

# **The Mediating Role of Cognitive Engagement in the Relationship Between Achievement Goals and Academic Burnout among Iranian EFL Learners**

**Hamideh Taheri<sup>1</sup>**

**Mahnaz Kaboodi<sup>2</sup>**

**Mohammadreza Nasr<sup>\*3</sup>**

Received: 13/01/2022

Accepted: 10/09/2022

## **Abstract**

Notwithstanding the saliency of cognitive engagement, achievement goals, and academic burnout in the learning process, their triple interaction has been underresearched. Thus, the current study aimed to test a structural model of cognitive engagement, achievement goals, and burnout and specifically to investigate the hypothesis that cognitive engagement mediates the effect of achievement goals on burnout. To this end, a total of 384 advanced Iranian EFL learners from different private English language teaching institutes in the cities of Shiraz and Bushehr were selected based on the convenience sampling method. The participants of the study were requested to complete three adapted and validated Likert scale instruments on cognitive engagement, the modified

---

\* Corresponding author

<sup>1</sup> Department of English language, Bushehr Branch ,Islamic Azad University, Bushehr, Iran; Ha.taheri@iua.ac.ir

<sup>2</sup> Department of Educational Sciences, Farhangian Teacher Education University, Tehran, Iran; .Kaboodim58@cfu.ac.ir

<sup>3</sup> Department of Education, National Iranian Oil Company, Tehran, Iran; nasr\_mr@yahoo.com

DOI: 10.22051/lghor.2022.39129.1625

DOR: 20.1001.1.2588350.2023.7.3.7.9

version of the Maslach Burnout Inventory-Student Survey, and achievement goals entailing 12, 10, and 12 items, respectively. The Structural Equation Modeling (SEM) approach was carried out to test the hypothesized model of the study. The results of Confirmatory Factor Analysis (CFA) confirmed that the three instruments well fitted the data of the study. Also, the goodness-of-fit indices indicated a good model fit. Likewise, the findings of path analyses demonstrated that achievement goals negatively affected burnout and positively impacted cognitive engagement. Further, cognitive engagement was found to partially mediate the relationship between achievement goals and burnout. The findings of the present study may hold substantial theoretical and practical implications for EFL teachers, syllabus designers, and educational policymakers.

**Keywords:** academic burnout, achievement goals, cognitive engagement, EFL learners, SEM

## Introduction

EFL learners are behaviorally and emotionally engaged in a wide range of learning activities that are highly organized and coercive and targeted at a specific achievement goal (Schaufeli & Taris 2005). Indeed, achievement goals are crucial factors in academic achievement (Kaplan & Maehr, 2007) and language performance (Ruishi et al., 2021) and are negatively associated with academic burnout (Madigan & Curran, 2021). This implies that learners with low levels of achievement goals are more likely to experience academic burnout (Moneta, 2011; Naghsh & Khavak, 2016) which results in low academic achievement (Cam, et al., 2014; Oyoo et al., 2020) and harms learning engagement and motivation (Duru et al., 2014; Virtanen et al., 2016).

Achievement goal theory demonstrates that learners' purposes in engaging in achievement tasks impact their degree of task engagement (Greene et al., 2004; King et al., 2012) and that the goal structure of an educational setting might affect learners' motivation, cognitive engagement, and progress within that learning environment (Ames & Archer, 1988). Indeed, learners adopting goal-oriented strategies are more likely to engage in the learning task and emphasize achievement goals to reach assigned outcomes (Zarei & Usefli, 2015).

Academic burnout among learners involves a feeling of frustration

with the academic demands and requirements, pessimism about homework, and feeling inefficient and fatigued (Rostami et al., 2013) and is caused by learners' inability in coping with academic challenges and encompasses three components, namely cynicism, exhaustion, and inefficacy (Maslach et al., 1986; Salmela-Aro et al., 2009; Schaufeli et al., 2002b).

Cognitive engagement viewed as the antipode of burnout (Maslach & Leiter, 2008) plays a pivotal role in learners' progress (Cam et al., 2014; Greene, 2015; Schaufeli et al., 2002a). Research in the field of applied linguistics has shown that achievement goals (e.g., Mirhassani et al., 2007; Moghimi, 2020) and cognitive engagement (Philp & Duchesne, 2016) are among psychological constructs that are instrumental in language learning and development. There is also evidence that achievement goal orientations directly affect cognitive engagement (Meece et al., 1998; Wang & Bai, 2022).

These findings accentuate the central roles of cognitive engagement, achievement goals, and burnout in the learning process within educational settings and can provide the theoretical underpinning for the hypothesized model (see Figure1) depicting the interplay between these three constructs. Psychological constructs i.e., engagement, achievement goals, and burnout are of great significance in learners' academic life and aspirations. This is abundantly clear in positive learning culture and efforts expended to attaining goals (Martin, 2008). Recently, language learning studies (e.g., MacIntyr et al., 2016) have examined advances and positive constructs in positive psychology to boost the language learning process. The previous research on achievement goals, cognitive engagement, and burnout mainly addressed the linkage of two of these constructs at a time in a single study. However, their ternary connections and particularly the mediating role of cognitive engagement in the relationship between achievement goals and burnout have remained untouched in both the language teaching context and mainstream education and are yet to be explored because they can help educators and researchers better understand their structural relationships and also psychological constructs affecting the association between achievement goals and burnout. By understanding the structural relationships of these constructs, we can

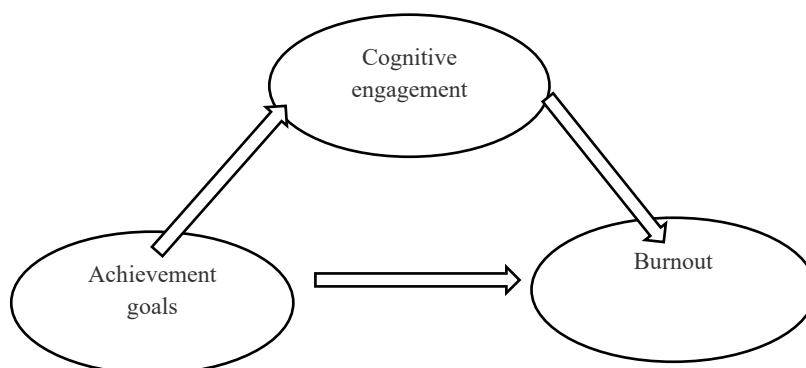
determine where to construct interventions and where to refine teaching practices. Further, given the saliency of these constructs in the language learning context and the dearth of research investigating the interacting relationships among these constructs, we intended to contribute to the literature by exploring their interplay through modeling the structural relationship between achievement goals and burnout with the mediating role of cognitive engagement. As a result, the study touched upon the following research questions:

1. Do achievement goals have a significant effect on burnout?
2. Do achievement goals have a significant impact on cognitive engagement?
3. Does cognitive engagement mediate the relationship between achievement goals and burnout?

Based on the research questions, three hypotheses are formulated as follows:

1. Achievement goals have a direct and significant effect on burnout.
2. Achievement goals have a direct and significant effect on cognitive engagement.
3. Cognitive engagement mediates the relationship between achievement goals and burnout.

In light of the theoretical backgrounds and the studies mentioned above, a path diagram was generated to map a conceptual model which predicts the causal relationships between achievement goals and burnout through the mediating role of cognitive engagement. Within the hypothetical model, the ovals represent latent constructs and unidirectional arrows illustrate causal paths. For instance, an independent variable directly impacts a dependent variable. Figure 1 shows a structural model and the directional paths between the components and the sub-scales.

**Figure 1***The hypothesized model*

The study findings can contribute to the literature by showing the intertwining nature between language learners' achievement goals, cognitive engagement, and burnout. Indeed, the interplay between these constructs is an important connection to successful language learning and achievement. This research might help EFL teachers better understand how to allay burnout and employ a strengths-based approach to burnout. The current research can be innovative in that it addresses three constructs collectively in a single study and that it employs SEM to provide a detailed profile of how these constructs interact.

### Literature Review

Burnout is a psychological syndrome encompassing three constructs, including cynicism, emotional exhaustion, and professional inefficacy (Maslach, 1982; Schaufeli et al., 2002b). Cynicism refers to learners' inattention and casual attitudes to learning activities and is the interpersonal aspect of cynicism (Maslach, 2015). Representing the affect and enduring tiredness, emotional exhaustion is viewed as the main source of stress (Maslach, 1993). Professional inefficacy points to learners' feeling of disqualification and a loss of notable achievement in academic settings (Maslach, 2015). Burnout is conceptualized as reactions that learners produce in the face of the pressure to fulfill their tasks (Salmela-Aro et al., 2009). It is exhaustion arising from hard work,

unfavorable attitudes toward self-study, and a sense of discontent and disgruntlement (Schaufeli et al, 2002b) provoking resentment to deal with academic undertakings that can ruin students' academic success (Mostert et al., 2007).

In the classroom setting, cognitive engagement concerns the implementation of cognitive and self-regulatory learning strategies (Greene, 2015; Reeve, 2012). It entails indomitable will (Pintrich, 2000) and hinges on academic issues including learning goals and motivation, self-regulation, learning practices and perceptions, and planning (Appleton et al., 2006; Fredericks et al., 2004; Jimerson et al., 2003; Sutherland, 2010; Walker et al., 2006). Cognitive engagement also pertains to learners' investment, attention, eagerness, and effort (Glanville & Wildhagen, 2007). Cognitive engagement displays strategies that learners employ to elaborate learning materials (Molinari & Grazia, 2021). It is a combination of reflection and a tendency toward stepping up the endeavor to master complicated skills (Fredricks et al., 2004). Taking investment into consideration, cognitive engagement is conceptualized as the willingness and determination to comprehend sophisticated issues to enhance complex skills (Mahatmya et al., 2012). In principle, cognitive engagement promotes high levels of apprehension and competency (Fredricks et al., 2004) and concerns learners' determination, reflection on learning, and strategies they capitalize on to gain mastery of demanding skills (Metallidou & Viachou, 2007).

Achievement goal theory is premised on theories of motivation and achievement-related behaviors that make learners achieve the desired outcome (Maehr & Zusho, 2009). It entails two primary goals including performance and mastery. The former is related to the avoidance of obstacles and reduced levels of intrinsic motivation while the latter is construed as grounded in learners' high internal motivation and attempts in dealing with challenges (Ames, 1992). To Maehr and Zusho (2009), mastery goals produce positive outcomes but performance might not bring about desired results. Overall, mastery goals are self-based and tasked-based (Martin & Liem, 2010). Mastery-oriented learners seek to enhance their skills and understanding, demonstrate competence, and

gain knowledge (Kaplan & Maehr, 2007). Mastery-avoidance goals are presumed to avoid misunderstanding and incompetence (Martin & Liem, 2010). Sideridis (2005) holds that there is a positive relationship between performance-approach goals and learners' endeavor, perseverance, and accomplishment. Nevertheless, Linnenbrink (2005) maintains that performance-approach goals are not conducive to achievement.

### **Literature Review**

Akbaslı et al. (2019) examined the interplay between engagement and burnout among 472 university students in Ankara, Turkey. The Pearson correlation coefficient and multiple linear regression were run for the data analysis. They found that cognitive and affective engagement significantly affected burnout. Further, Virtanen et al. (2018) explored the relationship between school burnout and student engagement among 2,485 grade 7 and 9 school students in Finland. They adopted a multistep statistical procedure, namely correlation, multinomial logistic regression, and person-centered mixed-model method to analyze the questionnaire data. Their results demonstrated that cognitive engagement and burnout were negatively related. In another study conducted by Zucoloto et al. (2016), the impact of different engagement constructs i.e., emotional, behavioral, and cognitive on burnout was investigated. Participants of their study constituted 363 pharmacy students at Sao Paulo State University. The findings obtained from SEM revealed that behavioral engagement and emotional engagement explained 81 percent of the variation in burnout and that cognitive engagement did not significantly impact burnout.

Concerning the relationship between achievement goals and cognitive engagement, Sedaghat et al. (2011) investigated the impact of motivational factors on academic and cognitive achievement using SEM among 1371 Iranian high school students. They found that achievement goals significantly impacted cognitive engagement and academic achievement. Poorgholamy et al. (2020) investigated the relationship between achievement goals and burnout among 384 university students at Payam-e-Noor University in Shiraz, Iran. They

adopted SEM for analyzing their data. Based on their results, achievement goals had a significant effect on academic burnout.

## **Method**

### ***Design***

A quantitative method was employed for the purposes of this study. The structural equation modeling approach using AMOS graphics 24 was performed for CFA and the model assessment. SEM is a multivariate analysis that helps researchers to explore a series of interrelationships simultaneously (Hair et al., 1998).

### ***Participants***

The subjects who volunteered for this study were 384 Iranian EFL learners (194 males and 190 females) with the age range of 17 to 41 from different academic backgrounds. One hundred and thirty EFL learners were high school students and forty of them were diploma holders. One hundred and twenty-four, seventy, and twenty of the participants held Bachelor's, Master's, and Ph.D. degrees, respectively. They were all native speakers of Farsi with common cultural backgrounds and have been learning English for at least the last four years. They were selected through convenience sampling from language learners enrolling in advanced English classes in various private language institutes in the cities of Shiraz and Bushehr in Iran. Two hundred eighty-one language learners attended English classes in language institutes in Shiraz and 103 EFL learners were from language institutes in Bushehr. The sample size was determined using the Krejcie and Morgan (1970) sample size table based on which a sample of 384 is recommended when the population is indefinite.

### ***Instruments***

Three previously validated self-report instruments on cognitive engagement, burnout, and achievement goals adapted from Gunuc & Kuzu (2015), Bresó, Salanova, & Schaufeli (2007), and Elliot and Murayama (2008),

respectively were employed in this study. We also validated the three questionnaires using CFA, Composite Reliability (CR), Cronbach's alpha, and Average Extracted Variance (AVE), the results of which are reported in the results section.

**Cognitive Engagement Questionnaire.** To measure the EFL learners' cognitive engagement level, we used the cognitive engagement questionnaire as part of the student engagement scale covering six different components i.e., participation, emotional engagement, cognitive engagement, valuing, sense of belonging, and behavioral engagement with 59 items from which 10 items (21-30) measured cognitive engagement on a 5-point Likert scale ranging from strongly disagree to strongly agree.

**Burnout Questionnaire.** The burnout questionnaire is also a 5-point Likert scale ranging from 1 for strongly disagree to 5 for strongly agree embraces three main constructs including exhaustion (5 items), cynicism (4 items), and academic inefficacy (6 items).

**Achievement Goals Questionnaire.** The third questionnaire includes 12 items measuring four elements of achievement goals, including performance-approach goal (3 items), mastery avoidance goal (3 items), mastery approach goal (3 items), and performance-avoidance goal (3 items) on a 5-point Likert scale ranging from strongly disagree to strongly agree. The three instruments were translated into Persian by the lead researcher to assure that the language learners fully comprehend the items of the instrument. In the next step, a certified translator checked the authenticity of the translations and made the necessary changes to them. As the questionnaires were developed and designed in the context of mainstream education, we decided to make minor changes to the items such that they fit the context of language teaching. For example, the words "English" and "language" were added where appropriate. Also, the questionnaires were merged into one (37 items) to make the participants fill them out altogether. Further, we made a few minor changes to the Persian versions of the questionnaires to make them fit the context of language learning. However, the order of the items and the number of them remained untouched. Finally, two experts in the fields of applied linguistics and

educational psychology reviewed the items with reference to the changes made to the items.

**Piloting the Questionnaires.** The Persian versions of the instruments were pilot-tested on a group of 40 advanced EFL learners. The reliabilities of cognitive engagement, burnout, and achievement goals questionnaires using Cronbach's Alpha turned out to be .89, .87, and .90, respectively which exceeded .7 suggesting that the questionnaires were reliable tools for the study (Fraenkel & Wallen, 2006; Salkind, 2007).

### ***Procedure***

The three online instruments were administered to EFL learners using WhatsApp, a popular multiplatform messaging application through which a broad range of responses to the questionnaires can be elicited from EFL learners in different language institutes. To collect data, we used an online survey software known as Porseline where a link to the questionnaire was created and forwarded to language teachers to post it in their groups of advanced EFL learners who were invited to take part in the study and were assured that their data would be confidential and that they did not need to provide any personal information for their participation in the study. Upon clicking the link, they agreed to fill out the questionnaire taking about 15 minutes of their time.

### **Results**

The main purpose of this study was to investigate whether cognitive engagement mediated the relationship between achievement goals and academic burnout. Descriptive statistics were first performed to summarize the questionnaire data.

#### ***Descriptive Statistics***

Table 1 depicts the descriptive statistics of the variables of the study.

**Table 1***Descriptive statistics for the constructs*

|                             | N   | Skewness | Kurtosis | Mean    | Std. Deviation |
|-----------------------------|-----|----------|----------|---------|----------------|
| <b>Burnout</b>              | 384 | -.443    | .298     | 58.1589 | 5.78858        |
| Exhaustion                  | 384 | -.646    | .404     | 16.2082 | 2.59552        |
| Cynicism                    | 384 | -.630    | .100     | 16.6658 | 2.70491        |
| Inefficacy                  | 384 | .113     | -.697    | 19.1151 | 1.36596        |
| <b>Achievement goals</b>    | 384 | -.172    | -.470    | 27.2849 | 5.92034        |
| Performance approach        | 384 | -.346    | .110     | 6.3507  | 2.05228        |
| Mastery avoidance           | 384 | -.430    | -.675    | 8.2247  | 2.96202        |
| Mastery approach            | 384 | -.599    | .452     | 4.5342  | 1.65152        |
| Performance avoidance       | 384 | -.245    | -.459    | 8.1753  | 2.67404        |
| <b>Cognitive engagement</b> | 384 | .654     | 1.854    | 18.5068 | 5.59023        |
| Valid N (listwise)          | 384 |          |          |         |                |

Following Table 1, the highest mean score ( $M= 19.11$ ,  $SD= ۱.۳۶$ ) among the burnout dimensions was ascribed to academic inefficacy. The means of cynicism and exhaustion stood at 16.66 and 16.20, respectively. Also, the highest mean score among the achievement goal components belonged to mastery avoidance ( $M=8.22$ ,  $SD=2.96$ ). To examine the normality of the data, the skewness and kurtosis statistics were analyzed. According to Brown (2006), skewness and kurtosis values within the range of  $-3$  and  $+3$ , and  $-10$  to  $+10$  are indicative of the normal distribution of the data when using structural equation modeling. Based on the skewness and kurtosis ranges as shown in Table 1, it is inferred that the normality assumption was met.

### **Measurement Model Analysis**

The SEM approach was adopted to examine the hypothesized model. A conceptual model was first proposed based on theoretical underpinnings. The

model was then tested for the fit of the sample data. Finally, we used path analysis to explore the correlations between direct and indirect effects on the outcome variables.

In the present study, CFA was used to evaluate the measurement model. For this purpose, the factor loading of each indicator (item) on each structure was estimated and analyzed using its significance level. When the p-value is less than 0.05, it indicates that the factor loadings are significant and that the indicators significantly measure their respective constructs in the model. Also, for each component, the two indices i.e., AVE and CR were calculated to measure the validity and reliability of the components, respectively. The AVE index shows what percentage of the variance of the components is affected by their respective indicators. The AVE index is used to measure the validity of a component and is also referred to as convergent validity. Researchers have set a value of 0.5 or higher for the appropriateness of this index (Fornell & Larcker, 1981). Therefore, based on the AVE index, values higher than 0.5 indicate the appropriate validity of the components under study. To determine the reliability of the questionnaires and their components, the composite reliability is calculated. If the CR value is greater than 0.7, it shows strong evidence of internal reliability (Fornell & Larcker, 1981). In this study, in the test phase of the model, the composite reliability, AVE, and Cronbach's alpha were employed. The results of confirmatory factor analysis, structural validity, and reliability indices of the measurement models are depicted in Table 2.

**Table 2***Factor loadings, composite reliability, Cronbach's alpha, and AVE of the questionnaire*

| Constructs                  | Standardized<br>estimates(Path<br>coefficients) | Sig.       | Cronbach's<br>alpha | Composite<br>reliability | AVE   |
|-----------------------------|-------------------------------------------------|------------|---------------------|--------------------------|-------|
| <b>Burnout</b>              | -                                               | $p < 0.01$ | 0.733               | 0.763                    | 0.529 |
| Exhaustion                  | 0.78                                            | $p < 0.01$ |                     |                          |       |
| Cynicism                    | 0.86                                            | $p < 0.01$ |                     |                          |       |
| Academic inefficacy         | 0.49                                            | $p < 0.01$ |                     |                          |       |
| <b>Achievement goals</b>    | -                                               | -          | 0.738               | 0.823                    | 0.543 |
| Performance approach        | 0.53                                            | $p < 0.01$ |                     |                          |       |
| Mastry avoidance            | 0.79                                            | $p < 0.01$ |                     |                          |       |
| Mastry approach             | 0.75                                            | $p < 0.01$ |                     |                          |       |
| Performance avoidance       | 0.84                                            | $p < 0.01$ |                     |                          |       |
| <b>Cognitive engagement</b> | Factor                                          | -          | 0.880               | 0.936                    | 0.593 |
|                             | Loadings                                        |            |                     |                          |       |
| I28                         | 0.74                                            | $p < 0.01$ |                     |                          |       |
| I29                         | 0.75                                            | $p < 0.01$ |                     |                          |       |
| I30                         | 0.79                                            | $p < 0.01$ |                     |                          |       |
| I31                         | 0.80                                            | $p < 0.01$ |                     |                          |       |
| I32                         | 0.74                                            | $p < 0.01$ |                     |                          |       |
| I33                         | 0.77                                            | $p < 0.01$ |                     |                          |       |
| I34                         | 0.81                                            | $p < 0.01$ |                     |                          |       |
| I35                         | 0.84                                            | $p < 0.01$ |                     |                          |       |
| I36                         | 0.75                                            | $p < 0.01$ |                     |                          |       |
| I37                         | 0.70                                            | $p < 0.01$ |                     |                          |       |

Based on Table 2, the reliability indices calculated using Cronbach's alpha exceeded 0.7 indicating high internal consistency of the scales (Salkind, 2007). Also, the standardized estimates of the constructs as well as the standardized factor loadings of the items of the cognitive engagement instrument are all significant ( $p < 0.01$ ). The factor loadings of the items of the cognitive engagement instrument are greater than 0.7 showing that the components perfectly explain the dimensions (Tabachnick et al., 2007). The AVE and the composite reliability values turned out to be greater than 0.5 and 0.7, respectively. This indicates that the model constructs have convergent and divergent validities for measuring the research variables.

**Confirmatory Factor Analysis**

As the instruments were administered to a different context i.e., the Iranian EFL learners, the instruments underwent some minor changes. As a result, CFA was performed to investigate their factor structures. The goodness-of-fit indices assessed included CMIN/DF (chi-square fit statistics/degree of freedom), RMSEA (Root Mean Square Error of Approximation), CFI (Comparative Fit Index), TLI (Tucker-Lewis Index), IFI (Incremental Fit Index), and GFI (goodness-of-fit index). These indices were analyzed via AMOS 24 under the normal-theory maximum likelihood method. The RMSEA assesses whether a questionnaire well fits a sample size (Brown, 2006). The acceptable cut-off values for the fit indices including CFI, GFI, TLI, and IF are above 0.90 (Byrene, 2010).

**Table 3**  
*Fit indices of the questionnaires*

|                      | CMIN/<br>DF | GFI  | IFI  | TLI  | CFI  | RMSEA |
|----------------------|-------------|------|------|------|------|-------|
| Burnout              | 2.135       | .94  | .95  | .93  | .95  | .054  |
| Cognitive engagement | 1.449       | .96  | .97  | .95  | .97  | .050  |
| Achievement goals    | 1.557       | .95  | .96  | .95  | .96  | .051  |
| Acceptable fit       | < 3         | >.90 | >.90 | >.90 | >.90 | <.08  |

The values of the goodness-of-fit indices, as shown in Table 3, all exceeded the standard-fit suggesting that the instruments fitted the data well.

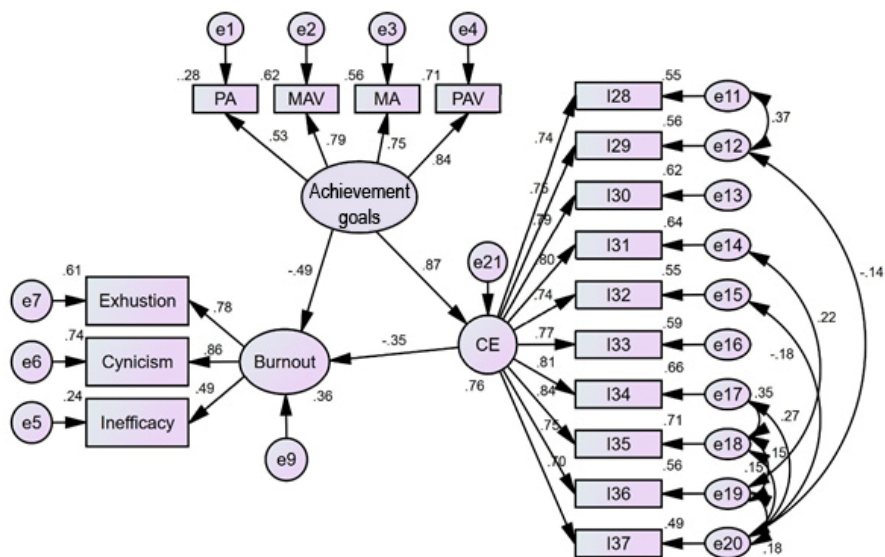
**Model Evaluation**

The fit indices of the model turned out to be moderately acceptable. Consequently, the model was modified through the modification indices proposed by the post hoc analysis procedures. Accordingly, we correlated a few residual errors between items of the cognitive engagement scale. The fitted structural model after applying the necessary modifications is presented in Figure 2. The value of the coefficient of determination ( $R^2$ ) of the burnout variable is equal to 0.36, which means that 36% of the variance changes of

burnout is predicted by achievement goal and cognitive engagement. To evaluate the fitness of the model, the same goodness-of-fit indices used in the confirmatory factor analysis phase were examined. Table 4 reports the model fit indices.

**Figure 2**

*SEM of achievement goals, cognitive engagement, and burnout in standardized estimates*



*Note.* CE= cognitive engagement, PA = performance approach, MA = mastery approach, MAV = mastery avoidance, and PAV = performance avoidance

**Table 4**

*Fit indexes of the model*

| Indexes           | GFI   | IFI   | TLI   | CFI   | RMSEA | CMIN/ DF |
|-------------------|-------|-------|-------|-------|-------|----------|
| Measurement model | 0.948 | 0.930 | 0.939 | 0.942 | 0.043 | 1.28     |
| Acceptable fit    | >.90  | >.90  | >.90  | >.90  | < .08 | < 3      |

RMSEA as the most important fit index turned out to be 0.43 which is

less than the acceptable cut-off point of .08 (Browne & Cudeck, 1993). The values greater than .08 suggest poor model fit (Hair et al., 2010). Also, the fit indices, including GFI, IFI, and CFI as shown in Table 5 turned out to be more than the acceptable fit value of .90. CMIN/DF was less than the cut-off point of 3 indicating an acceptable fit between the hypothetical model and the data (Kline, 2011). Based on the results of SEM, the goodness of fit indexes of the model was acceptable. That is, the model well fitted the data collected from the three questionnaires of the study.

Table 5 shows the standardized and unstandardized regression estimates of achievement goals, cognitive engagement, and burnout.

**Table 5**

*Path analysis of the model*

|                                             | Standard<br>coefficients | Unstandard<br>coefficients | C.R   | C.E  | Sig.  |
|---------------------------------------------|--------------------------|----------------------------|-------|------|-------|
| Achievement goals -<br>Cognitive engagement | 0.87                     | 2.521                      | 5.86  | 0.43 | 0.001 |
| Achievement goals -<br>Burnout              | -0.49                    | -1.365                     | -2.97 | 0.46 | 0.005 |
| Cognitive engagement -<br>Burnout           | -0.35                    | -0.914                     | -2.61 | 0.35 | 0.008 |

Following Table 5, the standard path coefficient between achievement goals and burnout turned out to be statistically significant ( $\beta = -0.49$ ,  $p = <0.005$ ). Path coefficients display the potential causal relationship between variables ranging from +1 to -1. The higher the value of the beta coefficient, the stronger the effect. The standardized Beta coefficient of -.49 suggests that the strength of the impact of achievement goals on burnout equaled -0.49 confirming the first research question. Likewise, the standard path coefficient between achievement goals and cognitive engagement was significant ( $\beta = 0.87$ ,  $p = <0.001$ ). Here again, the strength of the effect of achievement goals on cognitive engagement turned out to be 0.87. This finding also confirms the second hypothesis of the study.

The findings as depicted in Table 6 demonstrate the degree of the indirect and the total effects of achievement goals on burnout through cognitive engagement.

**Table 6**

*Direct and indirect effects of the variables of the structural model*

| Independent Variable | Mediator             | Dependent variable   | Direct effect | Indirect Effect | Total effect | VAF  |
|----------------------|----------------------|----------------------|---------------|-----------------|--------------|------|
| Achievement goals    | -                    | Cognitive engagement | 0.87**        | -               | 0.87**       | -    |
| Achievement goals    | Cognitive engagement | Burnout              | -0.49**       | -0.30**         | -0.79**      | 0.37 |

*\*\**: statistically significant as  $p < 0.01$

To establish mediation, the independent and dependent variables are to be significantly correlated without the presence of the mediator (Zhao et al., 2010). To examine this relationship, the initial direct effect of achievement goals on burnout in the absence of cognitive engagement was investigated and the standardized beta coefficient of this pathway turned out to be significant ( $\beta = -.62, p = .000 < .05$ ). As is evident in Table 6, the indirect and the total effects of achievement goals on burnout through cognitive engagement are - 0.30 and - 0.79, respectively. These values are significant at  $p = < 0.01$ . To determine the strength of the mediation, we calculated the value of Variance Accounted For (VAF) which shows the ratio of the Beta Coefficient of the indirect effect to the total effect. The value of the VAF index in the model turned out to be (0.37) which implies that 37% of the total effect of achievement goals on burnout is explained by the indirect effect. If the value of VAF exceeds 0.8, it represents full mediation; a value below 0.2 implies no mediation and a VAF value of between 0.2 and 0.8 represents partial mediation (Hair et al., 2014). As the value of the VAF index (0.37) lies between 0.2 to 0.8, thus, cognitive engagement serves as a partial mediator in the relationship between achievement goals and burnout, thereby fully supporting the third hypothesis. Under partial mediation, both direct and indirect effects are significant in the same direction (Baron & Kenny,

1986; Zhao et al, 2010). As mentioned above, the indirect effect of achievement goals on burnout is still significant after controlling for the mediator (cognitive engagement) providing evidence for the partial mediation model.

To confirm this finding, we also performed a more robust method i.e., bias-corrected bootstrap using Amos. This method is used to investigate whether the mediating effect of a variable is significant (Preacher & Hayes, 2008).

**Table 7**  
*Results of bias-corrected bootstrap for the indirect pathway*

| Variables                                          | Se   | Upper bound | Lower bound | Sig. |
|----------------------------------------------------|------|-------------|-------------|------|
| Achievement goals – cognitive engagement – burnout | .229 | -.211       | -.650       | .005 |

Since the upper and lower bounds show the same direction i.e., either negative or positive, the mediating effect is meaningful. As is evident in Table 7, the upper and lower bounds of the confidence interval were -.0229 and -.650, respectively suggesting that a mediation effect was established. Also, as zero did not lie within the confidence intervals, the mediating effect was significant (Hayes, 2009) at  $p < .005$  with a 95% confidence interval and the bootstrap samples of 5000.

**Discussion**

This research was undertaken with the goal of assessing a structural model of burnout, achievement goals, and cognitive engagement among Iranian EFL learners. Moreover, the mediating role of cognitive engagement in impacting achievement goals on burnout was investigated.

The first research question examined if achievement goals significantly affected burnout. The results indicated that achievement goals significantly and negatively impacted burnout. This implies that learners with higher levels of achievement goals are less likely to suffer from burnout. In explaining this finding, it can be argued that the fear and avoidance of taking action and consequently the passive nature of these language learners may result in low

levels of motivation and effort for undertaking language learning activities. Thus, they suffer a gradual decline in their performance which can lead to academic burnout over time. This finding is in accord with those of Poorgholamy et al. (2020), Naghsh and Khavak (2016), Moneta (2011), and Usan Supervia and Salavera Bordas (2020). The results, however, are in contrast with those of Koushifar et al. (2014) who did not find any relationship between achievement goals and burnout. The discrepancy of our result with that of theirs might be attributed to different contexts of study. While we performed our study on Iranian EFL learners, they conducted their research on high school students in Iran. Another line of explanation for the inconsistency of this result may pertain to the level of cognitive engagement and motivation among EFL learners in our study and the high school students who were involved in their study. In explaining the disparity of the result, it should be noted that our participants were willingly attending the English course in the language institutes as an extra-curriculum program, while the subjects in Koushifar, et al.'s (2014) study were high school students who were taking mainstream courses. However, the development of burnout should best be perceived by taking the impacts of crucial contextual as well as individual factors into consideration (Leiter & Maslach, 1988).

The second research question investigated whether achievement goals significantly impact cognitive engagement. The findings revealed that achievement goals significantly and positively affected cognitive engagement. That is, language learners with high levels of achievement goal orientations avail themselves of deeper cognitive strategies and more self-regulatory activities. This finding agrees with those of Meece et al. (1988) and Greene & Miller, 1996; Nolen, 1988). Also, Martin and Liem (2010), Ramshe et al.(2019), and Yu and Martin (2014) found similar results suggesting that learners' level of cognitive engagement is a function of their personal best goals. Meece et al. (1988) maintain that cognitive engagement and achievement goals are greatly impacted by both situational and individual factors, thereby displaying key signs of learners' motivation in learning. This finding can be justified on the grounds that language learners placing more emphasis on task-mastery goals

and performance-approach goals are more cognitively engaged in undertaking language activities. In other words, mastery and performance-approach goals make learners more cognitively engaged which can, in turn, lead to positive outcomes (Harackiewicz et al., 2002; Linnenbrink, 2005; Murayama & Elliot, 2009; Pintrich, 2000). Further, this finding is commensurate with the results of Sedaghat et al.'s (2011) study in which the learners' achievement goals significantly influenced their cognitive engagement and achievement. Also, our result in this regard lends support to the findings of Dweck and Elliot (1983) and Maehr and Nicholls (1980) that learners' cognitive engagement in learning activities was impacted by their achievement goal orientations i.e., mastery, performance, and learning. Along the same lines, Mehrdadian (2021) reached the same results and revealed that performance approach and mastery approach goals positively and significantly impact cognitive achievement.

The third research question examined the mediating role of cognitive engagement in the casual relationship between achievement goals and burnout. The finding demonstrated that cognitive engagement partially mediated the relationship in question. That is, cognitive engagement absorbed the partial effect of achievement goals on burnout, and that cognitive engagement, directly and indirectly, affected burnout. The findings revealed that the effect of achievement goals on burnout was significant in the absence of cognitive engagement. This relationship remained significant when the cognitive engagement was controlled. Based on Baron and Kenny (1986), if a significant relationship between the independent and dependent variables when the mediator is not controlled remains significant in the presence of the mediator, there is evidence for partial mediation. This indicates that the effect of achievement goals on burnout is partially transmitted with the help of cognitive engagement. Based on the findings, achievement goals negatively and significantly influenced burnout in the presence and absence of cognitive engagement. Also, cognitive engagement was found to significantly impact burnout. This is in line with the findings of Akbasli, et al.'s (2019) who reached identical results in the context of Turkish university students. This result also confirms that of Schaufeli et al (2002b) demonstrating that engagement and

burnout are two opposite ends of a continuum. This finding is also in agreement with that of Molinari and Grazia (2021) who revealed higher levels of cynicism are associated with lower levels of cognitive engagement. However, Zucoloto et al. (2016) found that cognitive engagement did not significantly affect burnout among university students at Sao Paulo University. The inconsistency of the results can be justified in terms of the context of the study (EFL setting vs. non-language learning context) whose subjects might show different levels of cognitive engagement. Another justification might be that cognitive engagement primarily involves learning the content. Thus, the knowledge gained in educational settings and the mental energy required does not directly impact the development of burnout (Zucoloto et al., 2016).

### **Conclusion and Implications**

The findings of this study reveal that cognitive engagement partially mediated the relationship between achievement goals and burnout. The results suggest that language learners who are more cognitively engaged are more resistant in the view of burnout levels. The findings accentuate the roles of achievement goals and cognitive engagement in preventing burnout among EFL learners in Iran. The results of this research bear a set of applied pedagogical implications. The first implication concerns material developers to design instructional interventions to promote cognitive engagement among language learners. This in fact can assist language teachers to diagnose language learners' engagement-related problems to employ well-timed and precautionary measures to combat burnout. The other implication regards EFL teachers who can encourage and assist their language learners to set effective learning and achievement goals. Considering the study results, language teachers are suggested to strongly promote their learners' competencies and performance and cognitively engage them in language learning tasks to assist them to mitigate and recover from pronounced experiences of burnout.

This study does have some limitations which can put forward recommendations for future studies. The first limitation concerns the data collection method which was based on convenience sampling. Future research

may utilize a random selection method which can increase the generalizability of the findings. Thus the results should be approached cautiously. The other limitation regards self-report scales the results of which might be biased. The subjects of the study were advanced language learners selected from miscellaneous private language institutes. Consequently, the results may be more beneficial to private language institutes. As a result, future researchers may replicate this study on language learners from different proficiency levels and other language learning settings, namely high schools or universities to ensure greater validity for the findings.

## References

- Akbaşlı, S., Arastman, G., Gün, F., & Turabik, T. (2019). School engagement as a predictor of burnout in university students. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 45 (45), 293-309. <https://doi.org/10.9779/PUJE.2018.234>
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261. <https://doi.org/10.1037/0022-0663.84.3.261>
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivational processes. *Journal of Educational Psychology*, 80 (3), 260-267. <https://doi.org/10.1037/0022-0663.80.3.260>
- Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the student engagement instrument. *Journal of School Psychology*, 44(5), 427-445. <https://doi.org/10.1016/j.jsp.2006.04.002>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bresó, E., Salanova, M., & Schaufeli, W. B. (2007). In search of the "third dimension" of burnout: Efficacy or inefficacy? *Applied Psychology*, 56(3), 460-478. <https://doi.org/10.1111/j.1464-0597.2007.00290.x>
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. Guilford publications.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Sage.
- Byrene, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming (multivariate applications series)*. Taylor & Francis Group.
- Cam, Z., Deniz, K. Z., & Kurnaz, A. (2014). School burnout: Testing a structural equation model based on perceived social support, perfectionism, and stress variables. *Eğitim ve Bilim*, 39, 310-325.
- Duru, E., Duru, S., & Balkis, M. (2014). Analysis of relationships among burnout, academic achievement, and self-regulation. *Educational Sciences: Theory and Practice* 14 (4): 1274-1284. <https://doi.org/10.12738/estp.2014.4.2050>

- Dweck, C., & Elliot, A. (1983). Achievement motivation. In E. M. Hetherington (Ed.), *Socialization, personality, and social development*. Wiley.
- Elliot, A. J., & Murayama, K. (2008). On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology, 100*(3), 613. <https://doi.org/10.1037/0022-0663.100.3.613>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- Fraenkel, J. R., & Wallen, N. E. (2006). *How to design and evaluate research in education with PowerWeb* (6<sup>th</sup> ed.). McGraw-Hill.
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109. <https://doi.org/10.3102/00346543074001059>
- Glanville J.I, Wildhagen T. (2007). The measurement of school engagement: Assessing dimensionality and measurement invariance across race and ethnicity. *Educational & Psychological Measurement, 67*(6), 1019-1041. <https://doi.org/10.1177/0013164406299126>
- Greene, B. A. (2015). Measuring cognitive engagement with self-report scales: Reflections from over 20 years of research. *Educational Psychologist, 50*(1), 1-17. <https://doi.org/10.1080/00461520.2014.989230>
- Greene, B. A., & Miller, R. B. (1996). Influences on achievement: Goals, perceived ability, and cognitive engagement. *Contemporary Educational Psychology, 21*(2), 181-192. <https://doi.org/10.1006/ceps.1996.0015>
- Greene, B. A., Miller, R. B., Crowson, H. M., Duke, B. L., & Akey, K. L. (2004). Predicting high school students' cognitive engagement and achievement: Contributions of classroom perceptions and motivation. *Contemporary Educational Psychology, 29*(4), 462-482.
- Gunuc, S., & Kuzu, A. (2015). Student engagement scale: Development, reliability, and validity. *Assessment & Evaluation in Higher Education, 40*(4), 587-610. <https://doi.org/10.1080/02602938.2014.938019>
- Hair, J., Anderson, R., Tatham, R. and Black, W. (1998) *Multivariate data analysis*. Prentice-Hall.
- Hair, J. F., Black, W. B., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* . Pearson Education, Inc.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2014). *A primer on partial least*

- squares structural equation modeling (PLS-SEM)*. SAGE Publications, Incorporated.
- Harackiewicz, J. M., Barron, K. E., Pintrich, P. R., Elliot, A. J., & Thrash, T. M. (2002). Revision of achievement goal theory: Necessary and illuminating. *Journal of Educational Psychology*, 94 (3), 638-645 <https://doi.org/10.1037/0022-0663.94.3.638>
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408-420. <https://doi.org/10.1080/03637750903310360>
- Helme, S., & Clarke, D. (2001). Identifying cognitive engagement in the mathematics classroom. *Mathematics Education Research Journal*, 13(2), 133-153. <https://doi.org/10.1007/BF03217103>
- Jimerson, S. R., Campos, E., & Greif, J. L. (2003). Toward an understanding of definitions and measures of school engagement and related terms. *The California School Psychologist*, 8(1), 7-27. <https://doi.org/10.1007/BF03217103>
- Kaplan, A., & Maehr, M. L. (2007). The contributions and prospects of goal orientation theory. *Educational Psychology Review*, 19(2), 141-184. <https://doi.org/10.1007/s10648-006-9012-5>
- King, R. B., McInerney, D. M., & Watkins, D. A., (2012). Studying for the sake of others: The role of social goals on academic engagement. *Educational Psychology*, 32(6), 749-776. <https://doi.org/10.1080/01443410.2012.730479>
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd eds.). The Guilford Press
- Koushifar, A. A., Hassani Zangbar, N., & Sattari, Y. (2014). The relationship between learning styles and goal orientation with academic burnout of Bostanabad high school students in 2012-2013. *Journal of Instruction and Evaluation*, 7(27), 55-66.
- Krejcie, R.V. and Morgan, D.W. (1970) Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>
- Leiter, M. P., & Maslach, C. (1988). The impact of interpersonal environment on burnout and organizational commitment. *Journal of Organizational Behavior*, 9 (4), 297-308. <https://doi.org/10.1002/job.4030090402>
- Linnenbrink, E. A. (2005). The dilemma of performance-approach Goals: The use of multiple goal contexts to promote students' motivation and learning. *Journal of Educational Psychology*, 97(2), 197.

<https://doi.org/10.1037/0022-0663.97.2.197>

- MacIntyre, P. D., Gregersen, T., & Mercer, S. (Eds.) (2016). Positive psychology in SLA. Multilingual Matters.
- Madigan, D. J., & Curran, T. (2021). Does burnout affect academic achievement? A meta-analysis of over 100,000 students. *Educational Psychology Review*, 33(2), 387-405. <https://doi.org/10.1007/s10648-020-09533-1>
- Maehr, M. L., & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation at school* (pp. 77-104). Routledge.
- Mahatmya, D., Lohman, B. J., Matjasko, J. L., & Farb, A. F. (2012). Engagement across developmental periods. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 45-63). Springer.
- Martin, A. J., & Marsh, H. W. (2008). Academic buoyancy: Towards an understanding of students' everyday academic resilience. *Journal of School Psychology*, 46(1), 53-83. <https://doi.org/10.1016/j.jsp.2007.01.002>
- Martin, A.J. (2008) Enhancing student motivation and engagement: The effects of a multidimensional intervention, *Contemporary Educational Psychology*, 33 (4), 239-269. <https://doi.org/10.1016/j.cedpsych.2006.11.003>
- Martin, A. J., & Liem, G. A. D. (2010). Academic personal bests (PBs), engagement, and achievement: A cross-lagged panel analysis. *Learning and Individual Differences*, 20(3), 265-270. <https://doi.org/10.1016/j.lindif.2010.01.001>
- Maslach, C. (1982). *Burnout: The cost of caring*. Prentice-Hall.
- Maslach, C. (1993). Burnout: A multidimensional perspective. In W. B. Schaufeli, C. Maslach, & T. Marek (Eds.), *Professional burnout: Recent developments in theory and research* (pp. 19-32). Taylor and Francis.
- Maslach, C. (2015). Psychology of burnout. *International Encyclopedia of the Social and Behavioral Sciences*, 2(2), 929-932.
- Maslach, C., Jackson, S. E., Leiter, M. P., Schaufeli, W. B., & Schwab, R. L. (1986). *Maslach burnout inventory* (Vol. 21, pp. 3463-3464). Consulting psychologists press.
- Maslach, C., & Leiter, M. P. (2008). Early predictors of job burnout and engagement. *Journal of Applied Psychology*, 93(3), 498-512. <https://doi.org/10.1037/0021-9010.93.3.498>
- Meece, J. L., Blumenfeld, P. C., & Hoyle, R. H. (1988). Students' goal orientations and cognitive engagement in classroom activities. *Journal of Educational Psychology*, 80(4), 514-523. <https://doi.org/10.1037/0022-0663.80.4.514>
- Meece, J. L., Glienke, B. B., & Burg, S. (2006). Gender and motivation. *Journal*

- of *School Psychology*, 44, 351-373. <https://doi.org/10.1016/j.jsp.2006.04.004>
- Maehr, M. L., & Nicholls, J. G. (1980). Culture and achievement motivation: A second look. *Studies in Cross-Cultural Psychology*, 2, 221-267. <https://doi.org/10.1037/h0037521>
- Mehrdadian, P., Rabiei, M., & Khosrorad, R. (2021). Fitting a model to students' cognitive engagement: A step towards accountable education in medical education. *Propósitos y Representaciones*, 9(SPE2), 1052.
- Metallidou, P & Viachou, A. (2007). Motivational beliefs, cognitive engagement, and achievement in language and mathematics in elementary school children. *International Journal of Psychology*, 42(1), 2-15. <https://doi.org/10.1080/00207590500411179>
- Mirhassani, A., Akbari, R., & Dehghan, M. (2007). The relationship between Iranian EFL learners' goal-oriented and self-regulated learning and their language proficiency. *Teaching English Language*, 1(2), 117-137.
- Moghim, M. (2020). Exploring the preferred achievement goal orientation of Iranian EFL learners and its relationship with learning strategies and academic achievement. *Journal of Foreign Language Teaching and Translation Studies*, 5(1), 67-84. <https://doi.org/10.22034/EFL.2020.225324.1028>
- Molinari, L., & Grazia, V. (2021). Students' school climate perceptions: Do engagement and burnout matter? *Learning Environments Research*, 26(1), 1-18. <https://doi.org/10.1007/s10984-021-09384-9>
- Moneta, G. B. (2011). Need for achievement, burnout, and intention to leave: Testing an occupational model in educational settings. *Personality and Individual Differences*, 50(2), 274-278. <https://doi.org/10.1016/j.paid.2010.10.002>
- Mostert, K., Pienaar, J., Gauche, C., & Jackson, L. T. B. (2007). Burnout and engagement in university students: A psychometric analysis of the MBI-SS and UWES-S. *South African Journal of Higher Education*, 21(1), 147-162.
- Murayama, K., & Elliot, A. J. (2009). The joint influence of personal achievement goals and classroom goal structures on achievement-relevant outcomes. *Journal of Educational Psychology*, 101(2), 432. <https://doi.org/10.1037/a0014221>
- Naghsh, Z., Khavak, Z. (2016). The study student's academic burnout according to predictors core self-evaluation and achievement goal orientation. *Journal of Applied Psychological Research*, 6(4), 145-158. <https://doi.org/10.22059/JAPR.2017.63705>
- Nolen, S. B. (1988). Reasons for studying: Motivational orientations and study strategies. *Cognition and Instruction*, 5(4), 269-287.

[https://doi.org/10.1207/s1532690xc0504\\_2](https://doi.org/10.1207/s1532690xc0504_2)

- Oyoo, S., Mwaura, P., Kinai, T., & Mutua, J. (2020). Academic burnout and academic achievement among secondary school students in Kenya. *Education Research International*.
- Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics*, 36, 50 –72. <https://doi.org/10.1017/S0267190515000094>
- Pianta, R. C., Hamre, B. K., & Allen, J. P. (2012). Teacher-student relationships and engagement: Conceptualizing, measuring, and improving the capacity of classroom interactions. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 365-386). Springer.
- Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekarts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation: Theory, research, and applications* (pp. 451–502). Academic Press.
- Poorgholamy, F., Kazemi, S., Barzegar, M., & Sohrabi, N. (2020). Predicting academic burnout based on achievement goals and self-regulated learning. *Iranian Evolutionary and Educational Psychology Journal*, 2(1), 13-23. <https://doi.org/10.29252/ieepj.2.1.13>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, 40(3), 879-891. <https://doi.org/10.3758/BRM.40.3.879>
- Ramshe, M. H., Ghazanfari, M., & Ghonsooly, B. (2019 ). The role of personal best goals EFL learners' behavioral, cognitive, and emotional engagement. *International Journal of Instruction*, 12(1), 1627-1638.
- Reeve, J. (2012). A self-determination theory perspective on student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 149-172). Springer.
- Rostami, Z., Abedi, M. R., Schaufeli, W., Ahmadi, A., & Sadeghi, A. H. (2013). The psychometric characteristics of the Maslach Burnout Inventory–Student Survey–among students of Isfahan University. *Zahedan Journal of Research in Medical Sciences*, 15, 29-33.
- Ruishi, W., Sidhu, G. K., & Muthukrishnan, P. (2021). The relationship between achievement goal orientations and language performance of secondary school EFL learners in China. *International Journal of Academic Research in Business and Social Sciences*, 11(7), 139-149.
- Salkind, N. J. (2007). *Encyclopedia of measurement and statistics*. Sage Publications.

- Salmela-Aro, K., Kiuru, N., Leskinen, E., & Nurmi, J. (2009). School Burnout Inventory (SBI) reliability and validity. *European Journal of Psychological Assessment*, 25(1), 48-57. <https://doi.org/10.1027/1015-5759.25.1.48>
- Schaufeli, W. B., Martinez, I. A., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002a). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies*, 3, 71-92.
- Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002b). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology*, 33, 464-481. <https://doi.org/10.1177/0022022102033005003>
- Schaufeli, W. B., & Taris, T. W. (2005). The Conceptualization and measurement of burnout: Common ground and worlds apart. *Work & Stress* 19 (3): 256-262 <https://doi.org/10.1080/02678370500385913>
- Sedaghat, M., Abedin, A., Hejazi, E., & Hassanabadi, H. (2011). Motivation, cognitive engagement, and academic achievement. *Procedia-Social and Behavioral Sciences*, 15, 2406-2410. <https://doi.org/10.1016/j.sbspro.2011.04.117>
- Sideridis, G. D. (2005). Goal orientation, academic achievement, and depression: Evidence in favor of a revised goal theory framework. *Journal of Educational Psychology*, 97(3), 366. <https://doi.org/10.1037/0022-0663.97.3.366>
- Sutherland, S. D. (2010). *Student and teacher perceptions of student engagement* (Unpublished doctorate dissertation), Toronto University.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5, pp. 481-498). Pearson.
- Usan Supervia, P., & Salavera Bordas, C. (2020). Burnout, goal orientation and academic performance in adolescent students. *International Journal of Environmental Research and Public Health*, 17(18), 6507. <https://doi.org/10.3390/ijerph17186507>
- Virtanen, T. E., N. Kiuru, M.-K. Lerkkanen, A.-M. Poikkeus, and M. Kuorelahti. (2016). Assessment of student engagement among junior high school students and associations with self-esteem, burnout, and academic achievement. *Journal for Educational Research Online*, 8 (2), 136-157. <https://doi.org/10.25656/01:12430>
- Virtanen, T. E., Lerkkanen, M. K., Poikkeus, A. M., & Kuorelahti, M. (2018). Student engagement and school burnout in Finnish lower-secondary schools: Latent profile analysis. *Scandinavian Journal of Educational Research*, 62(4), 519-537. <https://doi.org/10.1080/00313831.2016.1258669>

- Walker, C., O. Greene, B.A. & Mansell, R.A. (2006). Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement. *Learning & Individual Differences*, 16 (1), 1-12.  
<https://doi.org/10.1016/j.lindif.2005.06.004>
- Wang, J., & Bai, B. (2022). Whose goal emphases play a more important role in ESL/EFL learners' motivation, self-regulated learning, and achievement?: Teachers or parents. *Research Papers in Education*, 38(40) 520-542.  
<https://doi.org/10.1080/02671522.2022.2030395>
- Yu, K., & Martin, A. J. (2014). Personal best (PB) and 'classic achievement goals in the Chinese context: Their role in predicting academic motivation, engagement, and buoyancy. *Educational Psychology*, 34(5), 635-658.  
<https://doi.org/10.1080/01443410.2014.895297>
- Zarei, A. A., & Usefli, Z. (2015). The effect of assessment type on EFL learners' goal orientation. *Journal of Language, Linguistics and Literature*, 1(4), 112-119.
- Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206. <https://doi.org/10.1086/651257>
- Zucoloto, M. L., de Oliveira, V., Maroco, J., & Campos, J. A. D. B. (2016). School engagement and burnout in a sample of Brazilian students. *Currents in Pharmacy Teaching and Learning*, 8(5), 659-666. <https://doi.org/10.1016/j.cptl.2016.06.012>

