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The Mediating Role of Self-regulation between Student Engagement and Motivation among Iranian EFL Learners: A Structural Equation Modeling Approach

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ABSTRACT

The relationship between student engagement and motivation has been shown to be significant. However, the nature of this association still needs to be further known. The present study thus aimed at investigating this relationship by examining the mediating role of self-regulated language learning between the four dimensions of student engagement and language learning motivation among Iranian EFL learners. As an ancillary objective, the study tried to explore the relationships between dimensions of student engagement and self-regulated language learning. The participants, selected based on convenience sampling, comprised 146 young adult male language learners learning English at the Iran Language Institute (ILI), Gorgan, Iran. The participants were given three questionnaires. In order to analyze the data, structural equation modeling (SEM) was run by using the SmartPLS software, version 2. The results of path analysis indicated that self-regulated language learning failed to mediate between the four dimensions of student engagement and language learning motivation. The findings also showed that there were positive significant relationships between self-regulated language learning and three dimensions of student engagement, i.e., behavioral, cognitive, and agentic. However, the relationship between self-regulated language learning and emotional engagement was not statistically significant.

***Keywords*:** Dimensions of Engagement, Motivated Language Learning, Self-Regulation, Structural Equation Modeling (SEM)

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1.Introduction

Since language learning is a long term commitment, the language learner needs to be motivated enough to pursue this endeavor. However, at times this initial interest may be diminished or even lost over time (Brown, 2014). As Dörnyei (2018) put, in the fast-paced reality of today's life, even high motivation can be canceled out by various distractions. This loss of motivation might, in turn, lead to students' dropout (Menken, 2010; Parvaresh, 2008). Given the probable factors which can be regarded as approaches for such a decline of language learning motivation, one can think of increasing student engagement (Dörnyei, 2018), as a possible response to such a problem since engagement incorporates developments which contribute to learners' success (Ladd & Dinella, 2009).

Motivation plays a vital role in the students' success (Brown, 2014; Dörnyei, 1998); therefore, it has been researched by many scholars over the past decades. It has also been investigated in connection with other psychological concepts such as students' self-efficacy, anxiety, attitude, and the like. Recently its connection with student engagement has also been explored (Ghelichli et al., 2020; LeMay, 2017; Oga-Baldwin & Nakata, 2017; Reeve & Lee, 2014). Student engagement is argued to be an approach to keeping high levels of language learning motivation. Accordingly, this linkage between these two constructs seems to assume high significance and merits more investigation. However, little research has studied the role of a mediator in this connection so far. Self-regulation could be a probable mediator as it is connected to both student engagement and motivation.

Research has indicated that self-regulation is associated with both student engagement and language learning motivation (Appleton et al., 2006; Fredricks et al., 2004; Pintrich, 2004; Winne & Perry, 2000). Student engagement has been shown to be closely related to self-regulated language learning (Wolters & Taylor, 2012). Wolters and Taylor (2012) also argued that these two concepts have so many similarities that patterns of student engagement and self-regulation seem dependent upon each other in terms of features and types of educational practices ascribed to high-performing students. Simply put, the same models of both self-regulation and student engagement are employed to account for why some learners seem to be more successful than others. By the same token, as Winne and Perry (2000) pointed out, self-regulation provides learners with the awareness of regulating engagement in doing activities to improve learning practices and results.

To the researchers' best knowledge, relatively little research has targeted the intersection of student engagement, language learning motivation, and self-regulated language learning in an EFL context. What

most previous studies on the aforementioned constructs did was mainly the investigation of two of the constructs at a time, while the present study tried to explore all the three concepts in the same study in foreign language education. In fact, these concepts together in a single study seem to have attracted little attention from the scholars in the domain of language learning in an EFL context.

What is more, few studies have investigated the mediating role of self-regulated language learning between student engagement and motivation, especially in language education. As such, little is known about the mediator role of self-regulated language learning in this connection, implying that more empirical research is required to clarify this role. The current study was thus an attempt to fill this lacuna. Moreover, since motivation plays a significant role in language learning and has a close association with student engagement, researching self-regulated language learning as a mediator in this link could bring some advantages to the field. Therefore, the outcomes could deepen our understanding of the nature of this linkage, mediated by self-regulated language learning. Further, the findings can contribute to our knowledge of the association between dimensions of student engagement and self-regulated language learning. Hence, this study aimed at investigating self-regulated language learning as a mediator in the relationship between student engagement and language learning motivation by using structural equation modelling (SEM).

2.Literature Review

2.1. Student Engagement

Student engagement generally pertains to involvement in school activities and academic tasks (Dörnyei, 2018). More specifically, student engagement could be described as the investment and effort, either cognitive or psychological, expended to gain and understand the knowledge and capabilities brought about by academic perseverance (Newmann, 1992). Reeve (2012) argued that student engagement can manifest when a learner participates energetically in a learning task. Regarding the dimensions of student engagement, however, there might be various categories and terminologies. Four most recent ones, on which the present study has focused, are explained as follows:

- *Emotional engagement:* It refers to the students' positive or negative emotional reactions to teachers, classmates, learning (Fredricks et al., 2004), and identification with, or connection to, the educational context (Finn, 1989). According to Finn (1989), it can include a sense

of belonging or being important to the instructional context, and valuing success in academic achievements.

- *Behavioral engagement:* It is characterized by effort, persistence, and involvement in social and academic activities such as assignment completion and class attendance, and learning tasks such as attention and concentration (Blumenfeld et al., 2005; Reschly & Christenson, 2012).
- *Cognitive engagement:* It could be described as students' attitudes toward educational tasks and their psychological investment in complicated notions, and their desire to perceive them (Fredricks et al., 2004). Cognitive engagement, as Fredricks et al. (2004) put, includes being attentive, tactical, and eager to exercise the required effort for understanding complex concepts or developing tough skills.
- *Agentic engagement:* It is described as the students' intended participation in the process of the instruction (Reeve, 2012). Reeve (2012) explained that it refers to student-initiated and deliberate contributions to the learning and teaching conditions.

In sum, student engagement is a multidimensional construct, encompassing four distinct, but highly interrelated, aspects, each of which is connected to the other. The theoretical framework, proposed by Reeve (2012) with four dimensions, was adopted to operationally define student engagement in this study.

2.2. Language Learning Motivation

Language learning motivation can be defined as an individual's efforts to learn a language because he or she is willing to do so and the experience gained in this activity is satisfactory (Gardner, 1985). Lambert (1963) suggested that how much a person acquires a second language may depend on the level of motivation as well as attitudes toward the people of the target community and orientations to language acquisition. Oxford and Shearin (1994) were of the view that motivation may have impacts on students' application of language learning strategies, their communication with native speakers, and their perseverance to acquire second language skills.

According to Dörnyei (2005), motivation persuades an individual to start learning a second language and later it could make language learners continue the long and often tedious process of learning. In fact, Dörnyei maintained that motivation is linked to a myriad of factors which have contributions to language learning. Therefore, motivation is regarded as a desire or impulse influencing the success of foreign language learners. As such, individuals who have once been highly motivated may not gain their long-term goals if they lack sufficient motivation (Dörnyei & Csizér, 1998).

2.3. Self-Regulated Language Learning

In the literature related to developmental and educational psychology, self-regulated learning is defined as an active process by which individuals can set standards for their learning, monitor their behavior, and regulate their cognition and motivation to reach those standards or goals (Pintrich, 2000). Differently put, self-regulated learners do not receive information passively from their teachers or others, but they are active participants who construct knowledge as they proceed with learning. In other words, it concerns how students plan, observe, and manage their progress of language learning. Self-regulation, according to Dörnyei (2005), is a multifaceted concept, comprising processes related to cognition, metacognition, motivation, behavior, and surroundings, used by learners to foster educational accomplishment in different learning contexts.

However, Zimmerman (2000), as the originator of the concept of self-regulation, defined self-regulation as what individuals actually think, feel or do intentionally in order to reach their goals. This definition by Zimmerman seems to be different from others as it views self-regulation not as a trait but a process. A process definition of self-regulation, Zimmerman argued, can be used to explain why individuals' self-regulation vary from one kind of performance to another since these self-processes are contextually related.

2.4. The Theoretical Framework

Self-determination theory (SDT) (Deci & Ryan, 1985, 2000) was employed as the theoretical ground for the present study. SDT, according to Deci and Ryan (2000), is viewed as a method to student motivation and personality using traditional empirical methods, comprising three fundamental needs of autonomy, competence, and relatedness. This theory was adopted for several reasons. First, all three constructs of the study – language learning motivation, self-regulation, and student engagement – could be accounted for by SDT. Second, according to Nichols and Dawson (2012), student engagement could be seen with respect to SDT, in which students have substantial contribution to and reflect upon their learning process. Third, SDT has been the basis on which the instruments of the present study have been developed. Next, SDT may be more comprehensive than Gardner's (1985) theory of motivation, providing greater scope for concerned scholars to work on. To conclude, SDT may offer a firm conceptual ground to conduct an empirical study on these constructs (Reeve, 2012). Further, in this study SEM was used to investigate the mediational role of self-regulation in the association between student engagement and motivation. Hence, SDT was adopted as it provided the theoretical underpinning for the construct of motivation in this relationship.

In order to examine the relationships among dimensions of student engagement, language learning motivation, and self-regulated language learning, the research questions below were formulated:

1. Are there any statistically significant relationships between dimensions of student engagement and language learning motivation considering the mediating role of self-regulated language learning among Iranian EFL students?
2. Are there any significant relationships between dimensions of student engagement and self-regulated language learning among Iranian EFL students?

3. Method

3.1. Participants

The participants of this study were 146 out of 163 EFL learners within the age range of 14 and 19 years old, selected through convenience sampling, and their availability and willingness to participate were regarded as the criteria for their selection. They were chosen from the language learners who were learning EFL at the Iran Language Institute (ILI), adults' branch, Gorgan, Iran. They were selected from male language learners of this institute, who were all native Persian speakers taking EFL courses willingly as an extracurricular activity.

3.2. Instruments

3.2.1. Student Engagement Questionnaire (SEQ)

The instrument used in this study to collect data on student engagement was a combination of two questionnaires: Reeve's (2013) questionnaire, focused on agentic engagement, and Student Engagement in Schools Questionnaire (SESQ), developed by Hart, Stewart, and Jimerson (2011). The instrument was a 14-item questionnaire containing four dimensions: *emotional engagement*, *behavioral engagement*, *cognitive engagement*, and *agentic engagement*. Each item was calculated on a 5-point Likert-type scale from 1: *strongly disagree* to 5: *strongly agree*. The Cronbach's alpha as the reliability index of this questionnaire was calculated as .82.

3.2.2. Language Learning Motivation Scale (LLMS)

A modified version of Language Learning Motivation Scale (LLMS), developed by Noels, Pelletier, Clément, and Vallerand (2000), was used to collect data on the students' reasons for language learning, based on the motivational orientations delineated in SDT (Deci & Ryan, 1985, 2000). This adapted scale comprised 10 items and three sub-components: *intrinsic*

motivation, extrinsic motivation, and *amotivation*. The students were required to score the reason applicable to them. Each item was calculated on a 5-point Likert-type scale from 1: *It does not apply to me at all* to 5*: It applies to me completely.* The Cronbach's alpha of this scale was estimated as .66.

3.2.3. Self-Regulated Language Learning Questionnaire (SRLLQ)

The questionnaire employed to collect quantitative data on self-regulated language learning was an adapted version from the inventory already developed by Pintrich, Smith, Garcia, and McKeachie (1991). The modified questionnaire contained 14 items and three subscales: *metacognitive self-regulation*, *time and study environment*, and *effort regulation*. The items were calculated on a 5-point Likert-type scale from 1: *strongly disagree* to 5: *strongly agree*. The reliability index of the questionnaire was calculated as .79.

3.2.4. Oxford Quick Placement Test (OQPT)

The paper-based version of the Oxford Quick Placement Test (OQPT) (2001) was employed to homogenize the participants and select intermediate level language learners, although the students were already at the intermediate level of language proficiency in the ILI. The OQPT comprises 60 questions in a multiple-choice format. The students who scored between 30 and 47 were regarded as intermediate-level students, as such the appropriate participants of the study.

3.3. Procedure

The study was conducted at the ILI, adult male branch, Gorgan, Iran, in the fall term of 1398 (2019). The written permission for performing the present research at this institute was obtained from the provincial director of the ILI. Having taken the OQPT, 146 language learners, who scored between 30 and 47, as intermediate-level language learners, were selected from 163 male EFL learners and given the paper-based questionnaires. It should be mentioned that although the students' level of language proficiency was high enough to make out the items of the questionnaires (intermediate level), the first researcher himself was present in the classroom during the administration of the questionnaire for any necessary clarification as well as reminding them of not missing any single one of the questionnaire items. Therefore, he made sure that the students answered all the items of the questionnaires, resulting in a full response rate.

3.4. Data Analysis

The design of the study was correlational as it merely investigated the relationships among the variables of this study. The data gathered through the

questionnaires were analyzed through SEM, by using SmartPLS version 2, and Statistical Package for Social Science (SPSS), version 26.

4. Results and Discussion

4.1. Results

The data set had a sample size of 146 without any missing values or outliers. Regarding the use of a mediator in this study, it should be noted that an important requirement for examining the mediating role is that there have to exist significant associations between dependent and independent variables (Hayes, 2018). After running the test of normality, the Sig. values of Kolmogorov-Smirnov were less than 0.05, except for SE, indicating that the data distribution was not normal. Therefore, we had to use a non-parametric test of correlation, e.g., the Spearman's rho. The correlations of the variables were thus calculated and displayed in Table1.

As Table 1 illustrates, there were significant relationships between all the variables, providing enough justification for investigating the mediator effects on the relationships between the abovementioned constructs in the present study.

Fitness of the proposed model was examined through SEM, using SmartPLS software, version 2. As Ringle et al. (2014) put, in order to perform SEM, we need to run three programs in SmartPLS, version 2: PLS Algorithm, used to run the main SEM; bootstrapping, used to assess the significance or p-value of the correlations of measurement models and regressions of the structural model; and blindfolding, used to compute the Predictive Validity (Q^2), and the effect sizes (f^2). For outer model evaluation, indicator loadings need to be reported. Bagozzi and Yi (1988) recommended that Cronbach's alpha not be used for internal consistency reliability. In sum, what should be examined and reported include outer loadings, composite reliability, AVE and its square root (Wong, 2013).

According to Henseler et al. (2009), the analyses of the adjusted model should be performed in two subsequent phases. First, the measurement models need to be assessed. Second, after any probable adjustments, the structural model is to be evaluated.

Table 1

Correlations Between the Variables of the Study before Running SEM

			EMO	BEH	COG	AGN	SELF	MOT	SE
Spearman's rho	EMO	CC	1.000	.292**	.346**	.257**	.346**	.470**	.555**
		Sig.(2-tailed)	.	.000	.000	.002	.000	.000	.000
		N	146	146	146	146	146	146	146
	BEH	CC	.292**	1.000	.338**	.302**	.553**	.354**	.632**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.000
		N	146	146	146	146	146	146	146
	COG	CC	.346**	.338**	1.000	.319**	.437**	.498**	.767**
		Sig.(2-tailed)	.000	.000	.	.000	.000	.000	.000
		N	146	146	146	146	146	146	146
	AGN	CC	.257**	.302**	.319**	1.000	.447**	.307**	.727**
		Sig.(2-tailed)	.002	.000	.000	.	.000	.000	.000
		N	146	146	146	146	146	146	146
	SELF	CC	.346**	.553**	.437**	.447**	1.000	.317**	.641**
		Sig.(2-tailed)	.000	.000	.000	.000	.	.000	.000
		N	146	146	146	146	146	146	146
	MOT	CC	.470**	.354**	.498**	.307**	.317**	1.000	.545**
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.	.000
		N	146	146	146	146	146	146	146
	SE	CC	.555**	.632**	.767**	.727**	.641**	.545**	1.000
		Sig.(2-tailed)	.000	.000	.000	.000	.000	.000	.
		N	146	146	146	146	146	146	146

**. Correlation is significant at the 0.01 level (2-tailed).

Note. Correlation coefficient (CC), emotional engagement (EMO), behavioral engagement (BEH), cognitive engagement (COG), agentic engagement (AGN), self-regulated language learning (SELF), language learning motivation (MOT), and student engagement (SE).

4.1.1. Evaluation of the Measurement Models

The measurement models concern the relationships between hypothetical constructs or unobservable latent variables (LVs) and their observable variables – indicators or items (Wang, Hefetz, & Liberman, 2017). First, the measuring models were checked for convergent validity and discriminant validity (Ringle et al., 2014). Convergent validity was evaluated by observing the Average Variance Extracted (AVEs).

Table 2

Values of Adjustment Quality for the SEM Model

	AVE	Composite Reliability	R Square	Cronbach's Alpha
AGN	0.614	0.826		0.691
BEH	0.829	0.906		0.794
COG	0.515	0.809		0.687
EMO	0.722	0.838		0.616
MOT	0.523	0.810	0.414	0.690
SELF	0.508	0.805	0.452	0.679

Table 2 shows the results of running PLS Algorithm after adjustments. The values of the AVEs should be 0.5 or greater (Bagozzi & Yi, 1988). Based on Table 2, the AVE values are all larger than the acceptable threshold of 0.5. Therefore, the model had convergent validity.

Discriminant validity could be established in two ways (Ringle et al., 2014) by observing the criteria of Fornell and Larcker (1981), i.e., the square root of AVE in each LV is calculated, and checking the Cross Loading (Chin, 1998), i.e., factor loadings of the indicators in their related LVs or constructs are to be higher than those in the others.

Table 3

Fornell-Larcker Criterion Analysis for Checking Discriminant Validity

	AGN	BEH	COG	EMO	MOT	SELF
AGN	**0.783**					
BEH	0.337	**0.910**				
COG	0.304	0.358	**0.717**			
EMO	0.267	0.289	0.341	**0.849**		
MOT	0.334	0.395	0.546	0.451	**0.723**	
SELF	0.461	0.546	0.475	0.350	0.363	**0.712**

As presented in Table 3, all bold values on the diagonal of the table, which are the square roots of AVEs, are greater than other correlation values among the LVs, in the related rows and columns. We can thus state that the

model has discriminant validity based on the Fornell and Larcker (1981) criteria. The second way to observe discriminant validity is checking the cross loadings. After factor loadings having been checked, it was concluded that the discriminant validity of the model is also confirmed based on the Chin (1998) criteria.

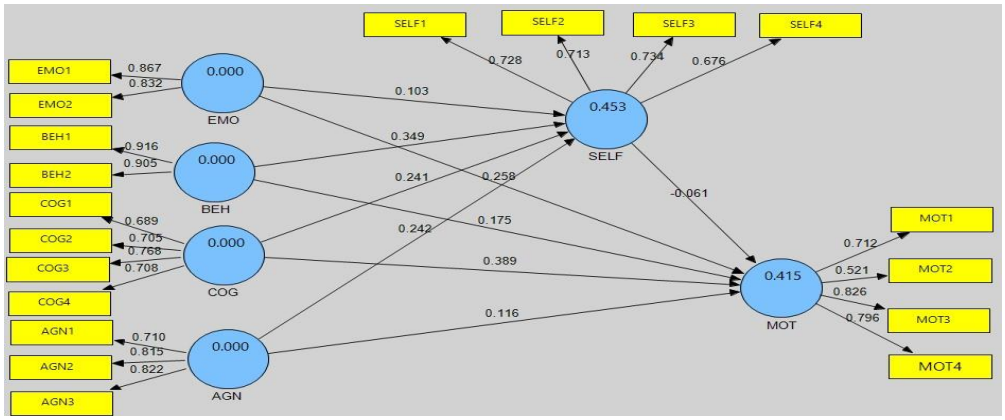
Having certified the convergent validity and discriminant validity, the researchers estimated the internal consistency values of Cronbach's Alpha (CA) and the Composite Reliability (CR). Traditionally, CA is employed to measure internal consistency in social and behavioral sciences, but in PLS-SEM, CA is considered a conservative measurement because of its sensitivity to the number of the items, leading to underestimating the internal consistency reliability (Hair, Hult, Ringle, & Sarstedt, 2017; Wong, 2013). Literature has thus recommended using CR as an alternative (Bagozzi & Yi, 1988). In this study, both types of reliability were checked, however. CA values above 0.60 (Ringle et al., 2014, p. 65) and CR values above 0.70 (Hair et al., 2017, p. 136) are considered appropriate or satisfactory in PLS-SEM. From Table 2, the values of CA and CR are shown to be larger than the threshold values. Therefore, internal consistency for all LVs or constructs were high. In sum, the results of the analyses indicate that both discriminant validity and convergent validity are well established, and LVs enjoy acceptable reliability indices.

4.1.2. Evaluation of the Structural Model

The structural model deals with the postulated relationships between the LVs or theoretical constructs (Wang et al., 2017). In order to evaluate the fitness of the structural model, the coefficient of determination (R^2) and predictive relevance (Q^2) were employed.

Figure 1

PLS-SEM Results with Path Coefficient Values



As Figure 1 depicts, the coefficient of determination, R^2, is 0.453 for the endogenous LV of self-regulated language learning. This means that the four LVs (EMO, BEH, COG, and AGN) moderately explain 45.3% of the variance in SELF. Also, these four variables together explain 41.5% of the variance of MOT. The values on the arrows between LVs or constructs, in the structural model, indicate the path or correlation coefficients.

In order to check the magnitude or strength of the relationships between the LVs, the effect sizes were calculated by using predictive relevance (Q^2). The Q^2 values of 0.02, 0.15 and 0.35 are considered weak, medium and large effects, respectively (Chin, 1998). The effect size of BEH was large (0.421) while other effect sizes fell within the range of medium.

In order to assess multicollinearity issues of the inner or structural model, multiple regression was calculated via SPSS, version 26, to get the Variance Inflation Factor (VIF) value (Wong, 2013). Multicollinearity occurs when observed variables or indicators of each LV or construct are highly correlated, which may bias the outcomes of the statistical tests and weaken the statistical power of the model (Wang et al., 2017). As Hair, Ringle, and Sarstedt (2011) put, the VIF needs to be 5 or lower or Tolerance level of 0.2 or higher to evade the collinearity problem. Since the VIF values were all lower than 5, and Tolerance values greater than 0.2, there was no multicollinearity among the independent or predictor variables.

Finally, one should also evaluate the general adjustment indicator of the model. In this sense, for the models in which all of the constructs are reflective, Tenenhaus et al. (2005) suggested a Goodness of Fit (GoF) which is essentially the square root of the average R^2 (goodness of fit for the structural model) multiplied by the average AVE (goodness of fit of the measurement models).

Table 4

General Model's Goodness of Fit

Variables	Communality	R^2	$\overline{\text{Communality}}$	$\overline{R^2}$	GoF
AGN	0.614				
BEH	0.829				
COG	0.515				
EMO	0.722		0.618	0.434	0.517
MOT	0.523	0.415			
SELF	0.508	0.453			

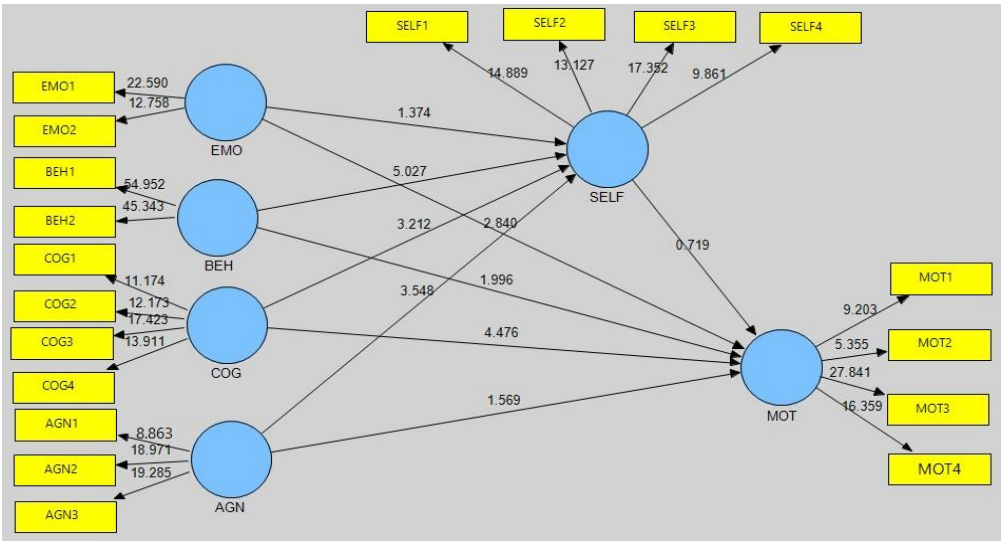
Wetzels et al. (2009) proposed that the value 0.36 is adequate in social and behavioral sciences. Based on Table 4, the value obtained for the

general GoF of the model was 0.517, indicating that the proposed model of the study had an adequate adjustment.

Now that the validity and reliability of the measuring models have been confirmed, and the proposed model enjoys a good fit with the empirical data, the structural model can be evaluated by checking path coefficients or correlation and regression coefficients of the LVs or constructs. Figure 1 depicts schematically the values of these statistical tests. In order to see if these correlations are significant ($p \leq 0.05$), the bootstrapping technique is to be run. Figure 2 displays the outcomes of this test.

Figure 2

PLS-SEM Results with T-Statistic Values Via Bootstrapping Module



The values on the arrows, called t-values, indicate the significance level of the relationships. In SmartPLS, instead of p-values, t-values are used to indicate the significance level, which is 1.96 for .05 level of significance (Ringle et al., 2014; Wong, 2013). The reading of Figure 2 shows that the t-value for the linkage of EMO-SELF (1.374) is lower than the referenced value of 1.96. However, the t-values for BEH-SELF (5.027), COG-SELF (3.212), and AGN-SELF (3.548) are above 1.96. Therefore, considering the second research question aiming at examining the association between dimensions of student engagement and self-regulated language learning, we can conclude that emotional engagement had no significant relationship with self-regulated language learning, while behavioral engagement, cognitive engagement, and agentic engagement had statistically significant

relationships with self-regulated language learning, with the behavioral engagement having the highest coefficient (β = 0.349).

In addition, as for the first research question examining the association between dimensions of student engagement and language learning motivation considering the mediating role of self-regulated language learning, indirect effects need to be observed between them. Table 5 displays the output of the calculations.

Table 5

Direct Effects, Indirect, and Total Effects and t-statistics of the Structural Model

			Direct Effects	Indirect Effects	Total Effects	*t*-statistics
AGN	⟶	MOT	0.116	-0.015	0.101	1.569
AGN	⟶	SELF	0.242	-------	0.242	3.548
BEH	⟶	MOT	0.175	-0.022	0.153	1.996
BEH	⟶	SELF	0.349	-------	0.349	5.027
COG	⟶	MOT	0.389	-0.015	0.374	4.476
COG	⟶	SELF	0.241	-------	0.241	3.212
EMO	⟶	MOT	0.258	-0.007	0.251	2.480
EMO	⟶	SELF	0.103	-------	0.103	1.374
SELF	⟶	MOT	-0.061	-------	-0.061	0.719

Given the mediator effect in the model, Table 5 shows that since the t-value for SELF-MOT is less than the threshold t-value (t-value = 0.719 $\leq$ 1.96), it could mean that the path coefficient (β = -0.061) between SELF and MOT is not statistically significant. Therefore, we can conclude that self-regulated language learning had no mediation effect on the relationship between dimensions of student engagement and language learning motivation.

4.2. Discussion

The results of the data analysis indicated that self-regulated language learning had no mediating role between language learning motivation and dimensions of student engagement. The findings also indicated that there were positive significant relationships between self-regulated language learning and three subcomponents or dimensions of student engagement, with the behavioral engagement having the highest index (β = 0.349), followed by agentic engagement (β = 0.242), and cognitive engagement (β = 0.241). However, the relationship between self-regulated language learning and emotional engagement (β = 0.103) was not statistically significant.

The outcomes of the study regarding the connection between self-regulated language learning and dimensions of student engagement were

rather in line with those of several research studies such as LeMay (2017), Pintrich and García (1993), and Ellis and Helaire (2018), who found correlations between self-regulated learning and at least one or more dimensions of student engagement in various educational contexts. In the present study, however, only emotional engagement did not have any significant association with self-regulated language learning. This could be ascribed to the learners' lack of interest in the educational setting and/or the teacher (Wolters & Taylor, 2012), leading to students' experiencing negative emotions such as boredom, sadness, or even frustration. These undesirable forms of emotions can be viewed as indicators of students' lack of investment in learning activities, withdrawal of persistence, and unwillingness to exert efforts (Pintrich, 2004). Further, self-regulated learners need to not feel adversary affections when they attempt to plan or monitor their learning. Thus, such students may not develop into self-regulated learners.

Another result of this study was that among the dimensions of student engagement, behavioral engagement had the highest effect on self-regulated language learning. This may be because students who are behaviorally engaged have higher motivational levels and tend to be attentive, hard-working, and determined to confront challenges (Guthrie, Wigfield, & You, 2012). Therefore, behaviorally engaged students are more like self-regulated learners as the latter also try to achieve their academic aims purposefully and succeed in surmounting hindrances energetically (Randi & Corno, 1997). Hence, since the participants of this study were young adults, who attended the classes willingly as their extracurricular activity, they were expected to be studious, goal-oriented, and persistent to achieve their accomplishments.

On the other hand, the findings indicated that self-regulated language learning failed to play a mediator role between language learning motivation and student engagement. This no mediation role of self-regulated language learning in the current study can be attributed to the centrality attributed to the agency of the students (Wolters & Taylor, 2012). Bandura (2006) defined agency as the learners' ability to gain control over their own learning behavior. This perspective behooves us to qualify students as self-regulated learners when their active engagement becomes a function of agentic processes. Therefore, the students pressured to accomplish their assigned tasks may seem to be engaged, but are not likely regarded as self-regulated learners.

In addition, this lack of mediation could also mean that self-regulated language learning did not help students to engage more in learning tasks and activities. This can be due to the belief that both student engagement and self-regulation have many common aspects, and even student engagement

contains self-regulation as one element (Fredricks et al., 2004). Thus, it is inferred that student engagement did not need self-regulation as a mediator to have effects on the students' motivational levels because total effects were smaller than direct effects. In fact, engaged students are practically doing what they should be to involve more in learning activities. However, in order to keep students engaged in what they do, other issues should be dealt with, among which one can think of the school setting and what students need to be engaged.

Student engagement can be promoted by satisfying students' basic psychological needs. Based on SDT, the theoretical underpinning of the current study, when students perceive that their school can meet their needs for autonomy, competence, and relatedness, they become more involved in learning tasks and school activities (Connell, as cited in Rumberger & Rotermund, 2012; Fredricks & McColsky, 2012). Hence, school authorities and/or teachers need to provide a school setting where such needs can be met. For example, if teachers build a helpful and sympathetic environment, students' need for relatedness can be satisfied. The students' need for autonomy is met when they are given a choice. And their need for competence is met when their self-efficacy is promoted through making them believe achieving the desired ends is possible (Fredricks et al., 2004).

In sum, we may infer that when students are persuaded to become more engaged, their level of motivation raises without any intervention of self-regulated learning strategies. Thus, adding self-regulated learning as a mediator to this relationship is not only in vain but also counter-productive as the small β value (-0.061) obtained in the current study was negative. Further, we can deduce that dimensions of student engagement, as Wolters and Taylor (2012) argued, already share features and assumptions with self-regulation. This finding, in essence, substantiates what Wolters and Taylor stated about the similarities between student engagement and self-regulation. On the other hand, we can also infer that if we persist in incorporating self-regulated learning, we might have to expect to see undesirable results. Hence, when students are engaged, they need not be pushed toward using self-regulation in order to be more motivated in language learning. Therefore, this study revealed that if we need to enhance the linkage between student engagement and motivation, self-regulation may not be an appropriate option.

5. Conclusion and Implications

Based on the results of the present study, several practical implications can be drawn. First, in order to have self-regulated learners, we need to make students behaviorally engaged. Hence, teachers should provide conditions in which students feel like participating in class activities. In addition, it has been proposed that by making students self-regulated learners,

they will become more behaviorally engaged as they know how to plan, monitor, and assess their academic and social behaviors (Randi & Corno, 1997). Simply put, self-regulated learning and behavioral engagement are related reciprocally. Accordingly, what teachers need to do is provide affordances and opportunities for the students so that they can involve in various forms of behavioral engagement such as asking questions and completing assignments (Reeve, 2012). Further, the students regarded as self-regulated learners commonly show more positive attitudes and emotions in an educational context (Wolters & Taylor, 2012).

Second, as interactions with friends and peers can stimulate learners to engage in academic activities as well as in extracurricular practices (Juvonen, Espinoza, & Knifsend, 2012), teachers are advised to create situations which increase such interactions. One way is to have learners work in groups or in pairs, which can lead to having more interactions with others. Research has shown that students with a higher sense of connection with their teachers and peers display higher emotional and behavioral engagement (Furrer & Skinner, 2003). When students have high behavioral engagement, they are industrious in school work and energetic in extracurricular activities (Lam et al. 2012).

Next, materials developers may consider incorporating more group or pair work exercises in the instructional materials so that students can take advantage of such learning tasks in promoting their academic engagement. Mahatmya et al. (2012) argued that learning to work in groups or in cooperation with others may help students to manage group work and boost their engagement. Further, Juvonen et al. (2012) were of the opinion that even friends and peers can have influences on the students' engagement in school work. They added that group work and other cooperative methods create opportunities for students to provide support for others to get more involved in the learning activities.

To summarize, this study contributes to our understanding of the association between student engagement and language learning motivation by investigating the mediator role of self-regulated language learning in this linkage. The study can be reckoned as one of the first empirical inquiries using SEM to analyze the indirect effects of self-regulation on the well-established relationship between student engagement and motivation. The contribution of this study is its finding that language learners do not need self-regulation to boost their engagement. Simply put, as students increase their engagement, their motivation can increase as well, without turning to self-regulation.

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