### *Abstract*

The present study attempted to examine the relationship between English as a Foreign Language (EFL) learners' motivational beliefs and their use of learning strategies. The three components of motivation, i.e. expectancy component, value component and affective component, were examined in relation to metacognitive, cognitive and effort management strategies. Two hundred and fifty seven EFL learners representing different proficiency levels completed the Persian version of the Motivated Strategies for Learning Questionnaire (MSLQ), which consisted of motivation scale and learning strategies scale. The analysis of the effect of proficiency level on motivational beliefs showed a significant effect of proficiency level on test anxiety and extrinsic goal orientation, suggesting that less proficient learners were significantly more anxious and more extrinsically oriented compared to advanced learners of English. It was also found that self-efficacy, control of learning beliefs, intrinsic goal orientation and task value could account for 70% of variations in self-regulated learning (SRL) strategies. Based on the findings of this study, several suggestions are made to aid instructors in creating a non-product-oriented approach to learning, which promotes foreign language learners' learning outcomes.

**Keywords:** Self-regulated learning (SRL), motivational beliefs, learning strategies, Motivated Strategies for Learning Questionnaire (MSLQ)

### **Introduction**

The link between cognition and motivation has been the focus of interest among motivation theorists. In fact, this link constitutes the subject of motivation theorists' research on regulation of behavior to attain goals. As Eccles and Wigfield (2002) maintain, "Broadly these theorists focus on two issues: how motivation gets translated into regulated behavior, and how motivation and cognition are linked" (p. 124). The first issue, i.e. self-regulated behavior, is characterized as being metacognitively,

motivationally, and behaviorally active in one's own learning processes (Zimmerman, 1989). As Zimmerman maintains, "To qualify specifically as self-regulated in my account, students' learning must involve the use of specified strategies to achieve academic goals on the basis of self-efficacy perceptions" (1989, p. 329). The three important elements in Zimmerman's definition are self-regulated learning strategies, self-efficacy perceptions of performance skill, and commitment to academic goals. The second issue

discussed by motivation theorists is the link between cognition and motivation or the way they interact to affect self-regulated learning. Investigating the link between cognition and motivation, Pintrich, Marx, and Boyle (1993) postulated that in addition to influencing one another, cognitive and motivational constructs are influenced by context. Additionally, cognitive and motivational constructs influence learners' engagement in the learning process, which will consequently affect their achievement outcomes (Eccles & Wigfield, 2002).

In order to conceptualize student motivation, Pintrich and De Groot (1990) adopt an expectancy value model of motivation, in which the components of motivation and self-regulated learning are linked. As Pintrich and De Groot state,

There are three components of motivation that may be linked to the three different components of self-regulated learning [i.e. metacognitive, cognitive and effort management strategies]: (a) an expectancy component, which includes students' beliefs about their ability to perform a task, (b) a value component, which includes students' goals and beliefs about the importance and interest of the task, and (c) an affective component, which includes students' emotional reactions to the task (1990, p. 33).

In Pintrich and De Groot's study (1990) the expectancy and the value components of motivation correlate with frequent use of metacognitive, cognitive, and effort management strategies. The relationship of the affective component to the components of self-regulated

learning was not found to be as straightforward as the other two components.

Since the current research aimed to examine the relationship between the components of motivation and self-regulation using, in the following paragraphs the relationships between motivation and self-regulated learning will be discussed.

### **Relationships between motivation and self-regulated learning**

In Pintrich's (1999) articulation of the link between self-regulated learning (SRL) and motivation, SRL is defined as a process where learners actively participate in setting goals, monitoring and regulating their cognition, motivation, and learning. Models of SRL can be generally conceptualized as a matrix of interactive cells where regulatory mechanisms work across four areas: cognition, motivation/affect, behavior, and context. There are also four phases that cut across these four areas or domains: forethought, planning, and activation, monitoring, control, reaction and reflection. To put it in simple terms, a self-regulating learner engages in regulatory phases of forethought, planning, activation, monitoring, control, reaction and reflection in areas of cognition, motivation/affect, behavior, and context. Pintrich (2004) notes that although individuals go through the four phases in a generally "time-ordered sequence", we cannot strongly assume that phases represent a strict hierarchical or linear structure (p. 389). Table 1 provides a description of the phases and areas that constitute self-regulated learning (see Appendix). The following paragraphs will present a short description of the

four phases of cognition, motivation/affect, behavior, and context regulation in SRL.

### **Phase 1: Regulation of cognition**

The first phase of regulating cognition involves forethought and planning activities and strategies such as “setting specific target or cognitive goals for learning, activating prior knowledge about the material to be studied, as well as activating any metacognitive knowledge students might have about the task or themselves” (Pintrich, 2004, p. 392). In other words, goals, prior content knowledge, and metacognitive knowledge are cognitions that can be self-regulated during the forethought, planning, and activation phase (Schunk, 2005).

In the cognition activation phase, the learners engage in activating prior knowledge in an unconscious manner; Schunk (2005), nevertheless, believes that a self-regulated learner activates knowledge in a “planful way through prompting and self-questioning” (p. 86). Metacognitive knowledge can also be activated either automatically or in a more planful and deliberate manner. Metacognitive knowledge is comprised of knowledge about the cognitive tasks or “declarative knowledge (e.g., of learning strategies such as rehearsal and note taking)”, cognitive strategies or “procedural knowledge (how to implement these strategies), and conditional knowledge (when and why to use different strategies)” (Schunk, 2005, p. 86).

Monitoring cognition is another important phase of cognition regulation, which ensures steady progress towards the set goals in addition to adaptations

and adjustments made in the process of learning and comprehension. Monitoring cognition, thus, involves metacognitive awareness followed by cognition control through engaging learners in the selection and adaptation of cognitive strategies for learning and thinking. Through making judgments about the status of progress towards the pre-defined goals, control of cognition contributes to the readjustment and modifying of task-specific goals and strategies. Cognitive judgments, therefore, ensue as a result of cognitive monitoring and control providing information about the “discrepancy between a goal and current progress toward that goal” (Pintrich, 2004, p. 392).

### **Phase 2: Regulation of motivation**

Motivation is assumed to be a key factor in determining learning achievement (Dörnyei, Csizér & Nemeth, 2006). In fact, motivation can be assumed to be a distinguishing feature setting SRL apart from other models of learning. In the following paragraphs a definition of how motivation is operationalized in relation to learning will be followed by a description of how motivation regulation works in SRL models.

Motivation has been operationalized differently. For instance, in Zimmerman’s model motivational beliefs included concepts such as self-efficacy, outcome expectations, and goal-orientation (2000). Pintrich and De Groot (1990) conceptualized motivation by adopting a general expectancy-value motivation model, which is similar to Eccles and Wigfield’s (2002) model. In a cognitive-motivational process model based on different conceptions of motivation (Pintrich, 2000; Zimmerman,

1989; Eccles and Wigfield, 2002), Vollmeyer and Rheinberg (2006) discussed a motivation model comprising initial factors of motivation, possible mediators of initial motivation and learning outcomes. The motivation model used in the current study is adapted from Pintrich, Smith, Garcia, and McKeachie's (1991, 1993) comprehensive model that was inspired by Eccles, Adler, Futterman, Goff, Kaczala, Meece, and Midgley's (1983) expectancy-value framework. In this model, motivation in educational settings consists of the three main components of *value*, *expectancies*, and *affect*, which are further broken down to task value, achievement goal orientation, control beliefs, self-efficacy beliefs, expectancy for success, test anxiety, and self-esteem.

In the first phase of motivation regulation, learners plan and activate such motivational and affective beliefs as goal orientation or purposes for doing the task, self-efficacy, perceptions of task difficulty, task value beliefs or the beliefs about the importance, utility, and relevance of the task, and personal interest in the task (Pintrich, 2004). Self-regulating learners actively monitor motivation in order to maintain self-efficacy and interest by proceeding to the next phase, i.e. motivational beliefs control through "positive self-talk" (Schunk, 2005, p. 87). Another control strategy employed to maintain motivation is the prospect of an extrinsic reward for the successful completion of the task or an intrinsic attempt on the part of the learners to "maintain a more mastery-oriented focus on learning" (Pintrich, 2004, p. 396). Along with positive self-talk as a control strategy to regulate motivation, Pintrich refers to

strategies such as "invoking negative affects such as shame or guilt", "defensive pessimism, and "self-handicapping" (p. 396).

### **Phase 3: Regulation of behavior**

Behavior is another area to regulate in self-regulated learning. Behavior regulation includes activities that involve time and effort planning along with plans for observing behavior overtly. Time and effort management activities or resources management activities also characterize behavior regulation in the second phase or the behavior-monitoring phase. The third phase of behavior regulation involves behavior control through "persisting, expending effort, and seeking help when needed" (Schunk, 2005, p. 87). In summary, behavior regulation involves time and effort planning, awareness and monitoring of effort, time use, need for help, increase/decrease effort, and choice behavior.

### **Phase 4: Regulation of context**

Regulation of context in SRL is different from the traditional "volitional control" where attempts are made "to control or structure the environment in ways that facilitate goals and task completion" (Pintrich, 2004, p. 399). Self-regulating learners, nevertheless, attempt to create contexts conducive to learning. In the first phase, therefore, learners form perceptions of the task and the learning context that they will experience. Learners then proceed to monitor the task and context conditions followed by adapting or negotiating the task to accommodate the contextual factors. In an attempt to control the context, learners might as well adapt the context to accommodate the demands of the task. Examples of context regulation are

learners' attempts at peer learning and utilizing available resources to benefit from the learning experience. Finally, the last phase to engage in is reaction and reflection, where learners "assess their performances, and these assessments form the basis for other efforts to regulate motivation, behavior, and context" (Schunk 2005, p. 87).

### **Motivated Strategies for Learning Questionnaire (MSLQ)**

In order to test the complex interplay of motivational, skill, and performance factors, Pintrich (1989) and Pintrich et al. (1991, 1993) suggested a model that combined motivation and study skills to predict students' performance in college to examine the "nomological network determining college students' behaviors" (Robbins, Lauver, Le, Davis, & Langley 2004, p. 276). As a result, *Motivated Strategies for Learning Questionnaire* (MSLQ) was developed for assessing students' motivation and learning strategies. This tool was based on a simple social cognitive and information processing perspective, according to which motivation and learning strategies are not stable and unchanging characteristics of learners; rather, motivation is assumed to be "dynamic and contextually bound" and "learning strategies can be learned and brought under the control" by the learner (Duncan & McKeachie, 2005, p. 117). Pintrich (2004) believed that whereas "the surface and deep approaches to learning fuse motivation and strategies for learning into generic learning styles, MSLQ conceptualizes and assesses the five cognitive strategies separately from any motivational components" (p. 393). Founded on a social-cognitive theoretical framework, MSLQ assumes that "motivation and learning strategies

are not traits of the learner, but rather that motivation is dynamic and contextually bound and that learning strategies can be learned and brought under the control of the student" (Duncan & McKeachie, 2005). Based on this view motivation and learning strategies vary depending on the course and tasks being done.

MSLQ consists of motivation and learning strategies scales, which are further broken down into several subscales. The details are presented in the procedure section.

### **Previous studies**

Previous studies on SRL and motivation can be divided into two groups: those which have examined the relationship between cognitive and motivational factors in non-linguistic educational fields and those which have focused on examining this relationship in second/foreign language learning.

Studies that have investigated the relationship between cognitive and motivational factors (Pajares & Graham, 1999; Pintrich & De Groot, 1990; Schunk, 1984, 1995, Zusho & Pintrich, 2003) have been mainly concerned with examining the link between expectancy and value components of motivation with self-regulated learning components including cognitive, metacognitive, and effort management strategies. Their findings indicated that learners with higher levels of self efficacy and mastery goals, "learning, and challenge, in addition to beliefs that the task is interesting and important, will engage in more metacognitive activity, more cognitive strategy use, and more effective effort management" (Pintrich & De Groot, 1990, p. 34). Moreover,

research has consistently found that a) self-regulating learners outperform non-self-regulating learners due to the use of SRL strategies and having adaptive motivational beliefs (Artino, 2008) b) learners who motivationally, metacognitively, and behaviorally participate actively in their own learning are more likely to achieve well (Schunk & Zimmerman, 2008).

The second group of studies has examined SRL and motivation in foreign language learning (Bown, 2006; Bown, 2009; Hirata, 2010; Kormos & Csizér, 2014; Wang, Quach, & Rolston, 2009; Zahidi, 2012). A summary of these studies is presented in Table 2.

**Table 2: Studies on SRL and Motivation in Second/Foreign Language Learning**

<b>Study</b>	<b>Objectives</b>	<b>Findings</b>
Bown (2006)	Studied two factors that have a significant impact on the student experience in a self-instructed language program: locus of control and use of affective strategies.	Learners with an internal locus of learning are more likely to be successful in self-instructed language learning than those with an external locus of learning. Successful self-instructed learners make use of affective strategies, whereas less successful learners do not.
Bown (2009)	Examined the processes and strategies learners use to manage the self-instructional process	Contextual factors such as learners' self-beliefs and social support influence the kinds of strategies that learners employ. Self-regulation of learning requires that learners structure the learning environment to meet needs and manage emotional responses to individualized language learning.
Wang, Quach, and Rolston (2009)	Studied development of four Chinese English language learners' use of self-regulated learning strategies	Students used more strategies in reading activities than in writing activities. Effective learners are more flexible with their repertoire of strategies and are more successful at monitoring and adapting their strategies. Incorporation of SRL strategies into the teaching of English helped in students' construction of their own strategies
Hirata (2010)	Examined the motivational factors affecting self-regulated learning (SRL) in the context of second language acquisition. The focus was on a particular task, the learning of kanji.	Instrumental mastery, performance orientation, and extrinsic value did not predict students' use of SRL. Intrinsic orientation, self-concept, self-efficacy, and intrinsic value were recognized as important predictors of SRL in general. Intrinsic interest in is essential for cognitive and metacognitive regulation, while a sense of positive self-concept influenced environmental regulation and

		self-efficacy beliefs enabled behavioral regulation.
Zahidi (2012)	Investigated self-regulation in English language learning	Language learners used SRL strategies in unique and varying degrees. Personal and environmental factors influence self-regulated learning strategies.
Kormos & Csizér (2014)	Studied the influence of motivational factors and self-regulatory strategies on autonomous learning behavior.	Strong instrumental goals and international posture, together with positive future self-guides, are prerequisites for the use of effective self-regulatory strategies. In order to exploit the affordances of learning technology, a proactive approach to locating and using these learning resources is necessary.

The most relevant study to examine the predictive relationship between motivational factors and SRL strategies was conducted by Hirata (2010). Hirata's study focused on a particular task, i.e. the learning of Kanji, which are adopted logographic Chinese characters used in modern Japanese writing system. Hirata reported a number of significant relationships suggesting the interdependence of motivational factors and learning strategies. The present study, similarly, attempted to investigate the predictive relationship between motivation and learning strategies employed by EFL learners in a context where English is taught as a foreign language in classroom setting. Identifying the specific motivational beliefs that contribute to the use of learning strategies in such a context can help educators promote learners' motivation and train them how to foster effective motivational beliefs. Therefore, the objectives of the present study are as follows:

1. Are EFL learners' motivational factors different across proficiency levels?

2. To what extent are EFL learners' motivational beliefs predictive of their learning strategies use?

## Method

### *Participants*

A non-random purposive sampling technique was employed to gather data. 280 Persian EFL learners at one of the branches of Iran Language Institute (ILI) located in north eastern Tehran participated in this study. Further screening eliminated those participants who had not filled out the questionnaires completely. Upon the completion of the screening procedure, 257 participants' questionnaires were analyzed. The participants were classified into four groups based on the proficiency levels into which they had already been placed in the institute.

### *Procedure*

One self-report questionnaire, namely Motivated Strategies for Learning Questionnaire (MSLQ), was utilized to obtain information about the learners' motivational beliefs and self-regulated learning strategies employed while learning English. Utilization of the self-report instrument warranted translation from English to Persian, as the target

population's native language was Persian.

Three independent forward translations of the original questionnaires were produced by three professional translators. Then a reconciled version was developed on the basis of the three forward translations and the translators' written and oral reports. Later, in the process of comparison of the backward translation and the original, the discrepancies were analyzed; this resulted in changes in the reconciled translation in the target language and subsequent production of a Persian version.

The MSLQ includes 81 self-report items designed to assess college students' motivational orientation and their use of different learning strategies. Two scales constitute the instrument: motivation scale and learning strategies scale. The motivational scale is further broken down into extrinsic goal orientation, intrinsic goal orientation, task value, control of learning beliefs, self-efficacy for learning and performance, and test anxiety. The learning strategies scale, which is based on a general cognitive model of learning and information processing, has three subscales: cognitive, metacognitive, and resource management.

## Results

The Cronbach's alpha reliability index for the MSLQ was .84, which is considered as a strong estimate of internal consistency.

The results of the descriptive statistics of the participants' motivational beliefs across proficiency levels indicated that the highest mean score was on task value

(6.07) in the pre-intermediate level of proficiency and the lowest mean score was on test anxiety in the advanced level of proficiency (4.22).

A one-way between-subjects ANOVA was conducted to compare motivational beliefs across proficiency levels. The results indicated that there was a significant effect of proficiency level on extrinsic goal orientation at the  $p < .05$  level [ $F(3, 253) = 4.360, p = .005$ ], and test anxiety at the  $p < .05$  level for the four proficiency levels [ $F(3, 247) = 3.584, P = .014$ ].

In order to find out to what extent EFL learners' motivational beliefs are predictive of their learning strategies use, a regression analysis was conducted with motivational beliefs as predictor variables and learning strategies as criterion variables. Based on the results displayed in Table 3, it could be concluded that the components of motivational belief could predict 49.3 percent of total LLS ( $R = .702, R^2 = .493$ ). After excluding the non-significant predictors on the second and third steps, the remaining significant variables – self-efficacy, control of learning, intrinsic and task value predicted 49.1 percent of total LLS ( $R = .701, R^2 = .491$ ).

**Table 3: Multiple Linear Regressions of Motivational Beliefs**

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.702 <sup>a</sup>	.493	.481	11.109
2	.702 <sup>b</sup>	.493	.483	11.089
3	.701 <sup>c</sup>	.491	.483	11.088

Dependent Variable: Learning Strategies

a. Predictors: (Constant), Test Anxiety, Self Efficacy, Extrinsic Goal Orientation, Control of Learning Beliefs, Intrinsic Goal Orientation, Task Value

b. Predictors: (Constant), Self Efficacy, Extrinsic Goal Orientation, Control of Learning Beliefs, Intrinsic Goal Orientation, Task Value

c. Predictors: (Constant), Self Efficacy, Control of Learning Beliefs, Intrinsic Goal Orientation, Task Value



In order to find out which motivational components predict self-regulated learning strategies, an ANOVA test was used. The results in Table 4 ( $F(4, 252) = 60.70, P < .05, \omega^2 = .48$ ) indicated that self-efficacy, control of learning beliefs, intrinsic goal orientation, and task value significantly predicted learning strategies. Therefore, these were entered into the multiple regression models as predictor variables.

**Table 4: ANOVA for Motivational Beliefs**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	29984.319	6	4997.386	40.491	.000 <sup>b</sup>
1 Residual	30854.615	250	123.418		
Total	60838.934	256			
Regression	29976.397	5	5995.279	48.759	.000 <sup>c</sup>
2 Residual	30862.536	251	122.958		
Total	60838.934	256			
Regression	29856.025	4	7464.006	60.709	.000 <sup>d</sup>
3 Residual	30982.909	252	122.948		
Total	60838.934	256			

a. Dependent Variable: LLS

b. Predictors: (Constant), Test Anxiety, Self Efficacy, Extrinsic, Control of Learning Beliefs, Intrinsic, Task Value

c. Predictors: (Constant), Self Efficacy, Extrinsic, Control of Learning Beliefs, Intrinsic, Task Value

d. Predictors: (Constant), Self Efficacy, Control of Learning Beliefs, Intrinsic, Task Value

Table 5 displays the regression coefficients, significance values of the contribution of the predictors and collinearity indices. The variables with non-significant contributions to the regression model ( $P > .05$ ) were excluded on each step. The tolerance values higher than .10 and VIF indices lower than 10 indicate that the assumption of lack of multicollinearity was met.

**Discussion**

The first objective of the present study was to examine the relationship between proficiency levels and motivational beliefs. Proficiency levels were found to have a significant effect on two scales of the motivational beliefs, namely

extrinsic goal orientation and test anxiety.

**Table 5: Regression Coefficients of Motivational Beliefs**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	7.699	3.394			2.269.024
Intrinsic	2.318	.659	.299		3.517.001
Extrinsic	.506	.526	.066		.962 .337
Task Value	1.613	.677	.209		2.381.018
1 Control of Learning Beliefs	1.287	.646	.136		1.992.047
Self Efficacy	1.476	.414	.176		3.568.000
Test Anxiety	.122	.484	.015		.253 .800
(Constant)	7.713	3.387			2.277.024
Intrinsic	2.305	.656	.297		3.514.001
Extrinsic	.517	.523	.068		.989 .323
Task Value	1.644	.665	.213		2.473.014
2 Control of Learning Beliefs	1.345	.603	.142		2.232.026
Self Efficacy	1.490	.409	.178		3.646.000
(Constant)	8.421	3.310			2.544.012
Intrinsic	2.467	.635	.318		3.885.000
Task Value	1.866	.626	.241		2.981.003
3 Control of Learning Beliefs	1.406	.599	.149		2.346.020
Self Efficacy	1.455	.407	.174		3.574.000

Goals represent specific purposes for which learners engage in a task. As findings showed, less proficient EFL learners were more extrinsically motivated. According to Vansteenkiste, Lens, and Deci (2006) various types of extrinsic motivation can be distinguished based on differences in the “degree of autonomy or self-determination, depending on the extent to which people have been successful in internalizing the initially external regulation of the behavior” (p. 21). The results of this study showed that the more proficient

the learners were, the less extrinsically motivated they became. These results may be interpreted in the light of the developmental stages of self-determination where motivation is principally controlled by external contingencies such as praise or threats; i.e., when a learner is at the initial stages of learning a foreign language, the prospect of external rewards or punishment might be the most powerful force regulating motivation. As learners' language proficiency grows, so will their ability in the process of internalization, which represents "a second instantiation (in addition to intrinsic motivation) of the growth-oriented endowment of human beings, and the process can function more or less successfully" (Vansteenkiste et al., 2006, p. 21). Teachers are, therefore, encouraged to use more extrinsic rewards for lower proficiency learners, which will aid in paving the learners' path to internalizing the initially external regulation of learning.

The findings also indicated that test anxiety, an affective component of motivational beliefs, was affected by language proficiency level. More proficient EFL learners tended to be significantly less anxious than less proficient language learners. These results are in line with the findings of a few previous studies that have demonstrated a relationship between language proficiency level and test anxiety (Aida, 1994; Allen & Herron, 2003; Dewaele & Ip, 2013; Dewaele & MacIntyre, 2014; Hembree, 1988; Liu, 2006; Thompson & Lee, 2014). For instance, examining the conditions that give rise to differential test anxiety levels, Hembree (1988) concluded, "The higher the student's ability level, the

lower the test anxiety" (p. 73). Similarly, Aida (1994) found that experience has a significant role in level of anxiety; more experienced learners were significantly less anxious. Also, Liu (2006) found that language learners in lower levels of proficiency were more anxious than their more proficient counterparts.

Horwitz, Horwitz, and Cope (1986) associated language anxiety with performance anxiety, which is composed of "communication apprehension; test anxiety; and fear of negative evaluation" (p. 127). Since the focus of this discussion is not on communication apprehension or fear of negative evaluation, only test anxiety will be discussed. Test anxiety stems from fear of failure, which is the result of putting unrealistic demands on oneself. Horwitz et al. suggest that teachers can alleviate the learners' anxiety by being more supportive and understanding of learners' feelings of "isolation and helplessness" so as to enhance their self-esteem and language confidence. In order to foster the learners' self-esteem and confidence, one must first identify the sources of anxiety. Young (1991) identified six potential sources of language anxiety originating from three sources: the learners, the teacher, and the instructional setting. These six sources include "1) personal and interpersonal anxieties; 2) learner beliefs about language learning; 3) instructor beliefs about language teaching; 4) instructor-learner interactions; 5) classroom procedures; and 6) language testing" (p. 427). Making learners aware of the sources of anxiety would most likely help alleviate their anxiety. Also, teachers and learners should be aware that proficiency and experience in foreign language learning bring about

more knowledge about the instructional setting, the teachers, and the learners beliefs. As a result of familiarity with the learning environment, modifications of beliefs about language learning and perceptions of self and test anxiety may decrease. Moreover, language educators might be able to reduce learners' anxiety in lower proficiency levels by providing them with ample information about the learning setting and procedures.

Another major finding of the present study was that self-efficacy was one of the best predictors of self-regulated learning (SRL) strategies. These results are in line with the findings of Kim, Wang, Ahn, and Bong's study (2015) that found statistically significant differences between efficacy beliefs use of SRL strategies. Self-efficacy beliefs are regarded as providing "the foundation for human motivation, wellbeing and personal accomplishment" (Hefferon & Boniwell, 2011, p. 104). The relationship between self-efficacy and SRL strategies can be explained with respect to the "triadic view of self-regulated learning" (Zimmerman & Martinez-Pons, 1990, p. 51). In this view, self-efficacy is regarded as a "thermostat that regulates strategic efforts to acquire knowledge and skill through a cybernetic feedback loop" (Zimmerman, 1989, p. 330). Zimmerman regards self-efficacy as a major element in self-regulated learning and maintains that it can affect learners' "behavioral performance" and "their manipulation and choice of learning environment" (1989, p. 331). The relationship between increase in self-efficacy and increased use of learning strategies has been found by several researchers (Diseth, 2011; Magogwe & Oliver, 2007). Additionally self-efficacy

has an impact on academic performance (Yusuf, 2011) and language outcomes (Liem, Lau, & Nie, 2008; Magogwe & Oliver, 2007). The current study also found a relationship between estimates of performance success and SRL strategies, suggesting that educators should employ procedures and techniques to enhance learners' perceptions of self-efficacy because they mediate the relationship between self-regulated learning strategies and achievement outcomes.

As an expectancy component of motivation, control of learning beliefs was found to be another best predictor of self-regulated learning strategies. Control of learning beliefs refers to learners' "beliefs that their efforts to learn will result in positive outcomes" (Pintrich et al., 1991, p. 12). Control beliefs concern the degree to which the learners believe that the outcome is contingent upon their own efforts. Regarding oneself as having authority and control over performance outcomes brings about strategic behavior to achieve desired goals. In fact, Bjork, Dunlosky, and Kornell (2013) note that in order to effectively manage the learning process, learners need to overcome "certain intuitions, knowing what activities are and are not productive for learning" (p. 435). The importance of these beliefs or "intuitions" is due to their effect on encoding and understanding information that support retention and transfer.

As a value component of motivation, intrinsic goal orientation was found to be another one of the best predictors of self-regulated learning (SRL) strategies. Intrinsic goal orientation is motivation stemmed from internal reasons such as

interest in task or learning, curiosity, and desire to master content. Research has shown that compared to extrinsic goal framing, intrinsic goal framing leads to both short-term and long-term persistence, higher autonomous motivation, and better test performance (Vansteenkiste et al. 2006). Additionally, Vansteenkiste, Simons, Lens, Sheldon, and Deci (2004) pointed out the causal relationship between intrinsic goal orientation and deeper learning and persistence, which are regarded as measures of autonomous learning. Therefore, in a self-regulating learner intrinsic goal orientation leads to better performance results through the use of strategies.

Task value, which is another value component of motivation, was the last best predictor of self-regulated learning strategies. Task value refers to the learners' evaluation of how important, interesting and useful the task is. Pintrich et al. (1991) postulated that high task value leads to higher involvement in learning. Moreover, according to Pintrich and De Groot (1990), research suggests that task value, along with goals of mastery, learning and challenge, which are associated with extrinsic goal orientation, is conducive to "more metacognitive activity, more cognitive strategy use, and more effective effort management" (p. 34).

In sum, expectancy and value components of motivation were found to be good predictors of self-regulated learning strategies.

### **Conclusion and implications**

The primary purpose of the present study was to examine the relationship between EFL learners' motivational beliefs and

their use of learning strategies. The findings showed that test anxiety and extrinsic goal orientation were significantly higher in lower proficiency learners. Since motivational beliefs and learning strategies are affected by a complex interplay of factors, a single prescription cannot be given for all learning situations. However, based on the findings, it is suggested that language teachers should be more sensitive to less proficient EFL learners' test anxiety by avoiding a product-oriented approach to learning and teaching specific strategies and techniques to help learners overcome anxiety. Furthermore, teachers are advised to give equal weight to attendance, classroom activity level, and progress made throughout the semester. This might help reduce the stakes of the test and hence learners' test anxiety. Language teachers are also advised to incorporate more extrinsic contingencies in the learning process when dealing with learners of lower proficiency levels in order to sustain and enhance their persistence and effort.

The second major finding was that self-regulated learning strategies could be explained by the expectancy and value components of motivation, i.e. self-efficacy, intrinsic goal orientation, task value, and control of learning beliefs. Hence, teachers are suggested to provide an environment that will not threaten the learners' self-efficacy beliefs as this will lead to their disengagement and apathy. The learning environment should not be so competitive as to pose a negative influence on learners' self-esteem. In competitive environments, learners usually set unrealistic goals to be achieved and if they are not able to attain those goals in the long run their self-

esteem will be negatively impacted. Therefore, teachers are suggested to create a non-competitive classroom environment in which the difficulty of the learning tasks is adjusted in an adaptive manner, allowing the learning pace to be determined by the learners' ability to understand and apply new information. In such contexts learning materials are selected in proportion to learners' objectives so as to maintain and foster their task value and engagement. If the learners deem that the material is pragmatically applicable to their immediate or future circumstances, they will take a more active part in the learning process.

Finally, it is suggested that future research on motivational beliefs and use of learning strategies be pursued with an experimental design to examine the role of teachers' practice on learners' motivational beliefs and their use of learning strategies. Future research can also examine the role of individual differences such as extroversion/introversion on motivational beliefs and learning strategies. Furthermore, researchers can use qualitative methods such as interviews with language learners and observation of learning in the classroom context to obtain rich information on factors that might be involved in shaping motivational beliefs at different proficiency levels.

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Appendix

**Table 1: Description of the phases and areas that constitute self-regulated learning**

Phases and relevant scales	Areas for regulation											
	Cognition		Metacognitive knowledge activation		Motivation/affect		Behavior			Context		
Phase 1	Forethought, planning, and activation	Target goal setting	Prior content knowledge activation	Metacognitive knowledge activation	Goal orientation adoption	Efficacy judgments	Perceptions of task difficulty Task value activation Interest activation	Time and effort planning	Planning for self-observations of behavior	Perceptions of task	Perceptions of context	
Phase 2	Monitoring	Metacognitive awareness and monitoring of cognition			Awareness and monitoring of motivation and affect			Awareness and monitoring of effort, time use, need for help	Self-observation of behavior	Monitoring changing task and context conditions		
Phase 3	Control	Selection and adaptation of cognitive strategies for learning, thinking			Selection and adaptation of strategies for managing, motivation, and affect			Increase/decrease effort	Persist, give up	Help-seeking behavior	Change or renegotiate task	Change or leave context
Phase 4	Reaction and reflection	Cognitive judgments			Affective reactions			Choice behavior		Evaluation of task	Evaluation of context	
Relevant MSLQ Scales	Rehearsal Elaboration Organization Critical Thinking Metacognition				Intrinsic Goals Extrinsic Goals Task Value Control Beliefs Self-Efficacy Test Anxiety			Effort Regulation Help-Seeking Time/Study Environment		Peer Learning Time/Study Environment		

