

# Self-Determination and Classroom Engagement of EFL Learners: A Mixed-Methods Study of the Self-System Model of Motivational Development

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## Abstract

This study examines the antecedents and outcomes of classroom engagement of 412 Turkish English as a Foreign Language (EFL) learners. Grounded in self-determination theory and the self-system model of motivation, this mixed-methods study examined the relations between context (perceived autonomy-support from the instructor), self (basic psychological needs), action (behavioral, emotional, agentic, and cognitive engagement), and outcome (achievement and absenteeism). The results of structural equation modeling supported the hypothesized model and showed that learners' perception of their teachers' autonomy-support within the classroom predicted their need satisfaction, which in turn predicted self-determined engagement. Engagement predicted achievement and absenteeism within English courses. Semi-structured interviews showed patterns consistent with the quantitative results, and also that students felt their engagement would best be supported in classes with a positive social atmosphere. As well, their comments underscored the important role of language teachers in supporting learners' psychological need satisfaction, classroom engagement, and positive academic outcomes. The findings suggest strategies for English language educators to bolster students' engagement within the classrooms, including students who seem to be unmotivated, reluctant language learners.

## Keywords

engagement, autonomy-support, basic psychological needs, achievement, absenteeism, mixed methods

## Introduction

Engagement, with its various modifiers such as school, student, classroom, or course, is a buzzword for a topic that has become very popular in education circles over the last decades (Appleton, Christenson, & Furlong, 2008; Fredricks, Blumenfeld, Friedel, & Paris, 2005; Kahu, 2013). Although this popular topic has been much researched, there remains a lack of consensus on its conceptual definition and types, and questions remain about how and why it is so crucial for learning (Reschly & Christenson, 2012). This is particularly true in the language education domain, where engagement and its associations to learning within the classroom have received less attention (Dincer, Yesilyurt, & Demiröz, 2017; Montenegro, 2017; Noels, Chaffee, Lou, & Dincer, 2016; Noels, Vargas Lascano, & Saumure, 2019; Philp & Duchesne, 2016). Despite the limitations in the current literature, there is consistent evidence that engagement is strongly related to effective learning (e.g., academic achievement, Fredricks, Blumenfeld, & Paris, 2004; Jang, Kim, & Reeve, 2016;

Schlenker, Schlenker, & Schlenker, 2013), and it is often portrayed as a remedy for students' disruptive school behaviors and failing grades (Fredricks et al., 2004; Ryan & Patrick, 2001).

Given its significance, it is useful to situate engagement in a larger motivational paradigm (Christenson, Reschly, & Wylie, 2012). One relevant framework that adopts a holistic approach to motivation is Self-Determination Theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2017), which proposes that the nature and extent of engagement follow from the dynamics of self-processes. According to the SDT, people

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share universal, innate psychological needs for autonomy (i.e., a sense of being self-governed and self-initiating in activities), competence (i.e., a sense of being effective), and relatedness (i.e., a sense of being emotionally connected with others). When these psychological needs are met through interactions with others in their social context, people are likely to be more engaged in relevant activities. Within education, students' psychological needs can be affected by the qualities of student–teacher relationships and the general classroom climate (Jang et al., 2016; Reeve, 2013; Ryan & Deci, 2016). Although limited, research shows that this holds true in the foreign/second language learning (LL) domain (Dincer & Yesilyurt, 2017; Noels et al., 2016; Noels et al., 2019; Oga-Baldwin & Nakata, 2017).

Although some LL research has shown that engagement is linked to the teaching context (e.g., Oga-Baldwin & Nakata, 2015), to learners' sense of self (e.g., Noels, 2015), and to desirable outcomes (e.g., Dincer, Yesilyurt, & Takkac, 2012), studies in the LL domain have generally only examined bivariate correlations among these constructs. Few studies have adopted a multivariate perspective to examine the interplay among multiple perceptions of the teaching context, learners' needs, and engagement. A deeper understanding of the motivational processes by which language learners' engagement is promoted or undermined in the L2 learning settings is needed (Dincer et al., 2017; Noels, 2015; Noels et al., 2016; Philp & Duchesne, 2016). To address this, the present study focuses on the complex relations among language learners' teaching context (teacher need support), self-perceptions (need satisfaction), engagement, and LL outcomes (achievement and absenteeism). It also supplements this multivariate perspective with an in-depth analysis of students' experiences of engagement.

### *Conceptualization of Classroom Engagement*

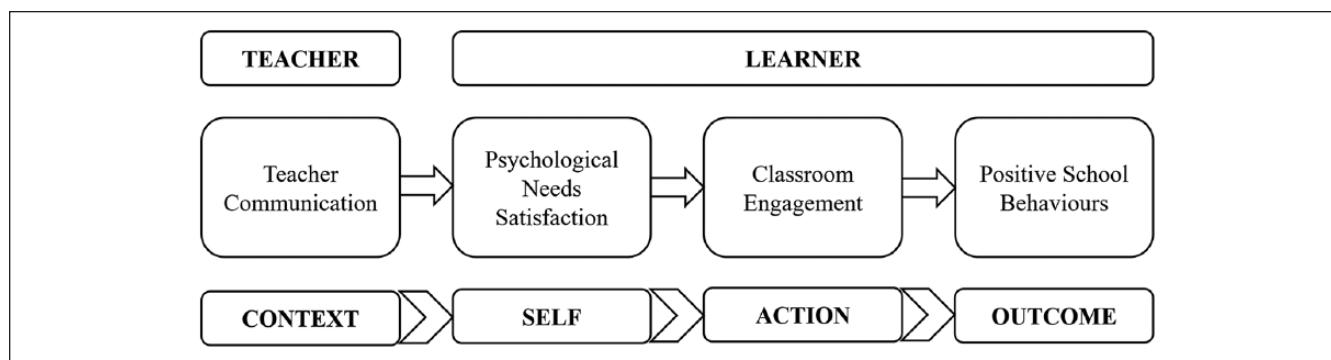
Engagement is defined as a student's active involvement and emotional quality during a learning activity (Reeve, Jang, Carrell, Jeon, & Barch, 2004). In the educational literature, there are different typologies of engagement and some scholars have used a two-part typology of engagement, identifying behavioral and emotional components of this construct (van Uden, Ritzen, & Pieters, 2013). Others conceptualize engagement as threefold, comprised of behavioral, emotional, and cognitive components (Fredricks et al., 2005; Fredricks et al., 2004). In the latter model, each component correlates with the other, and the three form a single composite construct. Within this typology, behavioral engagement refers to active involvement or participation in learning-related activities, such as asking questions in class and doing the homework. Emotional engagement concerns students' affective reactions in the learning process. Cognitive engagement refers to adopting sophisticated learning strategies such as conceptual understanding over surface knowledge.

Recently, Reeve (2013; Reeve & Tseng, 2011) argued that this three-dimensional model of engagement neglects to take into consideration the learners' active, constructive contributions to their learning activities, such as offering input and making suggestions, which he labels as agentic engagement. More research is required, however, to determine whether or not agentic engagement is distinct from other types of engagement and differentially predicts outcomes from the already established three dimensions (Eccles, 2016). Thus, the present study investigated engagement in LL as a four-dimensional construct, including agentic engagement along with behavioral, cognitive, and emotional engagement to examine the distinctive roles of these four engagement types in predicting language learners' outcomes.

### *Theoretical Underpinnings of the Study*

SDT provides a theoretical guide for how the social context within the classroom can affect learners' motivational experiences (Ryan & Deci, 2017). This theory, however, does not provide a clear picture of the role of engagement within the learners' motivational system. With the goal of connecting multiple motivation theories, the researchers (Skinner, Furrer, Marchand, & Kindermann, 2008; Skinner, Kindermann, Connell, & Wellborn, 2009) have proposed the Self-System Model of Motivational Development (SSMMD) as a framework for causally connecting classroom engagement to other motivational variables identified by other theories of human motivation, particularly SDT (Figure 1). In this integrated model, there are four types of motivational variables. Context variables refer to the social environment of learners, including teachers, parents, and peers. Self-variables refer to learners' ability beliefs, values, and attitudes, and particularly their perceptions of how well their need for autonomy, competence, and relatedness are satisfied. The third category, action, concerns goal-directed behaviors, particularly engagement in a learning activity. The last component of the model is the outcome, which, in the educational domain, is exemplified by cognitive development and learning. The SSMMD with its four components articulates the process by which the basic psychological needs posited by SDT as important aspects of the self are affected by the context and, in turn, affect engagement and relevant outcomes. For the present study, we adopted this holistic model of the motivational process as depicted below.

More specifically, the more that teachers' actions and classroom dynamics can support learners' need for autonomy, competence, and relatedness, the more that learners actively involve themselves in their learning activities, allowing them to learn more and to show higher academic achievement (Connell & Wellborn, 1991; Dincer et al., 2012; Noels et al., 2016; Reeve, 2012; Ryan & Deci, 2000). Engagement, then, mediates the relation between psychological needs and learning outcomes (Skinner et al., 2008, 2009). Indeed, a number



**Figure 1.** The Self-System Model of Motivational Development (SSMMD).

Source. Adapted from Skinner et al. (2008) and Skinner et al. (2009) with permission.

of studies support the claim that engagement plays a mediational role in the associations among social context, self, action, and outcomes (Connell & Wellborn, 1991; Noels, 2015; Patrick, Ryan, & Kaplan, 2007; Skinner & Edge, 2002; Skinner et al., 2009). This SSMMD is not unlike LL motivation models that emphasize the importance of the social context, including Gardner's (1985, 2010) socio-educational model and Noels and colleagues' (2016) socio-ecological model.

### Engagement and LL

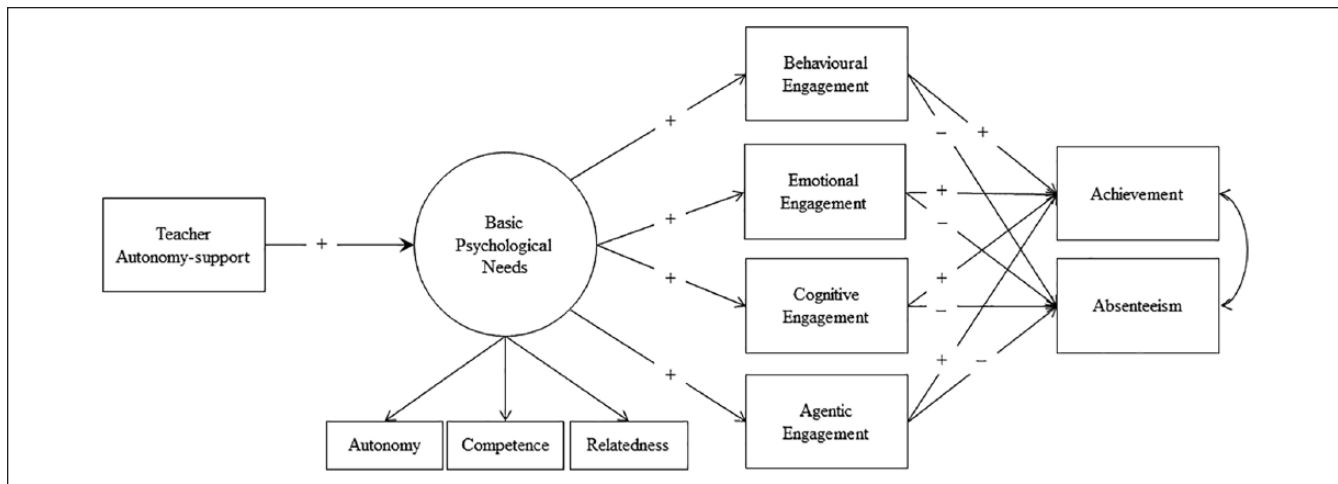
In spite of the demonstrated positive effects of classroom engagement on general learning, relatively little attention has been given to engagement in LL. Some theoretical frameworks use constructs analogous to engagement, including the socio-educational (Gardner, 1985, 2010) and the socio-contextual (Clément, 1986) models of LL. For instance, Gardner's (2010) notion of motivational intensity, which refers to the effort expended in LL in terms of the "the amount of work done, persistence, and consistency in focus" (p. 121), is very similar to Reeve's (2013) conceptual definition of behavioral engagement, which he describes as "how involved the student is in the learning activity in terms of attention, effort and persistence" (p. 579; see also Skinner et al., 2009). As well, Gardner's (2010) construct of positive attitudes toward the language course clearly corresponds with the affective engagement. Like the relation between engagement and academic outcomes, positive attitudes and motivational intensity have been consistently associated with indices of language achievement, including standardized measures, course grades, and self-ratings (Masgoret & Gardner, 2003).

In addition to these parallels among constructs from LL motivation models and engagement theories, some research has used the construct of engagement as elaborated by educational psychologists to better understand the role of active engagement in LL. For instance, Noels (2009) showed that intrinsic motivation (i.e., enjoying studying, finding English interesting) was a stronger predictor of classroom engagement in English learning than extrinsic reasons such as

passing the examination or pleasing one's parents. Similarly, Y. L. E. Chen and Kraklow (2015) investigated motivation and engagement in Taiwanese English as a Foreign Language (EFL) classrooms and found that students' overall intrinsic motivation and external regulation significantly predicted behavioral engagement. More self-determined motivational orientations, then, are strong predictors of LL engagement. According to the SSMMD, these orientations, in turn, are predicted by the engagement as part of the motivational cycle. Indeed, Noels and colleagues (2019) found that, across a semester, language learners' behavioral engagement and motivation became reciprocally associated across time.

In terms of basic psychological needs and engagement, Thaliah and Hashim (2008) investigated the relationship between language teachers' autonomy-support and learners' engagement in Malaysian context and found that autonomy-supportive teaching explained about 30% of the variance in classroom engagement in terms of behavioral and cognitive dimensions. In a more recent study using structural equation modeling (SEM), Oga-Baldwin and Nakata (2017) investigated the relation between engagement and motivation in the language classroom using in-class engagement as a single latent variable to predict self-determined motivation. They found that engagement strongly predicted learners' intrinsic motivation and identified regulation and weakly predicted introjected regulation whereas it negatively predicted external regulation in this study. The authors concluded that engagement might be an important variable in researching the long-term dynamics in EFL classrooms. The studies highlighted that perceived autonomy-support from language teacher plays a significant predictive role in determining engagement, the action component of the SSMMD model.

Of note, this small body of literature on LL engagement is mainly composed of quantitative research collected through cross-sectional designs. Yet, several researchers (Fredricks et al., 2016; Harris, 2011; Zyngier, 2008) have called for well-designed qualitative studies investigating classroom engagement. Furthermore, although general education research has investigated the impacts of teachers' and students' perceptions



**Figure 2.** Hypothesized structural model.

of classroom engagement on learning outcomes and the multi-dimensional nature of classroom engagement, there are also discipline-specific teaching behaviors that warrant further investigation (Bell, 2005). However, there is little qualitative research on language teachers' and learners' perceptions of engagement in language classrooms. Indeed, in their review of qualitative research, Philp and Duchesne (2016) highlighted the need for a principled, qualitative, understanding of LL engagement, which they believe should be investigated as a context-specific concept, multi-dimensional construct. They called for more research in this relatively unexplored terrain, and invited researchers to define the processes by which engagement and LL are linked, to study these processes across different contexts as well as the moderators that influence the association between engagement and LL.

Three other major limitations in the existing LL engagement research are also present. First, previous studies have usually assessed classroom engagement as a one- or two-dimensional construct, often focusing only on behavioral engagement. As each dimension of engagement is only a single piece of the puzzle, studies that overlook the affective, cognitive, and agentic dimensions only partially account for the complexity of language learners' engagement. Second, although prior studies have tested some aspects of the SSMMD within English language education, no applied linguistics research has simultaneously included variables representing all aspects of this model (i.e., perceived interpersonal context, self, action [i.e., engagement], and outcomes), which is necessary to assess the place each component holds within the motivational process. Third, there is quite limited qualitative research investigating language learners' classroom engagement, and little is known to date about which factors play roles in fostering engagement within language classrooms.

### *The Present Study*

Given the limitations of previous research, this study had two objectives. The primary objective was to assess classroom engagement as a multi-dimensional construct to determine its role within the SSMMD as a mediator between, on one hand, context and the self and, on the other hand, academically relevant outcomes. Based on this framework, a hypothesized SEM is presented in Figure 2.

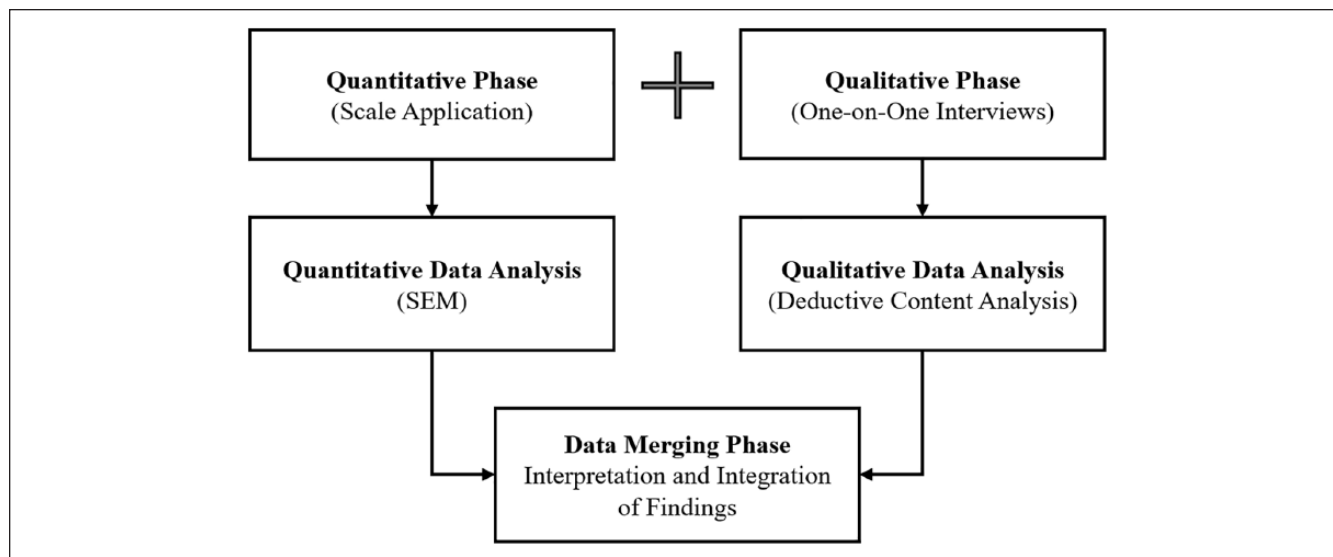
According to this model, autonomy-support from the language teacher predicts outcome variables by facilitating EFL learners' basic needs satisfaction and, mediated by need satisfaction, each type of engagement. The secondary objective was to more deeply consider language learners' accounts of their experience of engagement and to examine their suggestions for how teachers could better motivate students to engage in LL. Based on the objectives, the following research questions were posed:

**Research Question 1:** Do all types of engagement mediate the association between perceived autonomy-support from teachers and achievement?

**Research Question 2:** Do all types of engagement mediate the association between perceived autonomy-support from teachers and absenteeism?

**Research Question 3:** What are EFL learners' opinions on learning English, including (a) the role of the teacher and the classroom context; (b) their feelings of autonomy, competence, and relatedness; (c) their experience of engagement; and (d) their absenteeism within their EFL course?

**Research Question 4:** What are EFL learners' opinions about how the EFL learning experience and engagement could be improved?



## Method

## Research Design

We used a mixed-methods design, which combines quantitative and qualitative research techniques in a single study and more specifically adopted a concurrent triangulation design to seek convergence between the two approaches (Creswell & Clark, 2007; Johnson & Onwuegbuzie, 2004). The design of the study with its phases is given in Figure 3.

This approach is helpful for understanding the phenomena within both macro and micro perspectives: quantitative research shows group-level trends, and qualitative research articulates how the phenomenon of interest is experienced by individuals. In this design, the importance and centrality of each method are determined by the researchers (Creswell & Clark, 2007). We decided to use the quantitative and qualitative methods to complement each other, and we integrated their results at the interpretation level. We used the two data to better understand EFL learners' experience of classroom engagement and to elaborate an understanding of how students felt teachers could support their engagement. In the weighting of the data, we emphasized the quantitative data for our primary goal and followed up with analyses of participants' responses to open-ended questions for our secondary goal. We extended the research beyond numeric analyses by adding student-generated suggestions for how the course could best support self-determination and engagement.

### Setting and Participants

The setting was a foreign languages school within a state university in Turkey. The foreign languages school delivers English courses and provides English education to the freshman classes across different departments, such as engineering, medicine, and tourism. Within this school, there are over

30 English instructors, each class has 20 to 32 students, and students are assigned to classes according to results of English placement tests taken at the beginning of the term. It should also be noted that as the research setting is an EFL context, students are generally unable to use English outside the classroom and mostly rely on their teachers and classmates for interpersonal support (Dincer, 2014).

Participants for the quantitative phase were 412 freshmen EFL university-level students (65% men). They were selected according to a convenience sampling strategy, a non-probability sampling technique that was adopted because of the target groups' ready to access and availability. The students' ages ranged from 18 to 25 years ( $M = 19.82$ ;  $SD = 1.27$ ). The participants were all born in Turkey and, like all Turkish high school graduates, had a minimum of 7 years of English studies.

Participants for the qualitative phase were 18 students (61% men) from 135 respondents in the quantitative phase who volunteered to participate in one-on-one interviews. From this subsample, three to four participants from each class were selected with a simple random sampling strategy for the interviews. Their age ranged from 18 to 23 years ( $M = 20.44$ ;  $SD = 1.58$ ), and their responses to the questionnaire did not differ significantly from the full sample on any of the main variables or in gender distribution. The qualitative sample is slightly older than the full sample ( $t = -2.32$ ,  $df = 410$ ,  $p = .02$ ,  $d = .43$ ), with small effect size according to the benchmarks of Cohen (1988,  $d = .20$ , small;  $d = .50$ , medium;  $d = .80$ , large).

## Measures

All measures were previously validated in Turkish (Dincer, 2014) and used a 5-point Likert-type scale from 1 (*strongly disagree*) to 5 (*strongly agree*). The instruments' internal

**Table 1.** Questions From Semi-Structured Interviews.

Category	Interview questions
Autonomy-support	If one of your very close friends asked you what you think about this course and this teacher, what would you say?
Basic psychological needs	Do you feel autonomy in this class and how? Could you give details about your relationships with classmates in the class? How does being in this class make you feel about your English competency?
Behavioral engagement	Do you participate in classroom activities orally? What kind of behaviors do you perform in the class to be successful?
Emotional engagement	Are you interested in classroom activities and course? How do you feel in this course?
Cognitive engagement	Do you do extra things that would help your learning when you are studying course-related concepts? What kind of strategies do you follow when studying this course?
Agentic engagement	Do you ask questions that would help your learning in the class? How do you express your opinions to your teacher in this course?
Absenteeism	Could you give details about your course absenteeism and feelings when you do not attend the course?
Student-generated suggestions	If you had a magical wand to change anything about this course, what would it be? What is your best suggestion for the improvement of this course?

consistency was analyzed using Cronbach's alpha. All the scales have a Cronbach's alpha scores above .70, which indicates they are reliable measures (Hair, Black, Babin, & Anderson, 2014).

**Teacher autonomy-support.** The Learning Climate Questionnaire (LCQ; Williams & Deci, 1996) measured how much teachers provide their student with support in autonomous learning. The translated LCQ had 14 items (e.g., "I feel that my instructor provides me with choices and options";  $\alpha = .95$ ), with high mean scores indicating that students perceive an autonomy-supportive communication style from their instructors and low mean scores indicating students perceive an autonomy-suppressive or controlling communication style.

**Psychological needs.** The Activity Feelings State (AFS; Reeve & Sickenius, 1994) assesses how strongly learners feel that their psychological needs (i.e., autonomy, competence, and relatedness) have been satisfied during their learning activities. In this scale, the prompt "Being in this English class makes me feel. . ." is followed by nine items, with three measuring autonomy (e.g., "free";  $\alpha = .87$ ), three measuring competence (e.g., "capable";  $\alpha = .88$ ), and three measuring relatedness (e.g., "my skills are improving";  $\alpha = .78$ ). For each subscale, higher mean scores indicate higher satisfaction of the psychological need.

**Classroom engagement.** The Classroom Engagement Scale (CES; Reeve, 2013; Reeve & Tseng, 2011) combines items from multiple sources to create four subscales, each representing a different dimension of classroom engagement: Behavioral (three items, for example, "I pay attention in this

class";  $\alpha = .86$ ), Emotional (five items, for example, "This class is fun";  $\alpha = .91$ ), Cognitive (four items, for example, "When reading for this class, I try to explain the key concepts in my own words";  $\alpha = .88$ ), and Agentic (five items, for example, "I let my teacher know what I am interested in";  $\alpha = .87$ ). For each subscale, higher mean scores indicate that students engage with their LL.

**Language course achievement and absenteeism.** Students rated their last English exam score with a 7-point scale from low (0%-39%) to high (90%-100%) following the university grading system (i.e., 90-100 = AA; 80-89 = BB; 70-79 = CC; 60-69 = DD; any score lower than 59 is considered fail). Higher scores indicate higher academic achievement. Students also self-reported their course attendance throughout the term using a 7-point scale ranging from *no class absences* (0) to *many class absences* (16+). Higher scores indicate greater absenteeism. Students who missed 16 or more classes would automatically fail the course, and so, students were likely to pay close attention to their attendance record.

**Semi-structured interviews.** The qualitative phase of the study involved semi-structured interviews that included 15 questions regarding classroom atmosphere, psychological needs, classroom engagement, absenteeism, and suggestions for improving the course (Table 1).

### Data Collection and Analysis

The quantitative and qualitative data collection phases of this study occurred concurrently. After securing institutional permission, consent forms and questionnaires were distributed

**Table 2.** Descriptive Statistics and Intercorrelations for All Variables.

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Teacher autonomy-support	3.52	1.08	—								
2. Autonomy	2.92	1.22	.57**	—							
3. Competence	3.05	1.17	.62**	.77**	—						
4. Relatedness	3.05	1.05	.39**	.65**	.56**	—					
5. Behavioral engagement	3.19	1.07	.44**	.45**	.49**	.30**	—				
6. Emotional engagement	3.21	1.13	.67**	.65**	.75**	.43**	.59**	—			
7. Cognitive engagement	3.53	1.04	.46**	.47**	.59**	.28**	.46**	.58**	—		
8. Agentic engagement	3.23	1.04	.66**	.59**	.66**	.43**	.53**	.73**	.58**	—	
9. Achievement	2.28	1.27	.27**	.28**	.43**	.15*	.17*	.30**	.31**	.25**	—
10. Absenteeism	1.67	.93	-.22**	-.18**	-.24**	-.12*	-.21**	-.24**	-.21**	-.25**	-.13*

\* $p < .05$ . \*\* $p < .01$ .

to students during their English classes. The researcher was the sole instructor in the classroom while participants completed the questionnaire.

After completing the questionnaire, learners who agreed to participate in the qualitative phase with the researcher were invited to one-on-one interviews, which took place, on average, 1 day after the classroom visits for quantitative data collection. Interviews were in Turkish to facilitate learners' understanding of the questions and to allow them to answer the questions more thoroughly. Interviews were audio-recorded for later coding and lasted, on average, about 14 min. Before the interviews, the participants signed a consent form informing them of the goals of the study, their rights to withdraw from the study at any time, and keeping privacy and anonymity of the participants in any phase of the study. During the interviews, pre-determined, focal questions were asked along with some explanatory (e.g., Does your feeling stem from yourself or other factors?) and exploratory probing questions (e.g., What makes you think like that in the class?) to deepen the discussion of the topic. In addition to audio recording, the researcher took notes regarding the responses.

For analysis of the quantitative data, SEM was used as the main statistical method. SEM is a statistical methodology for hypothesis testing by examining the relationships between observed variables and latent variables (Byrne, 2012). SEM was conducted to answer the first and second research questions. Using Mplus 7.0, the model shown in Figure 2 that includes observed variables (teacher autonomy-support, four types of engagement, achievement, and absenteeism) and the latent variable (basic psychological needs) tested whether the conceptual model is valid. We assessed how well the proposed model fits the observed data using the chi-square test of exact fit, the root mean square error of approximation (RMSEA) with its confidence interval (CI), the standardized root mean square residual (SRMR), and the comparative fit index (CFI). Good model fit was present when either the chi-square test was non-significant, or RMSEA and SRMR

values were less than .08, and CFI was more than .95 (Bandalos & Finney, 2010; Hu & Bentler, 1999; Phakiti, 2018).

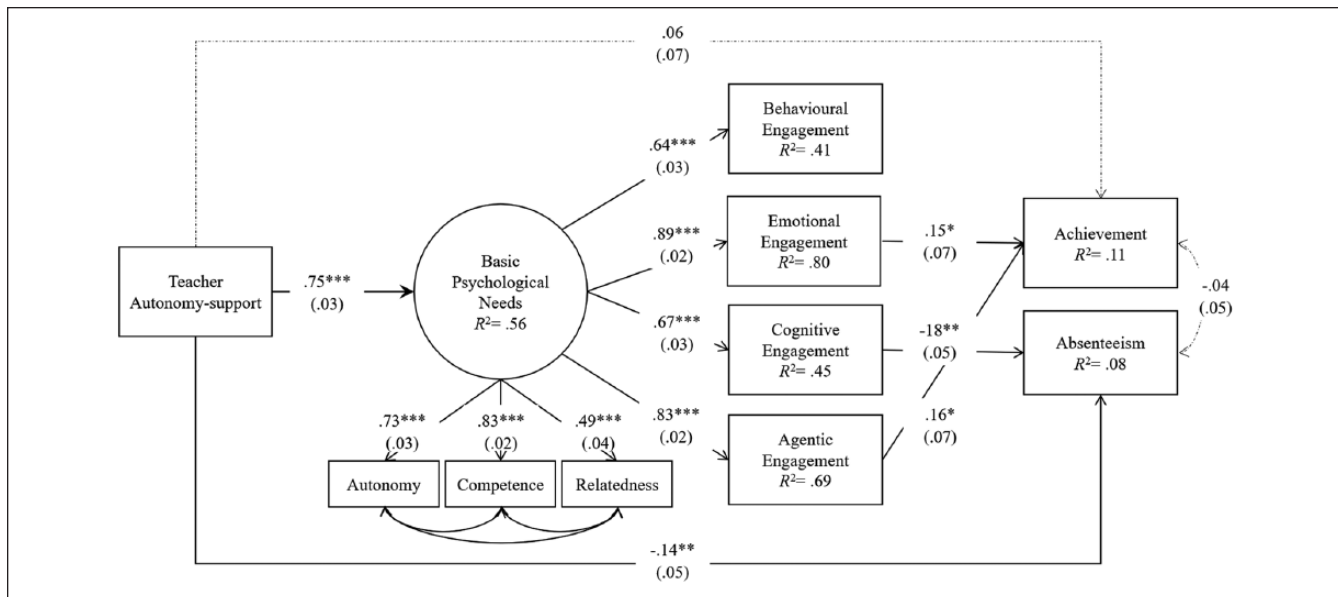
The qualitative data were analyzed using deductive content analysis, in which themes are identified on a previously established scheme or matrix derived from previous knowledge or theory (Marshall & Rossman, 2016). This analysis was carried out using NVivo 7.0 software to answer Research Questions 3 and 4. Following the steps set forth by Elo and Kyngäs (2008), a structured categorization matrix was developed in accordance with the SSMD framework as well as one category for student suggestions, and all data were reviewed for the correspondence with the predetermined categories. The researchers worked together to identify the prevalence of theoretically derived and emergent themes within each category to minimize potential individual bias in the analysis and to ensure the reliability of the qualitative results. When disagreements in classification arose, the researchers reached a resolution with a dialogue among researchers. In the presentation of the findings, anonymized citations of students' responses are provided to support analytic results.

## Results

### Quantitative Findings

**Descriptive analyses.** We first checked the data for missingness. Given the very low percentage of missing data (i.e., less than one), we decided to use imputation to replace the missing data.

Next, we examined the descriptive statistics and correlations among all measures (see Table 2). Students generally perceived their course environment as autonomy-supportive and reported moderate levels of satisfaction of their basic psychological needs within their English course. Students were moderately engaged in the course across all four dimensions. All variables of the model significantly correlated with



**Figure 4.** Final revised model.

Note. Standardized coefficients provided.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

each other in the expected directions, with correlations magnitude ranging from small to large. Teacher autonomy-support, three basic psychological needs, and four types of engagement showed positive medium to large correlations among each other (medium:  $r$ s between .40 and .59; large:  $r$ s  $\geq |.60|$ ; Plonsky & Oswald, 2014). Achievement was weakly ( $r$ s of  $\leq |.25|$ ; Plonsky & Oswald, 2014) to moderately positively correlated with all other variables except absenteeism. Achievement was weakly correlated with relatedness and behavioral engagement. Absenteeism was weakly and negatively correlated with all other variables.

**SEM.** An initial analysis of the hypothesized model showed poor model fit to the data ( $\chi^2 = 241.13$ ;  $df = 28$ ,  $N = 412$ ;  $p < .001$ ; CFI = .90; RMSEA = .136, 90% CI = [.12, .15]; SRMR = .046). Modification indices identified covariances among the three psychological needs, which the original model did not include. Given that these three variables represent the broad construct of psychological needs and were measured using the same prompt ("Being in this class makes me feel . . ."), these covariances likely represent variance shared due to the common measurement. The model was tested again with these covariances added and this modified model showed good fit to the data ( $\chi^2 = 94.53$ ;  $df = 25$ ,  $N = 412$ ;  $p < .001$ ; CFI = .97; RMSEA = .08, 90% CI = [.07, .10]; SRMR = .030). Next, non-significant regression and covariance paths in the model were removed for greater parsimony and direct paths from autonomy-support to outcomes (achievement and absenteeism) were added to allow assessment of mediation. The final model fits the data well ( $\chi^2 = 93.94$ ;  $df = 26$ ,  $N = 412$ ;  $p < .001$ ; CFI = .97;

RMSEA = .08, 90% CI = [.06, .10]; SRMR = .031) and was retained for interpretative purposes (see Figure 4).

As hypothesized, perceived autonomy-support positively predicted basic psychological needs, which in turn positively predicted each dimension of classroom engagement. Some dimensions of engagement predicted achievement and absenteeism. Specifically, emotional and agentic engagement positively predicted achievement while cognitive engagement negatively predicted absenteeism. Behavioral engagement did not predict any outcome variable. In addition, achievement and absenteeism did not covary significantly.

In terms of our first and second research questions about the mediational role of engagement, teacher autonomy-support predicted EFL learners' academic achievement positively through two pathways: autonomy-support  $\rightarrow$  basic needs  $\rightarrow$  emotional engagement ( $\beta = .10$  [.05],  $p = .04$ ) and autonomy-support  $\rightarrow$  basic needs  $\rightarrow$  agentic engagement ( $\beta = .10$  [.05],  $p = .03$ ; total indirect effect of autonomy-support on achievement:  $\beta = .20$  [.05],  $p < .001$ ). The direct path between autonomy-support and achievement was non-significant, indicating that the effects of autonomy-support on achievement take place through the identified indirect pathways. Teacher autonomy-support also had a significant indirect effect on absenteeism through the following pathway: autonomy-support  $\rightarrow$  basic needs  $\rightarrow$  cognitive engagement ( $\beta = -.09$  [.03],  $p = .001$ ). The direct path from autonomy-support to absenteeism was also significant, indicating that basic needs and engagement partially mediated the association between these two variables. In summary, more perceived autonomy-support from teachers predicted higher satisfaction of students' basic psychological needs,

which predicted higher engagement of all types, and students were more likely to get better grades when they engaged emotionally and agenticity and were less likely to miss classes when they engaged cognitively.

Squared multiple correlation ( $R^2$ ) values showed that 56% of the variance in basic psychological needs satisfaction is explained by the model. The model also explained much variance in the four domains of class engagement (behavioral: 41%; emotional: 80%; cognitive: 45%; agentic: 69%). Although the model explained some of the variances in both outcomes, the percentages were somewhat lower, with 11% for EFL learners' achievement and 8% for absenteeism.

### Qualitative Findings

To answer our third and fourth research questions concerning EFL learners' opinions on their SSMMMD concepts and how their EFL learning experience and engagement could be improved, deductive content analyses of the interviews were conducted. Summaries of learners' reflections in each component of the model and suggestions are presented next.

**Classroom context.** When asked for their opinions about their English course and teacher, most participants (15 out of 18) expressed positive impressions. Only two participants reported not enjoying the atmosphere of their English course. Most students also expressed positive impressions about their teachers, characterizing them as enjoyable, understanding, and patient. For instance, one learner reported, "... [my teacher] understands me, lets me ask questions without hesitation and express myself." Only three participants reported negative views about their teacher. For instance, one learner said, "If another teacher had taught us, it would be much better ... we [in the class] would be happy."

**Basic psychological needs.** Most participants (15 out of 18) reported experiences of satisfaction with each of their psychological needs. Regarding autonomy, students commonly mentioned feeling free to choose when and how to participate in class (e.g., "I am free in the class; in other words, I can do whatever I want in this class. . . . By getting right to speak I say my ideas about the course."). For relatedness, students commonly expressed feeling a sense of belonging to the class and with classmates. For instance, "We [in the class] have closer relationships with our classmates compared to other classes. It is the same with our teachers. We can do extra activities with our friends and even the teacher." Regarding competence, the most prevalent experience students reported was feeling successful within the course. For instance, one student stated, "At the beginning, I had negative feelings and thought 'No, I can't do this.' But now, I am gradually getting the job [of learning English] done." Correspondingly, the participants who reported negative views of the classroom context expressed less satisfaction of their basic psychological needs. For instance, one of these participants expressed feeling controlled in the classroom (e.g., "I

feel pressured [in the course] because I cannot even talk to my friend next to me [in class]"). Another one said that there is not a relaxing environment in the class and she does not feel belongingness much (e.g., "There are many people to whom I have not spoken or even said 'hello' until now [second semester] in this class, this problem is related to them [classmates]"). Complaining with the teacher's instruction style and use of outdated teaching methods (e.g., Grammar Translation Method), she added that she felt incompetent in mastering English (e.g., "Everything [activities] in this class is based on English grammar. I am not doing well in even Turkish grammar [mother tongue]").

**Classroom engagement.** Based on their statements when asked about their behavioral, emotional, cognitive, and agentic engagement, most participants (15 out of 18) were categorized as engaged learners. They actively participated in class by, for instance, raising their hands, volunteering to write on the blackboard, and taking notes (e.g., "By raising my hand, I try to get right to speak. I ask questions to the teacher."). They reported positive course-related feelings, such as enjoying course, feeling interested in course content, and feeling relaxed in class (e.g., "This course is enjoyable. I really enjoy the course."). They used more sophisticated cognitive strategies for learning English, such as reviewing course notes, reading extra English materials, and trying to use English in daily life (e.g., "After the course, I go to the library. I read English texts there. I search some online documents."). In terms of agentic engagement, they reported driving their own learning by, for example, asking for details when content was not clear and expressing their likes and dislikes during classes (e.g., "I say: My teacher, there is a mistake here that I have found. What do you think [on the mistake]? . . . We [I and my teacher] mutually talk and evaluate [the mistake]"). The three students who reported negative views about their classroom context showed low engagement—they reported becoming bored and depressed in the class, using surface cognitive strategies for learning such as memorizing (e.g., "I try to memorize [new] vocabularies").

**Absenteeism.** When participants were asked to talk about their course attendance, most reported that, when they missed class, it was due to external constraints or the need for sleep (e.g., "As the courses starts in early the morning, I fall asleep. But, I try to attend the class with a great pleasure.") and felt either neutral or discomforted about missing class (e.g., "My responsibilities towards myself, family, and teacher make me think I should attend [the course]"). A minority of students reported skipping class voluntarily (e.g., "Frankly, I do not have an inner force to attend [the course]") and having positive feelings about their absenteeism (e.g., "To be honest, I am happy when I do not attend [the course]"). No information was offered by any interviewee regarding course achievement.

In general, learners' comments during the semi-structured interviews show that learners who experienced mostly positive classroom contexts felt mostly autonomous, competent,

and related to their classmates and teachers. These learners reported engaging in their EFL course in all four dimensions of engagement—behavioral, emotional, cognitive, and agentic. They also skipped class only due to external pressures and felt bad or neutral about doing so. In contrast, learners who viewed their classroom context negatively expressed low satisfaction of their basic psychological needs, reporting even feeling controlled within their classroom context, and expressed fewer and less complex engagement experiences. These students also reported voluntarily choosing other activities over attending class when possible and having positive feelings about their absenteeism. This pattern of experiences corresponds with the pattern of findings from our quantitative analysis. That is, positive, supportive classroom contexts were positively linked to higher satisfaction of psychological needs, higher engagement levels for all four dimensions, and less absenteeism.

#### *Student-generated suggestions for enhancing engagement.*

Although about one third of participants felt that no changes were needed and did not provide suggestions for improving EFL courses, most participants identified at least one aspect of their course that they would like to see changed. The most frequently identified areas for improvement were course content and classroom atmosphere.

In terms of course content, students felt that certain topics covered in class were boring or irrelevant (e.g., “If I had a magic wand, I would change the boring topics in the course.”) and that certain language skills should receive more attention than others (e.g., “I would place more emphasis on speaking skill. We can learn grammar by ourselves after a certain level but not speaking.”). In addition, students suggested specific kinds of classroom activities that they felt would be most effective for LL. The recommended activities shared one thing in common; they required social interaction. For instance, one participant commented, “More communication dialogues and speaking activities [would be good]. . . These kinds of activities make learning long-lasting,” while another recommended role-playing activities, “Drama and theatrical activities both develop learners’ English speaking skill and increase their awareness of the course. Then, this helps learners become less timid in class. . . [activities like these] help students gain self-confidence.” In terms of classroom atmosphere, students mostly reported wanting to see more focus on relationships within the classroom (e.g., “I like the course atmosphere very much. I think people’s relationships are more important than the course itself.”; “[I wish] a comfortable environment in the class.”).

## **Discussion**

In this study, we investigated EFL learners’ motivational processes following the holistic approach of the SSMMMD, which takes into consideration both teacher and learner roles. Following this model, we hypothesized an order of

motivational components from teacher autonomy-support to language learners’ outcomes such that teaching context predicts self-processes (i.e., need satisfaction), which in turn predicts motivated action, which ultimately predicts outcomes. For the action component of this model, we investigated classroom engagement as a multi-dimensional construct, with four dimensions (behavioral, emotional, cognitive, and agentic) mediating the association between context (autonomy-support from teachers) and outcomes (achievement and absenteeism). Furthermore, we qualitatively explored EFL learners’ experiences related to each SSMMMD component to cross-validate our quantitative findings with the findings of the content analysis. Finally, we explored EFL learners’ suggestions for how teaching practice within the EFL classroom could be improved, fostering student engagement and thereby improving learning outcomes.

Consistent with our hypotheses about the importance of social context (i.e., teacher support) and self-relevant processes (i.e., need satisfaction) for learners’ action and outcome components, the results generally confirmed the “context → self → action → outcome” sequence theorized by the SSMMMD. Within the EFL context, we found that learners who perceived their teachers as more autonomy-supportive experienced the higher satisfaction of their autonomy, competence, and relatedness needs in their EFL learning. In turn, students who felt their psychological needs were more satisfied reported higher engagement levels in all four dimensions. Finally, there was general support for higher engagement predicting higher achievement and less absenteeism, although not all dimensions of engagement predicted each of these outcomes. Although this finding is in line with the literature in the education context in general (e.g., Reeve, 2013; Reeve et al., 2004; Ryan & Deci, 2000; Taylor, Ntoumanis, & Smith, 2009), it is the first time that all components of the SSMMMD model have been assessed simultaneously, confirming the model within the EFL context.

This model accounted for a high amount of variability in students’ motivational experience (psychological needs satisfaction and engagement). However, there remains a substantial portion of the variability among students to be explained. That is, although the key motivational variables explored here predicted these student outcomes, other, as yet unspecified, factors also play a role in students’ academic achievement and attendance. For instance, it has been well established that previous academic achievement is a strong if not the strongest predictor of later academic achievement (Duncan et al., 2007). In addition, teacher factors such as grading techniques and assessment styles are likely to contribute to variability in achievement across students (McMillan, 2001). In terms of absenteeism, our qualitative data provide clear examples of non-motivational factors that can impact attendance. As previously stated, students reported that pressures and responsibilities external to the EFL course at times influenced their decisions to skip class,

such as needing more sleep and having important family commitments to attend to. Nevertheless, engagement and teacher autonomy-support remain important motivational predictors of outcomes in the model.

Focusing on engagement, this study demonstrated that different dimensions of engagement predict different outcomes. Higher emotional and agentic engagement were associated with better grades while higher cognitive engagement was associated with less absenteeism. The relevance of emotional and agentic engagement for academic achievement was expected and is consistent with previous findings (Reeve, 2012, 2013; Reeve & Tseng, 2011). As explained by Gardner (2010), students with positive attitudes (i.e., emotionally engaged) tend to show greater motivational intensity (i.e., behavioral engagement; McEown, Noels, & Saumure, 2014) and correspondingly have a higher level of achievement. Agentially engaged students, according to Reeve (2012), are architects of their own motivation, proactively trying to personalize and enhance their learning context by offering input, making suggestions, expressing preferences, and more. As they constructively contribute to their education, agentially engaged learners' behaviors affect their learning positively. These agentic learner behaviors differ from basic behavioral engagement as demonstrated by the fact that behavioral engagement did not predict academic achievement in this study while agentic engagement did. This finding supports Reeve's (2013) view that agentic engagement should be considered above and beyond emotional, behavioral, and cognitive engagement.

Cognitive engagement, which focuses on deeper learning strategies and investment into course-related tasks, may not be necessary to achieve good grades, as LL assessments focus on skills gained and not the strategies learners use to gain those skills. However, students who are more cognitively invested in their course are likely to be more interested in participating in in-class activities, which requires attendance. In addition, cognitively disengaged students may feel less prepared for upcoming lessons and therefore be less willing to attend class (lest they be called on by the teacher!).

The fact that behavioral engagement did not predict either learner outcome is somewhat counterintuitive. Multiple studies have found that behavioral engagement predicts academic achievement in general education (for review, see Fredricks et al., 2004). Within LL, Gardner's (2010) motivational intensity, which arguably is similar to Reeve's definition of behavioral engagement (Reeve, 2012), has consistently predicted achievement and other LL outcomes (Gardner, 2010; Masgoret & Gardner, 2003). At the same time, the lack of association between behavioral engagement and achievement is not without precedence (Reeve, 2013; Reeve & Tseng, 2011). This finding raises questions about whether behavioral engagement is as important as other engagement types in the language classroom. In this era of student-centered approaches that emphasize creating a pleasant and supportive atmosphere in language classrooms and establishing

good relationships of mutual trust and respect between teachers and learners (Dörnyei, 2001), it may be that language learners find that answering teacher-directed questions or participating in teacher-provided learning activities is less important than feeling emotionally connected and contributing collaboratively to the course.

Given that previous research by Gardner and his colleagues shows motivational intensity to be a constant predictor of achievement, a closer look at the operationalization of motivational intensity is needed. This inspection suggests that motivational intensity measures (see Gardner, 2010) not only include behavioral engagement (e.g., "I keep up to date with English by working on it almost every day") but also other aspects such as agentic engagement (e.g., "When I have a problem understanding something in English class, I always ask my teacher for help"; "I really work hard to learn English") within the same scale. The associations with achievement, then, may be due to the combined aspects of engagement that are assessed by this index. Assuming that is the case, researchers must decide whether a comprehensive index is sufficient for their research objective or whether differentiating subtypes of engagement is preferable.

The results also show that classroom engagement mediates the associations between teacher autonomy-support and both achievement and absenteeism. Specifically, emotional and agentic engagement fully mediated the link between autonomy-support and academic achievement whereas cognitive engagement partially mediated the link between autonomy-support and absenteeism. These findings are consistent with Fredricks and colleagues' (2004) and Skinner and colleagues' (2008, 2009) views that motivated action is the mechanism through which all other motivational processes bring about learners' outcomes. At the same time, the partial mediation of cognitive engagement suggests other mechanisms are also in play. Although engagement is an important type of motivated action and the focus of this study, it is not the only motivated action—persistence, task selection, and coping, for instance, are also motivated actions (Skinner & Pitzer, 2012). As such, teacher autonomy-support likely affects absenteeism not only through cognitive engagement but also by creating a classroom environment that students enjoy and so they choose to attend regularly (i.e., task selection).

The qualitative findings show that most students had positive motivational experiences in their EFL class, although a small subset did not. Students who had positive experiences were invariably positive about course atmosphere, basic needs satisfaction, engagement, and less absenteeism. The opposite was also true. Students with negative experiences reported negative experiences in all aspects of their motivational process. As a whole, this pattern is consistent with the SSMMD model that posits that positive social classroom contexts are linked to positive experiences of need satisfaction, to engagement, and to positive learner outcomes, as well as the low occurrence of negative outcomes.

Perhaps more importantly, the student-generated suggestions for improving their EFL courses demonstrate that social interactions in the classroom play a central role for their motivational and learning experiences. Although some students did not report any problems with their course and were pleased with the teacher and the teaching practices, most indicated that engagement could be enhanced by having language activities that allow them to practice the language with one another and by having positive relationships among peers and with teachers. Supporting the claim of Philp and Duchesne (2016) that the contextual factors such as the setting, the task, and the students must be considered for engagement, these relationships may be especially important in the EFL setting given that most foreign language learners do not have access to day-to-day language-relevant social interactions outside the classroom. This concern may also be particularly important in cultural settings where the teacher is seen as knowledge provider or craftsperson who shapes language learners, and learners feel much dependency on the teacher in teaching and learning process (Saban, Kocbeker, & Saban, 2007).

The study findings presented here parallel a number of SDT studies outlining how to implement an autonomy-supportive teaching style in education (for reviews, see Reeve, 2012, 2013, 2016; Reeve et al., 2004), and we offer practical recommendations for EFL teachers and educators at large based on the findings.

- Use teaching practices that allow language learners to feel autonomous and competent and that allow them to have positive social interactions with their peers and teacher. Giving participation opportunities to all students, choosing teaching tasks that are personally relevant to the learners and match their proficiency levels, providing constructive feedback, being approachable to students, and caring for and respecting learners are just some examples of how we can help satisfy learners' psychological needs.
- Create opportunities for the learners to engage with their learning not only at a behavioral level but also emotionally and cognitively. Acknowledge students' feelings in the classroom and address situations that may lead to negative emotional experiences. Educate learners to use more complex cognitive LL strategies both inside and outside of the classroom and encourage them to connect new information to what they have previously learned. As well, helping students focus their attention and to work hard could indirectly foster positive outcomes.
- Emphasize agentic behaviors in the class. Be open to and welcoming of learner suggestions for classroom activities, and encourage learners to actively seek help when needed.
- Do not ignore the social nature of LL. A positive atmosphere where students feel comfortable interacting with each other and with the teacher facilitates

student engagement with both course content and learning activities.

The mixed-methods approach adopted in this study, along with our multi-dimensional approach to engagement, and our use of a model addressing engagement from a broader standpoint of learners' general motivation process, all contribute to a more nuanced understanding of classroom engagement in EFL learners and how students' learning may be enhanced. There are, however, three limitations to keep in mind in this study. First, the setting of the study is an EFL context. Thus, the readers extrapolating the findings to the English as a Second Language (ESL) context should be cautious about the implications, because EFL and ESL classrooms can have different characteristics in terms of motivation, language use, and cultural points (Krieger, 2005). Furthermore, what is theoretically good for one setting sometimes may be invalid for other settings (J. F. Chen, Warden, & Chang, 2005). Second, self-report scales and interviews were used in the process of gathering engagement data. Although self-reports are extensively used in language and educational research, they provide only subjective information. Therefore, other data collection methods such as observations of teacher–student interactions in the classroom and teacher reports in addition to student reports should be considered in future engagement research (Fredricks et al., 2005). Third, the cross-sectional nature of the data does not allow causal interpretations of the associations investigated here, even though the guiding SSMD model posits a causal sequence. Further research should, therefore, focus on longitudinal studies, tracking the development of engagement in language learners over time (Oga-Baldwin & Nakata, 2017). We need many experimental designs researching the causal directions and investigating the differences and the relationships in different engagement levels (Carreira, Ozaki, & Maeda, 2013). In addition, teacher motivation is also influenced by the classroom context and learner behaviors. Considering the reciprocal relations between learner engagement and teacher motivation, the hypothesized model can be extended and EFL instructors' motivation to teach English can be further investigated within the framework of classroom engagement (Reeve, 2013; Reeve et al., 2004).

Grounded in the well-constructed hypotheses of the SSMD and using a mixed-methods approach, the study reported here provides a nuanced view of EFL learners' motivational self-systems and supports the SSMD model of classroom engagement with its social context antecedents and learner outcomes as a whole. It also polishes the significant role of autonomy-supportive teacher behaviors in the self, action, and outcome components of the model. Taken together, this study provides important implications for language educators on how to foster language learners' classroom engagement and mentor autonomously engaged language learners.

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