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# Iranian EFL teachers' self-efficacy: structural equation modeling of the consequences

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## Abstract

Within the field of teacher education, the concept of self-efficacy—which includes teachers' self-perceptions of their competence and abilities in particular tasks—has attracted a lot of attention. It shows how confident a teacher is in their ability to help students achieve the learning objectives. In spite of its critical importance, there hasn't been a single study that thoroughly examines the underlying effects of self-efficacy among English as a Foreign Language (EFL) teachers. To carefully examine these effects and verify a theoretical model, this study uses a mixed methods approach. 26 articles are found to be eligible after a meta-analysis method is used to thoroughly review pertinent articles from Elsevier, Google Scholar, and ERIC. The following outcomes are linked to the self-efficacy of EFL teachers: burnout, instructional success, psychological well-being, engagement and job satisfaction, communication readiness, teaching commitment, emotion regulation, professional development, and motivational teaching behavior. Using structural equation modeling, the proposed model is evaluated in the quantitative phase. The researchers' 10-factor scale is used to collect data. The model's divergent validity, convergent validity, and reliability are all shown to be at acceptable levels by the results. These findings have both theoretical and practical ramifications, offering useful information.

**Keywords:** Consequences of self-efficacy, EFL teachers, Meta-analysis, Systematic review, Structural equation modeling

## Introduction

Bandura (1997) introduced the socioaffective concept of self-efficacy, which encompasses individuals' beliefs and perceptions about their ability to achieve certain levels of performance and overcome challenges effectively. This general effectiveness extends to the way individuals approach problems and make decisions. Numerous studies, such as those by Author et al. (2021), Chacon (2005) and Guo et al. (2010) have consistently demonstrated positive correlations between teacher self-efficacy and various factors, including student achievement. Self-efficacy, rooted in social cognitive theory, implies that individuals can exert influence over their life and work situations even when there are external variables that influence their behavior (Schunk & Pajares, 2010). It serves as a predictor of a person's effort, perseverance in adversity, and control over thoughts, actions, and goals (Schunk & Meece, 2006). Teacher self-efficacy is task and context

specific and varies depending on the situation, subject, student, and task (Bandura, 1997; Schunk & Pajares, 2010). Self-efficacy is described as the belief in one's own ability to organize and carry out actions necessary to achieve goals. It plays a crucial role in teacher effectiveness. More effective teachers demonstrate a willingness to take risks and set higher standards in their classes, which ultimately increases student achievement. Beyond teaching, teacher self-efficacy is closely linked to elements such as job satisfaction.

The concept of self-efficacy, as explored in various studies across diverse domains, including education (Balci et al., 2019; Cansoy et al., 2020; Schunk et al., 2012), holds considerable significance. Scholarly research, particularly in the field of education, has accumulated substantial evidence highlighting the influential role of self-efficacy beliefs. Numerous studies have delved into the pivotal importance of teacher self-efficacy (TSE) in various aspects of teaching and learning processes (Tschannen-Moran & Hoy, 2001). TSE refers to teachers' convictions about their ability to effectively carry out specific teaching and learning responsibilities within distinct contexts. Additionally, Wyatt (2008, 2016) defines TSE as educators' assumptions about their capacity to enhance instructional and educational processes across cognitive, meta-cognitive, social, and affective domains. The factors influencing an individual's behavior can be categorized into three main groups: environmental influences, internal personal factors, and individual behavior, with personal factors encompassing cognitive, emotional, and biological processes. Efficacy beliefs are shaped by a complex interplay of past and present performance, external factors, and internal personal characteristics. Existing literature suggests that efficacy beliefs are contingent upon situational factors, including job complexity and the availability of time and resources (Alibakhshi, 2011; Alibakhshi et al., 2019; Alibakhshi et al., 2020; Author et al., 2021).

When the relevant data are combined, it becomes clear that there are still unresolved questions regarding teachers' self-efficacy. Teachers' variables, which are impacted by their high levels of self-efficacy, are one of these problems. The aim of this research is to ascertain the effects of the teachers' high sense of efficacy on their personal characteristics and other variables. Moran, Tschannen-et al. (1998) assert that teachers develop self-efficacy by assessing their ability to meet the requirements for executing specific classroom activities under specific conditions. A person's knowledge, skills, and personality can be assessed in relation to external elements that either facilitate or hinder education. Put another way, it's critical to consider contextual or environmental factors, such as student factors, classroom resources, leadership styles, and collegiality, when evaluating effectiveness.

## **Review of the related studies**

### **Teachers' SE**

The term "self-efficacy" (SE) encompasses a teacher's belief in his or her abilities and self-esteem and represents a cognitive process linked to emotions. According to Bandura (2003), SE reflects a person's confidence in influencing certain life events. This confidence in one's abilities has profound effects on several factors, including (1) behavioral and cognitive control, (2) selection of environments and scenarios, and (3) persistence in completing specific tasks (Bandura, 1997). Bandura (1997) suggests that SE is based on

behavioral imitation, stress psychology, self-management and self-actualization rather than negative behavior, resignation or persistence towards unproductive goals. Tschannen-Moran et al. (1998) describe SE as a highly effective natural cycle with a significant impact on performance improvement. As a cognitive process, SE supports individuals in controlling behavior, increasing self-efficacy and competence, and improving overall efficiency (Shoulders & Krei, 2016). In the context of education, self-efficacy is crucial for teachers to promote teacher and student engagement, thereby contributing to positive outcomes. Much of the research in this area has focused on examining the expression and effects of self-efficacy beliefs.

Building on Bandura's (1997) social cognition theory, the definition of teacher self-efficacy in this study was defined as "the belief in a teacher's ability to organize and carry out the course of action required to accomplish a specific educational task in a specific context" (Tschannen-Moran, Hoy and Hoy, 1998, p 233). The term "teacher self-efficacy" describes a teacher's confidence in their capacity to promote learning. Teachers with higher levels of self-efficacy are more adaptive in handling problems in the classroom. You are more open to trying out novel strategies and procedures for handling difficult and complex circumstances. Instructors who possess this quality interact well with children who lack motivation and are more tolerant of failure and loss. The efficacy of instruction is enhanced and teacher performance is positively impacted by teacher self-efficacy. Teachers that possess self-efficacy are committed to reaching the objectives they set for themselves. In the field of education, teacher self-efficacy is crucial.

Studies by Brouwers and Tomic (2000) and Caprara et al. are in agreement. (2006), teachers with higher levels of teacher self-efficacy are said to be more adept at applying instructional strategies, sustaining student interest, and putting classroom management strategies into practice. Moreover, studies have indicated that teachers with high levels of teacher self-efficacy not only exert more effort to overcome obstacles, but also maintain this effort over a longer duration of time (Bandura, 1997, 1986). There are differences between teachers with high and low levels of teacher self-efficacy in terms of using new teaching methods and giving students with learning disabilities constructive criticism (Tschannen-Moran and Woolfolk Hoy, 2001). According to Tschannen-Moran et al., teachers who have high levels of teacher self-efficacy are also said to be open to new ideas and have a positive attitude toward teaching., (1998).

### **EFL teachers' SE**

As previously indicated by Bandura et al. (1999) and Tschannen-Moran et al. (1998), it is important to note that SE is a construct that is specific to the task, context, and domain, rather than a general construct. Hence, there exists a necessity for studies that are specific to a particular domain. The aforementioned studies aim to investigate the beliefs of individual teachers within a specific context (Choi & Lee, 2018; Klassen & Durksen, 2014; Klassen et al., 2011). Consequently, the subject matter of SE has been and continues to be investigated in various educational spheres. The domain of EFL has been recognized as unique, thereby necessitating research on TSE in this area, as noted by Chiang (2008). According to Faez and Karas (2017), the distinctiveness of this domain can be attributed to the function of the English language. In EFL contexts, the English language serves not only as the subject matter but

also as the instructional medium for both teaching and learning. In contexts where English is deemed a non-native language, commonly referred to as EFL settings, the employment of English within the classroom environment typically serves as the sole means of language exposure for pupils (Yashima, 2002). As Chiang (2008) states, EFL instructors bear the dual obligation of regarding the language as both the medium and the substance of education.

Based on the aforementioned explanations, it can be inferred that teacher self-efficacy holds significant value in the process of teaching and learning. This notion is supported by a number of scholars. Detailed qualitative analysis of the studies verified that highly efficacious have high levels of well-being, professional development, and effective teaching (Author, et al., 2021), intrapersonal and linguistic intelligence (Azari Noughabi, et al., 2020), quality teaching practices and instructional strategies (Choi, Lee, 2018), and willingness to communicate (Demir, et al., 2015). It was also reported that efficacious EFL teachers can regulate their emotions (Fathi & Derakhshan, 2019), have low levels of burnout (Fathi & Saeedian, 2020), have job satisfaction and teaching commitment (Fathi & Savadi Rostami, 2018), are pedagogically successful (Ghanizadeh & Moafian, 2011), and have a high level of psychological well-being (Fathi et al., 2021).

Safari et al. (2020) found in another study that EFL instructor self-efficacy is a favorable predictor of professional development. In comparison to reflective thinking and job satisfaction, self-efficacy predicted professional progress more strongly. Cansoy et al. (2020) discovered that teacher psychological wellbeing and teacher self-efficacy were strongly and favorably correlated, in line with the relationship between instructor psychological wellbeing and self-efficacy. Self-efficacy was also a reliable indicator of teachers' psychological health. Zee and Koomen (2016) looked into how teacher self-efficacy affected their psychological well-being as well as the academic adjustment of their students using a criteria-based review methodology. The results revealed a positive relationship between teacher self-efficacy and students' academic growth as well as factors influencing teachers' psychological wellness such as job happiness, dedication, and personal success.

Additionally, there was a negative correlation between fatigue and teacher self-efficacy. Von Münchhausen et al. (2021) explored the relationship between mental health and teacher self-efficacy among 742 teachers, and they discovered a significant and moderate correlation between the two. Furthermore, good feelings and psychological resistance at work were favored by teacher self-efficacy. Additionally, it was shown that improvements in life happiness and the ability to distance oneself from others were related to teacher self-efficacy. Reduced social support experience was also accompanied by lower teacher self-efficacy.

Very recently, Xiyun, et al. (2022) evaluated a model of psychological well-being based on teacher self-efficacy and emotion regulation in an EFL environment. In order to achieve this, 276 Iranian English teachers took part in the study. First, Confirmatory Factor Analysis (CFA) was used to confirm the measurement models for the three latent components. The postulated model was subsequently put to the test using structural equation modeling (SEM). Both teacher self-efficacy and emotion regulation were significant predictors of teachers' psychological well-being, according to SEM results, with teacher self-efficacy having a stronger correlation than emotion regulation.

### **Purpose of the study**

This study aimed at exploring the consequences of EFL teachers' self-efficacy. Therefore, the study had two objectives: to explore the consequences of EFL teachers' self-efficacy through a qualitative systematic review and to validate the model through structural equation modeling. More specifically, the researchers addressed the following questions:

1. What are the most frequently reported consequences of EFL teachers' self-efficacy, based on the related studies?
2. What is the psychometrics of the scale of the consequences of EFL teachers' self-efficacy?
3. Does the hypothesized model of the consequences of self-efficacy for English language teachers in Iran show acceptable fit indices as explored through the EFL teachers' consequences of the self-efficacy questionnaire?

### **Method**

The researchers employed a mixed-methods research design. In line with the objectives, the best research design was an exploratory mixed research design (Qual-Quan). The qualitative phase aimed at exploring the consequences of EFL teachers' SE. Meanwhile, the quantitative phase addressed the validation of the model through Structural Equation Modelling (SEM). Each phase is explained as follows:

#### **Phase 1: systematic review**

The systematic review's goal is to give readers a deeper comprehension of the variables influencing teachers' self-efficacy. The information was accessed for review using electronic journals. Journals released between 2013 and 2021 were used to analyze the literature. For these papers, the databases Elsevier, Google Scholar, and ERIC (EBSCO) were created. A qualitative meta-analysis of published papers on the SE of EFL teachers was employed in this study. "An attempt to conduct a rigorous secondary analysis of primary qualitative findings" is what qualitative meta-analysis is. Its goal is to offer a more thorough explanation of a phenomenon and an evaluation of how the research approach affected the findings—discussed" (Timulak, 2009, p. 591). We searched for 2000 articles using the terms "consequences of EFL teachers' SE, antecedents of EFL teachers' SE" in the Google search engine for this kind of meta-analysis. The terms "self-efficacy of EFL teachers" and "searching consequences of self-efficacy" were used. Just 26 of the studies that examined the causes and consequences of SE in EFL teachers were found to be relevant. Forty percent of the articles were chosen by the researchers to represent self-efficacy-based articles. Thus, in order to analyze this study, the researchers employed four steps. Included are the identification process, screening stage, eligibility stage, and inclusion stage.

#### **Step 1: identification phase**

Finding pertinent literature was the systematic review's initial step. This phase consisted of two main processes. Gathering pertinent articles and choosing them

**Table 1** Inclusion criteria

Inclusion criteria
Consequences of EFL Teachers' Self-efficacy
Research methodologies: quantitative, qualitative and mixed-method
Sample or respondents from various context
The positive relationship between a concept and teachers' self-efficacy
Journal articles published between 2010 and 2023

**Table 2** Exclusion criteria

Exclusion criteria
Not EFL Teachers
The studies did not evaluate self-efficacy
The concept was not the source of self-efficacy
Journal articles not published between 2013 and 2021

according to inclusion and exclusion criteria comprised the first step. Studies of this kind could highlight the shortcomings of publication bias. This research method did not include the review of literature from sources other than journal databases, such as book chapters, white papers, and technical reports. Consequently, the study looked at peer-reviewed literature to compare various outcomes. ERIC and Google Scholar were the two main databases used in this study. The studies that made up this systematic review were released in the years 2013 through 2021. Today’s reviews of the literature need to take into account the most recent findings in addition to the overall direction and achievements of a field of study in order to prevent becoming outdated. Several different keywords were combined in this process. Among them are self-efficacy, the effects of self-efficacy, and the self-efficacy of EFL instructors and teachers..

**Step 2: screening**

After the identification and removal of duplicates shortly following their publication on ERIC and Google Scholar, the next step involved a rigorous eligibility phase. The articles were carefully examined to ensure they conformed to the criteria outlined in the inclusion section of Table 1. This meticulous evaluation is a crucial component in safeguarding the high quality and reliability of the data acquired for this study. The eligibility phase serves as a stringent filter to include only those articles that align with the specified criteria, thereby enhancing the validity of the research findings.

**Step 4: exclusion**

The remaining articles were removed from our systematic literature review after the third round of verifying for eligibility. Table 2 lists the criteria for items that were eliminated. Like the eligibility process, the exclusion step was critical in ensuring that the researchers collected high-quality data.

There was a total of 26 papers that discussed the consequences of self-efficacy among EFL teachers. The majority of the publications examined used a mix of quantitative, qualitative, and mixed-method investigations. Respondents in all of the investigations mentioned different contexts and techniques.

### Phase 2: quantitative research method (SEM)

The aim of this phase was to validate the self-efficacy (SE) consequences model, which included several systematic steps. First, the consequences derived from the literature were examined for theoretical underpinnings, definitions and constructs. For each identified consequence, at least two points were carefully formulated. An expert panel consisting of three applied linguists and two educational psychologists knowledgeable about self-efficacy then evaluated the content validity ratio (CVR) and content validity index (CVI) of the constructed items. From the original pool, 33 items were deemed relevant based on their content validity. In the next step, the questionnaire was distributed to 180 English as a foreign language (EFL) teachers aged between 25 and 48 years, who were selected through random sampling. In the subsequent phase, the technique used Structural Equation Modeling (SEM) was applied to investigate causal relationships between latent variables without direct observation. SEM, which includes confirmatory factor analysis, identifies the contributions of individual statements to the measurement of latent variables. This process helps select only relevant constructs for the model, thereby reducing data dimensions and standardizing the scale of various indicators. Essentially, confirmatory factor analysis streamlines complex models and ensures that only the essential latent variables remain visible (Holtzman, 2011; Fan, 2016).

## Results

### Research question 1

The first research question aimed to examine the most commonly reported self-efficacy outcomes of English as a foreign language (EFL) teachers. After a comprehensive four-stage paper selection and evaluation process, a total of 26 articles were identified as relevant to this systematic review based on research focus and criteria. Numerous scholars have contributed to the understanding of the origins of EFL teachers' self-efficacy. Table 3 below provides a summary of the key articles addressing EFL teacher self-efficacy.

As seen in Table 3, the main extracted consequences of EFL teachers' self-efficacy include work engagement and job satisfaction (WEJS), willingness to communicate (WTC), Teaching commitment (TC), emotion regulation (MR), professional development (PD), Motivational teaching behaviors (MTB), burnout (BO), Pedagogical success (PS), Reflective Teaching (RT), and psychological well-being (PW).

### Research questions 2 and 3

In order to test the hypotheses related to questions 2 and 3 of the research, we employed multivariate analysis and structural equation modeling using Smart-PLS software, due to the low sample size. Results including a reliability and convergent analysis, divergent analysis, and path analysis are presented in the following sections.

### Measurement models

The outer, inner, and general models are tested in the process of evaluating models with Smart-PLS2 software. In structural equations, the inner model is comparable to



**Table 3** The related studies of the consequences of SE

Authors	Title	Findings
Author, et al (2021)	Exploring the consequences of teachers' self-efficacy: a case of teachers of English as a foreign language	Well-being, professional development, effective teaching,
Azari Noughabi, et al. (2020)	Assessing the Contribution of Autonomy and Self-Efficacy to EFL Teachers' Self-Regulation	intrapersonal and linguistic intelligence
Choi, E., & Lee, J. (2018))	EFL Teachers' Self-efficacy and Teaching Practices	Teaching practices, instructional strategies
Demir, et al. (2015)	The relationship between tertiary-level EFL teachers' self-efficacy and their willingness to use communicative activities in speaking	Willingness to communicate
Eslami, Z. R., & Fatahi, A (2008)	Teachers' Sense of Self-Efficacy, English Proficiency, and Instructional Strategies: A Study of Nonnative EFL Teachers in Iran	Instructional Strategies
Fathi, J., & Derakhshan, A (2019)	Teacher self-efficacy and emotional regulation as predictors of teaching stress: An investigation of Iranian English language teachers	Emotion Regulation
Fathi, J., & Saeedian, A. (2020)	A structural model of Teachers' self-efficacy, resilience, and burnout among Iranian EFL teachers	Burn out
Fathi, J., & Savadi Rostami, E. (2018)	Collective teacher efficacy, teacher self-efficacy, and job satisfaction among Iranian EFL Teachers: The mediating role of teaching commitment	Job satisfaction, teaching commitment
Fathi and et al., (2020a, 2020b)	Investigating a structural model of self-efficacy, collective efficacy, and psychological well-being among Iranian EFL teachers	Psychological well-being
Fathi, et al. (2021)	Self-efficacy, reflection, and burnout among Iranian EFL teachers: the mediating role of emotion regulation	Reflective teaching, burnout, emotion regulation
Ghanizadeh and Moafian (2011)	The relationship between Iranian EFL teachers' sense of self-efficacy and their pedagogical success in Language Institutes	Pedagogical success
Ghasemzadeh, Nemat and Fathi et al. (2019)	Teacher self-efficacy and reflection as predictors of teacher burnout: An investigation of Iranian English language teachers	Burn out
Han and Wang (2021)	Investigating the Correlation Among Chinese EFL Teachers' Self-efficacy, Work Engagement, and Reflection	Reflective teaching Work engagement
Huangfu, (2012)	Effects of EFL teachers' self-efficacy on motivational teaching behaviors	Motivational teaching behaviour
Khanshan and Yousefi (2020)	The relationship between self-efficacy and instructional practice of in-service soft disciplines, hard disciplines, and EFL teachers	Instructional practice
Khezerlou, (2013)	Teacher Self-efficacy as a Predictor of job burnout among Iranian and Turkish EFL Teachers	Burnout



**Table 3** (continued)

Authors	Title	Findings
Malmir and Mohammadi (2018). an EFL teachers	Teachers' reflective teaching and self-efficacy as predictors of their professional success: A case of Iranin teachers	Pedagogical sucesss
Moè, Pazzaglia, and Ronconi et al. (2010)	When being able is not enough. The combined value of positive affect and self-efficacy for job satisfaction in teaching	Job satisfaction Students' academic achievement
Rashidi & Moghadam (2014)	The Effect of Teachers' Beliefs and Sense of Self-Efficacy on Iranian EFL Learners' Satisfaction and Academic Achievement	Teachers' job satisfaction
Moradkhani, Raygan and Moein et al. (2017)	Iranian EFL teachers' reflective practices and self-efficacy: Exploring possible relationships	Reflective teaching Critical pedagogy
Rastegar & Moradi (2016)	On the relationship between EFL teachers' job satisfaction, self-efficacy, and their spiritual sense of well-being	Job-satisfaction Well-being
Razmjoo and Ayoobiyan (2019)	On the relationship between teacher resilience and self-efficacy: The case of Iranian EFL teachers	
Ryan and Deci (2000)	Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being	Teaching motivation Well-being
Safari, Davaribina, and Khoshneviset al. (2020)	The Influence of EFL Teachers' Self-Efficacy, Job Satisfaction, and Reflective Thinking on Their Professional Development: A Structural Equation Modeling	Job satisfaction Reflective teaching
Wang, Hall and Rahimiet al. (2015)	Self-efficacy and causal attributions in teachers: Effects on burnout, job satisfaction, illness, and quitting	Job-satisfaction Burnout

the measurement model. It displays the connections between evident or observable variables (components in this case) and latent or hidden variables (independent and dependent variables). The outer model analyzes the relationships between latent or hidden variables and is comparable to the structural model (path analysis) in structural equations. First, Table 4 displays the loadings for the teachers' SE items.

As seen in Table 4, the factor loadings of the items of self-efficacy consequences components were higher than 0.5 Therefore, it indicates an acceptable correlation between observed variables (objects) and latent variables (components).

### Reliability and convergent validity

The results show that the factor loadings for all variable components are above 0.6, indicating an acceptable level of factor loadings for the items that make up each variable. The variance inflation factor (VIF), used to assess the degree of multicollinearity or linear correlation between independent variables, ranges from 1 to 5, indicating that the variables are moderately correlated. Model testing also requires researchers to report Cronbach's Alpha (which indicates internal consistency) and Rho-A, which represents composite reliability indicators calculated using unstandardized loadings. Table 5 shows that Cronbach's alpha value for all variables exceeds 0.7, indicating acceptable internal



Table 4 (continued)

[illegible]

**Table 5** Reliability and convergent validity of the constructs

Construct	FL	VIF	Cronbach's alpha	Rho-A	Composite Reliability	AVE
Work engagement and job satisfaction (WEJS)	0.613	2.98	0.938	0.951	0.956	0.727
Willingness to communicate (WTC)	0.922	1.68	0.839	0.962	0.925	0.861
Teaching commitment(TC)	0.88	1.99	0.983	0.946	0.991	0.983
Emotion regulation(ER)	0.71	2.99	0.983	0.91	0.987	0.938
Professional development (PD)	0.82	1.82	0.896	0.87	0.950	0.905
Motivational teaching behaviors(MTB)	0.821	1.99	0.849	0.89	0.924	0.860
Burnout (BO)	0.72	2.86	0.931	0.85	0.955	0.877
Pedagogical success (PS)	0.922	1.69	0.959	0.94	0.973	0.925
Reflective teaching (RT)	0.89	2.11	0.955	0.93	0.970	0.918
Well-being	0.69	2.83	0.804	0.84	0.702	0.570

consistency for each variable. The Rho-A values for the variables are also above 0.7, indicating high and acceptable composite reliability based on unstandardized loadings. Furthermore, the composite reliability coefficient for all constructs exceeds 0.7, confirming the composite reliability of the constructs. Finally, the results show convergent validity for all variables, with factor loadings exceeding 0.4 and the AVE (Average Variance Extracted) value for each structure exceeding 0.5 (see Table 5).

#### Discriminant validity

We also assessed how well (c) the Bagozzi et al. discriminant validity criteria, which requires the AVE of both constructs to be greater than a square correlation between them, and (d) the Forell-Larcker criterion for discriminant validity worked. the Kline criterion for discriminant validity, which necessitates a correlation between two constructs of less than 0 point85, and (e) the criterion, which demands a correlation between two constructs significantly less than unity. Findings are displayed in Table 6.

As seen in Table 6, there is little or no correlation between the constructs, as the value of AVE in cells located on the left and under the Main diagonal are smaller than that of the main diagonal. Therefore, the latent variables (self-efficacy consequences) have more interactions with their items than other constructs, and the divergent validity of the model is at an acceptable level.

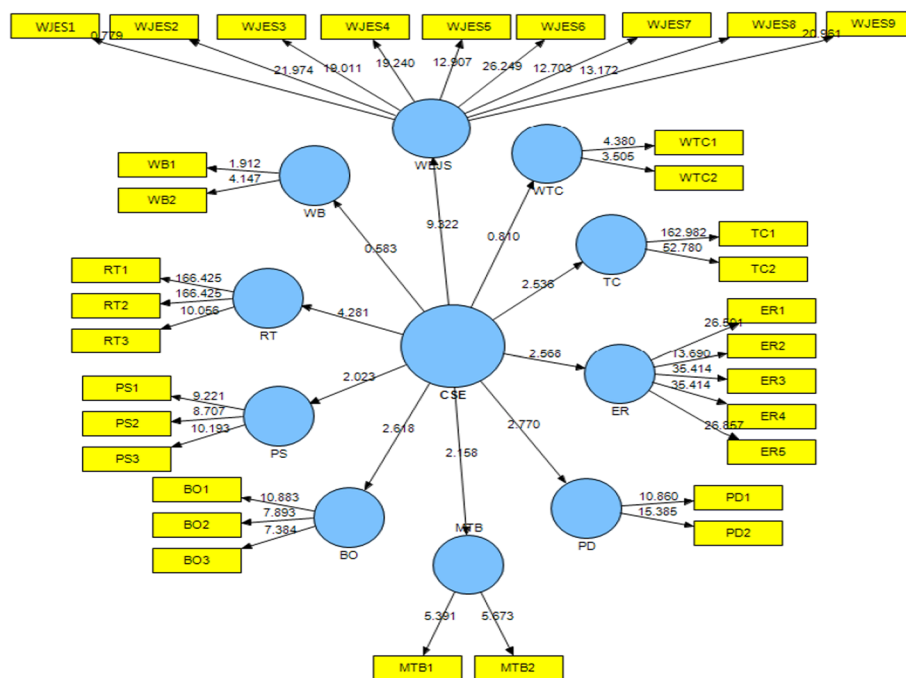
#### Inner model (path analysis) evaluation

In the evaluation of the proposed model (refer to Fig. 2), both standard and non-standard coefficients, along with R2 square, were utilized. All paths depicted in the internal model, representing relationships between constructs based on research hypotheses, were assessed for significance using the T-test and R2 square. Specifically, if the T value exceeds 1.96 and 2.58, the hypotheses are considered significant at the confidence levels of 95% and 99%, respectively. As illustrated in Fig. 2, all hypotheses within the model were accepted, as their T values were found to be significant at the 99% confidence level ( $P < 0.01$ ). The R-squared value is reported as 0.877, indicating an acceptable level of explanatory power. The detailed results are presented in Fig. 1.

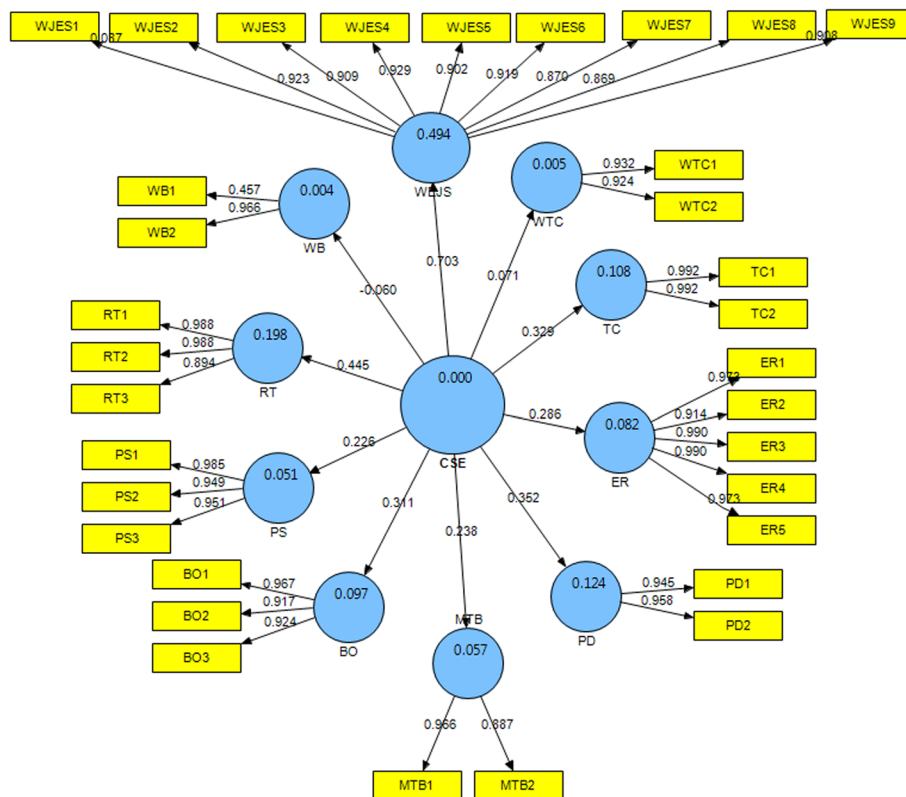
As seen in Fig. 1, all items and components at a confidential level of 99% and p-value of 0.01, are fit and appropriate for measuring the SE consequences In other words, all

**Table 6** Convergent validity of the components of SE consequences based on Forell-Larcker

	1	2	3	4	5	6	7	8	9	10
1) Work engagement and job satisfaction (WEJS)	0.852									
2) Willingness to communicate (WTC)	0.054	0.928								
3) Teaching commitment(TC)	0.003	− 0.138	0.991							
4) Emotion regulation(ER)	− 0.057	− 0.090	− 0.141	0.968						
5) Professional development (PD)	0.106	0.051	0.133	0.008	0.951					
6) Motivational teaching behaviors(MTB)	0.209	0.012	− 0.008	0.059	− 0.027	0.928				
7) Burnout (BO)	0.088	0.290	− 0.005	− 0.073	0.162	0.062	0.936			
8) Pedagogical success (PS)	0.073	− 0.020	− 0.014	− 0.109	0.082	− 0.070	− 0.104	0.961		
9) Reflective teaching (RT)	0.241	0.143	− 0.095	− 0.141	0.080	0.240	0.222	0.060	0.959	
10) Well-being (WB)	− 0.181	0.097	− 0.086	− 0.045	0.084	0.118	0.042	− 0.131	− 0.081	0.755



**Fig. 1** Measurement model of self-efficacy consequences based on non-standard coefficients. *Note:* WJS Work engagement and job satisfaction, WTC Willingness to communicate, TC Teaching commitment, ER Emotion regulation, PD Professional development, MTB Motivational teaching behaviors, BO Burnout, PS Pedagogical success, RT Reflective teaching, WB Psychological well-being



**Fig. 2** Measurement model of self-efficacy consequences based on standard coefficients

extracted consequences and the items which constitute each component are fit for measuring the consequences of EFL teachers' self-efficacy. In Fig. 2, the model for standardized coefficient conditions is presented (Fig. 2).

## Discussion

Numerous factors may be influenced by teachers' self-efficacy (Klassen et al., 2011). A variety of elements, which might be grouped into many themes, could be affected by EFL teachers' SE, according to the qualitative meta-analysis of the studies on the consequences of teachers' SE. Despite being important in the growth of a teacher's effectiveness, EFL teachers' SE has only been examined and linked to teacher efficacy from a qualitative or mixed-methods perspective. The objective of this meta-analysis was to examine the diverse outcomes of self-efficacy among English as a Foreign Language (EFL) instructors, as identified and explored in multiple studies chosen by the researcher, in accordance with the eligibility standards outlined in preceding sections. Following the application of inclusion criteria, a total of 26 studies were selected as the data sources for the present investigation. The various characteristics of studies, including their respective contexts, dates of publication, participants, research methodologies, and instruments for data collection, were subject to review. Subsequently, the compiled studies were utilized to collate diverse outcomes of self-efficacy among EFL instructors. The collected studies amalgamated completely similar items and furnished the frequency of their occurrences. The majority of the outcomes associated with the self-efficacy of English as a Foreign Language (EFL) instructors pertain to the teachers themselves, as opposed to having a direct impact on their students. A limited number of outcomes pertain specifically to learners, with learner academic (language) achievement being the most noteworthy. In relation to the ramifications pertaining to educators, teacher burnout emerges as the most salient outcome, as it is identified as a crucial factor in 12 of the studies. Based on the amalgamation of primary discoveries from the gathered research, it can be inferred that burnout is significantly and inversely associated with self-efficacy. Hence, the absence of self-efficacy may be considered a noteworthy antecedent of teacher burnout. Although there are limited techniques for analyzing teacher efficacy consequences, quantitative evidence for teacher efficacy consequences may provide stronger theoretical and practical links with teacher efficacy (Klassen et al., 2011).

The results of this investigation are consistent with the existing literature. Demir (2021) conducted an extensive literature review to investigate the self-efficacy beliefs of English as a Foreign Language (EFL) teachers. The study arrived at the conclusion that there exists a correlation between several factors and the self-efficacy of English as a Foreign Language (EFL) instructors. These factors include job satisfaction, teaching methodologies, psychological wellness, and burnout. According to Hoang's (2018) systematic review of 27 studies, self-efficacy has been consistently identified as a significant factor influencing the practices of English as a Foreign Language (EFL) teachers.

The present study examined the contextual factors, participant characteristics, research objectives, methodological approaches, and primary outcomes of the reviewed literature. The majority of the studies employed quantitative methodologies. In a previous literature review, Wyatt (2018) examined the methodologies employed by scholars



in their research on Long-Term Socio-Ecological (LTSE) systems, as well as the primary domains of inquiry. Overall, it can be contended that the methodologies employed in the present investigation, along with the results obtained, are consistent with the existing body of literature. The employment of modern learning-centered techniques and support for language development among EFL teachers were both found to be impacted by their TSE, according to the findings. These results are in line with those of a few related studies (Chacon, 2005), including one that examined students' sense of self-efficacy to implement innovative teaching strategies in the classroom, use custodial control-reducing teaching strategies and classroom management strategies (Guskey, 1987), take responsibility for students with special learning needs (Allinder, 1994), and manage classroom issues (Chacon, 2005). Teachers who have a high feeling of efficacy can undertake more difficult duties, are determined, exhibit greater fortitude while facing challenges, and become less worried.

Findings also revealed that the psychological health of EFL teachers could be significantly predicted by their sense of efficacy as a teacher. This result is consistent with the results of a significant body of research demonstrating the link between high levels of psychological health and teachers' levels of self-efficacy (Zee & Koomen, 2016; Fathi et al., 2020a, 2020b; Xiyun, et al., 2022). For instance, Lipiska-Grobelny and Narska (2021) discovered a correlation between teachers' psychological well-being and their level of self-efficacy. In other words, teachers who felt highly competent had higher levels of happiness and satisfaction and lower levels of distress. One explanation is that teachers with higher levels of self-efficacy—those who believe they have a significant impact on students' growth and learning—might feel more passionate about and satisfied with their work, which could improve their psychological well-being. Deci and Ryan (1985), who made the case that one's intrinsic motivation adds to their psychological well-being, corroborate this. Furthermore, by easing their psychological burdens and difficulties, teachers may be inspired to improve their classroom management and pedagogical efficacy. It can also be argued that teachers who have higher efficacy views and self-confidence in their abilities to teach effectively and engage their students feel more of a feeling of personal accomplishment and experience less burnout. Findings also support the findings reported by Hultell, et al (2013) which found a negative correlation between teachers' SE and their burnout. According to Skaalvik and Skaalvik (2010), high TSE reflects low-level burnout while low TSE reflects high-level burnout. The results are likewise in line with those of Avanzi et al. (2012), who found a link between burnout at work and among students among Italian teachers.

## Conclusions

This study explored the main consequences of EFL teachers' self-efficacy. Results of both qualitative and quantitative phases of the study showed that EFL teachers' self-efficacy is associated with a number of variables including psychological well-being, professional development, pedagogical success, low rate of burnout, effective instructional strategies, etc. One could argue that language institutions have the potential to enhance the individual and collective efficacy of teachers through the creation of a convivial collegial environment and a shared sense of community among English as a Foreign Language educators. According to the research conducted by Helms-Lorenz and Maulana (2016),

teachers' efficacy beliefs play a crucial role in enabling them to cope with the challenges of daily stress, job anxiety, and dissatisfaction. Schwarzer and Hallum (2008) posited that reduced levels of efficacy beliefs in educators elevate their susceptibility to experiencing burnout. Drawing from these findings and those of comparable research, it can be inferred that heightened perceptions of teacher efficacy serve as a pivotal factor in enhancing their psychological welfare.

The enhancement of teachers' psychological well-being can be positively influenced by the role of administrators. Research evidence suggests that the positive and equitable leadership roles of administrators have a favorable impact on the psychological well-being of employees, while negative and inequitable leaderships have an unfavorable impact (Densten, 2005; Helms-Lorenz & Maulana, 2016). Therefore, it is crucial to give serious attention to the role of administrators in promoting the psychological well-being of teachers.

This study seems to be a promising area for further investigation. Given the significant impact of Long-Term Stressful Events (LTSE), it is recommended that teacher educators prioritize the concept of self-efficacy in their interactions with student-teachers. The development of self-efficacy beliefs is a crucial factor that influences their academic trajectories. Moreover, it is advisable to conduct a replication of this research with diverse study samples, not only pertaining to the outcomes but also with regard to the origins of self-efficacy among EFL educators. In addition, it is noteworthy that the majority of research conducted on this subject matter has been of a quantitative nature, indicating a need for further exploration through qualitative and mixed-methods approaches.

#### **Limitations and suggestions for further studies**

This study has several limitations that should be considered when interpreting its findings. Firstly, the issue of generalizability arises, as the results may be context-specific to the Iranian educational system and may not be readily applicable to other cultural or educational settings. Sampling bias could also be a concern if the sample used in the study is not representative of the larger population of Iranian EFL teachers, potentially limiting the external validity of the results. Additionally, reliance on self-report measures for assessing self-efficacy introduces the possibility of bias, as participants may not always accurately represent their actual behaviors or abilities. A cross-sectional design, if employed, may hinder the study's ability to capture the dynamic nature of self-efficacy over time, and a longitudinal approach might provide a more comprehensive understanding of its development among Iranian EFL teachers. Social desirability bias further complicates the accuracy of responses, as participants may be inclined to provide socially acceptable answers rather than authentic reflections of their experiences.

The study's use of structural equation modeling, while powerful for identifying relationships between variables, cannot establish causation definitively. Furthermore, if the instruments used to measure self-efficacy lack cultural validation for the Iranian context, the accuracy and relevance of the results may be compromised. Potential recall bias may also be present if participants are required to recall past experiences, as memories can be fallible and subject to distortion.

Looking ahead, four areas for further studies could enhance the understanding of Iranian EFL teachers' self-efficacy. First, an investigation into the generalizability of the

findings across diverse cultural and educational contexts would contribute to the external validity of the research. Second, longitudinal studies could provide insights into the developmental trajectories of self-efficacy among Iranian EFL teachers. Third, exploring additional factors that may influence self-efficacy, such as organizational support or professional development opportunities, would offer a more comprehensive picture. Finally, a thorough examination of the cultural validity of the instruments used to measure self-efficacy in this context could enhance the reliability and applicability of future research.

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#### Author contributions

MM drafted the manuscript. GA and HHT confirmed the manuscript. MM collected the data. GA analyzed the data. All authors read the manuscript and agreed with the publication.

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#### Data availability

The authors declare that the data would be available at the editors' request from the corresponding author.

#### Declarations

##### Competing interests

The authors declare no competing interests.

##### Ethical approval and consent to participate

The authors declare that all authors filled in the consent form and willingly participated in the study. The ethical committee of Islamic Azad University confirmed that this study was conducted based on the guidelines and principles of this institute. The written informed consent from all participants was taken.

##### Conflicts of interest

The authors declare no conflict of interest.

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