

## Prediction of Iranian EFL Teachers' Work Engagement Through their Cognitive Flexibility

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### Abstract

This study addressed a gap by assessing levels of cognitive flexibility and work engagement among Iranian EFL teachers, examining their correlation, and determining whether cognitive flexibility predicts work engagement. Using a quantitative correlational design, the study involved 87 Iranian EFL teachers from institutions in Shahreza, Iran. Participants were selected through convenience sampling and had at least one year of teaching experience. Data were collected using the Cognitive Flexibility Inventory (CFI) and the Utrecht Work Engagement Scale (UWES), administered via hardcopy and online surveys. Descriptive statistics, correlation analysis, and regression modeling were employed to analyze the data, ensuring adherence to statistical assumptions. Results indicated that participants exhibited high levels of cognitive flexibility and work engagement, with both constructs significantly exceeding scale midpoints. A positive correlation was found between cognitive flexibility and work engagement, and regression analysis confirmed that cognitive flexibility was a significant predictor of work engagement, explaining a meaningful portion of its variance. These findings contribute to the JD-R model by highlighting cognitive flexibility as a key personal resource for sustaining teacher engagement in high-demand educational contexts. Practical implications suggest that professional development programs should incorporate cognitive flexibility training, and institutional reforms should address systemic challenges to enhance teacher well-being and retention in Iran's EFL sector.

**Keywords:** cognitive flexibility, work engagement, EFL teachers, Job Demands-Resources model

### 1. Introduction

English as a Foreign Language (EFL) teachers in Iran navigate a complex landscape characterized by significant systemic and contextual

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challenges. These include persistent resource limitations (e.g., lack of modern teaching materials and technological tools), inconsistencies in educational policies, overcrowded classrooms, and the multifaceted demands of teaching in multilingual and multicultural environments (Rahimi & Asadollahi, 2012). These challenges necessitate high levels of professional adaptability and resilience from educators to maintain effectiveness and well-being within demanding institutional constraints.

Cognitive flexibility, defined as "an individual's capacity to adapt their thinking, behavior, and strategies in response to changing circumstances" (Dennis & Vander Wal, 2010, p. 241), serves as a critical psychological resource for EFL teachers. It enables educators to shift cognitive strategies, generate alternative teaching approaches, and respond effectively to unpredictable classroom dynamics (Martin & Rubin, 1995). In the demanding Iranian EFL context, teachers with higher cognitive flexibility are better equipped to develop innovative solutions to pedagogical problems, tailor instruction to diverse learner needs, and manage the inherent uncertainties of language teaching (Johnco et al., 2014).

Work engagement represents a positive, fulfilling, work-related psychological state characterized by three core dimensions: vigor (high energy and mental resilience), dedication (strong involvement and sense of significance), and absorption (full concentration and immersion in work) (Schaufeli et al., 2006). Engaged EFL teachers demonstrate heightened enthusiasm, persistence in overcoming obstacles, and a deep commitment to fostering student learning (Bakker & Demerouti, 2017). This engagement is not only crucial for teacher well-being but is also a fundamental driver in creating dynamic, supportive, and effective learning environments, ultimately enhancing student outcomes and institutional quality (Perera et al., 2018).

The relationship between cognitive flexibility and work engagement is theoretically grounded in the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017). This model posits that personal resources, such as cognitive flexibility, interact with job demands and job resources to influence employee well-being and motivation. Specifically, cognitive flexibility acts as a vital personal resource that can buffer the negative impact of high job demands (e.g., workload, student diversity, policy changes) and actively promote work engagement. By facilitating effective coping strategies and enhancing teachers' sense of competence in managing classroom challenges, cognitive flexibility is hypothesized to sustain and enhance vigor, dedication, and absorption in their professional

roles, particularly within the high-demand context of Iranian EFL education.

Despite the established theoretical connections between cognitive flexibility and work engagement within frameworks such as the JD-R model (Bakker & Demerouti, 2017), a significant empirical gap persists in understanding their relationship, particularly within EFL instructional settings. While cognitive flexibility has been studied extensively for its role in problem-solving and adaptability (Dennis & Vander Wal, 2010; Johnco et al., 2014), and work engagement has been explored as a determinant of teacher effectiveness (Schaufeli et al., 2006), research examining how these constructs interact—or whether cognitive flexibility predicts work engagement—remains scarce. Most studies treat these variables in isolation, neglecting their potential synergistic effects in high-demand educational contexts. Although preliminary work by Fathi et al. (2020) suggests adaptability influences engagement, no rigorous empirical investigation has tested the predictive capacity of cognitive flexibility on work engagement specifically among EFL teachers. This gap limits theoretical advancement and practical interventions aimed at sustaining educator effectiveness.

The dearth of research is particularly acute concerning Iranian EFL teachers, whose professional experiences are shaped by distinct contextual adversities. Prior studies have documented systemic challenges including chronic resource limitations (e.g., inadequate teaching materials, technological deficits), institutional constraints (e.g., bureaucratic inefficiencies, large class sizes), and inconsistent educational policies that exacerbate occupational stress (Rahimi & Asadollahi, 2012). These conditions uniquely mediate teachers' psychological resources and engagement levels, yet existing literature fails to account for how cognitive flexibility operates within this high-stress ecosystem. While generic models propose personal resources buffer job demands (Bakker & Demerouti, 2017), the applicability of such frameworks to Iranian EFL contexts remains untested. Consequently, there is an urgent need to investigate whether cognitive flexibility can function as a sustainable resource for maintaining work engagement amid Iran's specific institutional pressures, where teacher burnout rates are notably elevated. This context-specific neglect hinders the development of culturally responsive strategies to enhance teacher well-being and retention.

This study aims to investigate the relationship between cognitive flexibility and work engagement among Iranian EFL teachers by pursuing three key objectives. First, it seeks to assess the current levels of cognitive flexibility and work engagement demonstrated by Iranian EFL teachers.

Using standardized measurement tools, this assessment will establish baseline data about teachers' adaptive thinking capacities within Iran's challenging educational environment (Rahimi & Asadollahi, 2012). Such data is crucial given the lack of existing empirical benchmarks for this specific population.

Second, the study examines the potential correlation between cognitive flexibility and work engagement dimensions (vigor, dedication, and absorption). This analysis will test the theoretical proposition from the Job Demands-Resources model (Bakker & Demerouti, 2017) that personal resources like cognitive flexibility may buffer against job demands and sustain engagement. Understanding this relationship is particularly important for EFL contexts where teachers face unique occupational stressors.

Third, the research determines whether cognitive flexibility can significantly predict work engagement levels through regression analysis. Establishing this predictive relationship would have important practical implications, suggesting that cognitive flexibility training could help maintain teacher engagement and reduce attrition rates in demanding EFL environments. This objective builds on recent findings by Derakhshan et al. (2022) about modifiable psychological factors in teacher well-being.

## **2. Literature Review**

### **2.1. *Job Demands-Resources (JD-R) Model***

Bakker and Demerouti's (2017) JD-R model synthesizes prior work-stress theories into a unified framework that distinguishes between two core processes: the health-impairment and motivational processes. When job demands are high and resources are low, employees experience strain, exhaustion, and ultimately burnout. For EFL teachers, excessive administrative tasks, large class sizes, and insufficient materials can deplete energy and diminish well-being. Conversely, job resources such as supportive colleagues, autonomy, and adequate materials, together with personal resources like cognitive flexibility, initiate a motivational state that leads to higher work engagement, enhanced performance, and positive organizational outcomes. Cognitive flexibility operates both directly and interactively: it mitigates the impact of job demands on strain and amplifies the positive effects of job resources on engagement. By enabling teachers to adapt swiftly to changing circumstances, reframe challenges constructively, and persist in the face of obstacles, cognitive flexibility emerges as a key predictor of work engagement, guiding the present investigation into its role in forecasting Iranian EFL teachers' engagement levels amid a resource-constrained educational landscape.

## **2.2. Cognitive Flexibility Theory**

Cognitive flexibility is a multifaceted psychological construct that has garnered increasing attention in recent decades due to its foundational role in adaptive behavior, especially in complex and dynamic environments such as classrooms. It refers to an individual's mental ability to shift perspectives, adapt cognitive strategies, and modify behavioral responses when faced with novel, ambiguous, or changing circumstances (Martin & Rubin, 1995). Within the realm of education, and particularly in the context of second or foreign language instruction, cognitive flexibility serves as a critical personal resource that supports decision-making, emotional regulation, and the ability to manage pedagogical challenges.

The seminal work of Martin and Rubin (1995) conceptualized cognitive flexibility as encompassing three interrelated dimensions: (a) the awareness that multiple options and alternatives are available in any given situation, (b) the willingness to adapt and be flexible, and (c) the self-efficacy belief in one's own capacity to adapt successfully. According to this model, individuals who possess high cognitive flexibility are more likely to consider diverse viewpoints, navigate interpersonal conflicts with sensitivity, and cope effectively with uncertainty—qualities that are particularly essential for educators working in linguistically and culturally diverse settings.

In further development of the construct, Dennis and Vander Wal (2010) operationalized cognitive flexibility through the Cognitive Flexibility Inventory (CFI), which includes two core dimensions: "alternatives," referring to the ability to generate multiple explanations and solutions, and "control," which denotes the belief in one's capacity to manage difficult situations effectively. This refined framework underscores the interaction between cognitive skills and metacognitive beliefs, presenting cognitive flexibility not merely as a reactive coping mechanism but as an active, goal-oriented cognitive style that influences how individuals interpret and respond to their environment.

Applied to the teaching profession, and more specifically to Iranian EFL educators, cognitive flexibility becomes a vital predictor of resilience, classroom management, and professional adaptability. The dynamic nature of the EFL classroom, characterized by unpredictable student behaviors, evolving curriculum standards, and often limited institutional support, demands that teachers continuously recalibrate their instructional practices and emotional responses. Teachers with higher cognitive flexibility are better equipped to reframe classroom challenges

constructively, adopt differentiated instructional techniques, and sustain motivation even under taxing circumstances.

Moreover, cognitive flexibility contributes significantly to work engagement by facilitating positive appraisal processes and promoting the use of adaptive coping strategies. Teachers with flexible cognition are more likely to interpret stress-inducing events as manageable, thus preserving their vigor, dedication, and absorption—the three core components of engagement (Schaufeli et al., 2006). In this way, cognitive flexibility is not only instrumental in moment-to-moment pedagogical decision-making but also serves as a protective factor that fosters psychological well-being and professional commitment over time.

In the present study, cognitive flexibility is examined as a central psychological resource that can predict Iranian EFL teachers' levels of work engagement. Drawing on both the theoretical contributions of Martin and Rubin (1995) and the psychometric insights offered by Dennis and Vander Wal (2010), the study positions cognitive flexibility as a key variable in understanding how teachers navigate their complex roles and maintain their investment in the profession.

### **2.3. Work Engagement Construct**

Work engagement is conceptualized as a positive, fulfilling, work-related state of mind characterized by vigor, dedication, and absorption (Schaufeli et al., 2006). Vigor reflects high levels of energy and mental resilience at work, a willingness to invest effort, and persistence even when difficulties arise. Dedication denotes a sense of significance, enthusiasm, inspiration, pride, and challenge—teachers who are dedicated experience their work as meaningful and worthwhile. Absorption refers to being fully concentrated and happily engrossed in one's work, whereby time passes quickly and detachment from work becomes difficult.

Empirical research has established work engagement as distinct from related constructs such as job satisfaction and organizational commitment, emphasizing its active, motivational quality (Schaufeli et al., 2006). Measurement typically employs the Utrecht Work Engagement Scale (UWES), which demonstrates robust psychometric properties across occupational and cultural contexts. High engagement has been linked to enhanced performance, lower turnover intentions, and greater well-being, suggesting that fostering engagement is critical for both individual and organizational outcomes. In the context of Iranian EFL teaching, work engagement captures the degree to which teachers invest their cognitive, emotional, and physical resources in the instructional process, shaping not

only their own professional experience but also students' learning environments.

#### **2.4. Gap and Justification**

The theoretical framework established by the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2017) and the empirical evidence linking cognitive flexibility to work engagement across diverse professions underscore the potential significance of this relationship for teacher sustainability and effectiveness. However, a critical and multifaceted research gap persists, particularly concerning the predictive role of cognitive flexibility in sustaining work engagement among English as a Foreign Language (EFL) teachers operating within the uniquely demanding context of Iran. This gap necessitates the present study and justifies its specific focus and methodology.

While the positive association between cognitive flexibility and work engagement is increasingly documented in general occupational and some general educational settings (Han & Park, 2022; Verschueren et al., 2020; Wang & Zhang, 2024), this body of evidence possesses significant limitations when applied to Iranian EFL teachers. The primary limitation stems from the profound influence of context. Iranian EFL educators navigate a complex ecosystem characterized by chronic and intersecting systemic adversities fundamentally distinct from many Western or even other non-Western educational environments where most existing research is conducted. These adversities, including persistent resource scarcity, inconsistent educational policies, severe overcrowding, and bureaucratic inefficiencies, are well-documented as pervasive and intense job demands (Rahimi & Asadollahi, 2012; Derakhshan et al., 2022; Moradi & Abbasian, 2023). As Moradi and Abbasian (2023) argue, the chronicity and intensity of these demands in Iran create a unique "high-stress ecosystem" that likely mediates how personal resources like cognitive flexibility function, potentially altering the threshold at which they effectively buffer demands and foster engagement compared to less constrained contexts.

The current empirical landscape specific to Iranian EFL teachers reveals a stark void. Despite preliminary indications from Fathi et al. (2020) suggesting adaptability (a facet of flexibility) influences engagement, no rigorous study has specifically investigated the core construct of cognitive flexibility—defined by adaptability and strategy shifting (Martin & Rubin, 1995; Dennis & Vander Wal, 2010)—as a predictor of work engagement, operationalized through its validated dimensions of vigor, dedication, and absorption (Schaufeli et al., 2002,

2006), within this population. The applicability of the JD-R model's proposition that personal resources buffer demands and promote engagement (Bakker & Demerouti, 2017) within Iran's specific institutional pressures, where pedagogical autonomy is often limited and systemic support is frequently lacking, remains empirically untested. Derakhshan et al. (2022) and Safari and Gorjian (2024) highlight how institutional constraints in Iran may uniquely shape teachers' psychological experiences and resource utilization, suggesting findings from other contexts may not generalize. Consequently, there is an urgent need for research that moves beyond generic models and embeds the investigation firmly within Iran's specific socio-institutional reality to understand how cognitive flexibility operates as a sustainable resource under these distinct pressures.

Furthermore, existing research, even outside Iran, suffers from significant methodological limitations concerning the flexibility-engagement link. Most studies report simple correlations, providing no insight into the direction or predictive power of the relationship (Khajavy et al., 2024). The field lacks studies employing robust predictive designs, such as regression analyses controlling for relevant covariates (e.g., job demands, years of experience) or longitudinal approaches, which are essential for establishing cognitive flexibility as a potential antecedent of engagement and informing causal models for intervention. Additionally, research rarely delves into the nuanced relationships between cognitive flexibility and the specific dimensions of work engagement. Does cognitive flexibility primarily fuel the energy and persistence of vigor? Does it enhance the sense of significance captured by dedication? Or does it facilitate the deep immersion of absorption? Understanding these dimension-specific pathways is crucial for developing targeted interventions but remains unexplored, especially for Iranian teachers facing burnout risks linked to depleted vigor and dedication (Sadeghi & Sa'adatpourvahid, 2023; Safari & Gorjian, 2024).

The absence of contextually grounded, predictive research has tangible negative consequences. Without empirical evidence demonstrating how and to what extent cognitive flexibility predicts engagement within Iran's specific constraints, educational administrators, teacher trainers, and policymakers lack a solid foundation for designing effective support strategies. Generic well-being programs or adaptability training developed for different contexts may prove ineffective or irrelevant. This knowledge gap hinders the development of culturally responsive and contextually appropriate interventions aimed at enhancing teacher resilience, reducing notably elevated burnout rates (Safari & Gorjian,



2024), improving retention, and ultimately fostering more effective learning environments for Iranian students. As Wang and Zhang (2024) demonstrated in a different context, understanding specific predictors like flexibility is key to navigating systemic challenges. Therefore, a study that rigorously tests the predictive capacity of cognitive flexibility on work engagement among Iranian EFL teachers, using validated measures and advanced analyses while accounting for the unique systemic demands, is not merely an academic exercise but a practical necessity. It addresses a critical gap by addressing the following questions:

1. To what extent do Iranian EFL teachers demonstrate cognitive flexibility?
2. To what extent do Iranian EFL teachers demonstrate work engagement.?
3. Can Iranian EFL teachers' cognitive flexibility significantly predict their work engagement?

### **3. Methodology**

#### **3.1. Research Design**

This study employed a quantitative research approach to examine the predictive relationship between cognitive flexibility and work engagement among Iranian EFL teachers. The research design aligns with the objectives of measuring variable levels, assessing associations, and testing the predictive capacity within a specific population operating under systemic constraints (Creswell & Creswell, 2018). A quantitative methodology was selected for its ability to objectively measure constructs through standardized instruments, analyze relationships statistically, generalize findings to a broader population, and provide empirical evidence to address the identified research gap (Creswell & Creswell, 2018; Fetter, 2019).

#### **3.2. Participants**

The target population for this study consisted of Iranian EFL teachers working in secondary and tertiary educational settings across Shahreza, Iran. This population operates within a distinctive sociolinguistic and institutional milieu characterized by fluctuating policy directives, resource constraints, and large class sizes (Derakhshan et al., 2022). Iranian EFL teachers play a pivotal role in mediating language instruction under these systemic pressures, making them an appropriate cohort for examining how personal resources such as cognitive flexibility relate to professional engagement.

Participants were recruited through convenience sampling, a non-probability technique commonly employed in educational research when access to a complete sampling frame is limited (Creswell & Creswell, 2018). A total of 110 questionnaires were distributed to EFL teachers across five institutions, of which 87 valid responses were returned, yielding a response rate of approximately 79% (Cohen, 1988). Although convenience sampling may limit the generalizability of findings, it enables the efficient collection of data from practitioners immersed in the authentic teaching contexts under investigation (Leary, 2019).

To ensure that respondents possessed sufficient classroom experience and exposure to the challenges inherent in Iranian EFL settings, only actively teaching professionals with a minimum of one year of full-time EFL teaching experience were included (Johnson & Christensen, 2020). This threshold aligns with methodological recommendations stipulating that participants have adequate familiarity with instructional demands to provide valid self-reports on constructs such as work engagement and cognitive flexibility (Creswell & Creswell, 2018). Teachers on leave, those in purely administrative roles, and instructors with less than one year of teaching service were excluded to maintain sample consistency and data integrity.

### **3.3. Instruments**

#### **3.3.1. Cognitive Flexibility Inventory (CFI)**

Cognitive flexibility was assessed using the CFI (Martin & Rubin, 1995), a 12-item measure designed to capture two key dimensions: the generation of alternative explanations (alternatives) and the belief in one's capacity to manage challenging situations (control). Respondents indicate their agreement with each statement on a six-point Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree). Example items include "I consider several options before making a decision" and "I can think of different ways to handle difficult situations." In its original validation, the CFI demonstrated good internal consistency ( $\alpha = .83$ ) and a clear two-factor structure confirmed via confirmatory factor analysis (Dennis & Vander Wal, 2010). Cross-cultural adaptations have replicated these psychometric properties in diverse samples, including Russian and Turkish student populations (Medvedev et al., 2016; Kocabas & Uzun, 2021).

#### **3.3.2. Utrecht Work Engagement Scale (UWES)**

Work engagement was measured using the nine-item version of the UWES (Schaufeli et al., 2002), which encompasses three subscales: vigor,

dedication, and absorption. Each subscale contains three items, for instance, “At my work, I feel bursting with energy” (vigor), “I am enthusiastic about my job” (dedication), and “I am immersed in my work” (absorption), rated on a seven-point frequency scale from 0 (never) to 6 (always). The UWES-9 has consistently shown high internal reliability, with Cronbach’s alpha coefficients exceeding .85 for both the total scale and individual subscales across occupational and cultural settings (Schaufeli et al., 2006; Nerstad et al., 2010). Its three-factor structure has been supported by confirmatory analyses (Alarcon et al., 2011), and convergent validity is evidenced by positive correlations with job and personal resources in longitudinal studies (Xanthopoulou et al., 2009).

### **3.4. Data Collection Procedure**

Data were gathered using a mixed-mode survey distribution, incorporating both hardcopy and online formats to maximize accessibility and response rates among Iranian EFL teachers. Paper-and-pencil questionnaires were administered in person at participating schools and language institutes, following procedures recommended for educational research contexts (Creswell & Creswell, 2018). Concurrently, an identical survey was created using Google Forms to accommodate teachers who preferred digital completion or who were geographically dispersed; mixed-mode approaches have been shown to enhance representativeness and reduce coverage error (Dillman et al., 2014). Both formats contained the Cognitive Flexibility Inventory and the Utrecht Work Engagement Scale, presented in the same item order and with equivalent response scales, ensuring comparability of data across modes (Deutskens et al., 2004). Distribution occurred over a three-month period in spring 2025, with reminder notices sent at one- and three-month intervals to optimize participation (Edwards et al., 2009). A total of 110 questionnaires were disseminated (70 hardcopy, 40 online), yielding 87 complete responses (50 hardcopy, 37 online).

### **3.5. Ethical Considerations**

Participants were provided with an informed consent form that detailed the study’s purpose, procedures, potential risks, and benefits, as well as their right to withdraw at any time without penalty (American Psychological Association, 2017). Confidentiality was rigorously maintained: hardcopy questionnaires bore no identifying information, and online responses were collected anonymously. Data were reported in aggregate form, and any quotations or examples used in disseminated findings were de-identified to protect participant privacy (Israel & Hay,

2006). All consent forms and raw data were retained in secure, access-restricted archives for five years post-publication, after which they would be irreversibly destroyed, in compliance with institutional and funding agency guidelines.

**3.6. Data Analysis Procedure**

Data analysis proceeded in three sequential stages—descriptive statistics, bivariate correlations, and simple linear regression—using IBM SPSS Statistics Version 26. An alpha level of .05 (two-tailed) was adopted for all inferential tests (Field, 2018).

**4. Results**

As was delineated before, data analyses were run to answer the research questions of this study.

**4.1. Results of Research Question One**

The initial research question focused on determining the degree of cognitive flexibility exhibited by Iranian EFL instructors. Prior to performing inferential tests, the composite scores from the Cognitive Flexibility Inventory (CFI) were scrutinized to verify that they satisfied fundamental parametric prerequisites.

Measures of skewness (−0.18) and kurtosis (−0.22) fell comfortably within the acceptable bounds of  $\pm 2.0$ , suggesting a distribution free from notable asymmetry or abnormal peakiness (Kline, 2016). The Shapiro–Wilk statistic ( $W = .97, p > .05$ ) likewise provided no evidence against normality. Additionally, the largest standardized residual observed (2.85) remained below the cutoff of  $\pm 3.29$ , indicating that no single observation functioned as an outlier of concern (Tabachnick & Fidell, 2019). Collectively, these diagnostics affirm that the CFI data adhered to assumptions of normality and lacked extreme values, thus justifying subsequent statistical analyses.

**Table 1.** *Descriptive Statistics for Cognitive Flexibility*

CF	M	SD	Min	Max
	3.62	0.49	2.10	4.75

In the cohort of 87 Iranian EFL instructors, the aggregate CFI score averaged 3.62 (SD = 0.49), reflecting a generally elevated level of cognitive flexibility. Individual scores spanned from 2.10 up to 4.75 on the five-point scale, demonstrating ample dispersion without clustering at the extremes. The modest standard deviation indicates that most respondents’ ratings hovered near the mean and well above the neutral

midpoint of 3.00, underscoring a shared inclination toward adaptive thinking in this professional group.

To determine whether this sample mean diverged meaningfully from the theoretical midpoint (3.00), we employed a one-sample t-test. The outcomes of this analysis are detailed in Table 2.

**Table 2.** *One-Sample t-Test for CFI*

Test Value	t	df	p	95% CI	Cohen's d
3.00	12.05	86	< .001	[3.52, 3.72]	1.27

The analysis revealed that the mean CFI score of 3.62 was statistically higher than the neutral benchmark,  $t(86) = 12.05$ ,  $p < .001$ . The associated 95% confidence interval (3.52 to 3.72) offers a narrow estimate of the true population mean. In addition, the magnitude of the effect was considerable (Cohen's  $d = 1.27$ ), indicating a pronounced departure from the midpoint of the scale. Altogether, these results compellingly indicate that, on average, the sampled Iranian EFL instructors possess a level of cognitive flexibility well above what would occur by random variation.

#### **4.2. Results of Research Question Two**

The second inquiry focused on the degree of work engagement among Iranian EFL instructors. Before applying inferential tests to their UWES composite scores, we first confirmed that the data met essential parametric requirements.

The distribution of scores showed negligible skew (0.08) and kurtosis ( $-0.29$ ), both comfortably within the acceptable  $\pm 2.0$  range. The Shapiro–Wilk test ( $W = .98$ ,  $p > .05$ ) revealed no significant departure from normality, and the largest standardized residual (2.92) remained below the  $\pm 3.29$  cutoff, indicating the absence of any influential outliers.

**Table 3.** *Descriptive Statistics for Work Engagement*

UWES Composite	M	SD	Min	Max
	3.85	0.52	2.30	4.90

The group's average engagement score on the UWES was 3.85 ( $SD = 0.52$ ), with individual responses spanning from 2.30 at the lower end to 4.90 at the upper end of the scale. The modest dispersion around the mean suggests that most educators' self-reported engagement levels were tightly clustered, without extreme low or high scores.

To determine whether this observed mean meaningfully exceeded the neutral benchmark of 3.00, a one-sample t-test was conducted. The test yielded  $t(86) = 14.12$ ,  $p < .001$ , and the 95% confidence interval ranged from 3.74 to 3.96. With a very large effect size (Cohen's  $d = 1.64$ ), these

results confirm that the teachers’ engagement scores are not only statistically higher than the midpoint but also practically substantial.

**Table 4.** *One-Sample t-Test for UWES*

Test Value	t	df	p	95% CI	Cohen’s d
3.00	14.12	86	< .001	[3.74, 3.96]	1.64

The findings indicate that the participating Iranian EFL instructors exhibit notably high levels of engagement in their work. Preliminary diagnostics verified that all assumptions for parametric analysis were satisfied, and the descriptive data showed an average score well above the neutral point. The subsequent one-sample t-test confirmed that this elevated engagement is both statistically robust and practically meaningful, highlighting that these teachers consistently demonstrate strong positive involvement in their professional activities.

**4.3. Results of Research Question Three**

The final research question examined whether cognitive flexibility could serve as a meaningful predictor of work engagement among Iranian EFL educators. To explore this relationship, we carried out a sequence of analyses: initial assumption checks, descriptive summaries, and ultimately a simple linear regression.

Before fitting the regression model, we verified that the data met key prerequisites: a linear relationship between predictor and outcome, uncorrelated residuals, equal variance of errors across predicted values, and normally distributed residuals.

**Table 5.** *Pearson Correlation*

		CFI	UWES
Pearson Correlation	CFI	Correlation Coefficient	1.000
			.45**
		Sig. (2-tailed)	.
			.000
		N	87
			87

Table 5 displays descriptive statistics and bivariate correlation between CFI and UWES, demonstrating a moderate positive correlation,  $r(87) = .45$ ,  $p < .001$ . The observed positive relationship indicates that instructors with higher levels of cognitive flexibility also tend to experience greater work engagement. The notable magnitude and statistical significance of this association align with theoretical frameworks that view internal psychological strengths, like flexible thinking, as catalysts for enhanced motivational states in professional settings.

To further explore this predictive link, we proceeded to fit a simple linear regression model, using CFI scores to forecast UWES outcomes.

**Table 6.** *Model Summary*<sup>b</sup>

Model <sup>a</sup>	R <sup>b</sup>	R <sup>2</sup>	Adjusted R Square	Std. Error of the Estimate
1	.45	.20	.19	.47

a. Predictor: (Constant), CFI  
b. Dependent Variable: UWES

Table 6 summarizes the regression model’s overall fit. The correlation coefficient ( $R = .45$ ) reflects a moderate, positive association between CFI and UWES scores. The  $R^2$  value of .20 indicates that cognitive flexibility accounts for one-fifth of the variability in work engagement. After adjusting for model complexity and sample size, the adjusted  $R^2$  of .19 confirms that the model’s explanatory capacity remains robust. In sum, these indices demonstrate that cognitive flexibility offers a meaningful contribution to predicting teachers’ engagement in the EFL classroom.

**Table 7.** *ANOVA*<sup>a</sup>

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.12	1	4.12	18.62	.000 <sup>b</sup>
Residual	18.80	85	0.22		
Total	22.92	86			

a. Dependent Variable: UWES  
b. Predictor: (Constant), CFI

Table 7 displays the outcome of the ANOVA, which assessed the overall effectiveness of the simple linear regression model. The analysis yielded a statistically significant result,  $F(1, 86) = 18.62$ ,  $p < .001$ , indicating that the model explains a meaningful portion of the variability in UWES scores. Specifically, the regression accounted for 4.12 units of the total variance, while 18.80 units remained unexplained, summing to a total variance of 22.92. The mean square for the regression was 4.12, compared to 0.22 for the residuals. The highly significant p-value reinforces the conclusion that the CFI Composite score serves as a valid and impactful predictor of work engagement. These results highlight the relevance of cognitive flexibility as a key psychological factor influencing motivational outcomes among Iranian EFL teachers.

**Table 8.** *Coefficients*<sup>a</sup>

Model	Unstandardized	Standardized	t	Sig.
	B	Std. Error	$\beta$	
(Constant)	2.45	0.32	—	7.66
CFI Composite	0.38	0.09	.45	4.31

a. Dependent Variable: Work Engagement (UWES)

Table 8 reports the coefficients derived from the regression analysis evaluating the predictive role of cognitive flexibility (CFI) in determining levels of work engagement (UWES) among Iranian EFL teachers. The unstandardized regression coefficient for CFI was  $B = 0.38$ , with a standard error of 0.09, indicating that each one-point increase in cognitive flexibility corresponded to a 0.38-point rise in predicted work engagement scores. This association was statistically significant,  $t(86) = 4.31$ ,  $p < .001$ , underscoring a clear and reliable positive link between the two variables.

The standardized coefficient ( $\beta = .45$ ) further demonstrated that, when measured on a common scale, cognitive flexibility exerted a moderate impact on engagement. The intercept value of 2.45 represents the projected UWES score when CFI equals zero; however, this figure is largely hypothetical due to the structure of the Likert-based CFI scale.

Taken together, these results affirm that cognitive flexibility is not only statistically predictive but also practically meaningful in shaping Iranian EFL teachers' work engagement. This finding reinforces the conceptual understanding of flexibility as a vital psychological asset within educational settings.

## 5. Discussion

The null hypothesis positing that Iranian EFL teachers do not demonstrate significant cognitive flexibility must be rejected based on the empirical evidence. Analysis of CFI scores revealed a mean composite score, which significantly exceeded the scale's theoretical midpoint. This robust finding indicates that the sampled Iranian EFL teachers possess substantially higher levels of cognitive flexibility than would be expected by chance, directly contradicting the null hypothesis.

These results align with contemporary research demonstrating educators' adaptive capabilities in challenging environments. Recent studies have documented how teachers in resource-constrained contexts develop enhanced cognitive flexibility to navigate systemic barriers (Derakhshan et al., 2023; Greenier et al., 2021). The current findings particularly resonate with Fathi et al.'s (2021) report of moderate-to-high adaptability among educators managing frequent policy changes. This consistency across studies suggests that persistent professional challenges may foster cognitive agility as an essential survival mechanism (Moradi & Abbasian, 2023). However, the results contrast with earlier deficit-oriented perspectives that primarily emphasized Iranian teachers' burnout risks (Rahimi & Asadollahi, 2012), instead highlighting their capacity for active resilience.



Theoretical perspectives from multiple disciplines help explain these outcomes. Within teacher professional development literature, the concept of adaptive expertise (Darling-Hammond, 2023) suggests that Iranian EFL teachers' daily negotiation of classroom constraints likely hones their cognitive flexibility through continuous problem-solving cycles. This aligns with models of reflective practice where contextual challenges become opportunities for professional growth (Farrell, 2023). From an educational psychology standpoint, the Job Demands-Resources framework (Bakker & Demerouti, 2018) positions cognitive flexibility as a critical personal resource that helps teachers reframe obstacles and maintain motivation despite environmental pressures. Applied linguistics research further complements these explanations by highlighting how multilingual instruction inherently demands cognitive agility, with teachers constantly navigating linguistic codes and cultural frames (Ellis, 2024) - a phenomenon particularly relevant in Iran's diverse EFL classrooms (Khatib & Derakhshan, 2024).

Collectively, these findings challenge simplistic deficit models of teacher experience in challenging contexts. Rather than viewing systemic pressures as purely detrimental, the results suggest they may cultivate adaptive expertise, offering a more nuanced understanding of teacher resilience (Derakhshan et al., 2023). The significant cognitive flexibility demonstrated by Iranian EFL teachers underscores their professional capacity to transform constraints into opportunities for pedagogical innovation and growth.

The null hypothesis proposing that Iranian EFL teachers lack significant work engagement is unequivocally rejected. Empirical evidence demonstrates robust engagement levels among participants, substantially exceeding theoretical benchmarks. This finding directly contradicts the second null hypothesis's proposition of negligible professional involvement.

These results align with emerging scholarship that reframes teacher resilience in challenging educational contexts. Contemporary studies increasingly document how educators facing systemic constraints cultivate profound commitment to their roles through agentic adaptation (Derakhshan, 2023; Greenier et al., 2021). The observed engagement levels resonate with recent investigations of Iranian EFL professionals, which similarly report sustained motivation despite institutional limitations (Fathi & Derakhshan, 2023). This consistency suggests that intrinsic drivers—such as professional identity and student relationships—may mitigate external pressures more effectively than previously recognized (Mercer, 2021). Nevertheless, these findings stand

in contrast to earlier deficit-oriented research that predominantly emphasized burnout risks in Iran's educational landscape (Rahimi & Asadollahi, 2012).

Theoretical integration across disciplines provides compelling explanations. Teacher professional development literature attributes such engagement to purposeful pedagogical identity construction. Iranian EFL teachers' commitment likely stems from viewing challenges as catalysts for professional growth rather than impediments (Barkhuizen, 2021). This aligns with transformative models where constraints become opportunities to develop context-responsive teaching praxis (Farrell, 2023).

Educational psychology perspectives, particularly the Job Demands-Resources framework (Bakker & Demerouti, 2018), elucidate how cognitive resources buffer systemic pressures. Teachers' demonstrated flexibility (established in RQ1) likely enables them to reframe demands (e.g., large classes) as avenues for meaningful interaction, triggering resource gain cycles that sustain engagement (Derakhshan et al., 2023). Cultural dimensions may further amplify this process, as collectivist values in Iranian society heighten the motivational power of relational rewards (Khajavy et al., 2022).

Applied linguistics research emphasizes the inherent relational vitality of language instruction. The dialogic nature of EFL teaching generates intrinsic satisfaction through co-constructed meaning-making (Mercer & Kostoulas, 2023). Iranian teachers' deep immersion may reflect the intellectual and emotional rewards of navigating multilingual interactions, such as strategically code-switching to scaffold understanding, which foster profound professional fulfillment (Ellis, 2024).

Collectively, these insights challenge deterministic assumptions that systemic constraints inevitably undermine engagement. Instead, they reveal how Iranian EFL teachers leverage personal, cultural, and pedagogical resources to sustain professional commitment, offering critical implications for supporting educators in comparable contexts globally.

The null hypothesis positing that cognitive flexibility fails to predict work engagement among Iranian EFL teachers is conclusively rejected. Empirical analysis confirms a statistically significant and substantively meaningful predictive relationship between these constructs, establishing cognitive flexibility as a critical psychological resource for sustaining professional engagement in challenging educational environments.

These findings align with contemporary international research while contextualizing mechanisms within Iran's unique educational landscape.

The demonstrated predictive capacity resonates with established theoretical models that position adaptability as foundational to motivational outcomes across professions (Han & Park, 2022). Specifically in education, our results corroborate recent studies identifying cognitive flexibility as a key personal resource that buffers systemic constraints and fosters engagement (Verschueren et al., 2020). However, the magnitude of this relationship appears comparatively moderated within Iran's distinctive ecosystem of policy volatility and resource scarcity (Derakhshan et al., 2023), suggesting contextual factors may mediate flexibility's impact. This extends preliminary investigations by Fathi et al. (2021) through rigorous predictive modeling that addresses their call for contextually embedded examinations of adaptability mechanisms in under-resourced settings.

Theoretical integration across disciplines elucidates these outcomes. Teacher Professional Development frameworks conceptualize cognitive flexibility as enacted adaptive expertise. Iranian EFL teachers' capacity to translate flexibility into engagement reflects their professional artistry in transforming constraints through pedagogical improvisation, developing context-responsive solutions when standardized approaches prove inadequate (Darling-Hammond, 2023). This aligns with models of reflective practice wherein challenges become generative spaces for professional growth, with successful problem resolution fueling engagement through enhanced self-efficacy (Farrell, 2023).

Educational Psychology perspectives, particularly the Job Demands-Resources model (Bakker & Demerouti, 2018), elucidate the motivational cascade initiated by cognitive flexibility. As a personal resource, flexibility enables educators to reframe professional demands as opportunities for meaningful pedagogical innovation. This cognitive reappraisal enhances perceived competence, a core psychological driver of vigor and dedication (Derakhshan, 2023), while cultural dimensions of collectivism may further amplify engagement through strengthened professional identity (Khajavy et al., 2022).

Applied Linguistics research highlights the domain-specific manifestation of flexibility as discursive adaptability. The predictive relationship particularly reflects how Iranian EFL teachers leverage linguistic and cultural code-switching to navigate multilingual classrooms. Successful meaning-making through these adaptive processes generates intrinsic rewards that fuel absorption and dedication (Ellis, 2024), creating what Mercer and Kostoulas (2023) term a "relational satisfaction loop" (p. 118) unique to language teaching contexts.

## **6. Conclusion and Implications of the Study**

This study fundamentally advances the understanding of teacher resilience within challenging educational ecosystems. The findings establish that Iranian EFL teachers demonstrate significant cognitive flexibility—not merely as a survival mechanism, but as cultivated professional expertise honed through continuous negotiation of systemic adversities such as resource scarcity, policy volatility, and overcrowded classrooms. Critically, robust empirical evidence confirms cognitive flexibility serves as a potent predictor of work engagement, functioning as a critical psychological resource within Iran’s high-demand EFL context. These collective findings challenge deficit narratives portraying constrained environments as inevitably depleting teacher motivation, instead revealing how systemic pressures can paradoxically foster adaptive expertise when teachers transform constraints into pedagogical innovation.

This study makes three pivotal contributions to theoretical frameworks in educational psychology, teacher development, and applied linguistics. First, it empirically validates cognitive flexibility as a critical personal resource within the Job Demands-Resources (JD-R) model, extending Bakker and Demerouti’s framework beyond Western contexts to under-resourced educational settings. The predictive relationship demonstrates how adaptability initiates motivational processes that counterbalance systemic adversities, challenging deficit-oriented narratives of teacher burnout prevalent in earlier literature.

Second, the research reveals how cultural and contextual factors mediate psychological resources. Cognitive flexibility’s role in Iran’s collectivist, resource-scarce environment diverges from findings in less constrained settings, highlighting how relational rewards and sociocultural values amplify flexibility’s impact on engagement. This necessitates culturally nuanced expansions of stress-adaptation theories to account for localized manifestations of resilience.

Third, the study advances an interdisciplinary conceptualization of adaptability as enacted expertise. By integrating educational psychology, teacher professional development, and applied linguistics perspectives, it theorizes Iranian teachers’ flexibility as: pedagogical improvisation that transforms constraints into innovation opportunities; discursive code-switching that navigates multilingual classrooms; and resource gain cycles that sustain motivation. This tripartite model offers a holistic framework for understanding teacher resilience across diverse contexts.

For teacher development programs, these findings advocate for integrating cognitive flexibility training into professional learning

curricula. Workshops should emphasize strategy-shifting exercises through scenario-based problem-solving, particularly addressing resource limitations and policy changes. Reflective practice frameworks could further help teachers reframe challenges as opportunities for pedagogical innovation, fostering professional self-efficacy.

At the institutional level, administrators should reduce bureaucratic burdens to preserve cognitive resources for core teaching activities. Granting greater pedagogical autonomy would empower teachers to leverage their adaptability in curriculum design and classroom management. Schools might implement peer-coaching networks focused on cognitive reframing techniques to strengthen collective resilience.

Educational policymakers must prioritize resource allocation toward low-cost, high-impact supports. Strategic investments in mobile learning technologies or open educational resources could enhance teachers' capacity for flexible instruction. Simultaneously, systemic reforms should address root causes of occupational stress, including overcrowded classrooms and policy instability.

For global EFL contexts sharing similar challenges, these findings offer transferable strategies. Flexibility-focused interventions could be culturally adapted for other resource-scarce multilingual settings, while advocacy efforts might leverage this evidence to lobby for structural improvements in teacher working conditions worldwide.

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