# Investigating the relationship between EFL learners' engagement and their achievement emotions

Farzaneh Shakki
*Golestan University, Iran*

**ABSTRACT:** The examination of emotion and its contribution to L2 learning began four decades ago; however, despite the advancements in this area, there seems to be also a need for more research on the role of emotion in learning in the milieu of education. Accordingly, the present study has been intended to shed light on the relationship between Iranian language learners' engagement and their achievement emotions. To this end, 403 Iranian English as Foreign Language (EFL) learners were recruited, and their achievement emotions, and engagement were examined by completing the associated questionnaires. The data were analyzed by the numerical method of Partial Least Squares-Structural Equation Modeling (SEM), and through the Smart PLS and MPLS, it was revealed that there is a considerable association between learners' engagement and achievement emotions. The results also indicated that EFL learners' achievement emotions could significantly predict their engagement in this setting. Moreover, considering various dimensions, it was found that enjoyment has a positive and significant effect on students' engagement. However, some dimensions of emotions such as anger, anxiety, and hopelessness were reported to be insignificant. In a nutshell, the article provides some implications for language teachers and learners.
**Keywords**: Achievement emotions, Affective factors, Engagement, English as Foreign Language learners, Positive Psychology

**Investigación sobre la relación entre el compro miso de los aprendices de inglés como lengua extranjera y sus emociones de logro**

**RESUMEN:** El estudio de las emociones y su contribución al aprendizaje de la L2 comenzó hace cuatro décadas; y aunque ha habido avances, parece necesario seguir investigando sobre el papel de aquéllas en el contexto educativo. Este estudio arroja luz sobre la relación entre el compromiso de los estudiantes iraníes de lenguas y sus emociones de logro. Participan 403 aprendices de inglés como lengua extranjera (ILE) iraníes cuyas emociones de logro y nivel de compromiso se examinan a través de unos cuestionarios *ad hoc*. Los datos se analizaron según un modelo de ecuaciones estructurales mediante mínimos cuadrados parciales (SEM) y a través del Smart PLS y del MPLS se observó que hay una asociación considerable entre el compromiso de los estudiantes y sus emociones de logro. Los resultados también indicaron que las emociones de logro de los aprendices de ILE podrían, de manera significativa, predecir su compromiso en este contexto. Además, considerando varias dimensiones, se encontró que el disfrute tiene un efecto positivo y significativo sobre el compromiso de los estudiantes; sin embargo, emociones como la ira, la ansiedad o la desesperanza no resultan significativas. En resumen, el artículo ofrece implicaciones para docentes y alumnado de lenguas.
**Palabras clave:** Emociones de logro, factores afectivos, compromiso, aprendices de inglés como lengua extranjera, Psicología positiva

## 1. INTRODUCTION

With the advent of Positive Psychology (PP) in education and psychology, learner engagement flourished and acquired a remarkable function in the academic domains (Budzinska & Majchrzak, 2021; Derakhshan, 2022b; Kahu & Nelson, 2018; Wang et al., 2021). Undoubtedly, one of the educators' main apprehensions across the globe is ensuring learners are engaged in their classes (Al-Obaydi et al., 2023; Kearney, 2013; Junior, 2015). Likewise, the role of inner states and achievement emotions of second/foreign (L2) students in language learning success captured a growing body of attention among researchers (Dewaele & Li, 2021; Shakki, 2022). Regardless of their sources and types, students' emotions in the context of L2 education need to be recognized and regulated to achieve academic success (Cho, 2022). The constructs of academic engagement have been extensively studied in general education and psychology because of their substantial effect on learners' educational achievement and performance (Bielak & Mystkowska-Wiertelak, 2020; Derakhshan et al., 2022; Hiver, et al., 2021; Shakki, 2022). Indeed, learner engagement is an important notion in all academic domains since it can bring about energy, asset, and achievement in education (Derakhshan, 2022a, 2022b; Eccles, 2016) as it alludes to learners' degree of participation in the class during teaching tasks and it is an active factor that is influenced by numerous inner and outer elements (Guilloteaux, 2016). Moreover, engagement in academia is a good predictor of the readiness of learners to invest a substantial amount of psychological endeavor and perseverance to build the required comprehension of novel ideas taught in the class (Solé-Beteta et al., 2022).

Based on the literature review, students' emotions and engagement in classroom activities considerably affect their success, enthusiasm, and achievement (Guilloteaux, 2016). Similar to other student-related emotions, investigating achievement emotions in academic environments has grown rapidly in the last ten years (Pekrun et al., 2017; Pinxten et al., 2014). For instance, achievement emotions are considered significant since they serve as indicators of how the learning experience unfolds. Such emotions predict students' motivation, participation, and achievement and play a crucial role in their language-learning process, in total (Pekrun, 2006; Pekrun & Perry, 2014).

In addition, constructive feelings like joy, aspiration, and pride can advance learners' inspiration to study, focus, utilize deep learning techniques and achieve educational success; however, deconstructive feelings like stress, rage, and boredom can undermine education (Dewaele et al., 2018; Pekrun & Perry, 2014). Studies on the emotional aspect of SLA mainly concentrate on negative emotions and their effects on teachers and students while recently it has been proved that constructive emotions promote learning (MacIntyre et al., Pekrun et al., 2017; Wang et al., 2021). Another gap that urged this study is that although there are an overwhelming number of studies on the effectiveness of different components of achievement emotion in math, literacy, and sciences (e.g., Muis et al., 2015; Shao et al., 2020), little is known about how students' achievement emotions are related to their academic engagement. Additionally, in the EFL context of Iran, the role of these types of emotions in shaping learners' engagement in the class has not been discussed to date. To fill these gaps, the current study is aimed to examine the possible relation between students' achievement emotions and their engagement in the Iranian EFL setting. Accordingly, the following research questions were generated:

Q1: Are there any significant relationships between Iranian EFL learners' achievement emotions and their engagement?

Q2: Do Iranian EFL learners' achievement emotions significantly predict their engagement?

## 2. Review of the literature

### 2.1. Students' Engagement

The learners' engagement means their commitment to the education and learning procedure which pertains to the learners' conduct, affection, participation, and cognition (Mahdikhani & Rezaei, 2015; Philp & Duchesne, 2016). Engagement is a multi-aspect structure, including four aspects, namely, cognition, behavior, agentic and emotional aspects. Behavioral engagement alludes to how learners engage in learning tasks in terms of awareness, involvement, attempt, severity, or perseverance (Chen et al., 2020; Han & Wang, 2021). Cognitive engagement means the extent of mental attempts learners put in when finishing learning activities in terms of employing complicated tactics instead of shallow learning ones (Chong et al., 2018). Emotional engagement alludes to the sensations learners experience towards educators, classmates, learning tasks, and school feelings, in addition to their sense of attachment (Greenier et al., 2021; Sinatra et al., 2015). The definition of agentic engagement includes the measure of doing enterprises that positively help learning and education (Dai & Wang, 2023; & Tseng, 2011). Such aspects conform respectively to the learning procedures of action, contemplation, sensation, and communication (Reeve, 2013).

### 2.2. Achievement Emotions

Within the past two decades, scholars have remarkably considered achievement emotions in the areas of teaching and psychology (Pekrun & Perry, 2014; Wang et al., 2022). The Control-Value Theory (CVT) is a structure for forming the concept of such emotions, suggesting that managing and value appraising are the proximal determining factors of the emotions that learners experience in achievement environments (Pekrun & Perry, 2014). Achievement emotions are characterized as the feelings that are associated with activities and the results of success (Pekrun et al., 2006). That is, all feelings related to learners' education and successes in teaching circumstances are achievement emotions. For instance, the satisfaction of education, the emotion of boredom in class, and rage during a hard assignment are all related to achievement emotions (Schutz et al., 2007).

Achievement emotions are objective-oriented and assessment-driven multidimensional mental cycles directly associated with successful activities and results (Fan & Wang, 2022; Jarrell et al., 2016). For achievement emotions, Pekrun's (2018) CVT proposes that these feelings are thoroughly related to assessments of success-relevant control and value. When learners feel in control over their education and value success, constructive feelings like the joy of education, aspiration, and pride are advanced, and deconstructive feelings like stress, despair, or boredom are decreased (Pekrun & Perry, 2014). Nine diverse achievement emotions (enjoyment, pride, hope, anger, relief, anxiety, shame, hopelessness, and boredom) are selected by Pekrun et al. (2011). He characterizes the main classifications of emotions from theory-based emotion groupings.

### 2.2.1. Enjoyment

Enjoyment is a constructive affective condition that integrates difficulty, joy, interest, entertainment, a feeling of dignity, and a sense of importance. It takes place specifically in events where students have a sense of independence and when something new is experienced or something difficult is attained (Elahi Shirvan & Taherian, 2018; Yazdanmehr et al., 2021). Based on the CVT, enjoyment in an L2 setting can be seen as a constructive educational enabling achievement emotion. It has been connected to elevated inspiration and engagement in addition to better genuine and self-discerned L2 presentation (Botes et al., 2021).

### 2.2.2. Boredom

Boredom can be described as a displeasing affective or mental condition that is related to lower physical and intellectual stimulation, particular time recognition, and action inclinations to disengage from what occurs in the surrounding (Li, 2021; Derakhshan et al., 2022). This means that boredom is a blend of unfulfillment, dismay, irritation, lack of attention, absence of inspiration to seek formerly determined objectives, and a damaged spirit (Elahi Shirvan et al., 2021; Kruk et al., 2021). The boredom hypothesis includes a negative and de-activating feeling made by continuous learning tasks or activities and pleasure as a constructive and activating feeling made by constant learning tasks or activities (Derakhshan et al., 2021; Pawlak et al., 2021).

### 2.2.3. Pride

The definition of pride refers to a feeling of self-esteem and individual value (Walden, 2009). In general, it is a constructive affection as it is believed that one's most significant achievement in both daily and life-altering situations is triggered by this sense (Tracy & Robins, 2007). Pride emotion is particularly significant and strong in academic situations, which is manifested in various learners in various shapes and conditions, therefore, presenting precious perspectives into the psychology of language students.

### 2.2.4. Anxiety

The definition of anxiety includes unsolved apprehension, or otherwise, as a condition of undirected stimulation after perceiving a threat and a condition of restlessness and concern, particularly for future worries (Yükselir & Harputlu, 2014). According to Horwitz (2017), the anxiety notion has multiple layers since people facing anxiety are inclined to experience anxiety when participating in language teaching. Anxiety is described as an unresolved apprehension, or as aimless wakefulness after perceiving a risk, and as a state of restlessness and concern, particularly about future concerns (Yükselir & Harputlu, 2014).

### 2.2.5. Anger

Anger is an affective component of aggressiveness and people's disposition about the sense of being misconducted and related to people's arousal (Suls, 2013). Variations in

goals, such as students' improper behaviors or problems may lead to teachers' anger (Chang, 2013), particularly if teachers recognize their behaviors or obstacles as being intentional or controllable by the students, if they recognize that students with high abilities are experiencing problems when they make insufficient efforts, or if they consider students' behaviors improper (Cubukcu, 2013).

### 2.2.6. Hope

The definition of hope includes target-oriented confidence made by people's historical setting where they have the tendency and chance to complete a target goal (Snyder, 2002). With hope, people have a higher tendency to participate in positive target-seeking behaviors and will potentially be logical and adaptable problem-solvers compared to people having lower hopes (Chang & Banks, 2007).

### 2.2.7. Shame

The definition of the emotional experience of shame refers to an affection where the self is placed on the core concentration of deconstructive assessment (Kim et al., 2011). Shame is related to deconstructive self-esteem and a feeling of degradation. People who accept greater degrees of shame tend to put a higher value on others' self-assessments and have a tendency for having higher self-criticality (Kim et al., 2011).

### 2.2.8. Hopelessness

Hopelessness refers to the anticipation that deconstructive incidents will take place and that constructive incidents will not take place, double with the anticipation that people cannot do anything to alter it (Abela & Hankin, 2008). Individuals experiencing hopelessness attribute undesired outcomes they feel within life to static elements like mental ability and have lower anticipations for future outcomes according to their previous feelings (Pekrun, 2006). Students encountering educational hopelessness are unwilling to concentrate on tasks that impede their knowledge collection and attainment since they are not able to manage future outcomes, which finally result in weak educational performance (Pekrun et al., 2011).

### 2.3. Empirical Studies

Goetz et al. (2008) examined the relationship between enjoyment as a type of positive emotion and students' academic achievement and the results show that enjoyment and achievement of the students in language classes are correlated. Similarly, Reilly and Sánchez-Rosas (2021) have carried out a study on the role of positive and negative achievement emotions experienced by university learners in Mexico. The results indicated that students experience positive emotions more regularly than negative ones. Additionally, upon paralleling the global averages of four positive and four negative emotions, a difference was found favoring the positive emotions. There are other studies conducted by Xie (2021) and Macklem (2015) on the role of boredom as one of the current negative emotions that has a significant effect on students' engagement leading to a lower level of performance. Ding and Zhao (2020)

conducted a study on emotions, engagement, and self-perceived achievement and they revealed that positive emotions such as enjoyment positively affect students' engagement while those negative emotions such as boredom were destructively associated with engagement.

Dewaele and Li (2021) investigated the role of teacher enthusiasm and students' types of achievement emotions such as enjoyment and boredom and their relationship to their engagement. The results of their study demonstrated that student enjoyment and boredom act as a mediator in the relationship between teacher enthusiasm and learner engagement in language classes. In another study, Shakki (2022) scrutinized the effect of teacher support and teacher-student rapport on L2 engagement and reported strong and significant associations among the constructs. The findings of the SEM analysis reveal favorable correlations and the influence of support and rapport on Iranian students' engagement. Considering the paucity of research that has been conducted so far, and the little attention which has been given to the relationship between the students' achievement emotions and their engagement, this study aims to investigate this relationship and to examine whether achievement emotions can prognosticate the EFL learners' engagement.

## 3. METHOD

### 3.1. Participants

The sample comprised 403 Iranian EFL students with various academic qualifications from different cities while the majority of them were from Tehran, the capital of Iran. An attempt was made to implicate both sexes in this study to generalize the results. To this end, 332 female students and 71 male students whose ages ranged from 19 to 30 took part in the survey (357 and 46 participants were enrolled in B.A. and master programs-EFL, respectively). All participants expressed their consent and completed an online questionnaire program via WhatsApp App.

### 3.2. Instruments

#### 3.2.1. Achievement Emotions Questionnaire (AEQ)

The AEQ by Pekrun et al. (2005) yielded 40 items, which account for emotional states (e.g. enjoying, being hopeful, being proud, being angry, being anxious, being shy, being disappointed, and boredom). In line with the guidelines developed by Pekrun (2005) regarding the use of the AEQ, all the items were rated on a five-point Likert scale. The items ranged were based on a scale from strongly disagree to strongly agree (rated 1 to 5). The reliability for the entire questionnaire was 0.731.

#### 3.2.2. Student Engagement Instrument (SEI)

The SEI questionnaire by Appleton et al. (2006), made up of 35 items, makes use of a 4-point Likert-similar scale (from strongly disagree to strongly agree) and is expected to measure three sub-categories of affective engagement, namely, educator-learner connections, the assistance provided by a colleague or guardian. It also measures three sub-categories of

intellectual engagement, namely, the status of school tasks, objectives and aspirations, and innate inspiration. The reliability of this questionnaire was found to be 0.904.

### 3.3. Data Collection Procedures

Prior to the distribution of the questionnaires in the main study, the learners, teachers, and other responsible parties such as the language schools' managers were fully briefed at different stages. In this investigation, the data were collected, using valid online questionnaires in February 2022. Overall, 403 questionnaires (332 female and 71 male students) were distributed and collected from multiple language schools and universities in Iran. To ensure the validity of the responses, all subjects were briefed on how they had to complete the questionnaires. They were assured that the responses would be kept confidential. All subjects were also told that the students could give up at their will during the study. Given that the subjects were not related to the researcher, no conflicts of interest occurred between the researcher and the subjects.

### 3.4. Data Analysis

The current empirical research has a quantitative, non-experimental, and descriptive research design running the numerical method of Partial Least Squares-SEM, through the Smart PLS 3.2.6 and MPLS (Ringle et al., 2015), in which the evaluation of the measurement model was first considered and then the structural model was evaluated as a model of graded modules. In this way, the model was assessed using the indicator repetition method which is essential to handle greater order models in MPLS-SEM (Hair et al., 2017). To calculate the normality of the data, the researcher used Skewness and kurtosis values with their ratios are within the acceptable range of +/- 1.96, demonstrating that the normality assumption is met (Pallant, 2010). Finally, regression for the dimensions of achievement emotions was used.

## 4. Results

Initially, the reliability of lower and higher-order variables were measured, the results of which are presented in the following table (Table 1).

**Table 1.** *Reflective measurement model assessment*

| Achievement Emotions (RHOC1) | Convergent validity | | | Internal consistency reliability | | |
|---|---|---|---|---|---|---|
| | | Outer loadings | t values | AVE | Composite reliability | Cronbach's α |
| | Indicators | >0.708 | >2.57 | >0.5 | >0.7 | >0.7 |
| Enjoyment (RLOC1) | Enjoy_01 | 0.807 | 2.398 | 0.598 | 0.912 | 0.886 |
| | Enjoy_02 | 0.795 | 2.372 | | | |
| | Enjoy_03 | 0.845 | 2.38 | | | |
| | Enjoy_04 | 0.853 | 2.379 | | | |
| | Enjoy_05 | 0.684 | 2.368 | | | |
| | Enjoy_06 | 0.718 | 2.38 | | | |
| | Enjoy_07 | 0.692 | 2.372 | | | |
| Hope (RLOC2) | Hope_01 | 0.786 | 7.638 | 0.602 | 0.858 | 0.778 |
| | Hope_02 | 0.816 | 7.776 | | | |
| | Hope_03 | 0.704 | 7.611 | | | |
| | Hope_04 | 0.792 | 7.714 | | | |
| Pride (RLOC3) | Pride_01 | 0.778 | 2.568 | 0.577 | 0.884 | 0.757 |
| | Pride_02 | 0.821 | 2.574 | | | |
| | Pride_03 | 0.644 | 3.578 | | | |
| | Pride_04 | 0.784 | 3.573 | | | |
| Anger (RLOC4) | Anger_01 | 0.722 | 22.862 | 0.612 | 0.863 | 0.787 |
| | Anger_02 | 0.782 | 30.507 | | | |
| | Anger_03 | 0.85 | 57.479 | | | |
| | Anger_04 | 0.768 | 29.934 | | | |
| Anxiety (RLOC5) | Anxiety_01 | 0.807 | 37.225 | 0.613 | 0.917 | 0.895 |
| | Anxiety_02 | 0.794 | 33.626 | | | |
| | Anxiety_03 | 0.815 | 32.371 | | | |
| | Anxiety_04 | 0.807 | 46.747 | | | |
| | Anxiety_05 | 0.757 | 27.335 | | | |
| | Anxiety_06 | 0.711 | 18.768 | | | |
| | Anxiety_07 | 0.784 | 37.004 | | | |
| Shame (RLOC6) | Shame_01 | 0.854 | 59.77 | 0.693 | 0.919 | 0.889 |
| | Shame_02 | 0.835 | 44.831 | | | |
| | Shame_03 | 0.865 | 56.444 | | | |
| | Shame_04 | 0.817 | 35.152 | | | |
| | Shame_05 | 0.79 | 28.555 | | | |
| Hopelessness (RLOC7) | HopLess_01 | 0.859 | 46.399 | 0.743 | 0.921 | 0.885 |
| | HopLess_02 | 0.856 | 52.104 | | | |
| | HopLess_03 | 0.881 | 63.179 | | | |
| | HopLess_04 | 0.852 | 47.246 | | | |
| Boredom (RLOC8) | Brdom_01 | 0.785 | 32.889 | 0.708 | 0.924 | 0.896 |
| | Brdom_02 | 0.828 | 41.863 | | | |
| | Brdom_03 | 0.844 | 41.081 | | | |
| | Brdom_04 | 0.889 | 71.705 | | | |
| | Brdom_05 | 0.859 | 56.42 | | | |
| Teacher–Student Relationships (RLOC9) | TSR_01 | 0.578 | 9.548 | 0.562 | 0.805 | 0.726 |
| | TSR_02 | 0.517 | 5.546 | | | |
| | TSR_03 | 0.713 | 24.138 | | | |
| | TSR_04 | 0.61 | 13.658 | | | |
| | TSR_05 | 0.61 | 13.315 | | | |

*Source.* Own contribution from results obtained with Smart PLS 3 Ringle, Wende, and Becker (2015). Note. RHOC = reflective high order construct; RLOC = reflective lower order constructs; AVE = average variance extracted; PLS = partial least squares.

According to the findings displayed in Table 1, the high reliability of all reflective lower and higher-order underlying variables of the measurement model was bolded, as the complex consistency which signifies the segment of the modification between the group of observed variables and the fundamental concepts exceeds the value of 0.708 recommended

by Hair et al. (2017). Moreover, all the loadings are larger than the suggested threshold of 0.707 (Chin, 1998). In addition, Cronbach's alpha for each of the latent variables is higher than 0.7 and goes beyond the AVE (Average Variance Extracted) value of 0.5.

## 4.1. Structural Model

The study model involves four high-order constructs named Psychological Engagement (first-order construct), Achievement Emotions (second-order construct), Cognitive Engagement (third-order construct), and Student Engagement (fourth-order construct). They were each modeled as a reflective construct consisting of its sub-construct as indicators. Bootstrapping analysis was used to verify the structural model (Chin, 1998).

Regarding the indication of discriminant validity, this was assessed by two tests, which are shown in Table 2 and Table 3. Foremost, above the diagonal, the Heterotrait–Monotrait Test (Henseler, Ringle, & Sarstedt, 2015) is displayed, being regarded as a measure of better presentation to describe the discriminant validity of the concepts. It was found with MPLS-SEM when asking for widespread bootstrapping, indicating that the principles of the associations between the reflective concepts are below 0.90 (Henseler et al., 2015). Moreover, to validate the discriminant validity, the Fornell–Larcker criterion was premeditatedly employing the square root of each variable AVE whose values display the diagonal. Consistent with these results, it can be proved that these studies' datasets are perceptibly reliable and valid to confirm the hypotheses with MPLS-SEM.

**Table 2.** *Discriminant validity for the lower order constructs (Heterotrait–Monotrait test)*

|    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 0.78 | | | | | | | | | | | | | |
| 2 | 0.63 | 0.78 | | | | | | | | | | | | |
| 3 | 0.70 | 0.64 | 0.84 | | | | | | | | | | | |
| 4 | -0.25 | -0.21 | -0.28 | 0.71 | | | | | | | | | | |
| 5 | -0.52 | -0.36 | -0.58 | 0.42 | 0.77 | | | | | | | | | |
| 6 | -0.29 | -0.11 | -0.23 | 0.44 | 0.45 | 0.85 | | | | | | | | |
| 7 | -0.35 | -0.29 | -0.35 | 0.59 | 0.47 | 0.57 | 0.62 | | | | | | | |
| 8 | -0.24 | -0.14 | -0.28 | 0.641 | 0.444 | 0.55 | 0.61 | 0.61 | | | | | | |
| 9 | -0.40 | -0.50 | -0.48 | 0.37 | 0.60 | 0.29 | 0.40 | 0.39 | 0.77 | | | | | |
| 10 | 0.66 | 0.77 | 0.76 | -0.23 | -0.42 | -0.10 | -0.27 | -0.18 | -0.48 | 0.86 | | | | |
| 11 | -0.31 | -0.22 | -0.33 | 0.62 | 0.45 | 0.49 | 0.59 | 0.67 | 0.35 | -0.28 | 0.63 | | | |
| 12 | -0.37 | -0.39 | -0.46 | 0.36 | 0.59 | 0.37 | 0.41 | 0.40 | 0.75 | -0.41 | 0.3 | 0.7 | | |
| 13 | 0.51 | 0.63 | 0.61 | -0.17 | -0.30 | -0.11 | -0.29 | -0.15 | -0.50 | 0.71 | -0.2 | -0.4 | 0.6 | |
| 14 | -0.26 | -0.16 | -0.25 | 0.71 | 0.35 | 0.54 | 0.61 | 0.51 | 0.35 | -0.21 | 0.52 | 0.33 | -0.17 | 0.56 |

1= Anger,2= Anxiety,3= Boredom,4= Control and Relevance of School Work,5= Enjoyment,6= Extrinsic Motivation,7= Family Support for Learning,8= Future Aspirations and Goals,9= Hope,10= Hopelessness,11= Peer Support for Learning,12= Pride,13= Shame,14= Teacher–Student Relationships

*Source.* Own contribution from results obtained with Smart PLS 3 Ringle et al. (2015).
HTMT.90 = heterotrait–monotrait test; PLS = partial least squares.

**Table 3.** *Discriminant validity for the lower order constructs (Fornell-Larcker)*

|    | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12   | 13    | 14   |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 1  | 0.78  |       |       |       |       |       |       |       |       |       |       |      |       |      |
| 2  | 0.63  | 0.78  |       |       |       |       |       |       |       |       |       |      |       |      |
| 3  | 0.70  | 0.64  | 0.84  |       |       |       |       |       |       |       |       |      |       |      |
| 4  | -0.25 | -0.21 | -0.28 | 0.71  |       |       |       |       |       |       |       |      |       |      |
| 5  | -0.52 | -0.36 | -0.58 | 0.42  | 0.77  |       |       |       |       |       |       |      |       |      |
| 6  | -0.29 | -0.11 | -0.23 | 0.44  | 0.45  | 0.85  |       |       |       |       |       |      |       |      |
| 7  | -0.35 | -0.29 | -0.35 | 0.59  | 0.47  | 0.57  | 0.62  |       |       |       |       |      |       |      |
| 8  | -0.24 | -0.14 | -0.28 | 0.641 | 0.444 | 0.55  | 0.61  | 0.61  |       |       |       |      |       |      |
| 9  | -0.40 | -0.50 | -0.48 | 0.37  | 0.60  | 0.29  | 0.40  | 0.39  | 0.77  |       |       |      |       |      |
| 10 | 0.66  | 0.77  | 0.76  | -0.23 | -0.42 | -0.10 | -0.27 | -0.18 | -0.48 | 0.86  |       |      |       |      |
| 11 | -0.31 | -0.22 | -0.33 | 0.62  | 0.45  | 0.49  | 0.59  | 0.67  | 0.35  | -0.28 | 0.63  |      |       |      |
| 12 | -0.37 | -0.39 | -0.46 | 0.36  | 0.59  | 0.37  | 0.41  | 0.40  | 0.75  | -0.41 | 0.3   | 0.7  |       |      |
| 13 | 0.51  | 0.63  | 0.61  | -0.17 | -0.30 | -0.11 | -0.29 | -0.15 | -0.50 | 0.71  | -0.2  | -0.4 | 0.6   |      |
| 14 | -0.26 | -0.16 | -0.25 | 0.71  | 0.35  | 0.54  | 0.61  | 0.51  | 0.35  | -0.21 | 0.52  | 0.33 | -0.17 | 0.56 |

1= Anger,2= Anxiety,3= Boredom,4= Control and Relevance of School Work,5= Enjoyment,6= Extrinsic Motivation,7= Family Support for Learning,8= Future Aspirations and Goals,9= Hope,10= Hopelessness,11= Peer Support for Learning,12= Pride,13= Shame,14= Teacher–Student Relationships

The diagonal components (shaded) are the square roots of the variance shared between the concepts and their measurement (AVE). Off-diagonal components are the associations among concepts. Diagonal elements should be higher than off-diagonal components to show discriminant validity.

To achieve the statistical findings and the confirmation of the study, one hypothesis, the structural model was analyzed, using bootstrapping, through ljj MPLS 3.2.9 (Ringle et al., 2015). The conceptual model of this study with t-values with Bootstrapping Results for each causal path is illustrated in Figure 1. Concerning the hypothesis, the findings are shown in Table 4. MPLS-SEM results of the Structural Model. ($\beta$ =. 444, t = 7.684, p < .001) demonstrate that achievement emotions have positive and significant effects on student engagement. As shown, it can be seen that student engagement is explained in 70% by Achievement Emotions ($R^2$ = .70). Then, the core hypothesis is accepted. Hence, we can assert that EFL learners' achievement emotions significantly predict their engagement.

**Table 4.** *MPLS-SEM results of the structural model*

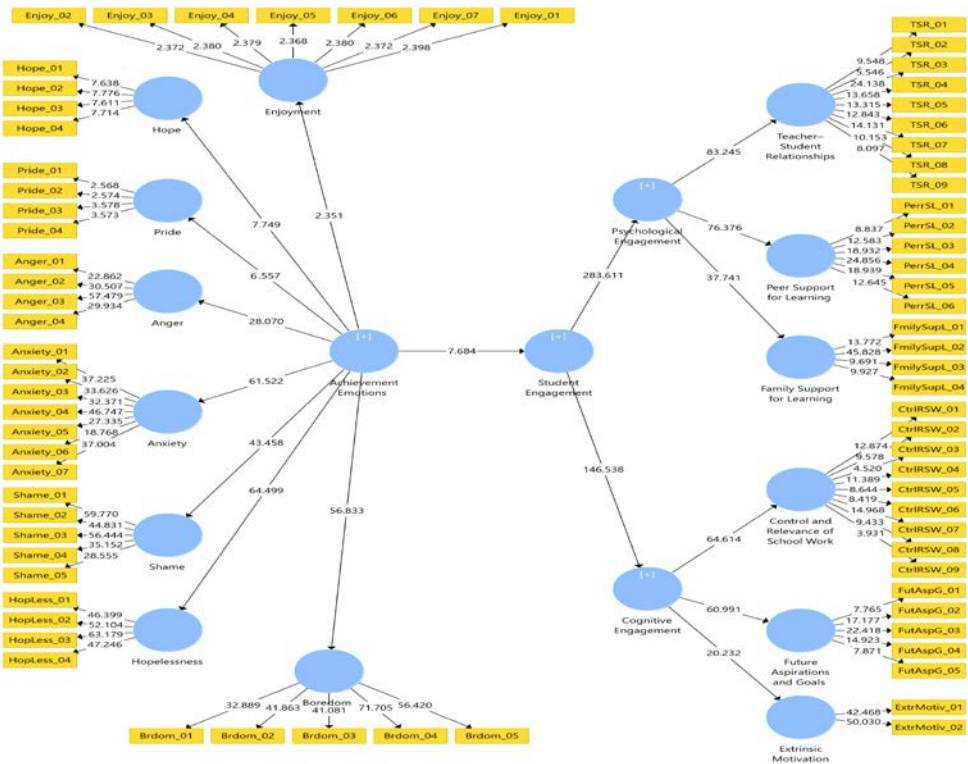| ID | Hypotheses | Path | Standardized coefficient, β | t value | f 2 | R² |
|---|---|---|---|---|---|---|
| H₁ | Are there any significant relationships between EFL learners' achievement emotions and their engagement? | Achievement Emotions → Student Engagement | 0.444*** | 7.684 | 0.246 | 0.697 |



*Figure 1. The path model with bootstrapping results*

**Table 5.** *Regression for the dimensions of achievement emotions*

| The dimensions effect of Achievement Emotions on Student Engagement | Standard Coefficient Beta | Coefficient std.Error | t-value | sig | results |
|---|---|---|---|---|---|
| Enjoyment | 0.332 | 0.048 | 5.170 | 0.000 | Positive and significant |
| Hope | 0.119 | 0.054 | 2.683 | 0.001 | Positive and significant |
| Pride | 0.135 | 0.050 | 2.076 | 0.039 | Positive and significant |
| Anger | -0.114 | 0.033 | -1.720 | 0.086 | not significant |
| Anxiety | 0.070 | 0.045 | 0.787 | 0.432 | not significant |
| Shame | -0.214 | 0.037 | -3.165 | 0.002 | negative and significant |
| Hopelessness | 0.054 | 0.036 | 0.654 | 0.513 | not significant |
| Boredom | -0.212 | 0.036 | -3.029 | 0.004 | negative and significant |

The table above (Table 5) has shown the effect size of eight dimensions of achievement emotions on student engagement dependent variable. As the results show, the effect of enjoyment on student engagement has a strong beta coefficient equal to 0.332 which obtained/reached the highest t-value (5.170). So it can be concluded that enjoyment has a positive and significant effect on student engagement. For the second dimension of student engagement, "Hope", the beta coefficient is equal to 0.119, which is positive and significant for student engagement. The results have shown that Pride positively predicts student engagement. The effect size of two dimensions of achievement emotions is negatively significant on student engagement. The reason for this is their strong and negative beta coefficients, which are -0.214 and -0.212 respectively. For the rest of the three dimensions (Anger, Anxiety, & Hopelessness), their effects on student engagement were not significant.

## 5. Discussion

In this study, which sought out the interplay of different constructive and deconstructive emotions in the process of L2 learning, it was maintained that positive feelings foster students' academic engagement and success (Pishghadam et al., 2016). This is supported by prior studies conducted by Pekrun and Perry (2014) and Schunk and Greene (2018), who attributed learner satisfaction, inspiration, self-control, and psychological health to constructive feelings in education. This reciprocal relationship between language learning and emotions can be ascribed to the nature of this field, which has been proven highly emotional (Derakhshan, 2022a; Xie & Derakhshan, 2021). The results are attributable to the Iranian EFL context and teachers' knowledge of PP and emotions. Moreover, the emotional and affective-oriented nature of EFL classes in Iran may have caused these findings as positive atmospheres lead to student engagement and achievement.

The results of this investigation also reflect CVT that underscores the interactions among multiple emotions produced in various affective, cognitive, motivational, and physiological subsystems. In this study, it was also argued that teachers' application of language pedagogy reduces L2 learners' negative emotions and facilitates their engagement in academic tasks. This is consistent with the results of Adamson and Coulson (2015). It seems that the linguistic demand of translanguaging inside and outside the classroom has created an emotional tie with students and actively engaged the participants and curbed their negative emotions. Our findings also lend supports to Ding and Zhao (2020) which proved that enjoyment as a positive emotion affects students' engagement while boredom as a negative type, was negatively associated with engagement.

Corresponding to CVT (Pekrun et al., 2011), and previous studies in Western settings, the participants with a higher level of constructive emotions reported higher engagement in EFL courses. This may be because people who take pleasure in English learning, can apply resilient and compatible self-regulating tactics to continue educators' descriptions. This positive correlation is echoed in Schukajlow and Rakoczy (2016), which demonstrated that constructive emotions enhance incentive, attempt, engagement, achievement, and educational functioning. On the contrary, it is indicated that deconstructive emotions negatively correlate with engagement and achievement (Pekrun et al., 2019). In this regard, Pekrun (2014) posited that displeasing feelings distract learners' from education, and trigger the utilization of lower-level educational techniques and superficial processing of content. These would end in boredom, hopelessness, shame, and weak academic performance (Pekrun & Linnebrink-Garcia, 2012).

The results of this study also revealed a positive relationship between enjoyment and engagement among Iranian EFL learners. This is comparable to the results of Pekrun and Linnenbrink-Garcia's (2012) research in which they regarded emotional engagement as one of the fundamental facets of enjoyment. Likewise, Liu (2021) ran a study in line with this finding, in which the values of enjoyment for learners' educational engagement and enthusiasm were clarified. The multidimensional nature of many PP emotions has likely caused the participants to correlate engagement and enjoyment. Many of the positive emotions common in L2 education serve as the facilitators and pre-conditions of others. Regarding the interplay of negative emotions and learners' engagement, the results support those of Xie (2021) and Macklem (2015), who pinpointed that the more engaged the learners are, the less bored they

are and the less monotonous they find the class activities. As for anxiety and enjoyment, Elahi Shiravn and Taherian's (2018) study is also in the same line as the present study, as they claimed that when the learners' enjoyment increases, their level of anxiety decreases. Higher enjoyment decreases the amount of anxiety in learners and increases their enjoyment, which consequently generates more engagement.

Moreover, the results support those of Dewaele and Li (2021), who indicated that student engagement is a product of insights into different issues such as teacher motivation and students' emotions. In language education, teachers' emotions and practices are inseparable from those of students since they are constantly interacting with each other. Hence, the way teachers and students show, regulate, and reinforce positive emotions and tackle negative ones strongly influences their classroom engagement level. This is actually what was found by Shakki (2022), in which the role of the teacher in enhancing the students' engagement was accentuated. Furthermore, teachers' utilization of proper techniques for L2 students is critical for the emergence, maintenance, and upsurge of academic engagement and achievement emotions. In support of prior research, the present study endorses the overlapping of student-related emotions and their predictive power in light of a suitable atmosphere and practice.

## 6. Conclusions

Undoubtedly, emotions play an indispensable function in learners' L2 learning and engagement; therefore, teachers need to attach more importance to this aspect of learners' personalities. The growing number of studies on achievement emotions in psychology and academia can serve as a driving force for L2 teachers. Learning from emotion studies in learning sciences and psychology presents vital perceptions in learning a second language. This can act as a new motive for applied linguists to develop research that presents/conveys higher degrees of novelty and accuracy for studying the emotional aspects of language achievement. The experiences and perspectives present significant input for L2educators and applied linguists in theorizing and practicing teaching psychology. The cooperation between scholars and specialists in achievement emotions in developing class interferences that address emotions will finally profit in developing and engaging language learners.

Practically, the present results have significant implications for educators. Teachers might try to improve and adopt proper tactics to rebuild the English classroom setting by guiding the students' emotions positively. The information indicates that perceived control is a vital precursor of emotions and language functioning. Therefore, material developers have to take into account the application of educational methods and embedding interference activities that nurture learners' perceptions of control over their education programs. This should be done to enhance language success straightly by improving perceptions of control as well as indirectly by fostering constructive emotions and decreasing deconstructive emotions.

## 7. Limitations and suggestions for future directions

This study was carried out among Iranian language learners; in the future, other similar groups of students should be taken into account. Despite the large number of subjects who participated in this study, the sample was merely made up of Iranian students. Future studies may conduct a similar study in which the sample can be drawn from other countries, as this would make it possible to check the consistency of the results. It is also suggested that future studies keep on researching the association between emotions with other variables to be able to discover appropriate tactics to produce constructive emotions and circumvent deconstructive emotions in the EFL context. Although in the present study, the researcher has examined how different achievement emotions were related to the students' engagement and their significant relationship was assured, future studies should be conducted to interpret the results by learners' individual differences. Given that this investigation uses the correlational format, the studies in the future can be interventional and longitudinal for the purpose of shedding light on the influence of achievement emotions on the outcomes.

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