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THE INTERFACE BETWEEN EFL LEARNERS' PERSONAL BEST GOALS AND INTRINSIC MOTIVATION IN PREDICTING EFFORT-REGULATION AND LANGUAGE ACHIEVEMENT

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ABSTRACT

This study encompasses language learning from both educational and psychological perspectives. In the educational domain, it includes cognitive and meta-cognitive aspects which are *language achievement* and *effort-regulation*; in the psychological domain, it includes motivational aspects which are *personal best* (*PB*) *goals* and *intrinsic motivation*. In particular, the main goal of this study was to empirically examine the interrelationships of the motivational and meta-cognitive facets of English as a foreign language (EFL) university and institute students and their influence on their language achievement. It also sought to probe whether there are significant differences across university and institute students regarding each variable under study. In this study, the PB goal scale and the Motivated Strategies for Learning Questionnaire (MSLQ) were administered to 280 institute and university students. Language achievement was determined via grade point average (GPA). The results estimated via structural equation modeling (SEM) demonstrated that personal best goal is a positive and significant predictor of effort regulation. It influenced GPA both directly and indirectly via its impact on effort regulation. It was also found that effort regulation and intrinsic motivation significantly and positively influenced GPA. Intrinsic motivation significantly and positively predicted effort regulation. It was also found that there is a positive and meaningful bidirectional relationship between personal best and intrinsic motivation.

Keywords: Effort-regulation, EFL students, Intrinsic motivation, Personal best goals, SEM

INTRODUCTION

Personal goals play a significant role in students' academic development (Anderman & Wolters, 2006). According to Locke and Latham (2002), goals affect achievement through several functions and mechanisms. It is believed that these functions and effects are motivating and facilitate commitment to and pursuit of goals. Different types of goal constructs have been proposed and operationalized in psycho-educational research, including goal setting, goal orientations, and goal structures (Anderman & Wolters, 2006). The focus of the present study is on the former of these goal areas. One of the latest proposed goal constructs in this domain is 'personal best' (PB) goals in academic work. PB goals first conceptualized by Martin in 2006 are defined as specific, challenging, competitively self-referenced targets towards which students strive. In his seminal paper published in the *British Journal of Educational Psychology*, Martin (2006) conceptualized dimensions of students' academic engagement, including those aspects hypothesized to be relevant to the study of PBs. These dimensions are the four hypothesized components of PBs including, specific

goals, challenging goals, competitively self-referenced goals, and self-improvement goals. Academic examples of PB include doing better on current schoolwork than on previous schoolwork or expending greater effort on a current assignment than on a previous assignment (Martin, 2006; Martin & Liem, 2010).

Another contributing factor which can be influential and important in effective learning is learners' motivation. Dörnyei (2010) believed that those learners who have high motivation can achieve a working knowledge of an L2, regardless of their language aptitude, whereas without great motivation even the most intelligent L2 learners are unlikely to persist long enough to achieve any real useful language. Motivation affects the extent to which language learners persevere in the learning process of learning an L2, and all the other variables involved in SLA presuppose motivation to some extent (Dörnyei, 2005). There are different types of motivations among which intrinsic motivation is the focus of this study. Intrinsic motivation is a vital construct, which reflects human's natural tendency to learn and assimilate. Intrinsic motivation refers to doing an activity just because it is innately enthusiastic or enjoyable.

In addition to learners' PB goals and intrinsic motivation, another factor which is highly influential in effective learning can be students' involvement in planning, organizing, and monitoring their academic endeavors, i.e., self-regulation. Pintrich (1999) described self-regulated learning as an active, constructive process whereby learners set goals for their learning plan actions and monitor, regulate and control their cognition, motivation and behaviour. These actions are guided and constrained both by their goals and the contextual framework and can mediate the relationships between individuals and the context, and their overall achievement (Zimmerman, 2000). Each of these factors are further explored in the following literature review.

LITERATURE REVIEW

Personal Best

As noted above the construct of personal best was first introduced in educational psychology by Martin (2006. He conceptualized dimensions of students' academic engagement, including dimensions hypothesized to be relevant to the study of PBs. Can you clarify for the reader how many dimensions he conceptualized and what proportion are applicable to your study. It is not clear if these four are all or just some. These dimensions are the four hypothesized components of PBs including, specific goals, challenging goals, competitively self-referenced goals, and self-improvement goals. His landmark study initiated lines of research on PB most of which were conducted by Martin himself or in collaboration with his colleagues (e.g., Martin, 2006, 2007, 2012, Martin, & Elliot, 2015; Martin & Liem, 2010). These studies have been published in the most creditable and leading journals in the field, such as, *Contemporary Educational Psychology, Educational Practice and Theory, Learning and Individual Differences, Learning and Instruction, and Educational Psychology.* Martin and Elliot (2015), for instance, assessed the role of prior personal best goals in predicting student academic motivation and engagement. To do so, a longitudinal survey study comprising a total of 1160 high school students was conducted in order to explore the degree of personal best and dichotomous achievement goals (mastery and performance) that predict student academic motivation and engagement across a full academic year. The findings demonstrated that personal best goals predict higher motivation and engagement a year later. Moreover, mastery goals predict higher motivation and engagement, while the role of performance goals was either neutral or negative which implies that personal best goals are associated with higher motivation and engagement across time.

Another study was carried out in order to examine the potential of personal best goals among the students with attention-deficit/hyperactivity disorder (ADHD) (Matin, 2012). The study focused on 3548 year 10 students from ten high schools of which 87 students who were ADHD were selected as a subsample along with an additional random sample of 87 for comparison. The remaining 3374 students also participated in the research. Positive and significant associations were demonstrated between personal best goals and academic outcomes among ADHD students, non-ADHD students, and the randomly drawn non-ADHD learners. These results illustrate the positive role of personal best goals which can be generalized among diverse groups of students (Martin, 2012).

In a similar vein, another study was an attempt to examine the first and higher order factor structure of the engagement and motivational disposition in relation to the learners' personal best. In other words, the study sought to test a multidimensional model of student engagement and motivation through construct validation approaches. To do so, 12,237 high school students took part in the study and results demonstrated that first and higher order factor structures present direct implications for future directions and educational practice regarding engagement and motivation research (Martin, 2007). Similarly, a study was carried out to identify cornerstones of personal bests in an educational setting in which students had the potential to attain personal best goals that are challenging, competitive, self-referenced, and specific based. The results drawn upon the data from 1,016 students proved that a proposed 'PB Model' can be used to facilitate personal bests in the classroom (Martin, 2006).

In line with this previous research, another study examined the importance of personal bests in predicting achievement and engagement as well as the salience of prior achievement and engagement in predicting subsequent personal bests. In order to collect data 1866 high school students took part in the study and findings provided applied, substantive, and methodological implications for practitioners and researchers who are willing to promote student academic development by demonstrating the importance of academic personal best over achievement and engagement (Martin & Liem, 2010). Moreover, another study explored the role of personal best goal setting in student mathematics achievement. Data were collected from 89 elementary and secondary school students using an experimental design the results of which showed the treatment group demonstrated greater achievement than the control group, thus in turn supporting the association between personal best goal setting and achievement growth (Martin & Elliot, 2015).

Intrinsic motivation

From early on, the notion of motivation has been used to explain different types of behaviour (e.g., drives connected to survival and basic biological needs). On the other hand, behaviour is motivated by the desire or need to reach particular goals (e.g., avoidance of punishment, recognition, and promotion). Consequently, motivation guides and energizes behaviour towards achieving a particular outcome (Sansone & Harackiewicz, 2000). Motivation is believed to be used to describe the forces acting on or within individuals to direct behaviour and the concept can be used to explain diversities in the intensity of a particular behaviour (i.e., more intense behaviour is the result of higher levels of motivation) and also to direct the behaviour (Gibson, Ivancevich & Donnelly, 2000). In other words, motivation is intentional and directional. It is intentional since it refers to the persistence of actions and personal choices. It is also directional which implies that there is a driving force to attain a specific goal (Nel, Gerber, Van Dyk, Haasbroek, Schultz, Sono & Werner, 2001).

In line with the previous descriptions, motivation as a key contributor to L2 mastering was believed to encompass all other factors involved in L2 learning. Dörnyei (2005) identified seven broad dimensions of L2 motivation: (1) affective/integrative variables, (2) instrumental/pragmatic variables, (3) macro context related variables, (4) self-concept related variables, (5) goal-related variables, (6) educational concept related variables, and (7)

significant others related variables. Dörnyei (1994) also suggested that language learning can be organized systematically (on a continuum from intrinsic to extrinsic). From this it is deduced that both intrinsic and extrinsic factors influence motivation and anxiety. Consequently, it is likely that the foreign language instructor (as an external variable) has the capacity to influence the learner's progression through stages of learning development. It is not surprising therefore that Dörnyei (2005) found/argues there is a significant association between the students' motivation to learn languages and the teachers' teaching style. For instance, if a learner has a reflective learning style and a teacher has an impulsive teaching style, these preferences do not result in a positive response and influence on student motivation, since the teacher expects an immediate response from a student who must first think and then provide an answer. This behaviour may not be positively rewarded by a teacher with a contrasting learning style who prefers a more immediate response. This type of negative response could negatively influence the motivation for this type of learner (Ehrman, 2002).

According to the Expectancy Value Theory (Wigfield & Eccles, 2000), the greater the likelihood of success, achievement and perceived value in an activity, the more motivated and decisive the learners would be to complete the activity. Consequently, when the activity is done successfully, motivation, expectancy beliefs, and consequently achievement goals will inspire students and higher achievement in the language will be achieved. Thus, higher levels of engagement would be expected to serve to further increase motivational risk taking behaviours and overall success in language learning (Oxford & Nyikos, 1989).

A plethora of studies have been done in order to find the associations between L2 learners' motivation and some other student-related variables. Rostami, Ghanizadeh and Ghonsooly (2015), for instance, conducted a study to examine the role of teacher burnout and family influence as two external factors in student motivation. In particular, four factors were considered in this study: (a) criterion measures which examined students' intended efforts towards learning the language, (b) instrumentality-promotion that measures the regulation of personal goals, (c) attitudes to learning which assess situation-specific motives, and (d) family influence, which examines parental roles regarding learning the language. The findings of this study demonstrated that there are significant interrelationships among the variables in which teacher burnout and family influence have significant impacts on student demotivation. Ghanizadeh and Rostami (2015) conducted research on 905 EFL learners to probe potency and validity of Dörnyei's L2 motivational self-system among Iranian EFL learners in public and private language schools. They concluded that in accounting for L2 motivation and attitudes, the volitional nature of learning endeavor should be taken into consideration. This volitional nature is highly reliant on learners' context-specific goals and objectives of foreign language learning. The role of motivation in diminishing and preventing burnout has also been revealed in previous studies (Ghanizadeh & Jahedizadeh, 2015; Jahedizadeh, Ghanizadeh & Ghonsooly, 2016). What can be inferred from all these studies clearly demonstrates the contributing role of motivation, in particular the internal aspect of motivation, in influencing all aspects and dimensions of L2 learning.

Effort-regulation

Self-regulation can be defined as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000, p. 14). In other words, self-regulation involves "cognitive, affective, motivational, and behavioural components that provide the individual with the capacity to adjust his or her actions and goals to achieve desired results in the light of changing environmental conditions" (Zeidner, Boekaerts & Pintrich, 2000, p. 751, as cited in Dörnyei, 2005). Although the majority of research conducted prior to the 1990s examined the notion of self-regulation without regard to the specific social and environmental context, more recently, researchers are

examining the effects of social and external contexts on self-regulation within various instructional settings (Eccles & Wigfield, 2002; Jackson, Malmstadt, Larson & Davidson, 2000; Perry, 1998; Perry, VandeKamp, Mercer & Nordby, 2002). These studies suggest that self-regulation is influenced by a host of instructional and environmental conditions including the clarity, pace, and amount of instruction provided to learners, teacher characteristics, the degree of learner autonomy, and other classroom factors (Boekaerts & Cascallar, 2006; Walsh, 2006).

Self-regulation related studies encompass the associations among cognitive, metacognitive, and motivational variables. Myer and Turner (2002) conducted a study to find the relationship between promotion of a supportive classroom environment in which motivational, emotional, and academic support are fundamental issues and student self-regulation. To do so, an observation of various classroom social contexts was carried out. The results reported significant differences among the opportunities for learners to self-regulate their learning due to the differences in classroom conditions (e.g., the teacher's discourse approach, the supportive climate of the classroom, the degree of shared understanding and responsibility for learning, as well as the degree of learner independence and autonomy.

Also, in a recent study in the domain of EFL learning, Varasteh, Ghanizadeh and Akbari (2016) examined the interrelationships among task value, ambiguity tolerance, and metacognitive self-regulation, and their effects on learning strategies, learner's test anxiety, and language achievement. The results revealed that students' self-regulation plays a significant role in language achievement. Moreover, a direct and positive association was observed between cognitive and metacognitive components. Additionally, cognitive and motivational components were found to have a significant relationship with each other as well as language achievement. In a similar vein, Ghanizadeh and Jahedizadeh (2017) scrutinized university students' affective experiences in academic contexts as well as the ways to integrate affection into existing models of motivation and learning. The findings of the study yielded via SEM revealed that students' emotional exhaustion negatively predicted students' intrinsic motivation, effort regulation, and academic achievement. It was also found that intrinsic motivation significantly and positively predicted effort regulation and academic achievement. Finally, effort regulation was found to be a positive and significant predicator of university students' academic achievement. In essence, it seems self-regulatory strategies are conducive to effective L2 learning and facilitate many aspects of learning.

PURPOSE OF THE STUDY

The importance and popularity of motivation and achievement goal theories among scholars and educationists has fueled intensive research in these areas. In the light of the above literature review into the importance of both intrinsic motivation and personal best theories in students' success, there remains a scarcity of research on the effect of PB goals on learning a second language. Despite previous research on the effect of PB goals on students' schoolwork − although scant in number given that PB is a newly-introduced construct in educational psychology− the facilitative role of PB goals on learning a second language has remained an unchartered territory that awaits further research. So, the focal objective of the present study was to explore the interplay between EFL learners' personal best goals and intrinsic motivation in predicting effort- regulation and language achievement.

This study is the first one that incorporates the relational pattern of the above mentioned variables among EFL learners. Specifically, the present study presented a model depicting connections and causal relations among these factors. As indicated in Figure 1, it is hypothesized that personal best goals predict effort-regulation and language achievement; effort-regulation in turn influences language achievement. Intrinsic motivation is also

assumed to impact on effort-regulation and language achievement. Personal best goals and intrinsic motivation were hypothesized to have a bi-directional relationship.
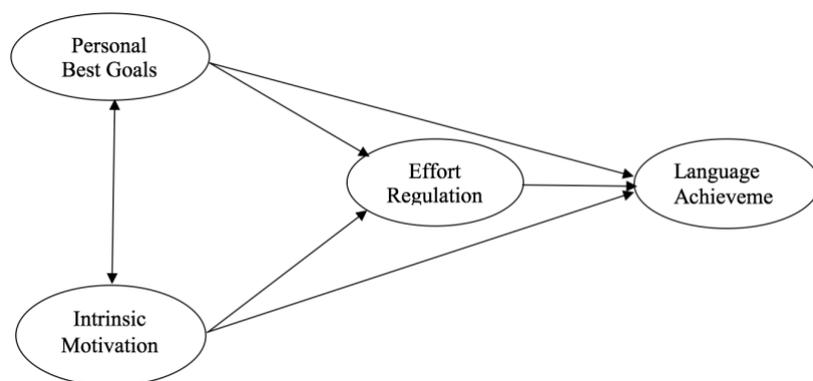

Figure 1: The hypothetical relationship among variables under study

METHOD

Participants

The participants of the study comprised 280 English language learners who were selected according to a convenience sampling among EFL learners learning English in a language institute and a university in Mashhad, Northeast Iran. The community sample of 280 students was university (N= 168) and institute students (N=112). All participants were female with English language proficiency at intermediate and upper-intermediate levels. Participants were recruited by invitation from the researchers who were teaching at these female-only settings. All participation was voluntary. Generally, in Iran there are two main routes for learning English, private institutes where students can study English from elementary to advanced levels, and universities where they can study English (including English teaching, English translation, and English literature) as their major of study at BM, MA, and PhD levels.

The students were aged between 15 and 31 years (*M* = 22.15, *SD* = 4.96). The university junior students were studying English language teaching (ELT) and translation studies. The institute students were studying at upper intermediate levels. After a brief explanation of the purpose of the study, all the participants received a battery of two questionnaires. To gather reliable data, the participants were assured that their views would be confidential. In addition, they were only required to provide information such as their grade point average (GPA) for university students, and their final score of the term measured by standardized proficiency tests for institute students, as well as their age and educational level.

Instruments

Two major instruments were utilized in the study: 1) the Motivated Strategies for Learning Questionnaire (MSLQ), 2) the PB scale. Each one is described below.

Motivated Strategies for Learning Questionnaire

The students responded to a self-report questionnaire (the Motivated Strategies for Learning Questionnaire) which was designed by Pentrich and Paul (1991). It includes items on intrinsic motivation and effort regulation. Students were instructed to respond to the items

on a 7-point Likert scale (1 = not at all true of me to 7 = very true of me) in terms of their behaviour in the specific major of study. The questionnaire comprised items that had been adapted from various instruments used to assess student motivation, cognitive strategy use, and meta-cognition (e.g., Eccles, 1983; Harter, 1981; Weinstein, Schulte & Palmer, 1987).

On the MSLQ, intrinsic motivation refers to students' general goals or orientation to the course as a whole. Intrinsic motivation concerns the degree to which the student perceives herself to be participating in a task for reasons such as challenge, curiosity, and mastery. Having intrinsic motivation towards an academic task indicates that the student's participation in the task is an end all to itself, rather than participation being a means to an end.

Self-regulation on the MLSQ includes students' ability to control their effort and attention in the face of distractions and uninteresting tasks. Effort management is self-management, and reflects a commitment to completing one's study goals, even when there are difficulties or distractions. Effort management is important to academic success because it not only signifies goal commitment, but also regulates the continued use of learning strategies.

Personal Best Scale

The items on the PB Scale (Martin, 2010) were rated from 1 (strongly disagree) to 7 (strongly agree). The instrument assesses dimensions of students' academic engagement, including dimensions hypothesized to be relevant to the study of PBs. These dimensions are the four hypothesized components of PBs: specific goals (e.g., 'I aim for specific results in my schoolwork'), challenging goals (e.g., 'I aim for goals in my schoolwork that challenge me'), competitively self-referenced goals (e.g., 'I compete with myself more than with other students'), and self-improvement goals (e.g., 'When I do my schoolwork I try to do better than I've done before').

Procedure

Data collection process started in February 2016. After identifying the sample of participants, they were asked to complete the PB questionnaire. Simultaneously, the students responded to a self-report questionnaire (the Motivated Strategies for Learning Questionnaire—MSLQ) that included items on student motivation and effort-regulation Since gathering of 280 participants at the same time and in the same place was impossible, the questionnaires were administrated on different days and at different times in a class environment over a period of several weeks.

The students were asked to write their educational level, age, and their grade point average or final exam score (GPA) as an indication of their language achievement. Participants voluntarily took part in the present study and the right to choose to be part of the study or not and the right to opt out at any time during the study was discussed.

The questionnaires were given to learners 15 minutes before the class started in order not to disturb the class, and a straightforward instruction regarding what the respondents should do and brief information about the purpose of the questionnaires, their scope, and their significance of paying attention to the study was provided in their native language (i.e. Farsi). They were also given an opportunity to ask questions.

Data Analysis

After collecting all the completed questionnaires from the respondents, total scores for each questionnaire were obtained and tabulated. Since this study is basically a quantitative type of research and each quantitative research calls for using statistical method, techniques, and analyses (Dörnyei, 2007; McKay, 2006; Richard & Schmidt, 2002), some advanced statistical procedures were employed to achieve the purposes mentioned earlier in the present study. Both descriptive and inferential statistics were utilized. Descriptive statistics for each questionnaire item were calculated. Distributions were also examined to check the

assumptions regarding univariate normality. To check the normality, the researcher examined, mean, range, standard deviation of each questionnaire scale. The Kolmogorov-Smirnov test was also employed. The latest version of Statistical Package for Social Sciences (SPSS) was utilized to compute the descriptive statistics and perform reliability analyses.

Structural Equation Modeling (SEM) was used to interpret the interrelationships among selected meta-cognitive, motivational, and cognitive characteristics of participants and language achievement within a single framework as well as testing the researcher's theoretical hypothesized model (testing hypotheses formed on the basis of theory and empirical research). SEM combines the capability of path analysis, confirmatory factor analysis, and regression analysis. Therefore, SEM clearly is more robust than other procedures for investigating a variety of independent and dependent variables simultaneously**.**

RESULTS

Normal distribution of the data and descriptive statistics

To check the normality of data distribution, the Kolmogorov-Smirnov test was employed. This test is used to check whether the distribution deviates from a comparable normal distribution. If the *p*-value is non-significant ($p > .05$), we can say that the distribution of a sample is not significantly different from a normal distribution, therefore it is normal. If the *p*-value is significant ($p < .05$) it implies that the distribution is not normal.

Table 1: Kolmogorov-Smirnov Test results

	Kolmogorov-Smirnov[a]		
	Statistic	**Df**	**Sig.**
Intrinsic Motivation	.095	280	.059
Effort-regulation	.092	280	.061
Personal Best	.084	280	.075
LanAchievement	.079	280	.064

Table 1 presents the results of the Kolmogorov-Smirnov test. As it can be seen, the obtained significance value for all variables is higher than .05. Therefore, it can safely be concluded that the data is normally distributed across all four variable.

Table 2 presents descriptive statistics of *EFL* learners' intrinsic motivation, effort regulation, personal best and language achievement.

Table 2: Descriptive Statistics of Intrinsic Motivation, Effort-Regulation, Personal Best Goals

and Language Achievement

|	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Intrinsic Motivation	280	12.00	28.00	22.00	3.06
Effort-Regulation	280	8.00	25.00	18.07	2.94
Personal Best Goals	280	14.00	28.00	23.34	3.62
Lan Achievement	280	13.00	19.50	16.95	1.63
Valid N (listwise)	280				

As Table 2 indicates, the mean of intrinsic motivation is (*M*=22, *SD*=3.069), for effort-regulation it is (*M*=25.00, *SD*=2.94), for personal best it equals (*M*=23.34, *SD*=3.62), and the mean of language achievement is (*M*=16.92, *SD*=1.63). The above descriptive statistics paved the way for conducting the inferential statistics estimated via SEM.

The Proposed Model Containing Personal Best Goals, Effort Regulation, Intrinsic Motivation, and Language Achievement (GPA)

To examine the structural relations, the proposed model was tested using the LISREL 8.50 statistical package**.** A number of fit indices were examined to evaluate the model fit: the chi-square magnitude which shouldn't be significant, Chi-square/*df* ratio which should be lower than 2 or 3, the normed fit index (NFI), the good fit index (GFI), and the comparative fit index (CFI) with the cut value greater than .90**,** and the Root Mean Square Error of Approximation (RMSEA) of about .06 or .07 (Schreiber, et al., 2006).

As demonstrated by Figure 2, the chi-square value (45.91), the chi-square/*df* ratio (2.29), the RMSEA (.070), the NFI (.92), GFI (.93), and CFI (.95) all reached the acceptable fit thresholds. It implies that the model had a perfect fit with the empirical data.

To check the strengths of the causal relationships among the variables, the *t*-values and standardized estimates were examined. As indicated in Figure 4.1, two estimates were displayed on the paths. The first one is the standardized coefficient (*β)* which explains the predictive power of the independent variable and presents an easily grasped picture of effect size. The closer the magnitude to 1.0, the higher the correlation and the greater the predictive power of the variable is. The second measure is the *t*-value (t); if *t* > 2 or *t*< -2, we call the result statistically significant.
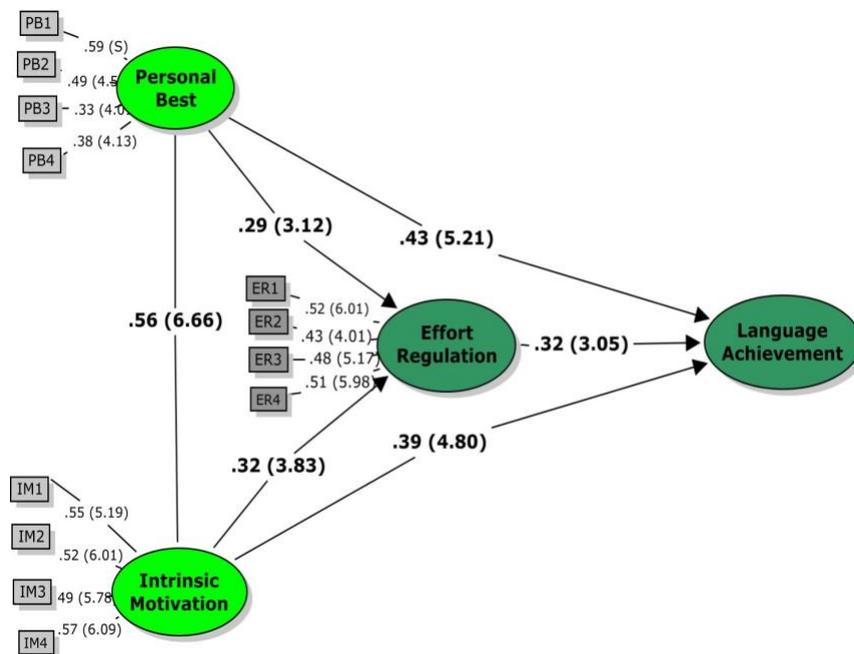
$\chi2$= 45.91, *df*= 20, *RMSEA=.* 070, *GFI*=.92, *NFI*=.93, *CFI*=.95

Figure 2: The schematic representation of the relationships among personal best goals, effort regulation, intrinsic motivation, and GPA.

The results demonstrated that personal best goal is a positive and significant predictor of effort regulation (*β*=0.29, *t*= 3.12). PB also influences GPA both directly (*β*=0.43, *t*=5.21)

and indirectly via its impact on effort regulation. It was also found that effort regulation (β=0.32, t=3.05) and intrinsic motivation (β=0.39, t=4.80) positively and significantly influence GPA. Intrinsic motivation is also a significant predictor of effort regulation (β=0.32, t=3.38). Intrinsic motivation and personal best have meaningful and positive co-interrelationship (β=0.56, t=6.66).

The correlation coefficients among EFL learners', intrinsic motivation, effort regulation, personal best and GPA are presented in Table 3. This shows the highest correlation is observed between PB and intrinsic motivation (r =0.63, p< 0.05). The second higher correlation was found between PB and language achievement (r = 0.62, p< 0.05). It was also found that intrinsic motivation and language achievement are significantly correlated (r = 0.45, p< 0.05).

Table 3: The Correlation Coefficients among Intrinsic Motivation, Effort Regulation,

Personal Best and Language Achievement

	1	**2**	**3**	**4**
1. Intrinsic motivation	1.00			
2. Effort regulation	.41**	1.00		
3. Personal best	.63**	.43**	1.00	
4. Lan achievement	.45**	.32**	.62**	1.00

**Correlation is significant at the level of 0.05

DISCUSSION

This study embraces language learning from both educational and psychological perspectives. In the educational domain, it includes cognitive and meta-cognitive aspects which are achievement and effort-regulation and in psychological domain it encompasses personal best and intrinsic motivation.

To attain the goals of the present research, SEM was applied to the data. Six different paths were hypothesized and examined in the proposed model. To present the discussion and the corresponding interpretations of each path, the researchers, reiterating each association, explain the findings in the light of the existing body of the literature and theoretical contentions in the sections below.

The relationship between intrinsic motivation and effort-regulation

As the results showed, intrinsic motivation significantly and positively predicted effort regulation. Motivation is defined as a process which helps learners to start and maintain goal-directed activities. Motivation is generally viewed as a process through which an individual's needs and desires are set in motion (Alexander & Murphy, 1998; Pintrich, Marx & Boyle, 1993). As mentioned before, effort-regulated learning derives from internal factors of students. Those learners who are self-regulated attempt to adjust the characteristics of their behaviour, motivation, and cognition to fit the task or activity they are doing. Control and goal setting (two key components of self-regulation) normally are not externally imposed. They are internal factors which come from within the student. Self-regulated learning involves the active, goal-directed, self-control of behaviour, motivation and cognition for academic tasks by the student. This type of learning enhances their motivation to learn better than other students.

This association is cyclical in nature. Students who are motivated to reach a certain goal and fulfill their dreams will engage in effort-regulatory activities they feel will help them

achieve that goal or objective. Virtually, as Pintrich (1999) put it, effort-regulation in dynamic interaction with motivation helps learners to achieve their goals.

The relationship between intrinsic motivation and language achievement

According to the findings, intrinsic motivation significantly and positively predicated language achievement. Researchers who work in the field of motivation argue that intrinsic motivation is an important educational outcome which originates from its relationship to achievement and performances in all domains (e.g., Pintrich, 2000; Dornyei, 2005). High GPA or achievement stems from a highly intrinsic motivation. The students who are highly motivated try hard to do their best in completing a task. So they achieve greater academic success.

One of the main characteristics of highly motivated language learners is that they maintain their motivational strength to do a task or activity over long periods of time. Such students not only initiate an activity, but also keep the necessary motivation for doing the intended action till they complete it. Students frequently encounter numerous demotivating obstacles (Ushioda, 1998, p. 102). In such situations, sustaining effort and motivation during and across various educational periods seem to have a pivotal role in the learners' success in mastering a second language.

The relationship between effort-regulation and language achievement

Effort regulation significantly and positively influenced language achievement. Self-regulated learning is a dynamic and applicable processes through which learners determine their goals for learning and then attempt to guide, regulate, and control their cognition, motivation, and behaviour.

All theorists concerned with self-regulation share the idea that students regulating their own learning are actively involved in the process of learning and thus can guide their thoughts, emotions, and actions in a way to positively affect their learning and motivation (Boekaerts & Corno, 2005). This is consistent with lines of research on self-regulation. For instance, in a research done by Zimmerman and Martinez-Pons (1986), self-regulated learning strategies such as reviewing text, environmental structuring, seeking information, and goal settings were found to significantly facilitate the students' achievement. Furthermore, it was found that high achievers used self-regulatory procedures more than low-achievers. Additionally, Pintrich, Smith, Garcia and McKeachie (1991) illustrated that elements of self-regulation together with motivation and use of a variety of cognitive and metacognitive strategies and achievement were all considerably interrelated with each other. Likewise, Ee, Moore and Atputhasamy's (2003) study showed that high achieving learners had better traits to consider and employ self-regulatory strategies which were absolutely associated with their achievement. In EFL domain, Ghanizadeh and Mirzaee (2012) indicated that that EFL learners' self-regulation can predict about 53 % of their language achievement.

The relationship between PB goals and language achievement

As the results revealed, personal best significantly and positively influenced language achievement. PB also influences GPA indirectly via its impact on effort regulation. PB is defined as specific, challenging, competitively self-referenced targets towards which students strive (Martin, 2012). It has been proposed that striving for personal best goals was a potentially efficient and effective way of enhancing student long-term academic development (Martin, 2012). When learners try to do better on current schoolwork than on previous schoolwork or expending greater effort on a current assignment than on a previous assignment, they can get better results each time in comparison with the previous time, so in this way their GPA will improve significantly after a period of endeavor.

The relationship between PB goals and effort-regulation

The results demonstrated that personal best is a positive and significant predictor of effort regulation. Self-regulation is self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals (Zimmerman, 2000, p. 14). In other words, self-regulation involves different components such as cognitive and motivational that provide learners with the capacity to adjust their actions and goals to achieve desired results by changing necessary environmental conditions. It is plausible that pursuing academic personal bests can promote learners' self-regulation, since doing better on current task than previous task is accessible by those learners who can manage their own learning, which in turn improves their regulation in their learning process.

The relationship between PB goals and intrinsic motivation

Personal best and intrinsic motivation were found to have significant and positive co-interrelationship. As one of these variables increases or decreases, the other one changes in the same direct. Without any intrinsic motivation learners never determine any goals to try for it. High intrinsic motivation provides necessary fuel for learners to move toward their goals. Reciprocally, thinking of their personal goals gives the learners enough fuel to keep their intrinsic motivation high.

IMPLICATIONS

The findings of this study may inspire several implications. The results have both theoretical and practical implications. In the light of these findings, some pedagogical implications may also be proposed. The psychometric properties of meta-cognitive self-regulation, PB goals, and motivation substantiated the applicability of these inventories to Iranian EFL university and institutes students. Moreover, this study made a principal contribution to the current literature concerning self-regulation and meta-cognition. Both teachers and learners can benefit from the pedagogical implications derived from the results of this study. Besides, teachers' awareness of the relationship between these variables can induce teachers to provide students with the learning tasks and environment which improve intrinsic motivation and effort-regulation. What is more, teachers can use a variety of assessment techniques in order to allow different self-regulated strategies.

The findings of this study can be employed by teachers in their teaching programs. Given that intrinsic motivation is one of crucial factors in language learning, teachers can use a variety of techniques and learning tasks and activities that develop their intrinsic motivation. They can also give learners positive energy in order to motivate them to do their bests in order to fulfill their dreams about their learning. they can effectively attain this purpose by developing tasks which are interesting, enjoyable, challenging, and versatile (Jahedizadeh, Ghanizadeh & Ghonsooly, 2016).

The results provide advice for English language learners too. They make it clear that for being a successful learner, intrinsic motivation is only one of the crucial factors in learning. Students' endeavor and self-monitoring are vital factors too. So learners must continuously check their progress for improvement and analysis of their current needs and weaknesses.

In addition to teachers and students, these findings can be employed by policy makers, who make the major decisions regarding teaching and learning, in order to direct the operations of textbook writers, curriculum designers, and educators in line with the disposition of the learners. Furthermore, educational organizations, academic specialists, administrators, university managers, course developers, and instructors also need to heed the results so as to promote the need to take account of and ensure incorporation of executive hierarchical self-regulated strategies.

CONCLUSIONS

On the whole, the findings of the present study lead to the conclusion that personal best goals, intrinsic motivation, and effort-regulation have facilitative roles in EFL learners' language achievement. The results confirmed a dynamic interplay among all the variables. In other words, when learners have specific and clear goals for their learning which come from their intrinsic motivation, they have a clear vision of their future goals. So this vision pushes them to attain better performance each time. For making progress in each time of their performance learners are required to become independent learners who manage and control their effort to achieve their goals. Independent learners know that for achieving their goals they must evaluate themselves at each time of endeavor to get informed about what they lack in order to be able to change the situation in their environment to achieve their ultimate goals.

The present study is limited in a number of ways. First, due to feasibility considerations, the participants were chosen from the university and institutes where the researchers were teaching. Given that the participants were from female-only settings and as it is generally believed females tend to be more successful with language learning than males (Jahedizadeh & Ghanizadeh, 2015), the study should be replicated with samples from both genders to ensure a higher degree of randomization and, ultimately, more generalizability. Second in this research, the variables in question were assessed via questionnaires. The use of qualitative approaches such as interviews, case studies, and observations to investigate these constructs would allow prospective researchers to not only determine the processes by which these constructs develop but also shed light on how teachers can motivate students and support them to develop personal goals and self-monitor.

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REFERENCES

Anderman, E. M., & Wolters, C. A. (2006). Goals, values, and affect: Influences on student motivation. In P. A. Alexander & P. Winne (Eds.), *Handbook of educational psychology* (pp.369-389), CUP: Cambridge

Boekaerts, M., & Cascallar, M. (2006). How far have we moved toward the integration of theory and practice in self-regulation? *Educational Psychology Review, 18*(3), 199-210

Deci, E., Koestner, R., & Ryan, R. (1999). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin, 125*, 627-668.

Dörnyei, Z. (1994). Motivation and motivating in the foreign language classroom. *Modern Language Journal, 78*, 273-284.

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. New Jersey: Lawrence Erlbaum Associations.

Ee, J., Moore, P. J., & Atputhasamy, L. (2003). High-achieving students: their motivational goals, self-regulation and achievement and relationships to their teachers' goals and strategy-based instruction. *High Ability Studies*, *14,* 23-39.

Ehrman, M. (2002). *Understanding the learner at the Superior-Distinguished threshold*. In B. L. Leaver & B. Shekhtman (Eds.), Developing Professional language proficiency, Cambridge University Press, Cambridge.

Gardner, R., & Lambert, W. (1972). *Attitudes and motivation in second language learning*. Rowley, MA: Newbury House.es, California

Ghanizadeh, A., & Jahedizadeh, S. (2015). De-motivators and their association with burnout and language achievement in an Iranian EFL context. *Journal of Teaching Language Skills, 7*(3), 61-85.

Ghanizadeh, A., & Mirzaee, S. (2012). EFL learners' self-regulation, critical thinking and language achievement. *International Journal of Linguistics, 4*(3), 444-461.

Ghanizadeh, A., & Rostami, R. (2015). A Dörnyei-inspired study on second language motivation: A cross-comparison analysis in public and private contexts. *Psychological Studies, 60*(3), 292–301.

Gibson, J. L., Ivancevich, J. M., & Donnelly, J. H. (2000). *Organizations: Behavior, structure, processes* (10th. ed.). Boston: McGraw-Hill.

Jackson, D. C., Malmstadt, J. R., Larson, C. L., & Davidson, R. J. (2000). Suppression and enhancement of emotional responses to unpleasant pictures. *Psychophysiology, 37*, 515–522.

Jahedizadeh, S., & Ghanizadeh, A. (2015). Demotivation and foreign language achievement: educational level and gender differences among Iranian EFL learners. *International Journal of Foreign Language Teaching in the Islamic World, 3*(6), 5–9.

Jahedizadeh, S., Ghanizadeh, A., & Ghonsooly, B. (2016). The role of EFL learners' demotivation, perceptions of classroom activities, and mastery goal in predicting their language achievement and burnout. *Asian-Pacific Journal of Second and Foreign Language Education, 16*, 1-17.

Jarvis, M. (2005). *The psychology of effective learning and teaching*. London: Nelson Thornes Ltd.

Locke, E., & Latham, G. (2002). Building a practically useful theory of goal setting and task motivation. *American Psychologist*, 57, 705–717.

Martin, A. J. (2006). Personal bests (PBs): A proposed multidimensional model and empirical analysis. *British Journal of Educational Psychology, 76*, 803–825.

Martin, A. J. (2007). Examining a multidimensional model of student motivation and engagement using a construct validation approach. *British Journal of Educational Psychology, 77*, 413–440.

Martin, A. J. (2012). The role of Personal best (PB) goals in the achievement and behavioral engagement of students with ADHD and students without ADHD. *Contemporary Educational Psychology, 37*, 91–105.

Martin, A. J., & Elliot, A. J. (2015). *The role of personal best (PB) and dichotomous achievement goals in students' academic motivation and engagement: A longitudinal investigation*. *Educational Psychology, 71*(3), 221-256.

Martin, A. J., &Liem, G. A. (2010). Academic Personal bests (PBs), engagement, and achievement: A cross-lagged panel analysis. *Learning and Individual Differences, 20*, 265–270.

Meyer, D. K., & Turner, J. C. (2002). Discovering emotion in classroom motivation research. *Educational Psychologist, 37*, 107–114.

Nel, P. S., Gerber, P. D., Van Dyk, P. S., Haasbroek, G. D., Schultz, H. B., Sono, T., & Werner, A. (2001). *Human resource management* (6th ed.). Cape Town: Oxford Zuniversity Press.

Oxford, R., & Nyikos, P. (1989). Variables affecting choice of language learning strategies by university students. *The Modern Language Journal, 73*, 291-300.

Perry, N. E. (1998). Young children's self-regulated learning and contexts that support it. *Journal of Educational Psychology, 90,* 715-729.

Perry, N. E., VandeKamp, K. J. O., Mercer, L. K., & Nordby, C. J. (2002). Investigating teacher-student interactions that foster self-regulated learning. *Educational Psychologist, 37*(1), 5–15.

Pintrich, P.R. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International Journal of Educational Research*, *31*, 459-470.

Pintrich, P., Smith, D.A. F., Garcia, T., & McKeachie, W. (1991). *A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ)*. Ann Arbor: NCRIPTAL, School of Education, University of Michigan.

Rivers, W. (2001). Autonomy at all costs: An Ethnography of metacognitive self-assessment and self-management among experienced language learners. *The Modern Language Journal, 85*, 27-290.

Rostami, S., Ghanizadeh, A., & Ghonsooly, B. (2015). External factors affecting second language motivation: The role of teacher burnout and family influence. *Iranian Journal of Applied Linguistics, 18*(2), 165-187.

Sansone, C., & Harackiewicz, J.M. (2000). *Looking beyond rewards: The problem and promise of intrinsic motivation*. In C. Sansone & J. M. Harackiewicz (Eds.), Intrinsic and extrinsic motivation: The search for optimal motivation and performance. San Diego, CA: Academic Press.

Sungur, S., & Tekkaya, C. (2006). Effects of problem-based learning and traditional instruction on self-regulated learning. *Journal of Educational Research, 99*(5), 307.

Ushioda, E. (1998). *Effective motivational thinking: A cognitive theoretical approach to the study of language learning motivation*. In E. A. Soler & V. C. Espurz (Eds.), Current issues in English language methodology (pp. 77-89). Spain: Universitat Jaume I.

Varasteh, H., Ghanizadeh, A., & Akbari, O. (2016). The role of task value, self-regulation, and ambiguity tolerance in predicting EFL learners' test anxiety, learning strategies, and language achievement. *Psychological Studies, 61*(1), 2-12.

Walsh, S. (2006). Talking the talk of the TESOL classroom. *ELT Journal*, *60*(2), 133-141.

Wigfield, A., & Eccles, J. (2000). Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology, 25*, 68-81.

Zimmerman, B. J. (2000). Attaining self-regulation: A social cognitive perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 13–39). San Diego, CA: Academic Press.