

On the Relationship of Iranian EFL Learners' Engagement and Self-Regulation with Their Learning Outcomes

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ABSTRACT

Background: Language learning is a long and tedious process and some students may lose their initial interest, so their learning achievement might in turn decrease. Student engagement and self-regulation can be seen as influential in helping them to restore their enthusiasm and motivation. Engagement can assist students to be actively involved in their school work in order to become more motivated and interested in language learning. Further, self-regulation also seems to contribute to have students regulate their learning behavior and engagement, which could possibly play a role in their learning outcomes.

Purpose: The purpose of this study was thus to investigate the relationships of self-regulation and student engagement with learning outcomes.

Method: The participants, selected through convenience sampling, included 146 language learners learning English at the Iran Language Institute (ILI) Gorgan, Iran. They were given two questionnaires and a language proficiency test.

Results: The obtained data were analyzed by using SPSS, version 26. The results of Spearman's rho correlation tests indicated that there were statistically significant relationships of self-regulation and student engagement with learning outcomes, with student engagement having a stronger association with learning outcomes. Moreover, student engagement as a global construct was a better predictor of learning outcomes.

Conclusion: Since student engagement is comparatively new in the realm of language education, the findings can contribute to our understanding of its role in learning outcomes. Besides, the results have pedagogical implications for language learners and language teachers alike.

KEYWORDS

self-regulation, student engagement, learning outcomes, EFL learners, language learning

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INTRODUCTION

Language learning is a time consuming and sometimes tedious endeavor, which may result in students' withdrawal from the learning process (Menken, 2010). Therefore, language learners may require to become more engaged and interested in their school tasks and activities as "student engagement in academic activities is critical to success" (Webber et al., 2013; p. 591). Likewise, Wong and Liem (2022) believed that student engagement plays a crucial role in the outcomes of the learners' schooling.

This engagement, however, needs to be guided or directed to the right track in order to make the most of the class hour and not to waste students' energy and time. Self-regulation seems to help students regulate their engagement with academic activities and make them assume responsibility for their own learning. In this regard, Coelho et al. (2018) were of the view that engagement and self-regulation are relevant as students "need to be able to modulate behaviors and control attention to be engaged" (p. 1). They even contended that self-regulation skills can be regarded as a distin-



guishing feature of successful development, which is connected to academic achievement.

Student engagement can be regulated by language learners when they are actively, intentionally, and thoughtfully involved in how they work within academic settings (Baumeister & Vohs, 2004; Boekaerts et al., 2000). Self-regulation, on the other hand, is closely connected to student engagement as the two constructs have so many features in common that both attempt to account for psychological learning processes (Wolters & Taylor, 2012). Moreover, Winne and Perry (2000) reasoned that self-regulation can help learners to regulate their engagement in doing academic tasks.

Most educators and scholars may wonder "why some learners learn faster than others and why some learners achieve ultimately higher levels than others" (Dörnyei, 2010, p. 4). In fact, the question is what causes this variation in the students' learning outcomes. One explanation might be that students may sometimes lose their initial motivation and interest to continue language learning, leading to their poor achievement. Therefore, they may need to be pushed forward so that they become more interested to be involved in their academic activities. Student engagement and self-regulation have been independently suggested by various scholars as indicators of students' achievement (Commissiong, 2020; Finn & Zimmer, 2012; Mello, 2016; Moyer, 2014; Pellas, 2014). What, however, has been paid less attention to is the investigation of the relationship of these two constructs together with learning outcomes in the same study in language education. The results of the present study can help us to gain more understanding of the relationships among the variables under study. Hence, since there seems to be scant research on the roles of student engagement (Kha-javy, 2021; Mercer, 2019) and self-regulation in the learners' learning outcomes in the domain of language education, the current study was thus an attempt to fill this gap by investigating the relationships among these variables empirically in the Iranian EFL context.

LITERATURE REVIEW

Self-Regulation

Given the literature on developmental and educational psychology, when learners actively aim at a target for their learning, control their actions and behaviors, and regulate cognition to achieve those goals, they in essence are employing self-regulated learning strategies (Pintrich, 2000). In other words, students are no longer passive recipients of knowledge, but are actively constructing it while engaged in their learning experiences. In simple terms, it can indicate how students manage, supervise, and evaluate to what extent they have made progress in their learning. Self-regulation, however, like many other concepts in language education and educational psychology literature, seems to be a multi-

dimensional and complex construct. Boekaerts et al. (2000) reasoned that "self-regulation is a very difficult construct to define theoretically as well as to operationalize empirically" (p. 4). Zimmerman and Kitsantas (2014), however, defined self-regulation as "processes that learners use to activate and maintain cognitions, emotions, and behaviors to attain personal goals" (p. 145). Learners make use of such goals to generate self-centered feedback circles in order to monitor their effectiveness as well as to adapt their functioning. As Zimmerman and Kitsantas put, in order to achieve difficult goals and keep working towards them, learners need to have positive beliefs that motivate and support them.

Self-regulated learners, as Zimmerman (1990) put, seem to have substantial control over and intense awareness of their extent of knowledge and identified abilities. In contrast to inactive students, self-regulated learners take initiative by actively seeking out information and taking the necessary actions to learn it. In other words, when they face difficulties like unfavorable studying conditions, teachers who are hard to understand, or difficult textbooks, they have the ability to find a way to do well. As self-regulated students are effective and can regulate their own learning (Filice et al., 2020), they see learning as an organized and controllable practice, and they take more responsibility for their learning outcomes. (Zimmerman & Martinez-Pons, 1986). Self-regulated students, directed by their objectives, know their assets and confinements (Lunsford, 2020). In short, self-regulated students are able to study and learn on their own without needing help from teachers, parents, or friends, and monitor their own learning by investing constant effort to gain knowledge and skills (Zimmerman, 1989).

Student Engagement

As it was earlier mentioned, the two constructs of self-regulation and student engagement have many characteristics in common. Simply put, students can employ self-regulated learning strategies to control and monitor their levels of engagement. Engagement in general concerns "learners' active participation and involvement in a language learning task or activity" (Hiver et al., 2021, p. 2). According to Dörnyei (2018), student engagement concerns involvement in school-related activities and academic tasks. Research has shown that actively engaged students are "both more successful academically and more likely to avoid the pitfalls of adolescence" (Skinner et al., 2008, p. 765). Student engagement is frequently praised as the main focus of education. In language learning, student engagement is of more significance as students need to actively participate in order to gain communicative competence (Dörnyei, 2018). According to Trowler (2010), student engagement means more than just being involved or participating, entailing emotions and meaning-generating tasks. Engagement which lacks feelings is only involvement or even passivity. Reeve (2012) argued that student engagement can manifest when a learner participates energetically in a learning task.

However, when students are engaged, it means that they have been able to stay focused and motivated despite having many things that could distract them. Hence, as Dörnyei (2018) put, motivation is necessary for “preparing the deal,” but engagement is indispensable for “sealing the deal”. In short, engagement includes motivation and implementation. Students are increasingly “disengaged from the academic and social aspects of school life” as “far too many students are bored, unmotivated, and uninvolved” (Appleton et al., 2008, p. 369). Student engagement has been depicted in the literature as comprising several components. Apparently, as for the dimensions of student engagement, researchers seem to have little consensus on the exact number of the sub-components (Circic & Jovanovic, 2016; Sinatra et al., 2015). For instance, Appleton et al. (2006) worked on the cognitive and psychological dimensions to measure student engagement. However, Hart et al. (2011), focused their research on the assessment of three constructs of student engagement: affective, behavioral, and cognitive. Still, Reeve (2012, 2013) introduced another component – agentic. Reeve also used the term emotional instead of affective. However, the model employed in the present study had four sub-components as follows:

1. Behavioral engagement 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., 2004; Reschly & Christenson, 2012). Behavioral engagement could also be relevant to “the ‘directing’ aspect of attention or the intentional use of attentional effort” (Wong & Liem, 2022, p. 26).
2. Emotional or affective engagement refers to the students’ positive or negative emotional reactions to teachers, classmates, and learning (Fredricks et al., 2004), and identification with, or connection to, the educational context (Finn, 1989). Emotional engagement can be observed in “learners’ personal affective reactions as they participate in target language-related activities or tasks” (Hiver et al., 2021, p. 5).
3. Cognitive engagement 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 includes “attention, concentration, focus, absorption, ‘heads-on’ participation, and a willingness to go beyond what is required” (Skinner & Pitzer, 2012, p. 24). Wong and Liem (2022) described it as “the extent to which students are absorbed during learning activities” (p. 25).
4. Agentic Engagement: Reeve (2012) defined agentic engagement as “students’ intentional, proactive, and constructive contribution into the flow of the instruction

they receive” (p. 161). Agentic engagement, as Reeve (2013) put it, could be seen as another helpful way to improve student advancement in that it is no different from the other three sub-components of engagement. Agentic engagement, however, is different from the other three reactive elements as it is a proactive approach to learning and is initiated by the students when they actively contribute to their own learning progression.

The Theoretical Framework

The present study was conducted based on self-determination theory (SDT; Deci & Ryan, 2002). This theory, consisting of three basic, psychological needs of relatedness, autonomy, and competence, posits that individuals will engage constructively in the activities when such needs are satisfied. Engagement can be viewed “in terms of self-regulation and self-determination theories, both of which presume students’ active involvement in and reflection on their own learning” (Nichols & Dawson, 2012, p. 471). Therefore, as student engagement and self-regulation are related constructs (Coelho et al., 2018; Wolters & Taylor, 2012), both can be informed by this theory. Further, the instruments applied to collect data on self-regulation and student engagement in this study had been developed according to this theory. Besides, Reeve (2012) argued that the SDT can offer a solid theoretical ground to do empirical research on the aforementioned constructs. Finally, the SDT is also employed to justify the results and discuss the pedagogical implications of the study.

Empirical Studies

Finn and Zimmer (2012) reported that there was a significant association between self-regulated learning and academic achievement. Webber et al. (2013) found that student engagement could predict learning outcomes. Based on the results of her study, Moyer (2014) made the argument that learner engagement and self-regulation could account for exceptional outcomes in second language phonology. The study conducted by Pellas (2014) revealed that self-regulation was positively and significantly correlated with student engagement, and both constructs had effects on the learners’ online learning. Zhang et al. (2015) investigated the role of self-regulation in college students’ academic engagement and burnout. They reported significant correlations between self-regulation process and academic engagement. Mello (2016), who investigated masters and doctoral students’ engagement with the online resources, showed that engagement was rewarded with higher marks and led to more motivated students. Moreover, LeMay (2017) investigated the relationships among academic engagement, motivation, and self-regulation and the predictive capacity of these variables on students’ achievement. The findings demonstrated correlations between academic engagement and self-regulation. Ellis and Helaire (2018) examined the relationships between self-regulated learning beliefs and

behavioral engagement. The authors, using SEM as the analytic method, found positive relationships between the variables of their study.

Choi et al. (2018) investigated the impacts of self-regulated learning strategies and motivational factors on students' knowledge of L2 vocabulary. Their analysis showed that motivation influenced EFL vocabulary knowledge mediated by self-regulated vocabulary learning. They also found that motivation had a positive relationship with self-regulated learning of vocabulary. Likewise, Commissiong (2020), studying 385 students and 61 faculty members in the Caribbean, also found significant correlations of student achievement with student engagement and self-regulation. The purpose of Pahuriray's (2021) study was to examine the connection between self-regulating capacity in language learning and academic performance. The results unveiled that higher self-regulation capacity would lead to higher academic achievement. The aim of Park and Kim's (2022) study was to explore how students' self-regulation, co-regulation and behavioral engagement affected their performance in flipped classrooms at college. Their results showed that self-regulation had significant effects on behavioral engagement and academic performance, whereas behavioral engagement had no influence on the students' performance.

A review of the empirical studies conducted in recent years on the construct of student engagement reveals that this concept seems to have been under-researched in the domain of language education so far (Khajavy, 2021; Mercer, 2019), especially in the Iranian EFL context, and deserves more investigations to see its role in the students' learning outcomes. On the other hand, as self-regulation seems to have a close association with student engagement, this construct has also been added to further study its role in the students' learning outcomes. The findings could contribute to our understanding of the relationship between these constructs and students' perceptions of their achievement and the significance of the constructs to learning outcomes. The results of correlation and regression analyses can have the potential to help language teachers in designing appropriate learning activities and make them responsive to learners' needs. Accordingly, as little research has been conducted on student engagement and self-regulation and their roles in students' achievement in the same study in the realm of language education, the current study made attempts to explore the role of self-regulation and student engagement in students' learning outcomes. The following research questions were thus formulated:

1. Is there any significant relationship of student engagement and self-regulation with Iranian EFL learners' learning outcomes?
2. Is there any significant relationship between Iranian EFL learners' engagement and self-regulation?

3. Which construct, self-regulation or student engagement, is a better predictor of Iranian EFL learners' learning outcomes?

METHOD

Participants

This study involved selecting 146 male EFL learners from a total of 164 ones who were studying English at the Iran Language Institute (ILI), adults' branch, Gorgan, Iran, through convenience sampling based on their practical accessibility. These students, who were all Persian native speakers, were at the intermediate level, ensured by Quick Placement Test (QPT). They took the classes, held twice a week in the evening, willingly. The Iran language institute, the oldest language institute in the country, offers courses in English and other international languages. The institute also offers courses in IELTS and TOEFL to its advanced learners (see more at <https://www.ili.ir/>).

Confidentiality of the participants' data was strictly maintained throughout the study and all of them were assured that their responses would be kept anonymous and used for research purposes only. The distribution of the participants by age and years of language learning is shown in Table 1.

Instruments

Student Engagement Questionnaire (SEQ)

In order to collect the required data on student engagement, a scale adapted from two questionnaires (Hart et al., 2011; Reeve, 2013), was employed (see Appendix A). This modified and finalized scale included 14 items on four dimensions – *emotional engagement*, *behavioral engagement*, *cognitive engagement*, and *agentic engagement*. The items were calculated on a 5-point Likert-type scale from 1= *strongly disagree* to 5= *strongly agree*. The content validity of the questionnaire was confirmed by three experts in the field. Cronbach's alpha was used as indicative of the reliability index of the scale ($r=0.82$).

Self-Regulation Questionnaire (SRQ)

The scale used to collect data on self-regulation was taken from the questionnaire by Pintrich et al. (1991). This adapted questionnaire had 14 items and three subcomponents: *metacognitive self-regulation*, *time and study environment*, and *effort regulation* (see Appendix B). Each item was measured on a 5-level Likert-type scale from 1= *strongly disagree* to 5= *strongly agree*. The content validity of the scale was verified by three PhD holders in the field. The reliability index of the scale was estimated as .79.

Table 1*Distribution of Participants by Age and Years of Language Learning*

Age	Years of Language Learning	Frequency	Percent	Valid Percent	Cumulative Percent
3-15	0-3	1	2.8	2.8	2.8
	4-6	12	33.3	33.3	36.1
	7-9	23	63.9	63.9	100.0
	Total	36	100.0	100.0	
16-18	0-3	28	26.2	26.2	26.2
	4-6	53	49.5	49.5	75.7
	7-9	26	24.3	24.3	100.0
	Total	107	100.0	100.0	
19-20	0-3	1	33.3	33.3	33.3
	4-6	1	33.3	33.3	66.7
	7-9	1	33.3	33.3	100.0
	Total	3	100.0	100.0	

Quick Placement Test (QPT)

The Quick Placement Test (QPT) (2001) had a two-fold role in this study. It was used to both homogenize the participants and select intermediate level language learners, and measure their learning outcomes. This standardized test consists of 60 questions in a multiple-choice format. Those students who scored between 30 and 47 were considered intermediate language learners.

Data Collection Procedures

After taking the QPT, 146 language learners were chosen from 164 male EFL learners and given the questionnaires. The current study was done at the ILI, adult male branch, Gorgan, Iran. The written permission for conducting the study in the institution was attained from the manager of the institute. The students were deemed to be proficient enough to grasp the questionnaire items, yet the first researcher attended all questionnaire administrations in case students needed any probable explanations. He also reminded the students not to miss any items of the questionnaires. Thus, a full response rate was obtained as all the students answered all the questionnaire items.

Data Analysis

The SPSS software, version 26, was employed to do the statistical analysis of the data. In order to determine whether the relationships among self-regulation, student engagement, and learning outcomes were statistically significant, Spearman's rho correlation tests were applied. To show that the relationships were of practical significance, effect sizes, i.e. R^2 , were calculated as well (see Creswell, 2012). In addition, multiple regression tests were used to see which con-

struct, self-regulation or student engagement, had a better predictability power over students' learning outcomes.

RESULTS

The descriptive results of the two questionnaires and the QPT are displayed in Table 2. Data screening showed no incomplete questionnaire items, outliers or other aberrations.

As normal distribution of the data is important in using statistical tests, Kolmogorov-Smirnov and Shapiro-Wilk tests were run. The results of these tests are displayed in Table 3.

According to Table 3, the Sig values for Kolmogorov-Smirnov and Shapiro-Wilk tests for SE and SELF are above .05. However, since the Sig value for LOUT is less than .05, the distribution of data for LOUT is not normal. Therefore, non-parametric tests need to be used.

Then to answer research questions 1 and 2, Spearman's rho correlation tests were employed. Table 4 shows the results of these tests.

As can be seen in Table 4, LOUT had significant relationships with both SE ($r=.817$, $n=146$, $p=.000$) and SELF ($r=.771$, $n=146$, $p=.000$). Moreover, there was a significant relationship between SE and SELF ($r=.677$, $n=146$, $p=.000$). Hence, it can be concluded that the relationships among the three variables of this study are all statistically significant.

In order to find out how much variability in the dependent variable (LOUT) can be explained by the independent variables (SE and SELF), regression analysis was used. Simply

Table 2*Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
SE	146	34	70	53.80	7.376
SELF	146	27	70	50.46	8.240
LOUT	146	30	47	38.52	3.112
Valid N (listwise)	146				

Note. SE=student engagement; SELF=self-regulation; LOUT=learning outcome

Table 3*Tests of Normality*

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
SE	.054	146	.200*	.990	146	.349
SELF	.063	146	.200*	.989	146	.342
LOUT	.103	146	.001	.981	146	.038

Table 4*Correlations between SELF, SE, and LOUT*

			ENG	SELF	LOUT
Spearman's rho	SE	Correlation Coefficient	1.000	.677**	.817**
		Sig. (2-tailed)	.	.000	.000
		N	146	146	146
	SELF	Correlation Coefficient	.677**	1.000	.771**
		Sig. (2-tailed)	.000	.	.000
		N	146	146	146
	LOUT	Correlation Coefficient	.817**	.771**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	146	146	146

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

put, the multiple linear regression was applied to determine which construct, student engagement or self-regulation, was a better predictor of students' learning outcomes, i.e., the third research question. Table 5 illustrates the results of running the multiple linear regression tests. It should be noted that the assumptions for running multiple regression analysis were checked. It was found out that the assumptions were met, so the data were proper for using multiple regression tests.

Based on Table 5, a statistically significant model was created by the regression analysis ($F(2, 143) = 205.7, p = .000, AR^2 = 0.73$), explaining 74% of the total variance. It was found that both student engagement ($\beta = 0.548; t = 9.00; p = .000$) and self-regulation ($\beta = 0.380; t = 6.247; p = .000$) were sig-

nificant predictors of learning outcomes. However, student engagement was a better predictor of students' learning outcomes.

DISCUSSION

The main purpose of this study was to explore the relationships of learning outcomes with student engagement and self-regulation. A secondary objective of the study was to determine which construct, student engagement or self-regulation, could be a better predictor of language learning outcomes. The results of correlation tests showed that there were positive significant relationships of learning outcomes with both student engagement and self-regulation, with

Table 5*Multiple Regression Analyses Predicting LOUT from SELF and SE*

Model B	Unstandardized Coefficients		Standardized Coefficients		ΔR ²			
	Std. Error	Beta	T	Sig. F	R	R ²		
(Constant)	18.848	.988	19.07	.000	205.72	.861	.742	.738
SE	.231	.026	9.009	.000				
SELF	.143	.023	6.247	.000				

student engagement having a stronger bond. Further, the regression analysis indicated that student engagement was a better predictor of language learning outcomes.

The findings of the present study were in line with those of several studies conducted by Choi et al. (2018), LeMay (2017), Ellis and Helaire (2018), Zhang et al. (2015), Finn and Zimmer (2012), Commissiong (2020), Pellas (2014), Mello (2016), and Moyer (2014). These scholars reported positive, significant relationships of learning outcomes with student engagement and/or self-regulation. Besides, the results of the regression analysis supported those found by Commissiong (2020), who reported that both student engagement and self-regulation predicted student success significantly. Likewise, Webber et al. (2013) found that higher levels of student achievement could be predicted by the subcomponents of student engagement. In contrast, Fong et al. (2017) and Rahal and Zainuba (2016) posited that learner engagement and self-regulation may not predict all aspects related to student achievement.

Correlation analyses showed that student engagement had a stronger relationship with learning outcomes than did self-regulation. Further, in regression analysis, student engagement was a better predictor of learning outcomes. Therefore, it can be inferred that student engagement seems to play a significant role in the students' academic success. This finding could be attributed to the close association of student engagement with learning motivation (Ghelichli et al., 2020; LeMay, 2017; Oga-Baldwin & Nakata, 2017). According to Oga-Baldwin and Nakata (2017), when students become more engaged in the learning process, their motivational levels increase. This increase in motivation makes students more interested in learning, which can in turn result in students' overall achievement (Beachboard et al., 2011; Taurina, 2015).

In addition, self-regulation was shown to be related to learning outcomes as well. This finding could be due to the idea that when students regulate their learning, they could be more successful. In other words, as Pintrich (2000) put, when language learners monitor their behaviors and modulate cognition for higher achievement, they apparently take responsibility for their own learning, which can lead to an increase in learner autonomy. Moreover, as learner autonomy is related to learner engagement, enhancement of student

engagement could increase learner autonomy too. According to the SDT, learners with greater sense of autonomy demonstrate higher levels of academic engagement (Deci & Ryan, 2002). Consequently, as Üstünlüoğlu (2009) argued, increased learner autonomy has positive impacts on student performance and improves achievement rates.

The results of the current study could have pedagogical implications. Since student engagement is closely related to learning outcomes, its improvement can contribute to student achievement. One possible way of promoting student engagement and achievement is to increase teachers' interactions with their students (Collaço, 2017; Pianta et al., 2012). Pianta et al. (2012) believed that "Through instructional behaviors, conversations, and activities, teachers foster students' development" (p. 376). They, for instance, suggested teachers' providing feedback for the students on their efforts or performance as it increases such teacher-student interactions. Feedback, they added, is to be of high-quality, and teachers "provide frequent feedback loops or back-and-forth exchanges" (p. 377). Where high quality feedback has been observed, these interactions, according to Howes et al. (2008), were connected to achievements in language and literacy.

Since psychological needs can have impacts on learner engagement and learning outcomes (Reeve, 2012), meeting such needs will promote students' achievement. Based on the SDT, these needs can be satisfied by providing conditions in which students' needs for autonomy, relatedness, and competence are met. However, the setting which intends to improve students' progress and learning outcomes is to be created in such a way that their sense of choice, autonomy, and connectedness are considered (Pianta et al., 2012). By the same token, Appleton et al. (2006) also underscored the significance of the context where the indicators of the dimensions of student engagement are observed, for example, interactions with teachers and administrators at the educational setting, family members' encouragement, and peer support. Moreover, according to the SDT, learning environments, if taken seriously by the educators, can have positive effects on the students' motivation because such environments are capable of improving students' feelings of relatedness. And increase in social relatedness can have effects on student achievement (Beachboard et al., 2011).

Other implications predicated on the results of this study could be activities language learners need to implement, such as working with peers on school projects as extracurricular activities and involving in class discussions with the teacher and classmates. In addition, informed by agentic engagement, teachers are advised to involve students in the process of instruction (Reeve, 2012). In other words, teachers are suggested to do so by "allowing students to take part in making decisions in order for them to become invested in the learning experience" (Collaço, 2017). Finally, it can be concluded that engaging students in academic activities is not the responsibility of teachers alone because "engagement requires a broad-based commitment from many people across the institution that work together to shape expectations" (Webber et al., 2013; p. 607).

CONCLUSION

The current study investigated the relationship of learning outcomes with student engagement and self-regulation among Iranian EFL learners. The findings of the study showed that both student engagement and self-regulation had significant relationships with learning outcomes. Moreover, student engagement was shown to be a better predictor of learning outcomes. As this study focused on self-regulation and student engagement as global constructs and learning outcomes in general, future research can investigate the subcomponents of each. For example, such dimensions of student engagement as behavioral, cognitive, emotional, or agentic engagement could be explored in relation with learning outcomes. Alternatively, students' learning outcomes can be investigated in light of language skills or subskills, for instance, reading comprehension or students' knowledge of grammar or vocabulary. Besides, while this study used questionnaires as instruments to collect quantitative data, further studies can employ other types of instruments such as interviews, observations, etc. for data collection purposes. Similarly, the present study used a cross-sectional design; future studies can be done on student engagement using a longitudinal design by focusing on the dynamics of this construct. Finally, as the concept of student engagement is comparatively a novel area for further research in the realm of second or foreign language learning and teaching, this construct and/or its dimensions

still merit more attention and investigation by the scholars in the field. In sum, the more research on student engagement is conducted, the more innovative ways of improving learning outcomes could be identified.

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DECLARATION OF COMPETING INTEREST

None declared.

AUTHORS' CONTRIBUTION

Yahya Ghelichli: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing – original draft

Seyyed Hassan Seyyedrezaei: Conceptualization; Data curation; Investigation; Project administration; Resources; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing

Zari Sadat Seyyedrezaei: Conceptualization; Data curation; Investigation; Project administration; Resources; Supervision; Validation; Visualization; Writing – original draft; Writing – review & editing.

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APPENDIX A

Student Engagement Questionnaire (SEQ) (Hart et al., 2011; Reeve, 2013)

Dear language learner,

The aim of this survey is to inquire about your opinion regarding "**Student Engagement and Self-Regulated Language Learning**" in the EFL classroom and school. Please answer the following questions carefully. Remember there are no right or wrong answers; just answer as accurately as possible. All information will be kept confidential. We appreciate your cooperation in advance.

Age: under 15 16-18 19 and above

Gender: male female

Years of learning English: 0-3 4-6 7 and above

Degree: High School Student University Student Graduated other

Rating Scale:

1 = strongly disagree 4 = agree

2 = disagree 5 = strongly agree

3 = neither agree nor disagree

Dimension	No.	Item	1	2	3	4	5
Emotional	1	I am very interested in learning a foreign language.					
	2	I enjoy learning new things in class.					
Behavioral	3	In class, I work as hard as I can.					
	4	When I'm in class, I participate in class activities.					
	5	I pay attention in class.					
	6	If I have trouble understanding a problem, I go over it again until I understand it.					
	7	When I run into a difficult problem, I keep working at it until I think I've solved it.					
Cognitive	8	When I study, I try to understand the material better by relating it to things I already know.					
	9	When I study, I figure out how the information might be useful in the real world.					
	10	I make up my own examples to help me understand the important concepts.					
	11	I try to see the similarities and differences between things I am learning and things I know already					
Agentic	12	I let my teacher know what I need and want.					
	13	During the class, I express my preferences and opinions.					
	14	When I need something in class, I'll ask the teacher for it.					

APPENDIX B

Self-Regulated Language Learning Questionnaire (SRLQ)

Dimension	No.	Item	1	2	3	4	5
Metacognitive Self-Regulation	1	When reading for the English class, I make up questions to help focus my reading.					
	2	When I become confused about something I'm reading for this class, I go back and try to figure it out.					
	3	If course materials are difficult to understand, I change the way I read the material.					
	4	Before I study new course material thoroughly, I often skim it to see how it is organized.					
	5	I try to change the way I study in order to fit the course requirements and instructor's teaching style.					
	6	I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying.					
	7	When I study for the English class, I set goals for myself in order to direct my activities in each study period.					
Time and Study Environment	8	I usually study in a place where I can concentrate on my course work.					
	9	I make good use of my study time for the English class.					
	10	I have a regular place set aside for studying.					
	11	I make sure I keep up with the weekly readings and assignments for this course.					
	12	I attend class regularly.					
Effort Regulation	13	I work hard to do well in class even if I don't like what I am doing.					
	14	Even when course materials are dull and uninteresting, I manage to keep working until I finish.					

Note: Adapted from "Reliability and predictive validity of the motivated strategies for learning questionnaire (MSLQ)", by P.R. Pintrich, D.A. Smith, T. Garcia, and W. J McKeachie, 1991, *Educational and Psychological Measurement*, 53(3), 801-813 (<https://doi.org/10.1177/0013164493053003024>). Copyright 1991 by Sage.