The Impacts of Reflective Teaching and Emotion Regulation on Work Engagement: Into Prospect of Effective Teaching in Higher Education

Ehsan Namaziandost
PhD in Applied Linguistics (TEFL); Department of General Courses, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran

Tahereh Heydarnejad
Department of English Language, Faculty of Literature and Humanities, University of Gonabad, Gonabad, Iran

Zeinab Azizi
Assistant Professor, Teaching English and Linguistics Department, Ayatollah Ozma Borujerdi University, Borujerd, Iran

Abstract
Reflective teaching (RT) and emotion regulation (ER) empower teachers to observe and evaluate themselves. Despite the long history of RT and ER, little is known about how they can influence teacher work engagement (WE). Thereby, the this study aimed at examining a structural model of English as a Foreign Language university professors’ RT, ER, and WE. In so doing, the researchers administered the English Language Teacher Reflective Inventory, The Language Teacher Emotion Regulation Inventory, and The Engaged Teacher Scale to 341 EFL university professors. They used a Structural Equation Modelling to analyze the collected data. Findings reflected that university professors with higher reflective teaching practices were more engaged in job duties. Moreover, the findings documented that the participants who were more reflective in their teaching had higher emotion regulation. The findings offer some implications for different stakeholders.

Keywords: Emotion Regulation, Reflective Teaching, Iranian Higher Education Contexts, Work Engagement, University Professors

1 Corresponding author: e.namazi75@yahoo.com
1. Introduction

Undoubtedly, teachers are to provide knowledge and skills to the young generation and give them the possibility for a better future (Mostafavi et al., 2022; Rezai et al., 2022). The way teachers behave and teach directly affects their students’ academic success and future. Hence, university professors cannot pave the ground for such an invaluable purpose unless they enjoy the required content and pedagogical knowledge. A key construct that is highly needed for university professors to gain the required content and pedagogical knowledge is reflective teaching (RT) (Pollard & Collins, 2005). It is viewed as an essential construct providing a safe road for improving professional competence. In simple terms, it is considered as a metacognitive skill opening up opportunities for using intuition, insight, and artistry (Akbari, 2007; Ayoobiyan & Rashidi, 2021; Fathi et al., 2021; Shirazizadeh et al., 2019). As defined by Aliakbari et al. (2020), RT is a problem-solving tool used by teachers to react efficiently in every demanding situation by looking back and forth their teaching behaviors. It helps teachers to ponder upon their teaching and make better decisions. Thus, it is essential for any educational system to nurture higher order thinking skills among teachers.

It is self-evident that an inevitable part of teaching are emotions (Namaziandost et al., 2022). As underscored by Heydarnejad et al. (2021a) and Xiyun et al. (2022), “teachers’ effectiveness is tied to applying effective strategies to monitor and modify emotions. In other words, teachers are expected to control their emotions to fulfill educational objectives. In so doing, they may apply various strategies, which are defined as emotion
regulation strategies (Alipour et al., 2021; Derakhshan et al., 2022; Frenzel et al., 2020; Taxer & Gross, 2018; Wang et al., 2022). Teachers who regulate their emotions efficiently are able to act effectively during emotional experiences at the workplace (Chang & Taxer, 2020). In recent years, a mass of research has offered strong evidence in support of the significant role of teacher ER in their teaching effectiveness (i.e., Frenzel et al., 2021; Taylor et al., 2020; Zheng et al., 2022).

Another important construct affecting teachers’ effectiveness is WE. As an affective-motivational construct, WE is considered the individuals’ willingness and involvement at work (Silva et al., 2020). In the modern educational organizations wherein the working conditions are becoming more challenging and demanding, the teachers with higher emotion regulation (ER) are more engaged in job duties. The engaged teachers are more dedicated and committed to educational purposes, are engrossed with class activities, and careful to students’ wants and needs (Burić & Macuka, 2017; Topchyan & Woehler, 2020). Leafing through the empirical studies in the existing literature reflects that teacher WE has a detrimental effect on their professional growth, as well as their students’ psychological well-being and learning engagement (e.g., Han & Wang, 2021; Zhang et al., 2021).

In the literature, a mass of study has explored the essence and role of teacher RT (e.g., Malmir & Mohammadi, 2018; Rashtchi & Sanayi Mashhour, 2019), ER (e.g., Fathi & Derakhshan, 2019; Heydarnejad et al., 2021b; Morris & King, 2018; Richards, 2020), WE (e.g., Li, 2022; Schaufeli et al., 2008). Given the important role of RT, ER, and WE in teachers’ effectiveness, their relationships and their possible effects on the teaching profession have received scant attention “in the Iranian higher education context. To fill up this lacuna, this research is an attempt to picture the correlations between RT, ER, and WE in higher education. The findings of
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this research may be beneficial for different stakeholders to further their understanding of the correlations among RT, ER, and WE in the Iranian higher education” contexts. To meet these purposes, the research questions below were inspected:

1. Is EFL university professors’ RT affected by their WE?
2. Is EFL university professors’ ER influenced by their WE?

2. Literature Review

2.1 Reflective Teaching

One of the often-cited constructs in the literature of L2 teaching is RT. As defined by Dewey (1933), RT entails teachers’ examination of their fundamental assumptions and beliefs about teaching activities. In this regard, “two kinds of reflection can be considered: reflection-in-action and reflection-on-action. The former deals with teachers’ reflection” during teaching challenges and difficulties. However, the latter happens prior to or after experiencing teaching challenges and difficulties (Akbari et al., 2010). Open-mindedness, a sense of responsibility, and wholeheartedness are considered the prerequisite for reflectivity (Akbari et al., 2010). Reflective thinking is a systematic process of meaning transformation from one experience to another experience in the hope of a deeper understanding (Gheith & Aljaberi, 2018). It is on the opposite pole of impulsivity (Farrell, 2016).

Through reflection, teachers can reach an in-depth understanding of teaching by going beyond typical teaching approaches and strategies (Farrell, 2015). Gheith and Aljaberi (2018) argued that RT turns teachers into active constructive learners who are involved in the dynamic evaluation, observation, and reflection. Due to a lack of agreement on what constitutes reflection, no clear operational model exists to picture this construct before 2010. A RT model was introduced by Akbari et al. (2010) for language
teachers. The model “entails five elements, including cognitive, affective, critical, meta-cognitive, and practical. The cognitive element refers to teachers’ activities to achieve professional growth. The affective element, the third dimension, is related to teacher’s reflection on their learners’ emotional reactions. The meta-cognitive element refers to teachers’ evaluation of their personality and undertaken activities. The critical element is concerned with reflection on the socio-political aspects of teaching. And, the practical element entails the practical acts of reflection, such as lesson reports, journal writing, observation,” and teaching portfolios, to name a few (Farrell, 2016).

To capture teacher reflectivity, various “attempts have been made in recent years. As an example, Malmir and Mohammadi (2018) explored the influence of RT and self-efficacy on professional success in the EFL context of Iran. Their findings evidenced that both RT and self-efficacy were strong predictors of the participants’ professional” success. Furthermore, Slade et al. (2019) reported that RT substantially contributed to pre-service teachers’ activities. Additionally, Shirazizadeh et al. (2019) inspected the association between teacher reflection, resilience, and stress in the EFL context. Their findings indicated that RT and resilience were correlated positively. In contrast, RT and role stress were related negatively. The mediator role of RT in decreasing teacher burnout was investigated by Ghasemzadeh et al. (2019) as well as Rashtchi and Sanayi Mashhour (2019). In the same vein, Aliakbari et al. (2020) found out teacher reflective practice, job satisfaction, and autonomy are significantly related. The direct influence of RT on language teacher immunity has received support from the results of Rahimpour et al. (2020). All the existing literature on RE proves that this construct gives direction to teachers' activities. In this regard, fewer studies were conducted in higher education and the possible relationship of RT with ER, and WE in higher education is quite unexplored.
2.2 Emotion Regulation

As noted by Gross and John (2003) and Gross and Thompson (2007), ER is a cognitive, behavioral, and physiological process used to mold emotional experiences effectively. ER is not a snapshot but a process that shapes and directs how individuals experience or express their emotions (Gross, 1998b). More precisely, ER includes regulation of emotions (i.e., how emotions themselves should be managed) and regulation by emotions (i.e., how emotions manage something else) (Gross, 1998b, 2015). Furthermore, ER changes the rise, time span, and latency of emotional responses along with cognitive, behavioral, and physiological reactions (Taxer & Gross, 2018).

The fundamental aspects of ER are based on "the activation of a regulatory goal, the engagement of regulatory processes, and the modulation of the emotion trajectory." (Gross & Barrett, 2011, p. 27). ER is of two types: explicit or implicit (Gross, 2014). ER is explicit when emotions are regulated in conscious awareness. ER is implicit as the management of emotions occurs unconsciously (Kobylińska & Kusev, 2019).

To date, different models have been introduced to picture the involved strategies in ER. One of the first models of ER is the Hot/Cool System. It posits that willpower is the bedrock of ER (Mischel & Ayduk, 2004). According to this model, individuals develop the Hot system in childhood, while they progress the Cool system in childhood. Individuals use the former to act quickly in emotional situations and they use the latter to stay relaxed in emotional tensions (Greenier et al., 2021; Sutton & Harper, 2009). Another "model is the Resources or Strength Model, proposed by Schmeichel and Baumesiter (2004). It rests on self-regulation, emotion regulation, and motivation". Gross (1998b, 2014) presented the process-oriented model of ER. It rests on "the modal model and treats each step in the emotion-
The modal model of ER posits “the situation-attention-appraisal-response sequence” (Gross, 1998b, p. 28). A psychologically relevant situation is presented by this sequence. According to Gross (2014), this situation may be external (“The snake slithering into my tent.”) or internal ("The sneaking suspicion that I will never amount to anything."). Ellsworth and Scherer (2003) stress that external or internal situations lead to appraisals affecting individual's evaluation of the existing situation with respect to the intended purposes. These unfolding appraisals alter experiential, behavioral, and neurobiological response systems (Gross, 2014). Emotional responses result in the change of the situation evoking the initial response. The modal model of emotion also pictures this characteristic of emotion that the response loops back to (and modifies) the situation that evoked the emotion. Simply put, “emotional responses often lead to changes in the environment that change the possibility of subsequent instances of that and other emotions.” (Gross & Thompson, 2007, p. 102).

According to Gross (2014), ER entails five dimensions: "situation selection, situation modification, attentional deployment, cognitive change, and response modulation." (p. 56). Situation selection (SS) addresses different activities that may be used to stop situations resulting in a special emotion. The second dimension considers the strategies used to alter the features of situations triggering particular emotions. The third dimension refers to shifting one’s attention to change the experienced emotion. The fourth dimension involves strategies used to change a situation in terms of the cognitive appraisal originating emotions. The last dimension addresses the different strategies applied to affect and alter reactions physically, experientially, or behaviorally.
Heydarnejad et al. (2021b) developed a six-dimension model to explain language teacher ER. The dimensions entail “situation selection, situation modification (SM), attention deployment (AD), reappraisal, suppression, and seeking social support." (p. 7). They "developed the first three dimensions of the model (i.e., situation selection, SM, AD) in line with Gross’ process model of ER (1998a, 1998b, 2014). And, they used the findings of Gross and John (2003) to develop reappraisal and suppression dimensions. Additionally, they benefited from the findings of Jennings and Greenberg (2009) and Taxer and Gross (2018) to present the last dimension, seeking social support. It is the distinctive feature of the language teacher ER model”, which considers the social aspect of teaching (Heydarnejad et al., 2021b).

In the educational contexts, both teachers and learners face various challenges, which may trigger pleasant and unpleasant emotions. The way they handle their emotions affects other academic success. Teachers can establish a pleasant emotional climate to manage their own emotions and their students’ ones efficiently (Alipour et al., 2021). With efficient ER strategies, teachers can manipulate the experienced frustration in classes (Morris & King, 2018). Chang and Taxer (2020) explored teacher ER as a reaction to the classroom misbehaviors of their students. Their findings indicated that the teachers applying reappraisal as ER strategy in the face of students’ misbehavior “have the chance of experiencing pleasant emotions. Furthermore, structural equation modeling was used by Fathi and Derakhshan (2019) to explore the effect of teacher ER and self-efficacy on teaching stress in the EFL context of Iran. Their results indicated that self-efficacy skills and ER enhance teachers to manage the teaching stress. They also emphasize the role of in-service classes in boosting teachers’ self-efficacy beliefs and ER. Taking a similar path, Fathi et al. (2021) inspected the associations between ER, self-efficacy, burnout, and reflection using a structural equation
modeling. The findings reflected that these constructs were interrelated, and ER played a mediator role in teacher self-efficacy, burnout, and reflection. Finally, in a recent attempt, Zheng et al. (2022) scrutinized the correlations between ER, self-efficacy beliefs, and L2 grit among EFL university professors. In accordance with their findings, the participants’ ER and self-efficacy tendencies could predict their level of L2 grit.

2.3 Work Engagement

In 1990, Kahn introduced the construct of WE. It refers to emotional, cognitive, and physical absorption into one’s job responsibilities (Van Beek et al., 2012). WE "is an affective-motivational construct defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption." (Schaufeli & Salanova, 2011, p. 8). Vigor is characterized as the tendency to devote effort while working. Dedication is concerned with individuals’ inspiration and enthusiasm while working. Absorption means “being fully concentrated and deeply engrossed in one’s work, whereby time passes quickly and one has difficulties detaching oneself from work.” (Schaufeli & Salanova, 2011, p. 24). Kahn (1990) introduced the self-in-role construct due to the fact that individuals are constantly bringing in and leaving out the different depths of themselves at workplace.

The terms WR and workaholism are sometimes confused, although they are different (Bakker et al., 2011). Engaged employees should be differentiated from workaholics, which refers to a person who works a lot, so that they do not have time to do anything else. In other words, workaholics are characterized by working compulsively (Schaufeli & Salanova, 2011). According to Gorgievski et al. (2010), workaholics “work hard because of a strong and irresistible inner drive, but engaged employees work hard because for them working is fun.” (p. 85). As Schaufeli et al. (2008) highlighted, compared to working hard, this uncontrollable inclination is more toxic.
More importantly, the motivational dynamics underlying these two constructs differ fundamentally (Taris et al., 2010). Viewing from another perspective, Bakker et al. (2011) noted that a limit should be assumed for engagement because “if engaged employees get overly involved in work activities, they may experience work-family conflict and other negative consequences.” (p. 35). Furthermore, approach motivation supports the behavior of people with high WE, whereas avoidance motivation justifies the behavior of workaholics (Schaufeli & Salanova, 2011). Having dealt with the two concepts of WE and workaholics and their differentiations, Van Beek et al. (2010) stress that intrinsic motivation leads to WE while extrinsic motivation backs up workaholism.

Self-determination theory (SDT) can be considered as the theoretical foundation of WE (Bakker et al., 2011; Zeng et al., 2019). Based on the assumption of SDT, “engaged people are encouraged to bring improved presentation, perseverance, and inventiveness to their work.” (Oga-Baldwin & Nakata, 2021, p. 29). In addition, Klassen et al. (2013) proposed a new model to explain teacher WE. This model consists of three sorts of engagement, namely cognitive-physical, emotional, social (i.e., students and colleagues). The first dimension refers to what extent teachers allocate their attention, time, and energy cognitively and physically. As defined by Han and Wang (2021), the second dimension is teachers’ pleasure, pleasant emotions, and entertainment tied with teaching (Han and Wang, 2021). The last dimension is related to the ways through which teachers engage with their colleagues and students socially. The last dimension is the distinguishing feature of this model to consider the social aspect of teachers’ performances. Teaching is embedded with social relationships with students, colleagues, and parents. These interrelationships affect teachers’ as well as
learners’ engagement in the social context of the workplace (Jennings & Greenberg, 2009; Oga-Baldwin & Nakata, 2020).

The existing literature on WE mirrors the reciprocal associations between teacher WE and other constructs. As an example, Oga-Baldwin & Nakata (2020) conducted a study in Japanese foreign language classes to gauge the effects of engaged teachers’ practices on their learners’ activities. Their results showed that the learners were more active and motivated when their teachers were more engaged. The associations between teacher WE and burnout, teaching experiences were explored by (Amini Faskhodi & Siyyari, 2018). Their findings suggest that WE and burnout are negatively associated. Additionally, they concluded that the level of teacher engagement increases as they gain teaching experience. Similarly, in China, the relationships between WE, perseverance of effort, growth mindset, and well-being were explored by Zeng et al. (2019). Their study findings uncovered that the participants’ WE was highly affected by growth mindset, perseverance of effort, growth mindset, and well-being. Furthermore, Greenier et al. (2021) documented that ER and psychological well-being could predict teacher WE. Lastly, Shu (2022) reported that commitment and self-efficacy could predict teacher WE and well-being.

3. Method

3.1 Setting and Participants

This research was run at the setting of the Iranian run-state universities (n = 24). The researchers selected 342 EFL university professors, including males (n = 180) and females (n = 161). They adopted a convenience or opportunity sampling method to choose the participants. Their age ranged between 31 and 55 and they had a vast range of teaching experience (i.e., from 1 to 29 years). They all held either Ph.D. or were Ph.D. candidates. Their majors include teaching English as a foreign language (TEFL) (n =
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126), English Literature (n = 73), English Translation (n = 89), and also Linguistics (n = 53). Of particular note is that the researchers informed the participants about the objectives of the study and asked if they were willing to participate in the study. The participants who were willing to participate in the study signed digital written consent (in Persian) and sent it back to the researchers. The researchers ensured the confidentiality of the participants’ performance and shared them with the final” findings. Lastly, it is worth mentioning that this research was monitored and confirmed by the Ethical Board of Research at Gonabad University.

3.2 Instruments

The researchers adopted “some instruments to gain the needed data. The first instrument comprised the English Language Teacher Reflective Inventory (ELTRI). Constructed and validated by Akbari et al. (2010), the researchers used it to measure the participants’ reflectivity while teaching. ELTRI measures different dimensions, including practical (e.g., “I write about my teaching experiences in a diary or a notebook.”), cognitive (e.g., “I think of using/introducing new teaching techniques in my classes.”), learner (affective) (e.g., “I ask my students to write/talk about their perceptions of my classes and the things they liked/disliked about them.”), meta-cognitive (e.g., “I think of the positive/negative role models I have had as a student and the way they have affected me in my practice.”) and, critical elements (e.g., “I think about the political aspects of my teaching and the way I may affect my students’ political views.”). It included 29 items on a five-point Likert scale, ranging from 1 (= completely disagree) to” 5 (= completely agree). The reliability of ELTRI was calculated using Cronbach alpha and the results were acceptable, ranging from 0.81 to 0.91 for all the sub-scales.

The next data collection “tool was The Language Teacher Emotion Regulation Inventory (LTERI). Constructed and validated by Heydarnejad et
al. (2021b), the researchers used it to measure the participants’ ER. The LTERI includes 27 items on a five-point Likert scale, ranging from 1 (= never) to 5 (= always). It examines six components, including SS (e.g., “I avoid conflicting or emotionally disturbing situations in the staff room.”), SM (e.g., “When an unpleasant discussion is raised in my classes, I try to change the topic.”), AD (e.g., “If I feel frustrated in language classes, I try to engage myself in different class activities to forget it.”), reappraisal (e.g., “If for some reasons, I feel upset at work, I remind myself of my goals in my life.”), suppression (e.g., “If I feel helpless in my language classes, I disregard that.”), and seeking social support (e.g., “When I feel hopeless in my language classes, I seek advice from experts such as psychologists and school counselors.”). Prior to the current research, the researchers gauged the reliability of the LTERI through Cronbach’s alpha. The findings yielded from 0.74 to 0.89 to all the components which were found acceptable by the researchers.

The last instrument entailed “The Engaged Teacher Scale (ETS). Designed and validated by Klassen et al. (2013), the researchers employed it to assess the participants’ WE at the workplace. ETS has 16 items on a seven-point Likert scale, ranging from 1 (= strongly disagree) to 7 (= strongly agree). ETS contains four components, namely cognitive engagement (CE) (e.g., “I try my hardest to perform well while teaching.”), emotional engagement (EE) (e.g., “I am excited about teaching.”), social engagement (SE): students (e.g., “In class, I show warmth to my students.”), as well as SE: colleagues (e.g., “At school, I care about the problems of my colleagues.”). The researchers” calculated the reliability of all the subscales through Cronbach’s alpha. The findings gave acceptable coefficients ranging from 0.87 to 0.92.

3.3 Procedures of Data Collection
The researchers gathered the needed data moving through different steps. First, they measured the reliability of the data collection tools prior to the main study. Then, they started collecting the data from “January to May, 2022 using a web-based platform. Afterward, having earned the participants’ consent by signing digital written consent, the researchers invited them to fill out an electronic form of the ELTRI, the LTERI, and the ETS through Google Forms. The researchers asked the participants to contact them in the face of any difficulty in understanding the items of the instruments. The researchers designed the Google forms such” that each part had to be necessarily linked; thus, they did not miss any data.

3.4 Data Analysis

The researchers examined the normality “assumption of the gained data using a Kolmogorov-Smirnov Test. They found that the normality assumption was met for the gained data and thus, they could employ CFA and SEM through LISREL 8.80. To test the proposed structural theory, the researchers used SEM to take a confirmatory hypothesis-testing approach (Schreiber et al., 2006). It entails the measurement model, and the structural model (Kunnan, 1998). They explored the association between the observed variables and latent variables using the measurement model. Additionally, they inspected the correlations between the latent variables via a structural model. Furthermore, prior to testing a structural model, the researchers” validated all the latent variables through CFA (Hair et al., 1998).

4. Results

Table 1 informs the descriptive statistics for the RT, ER, and WE among the participants.

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Subscales</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>M</th>
<th>S.D.</th>
</tr>
</thead>
</table>

Table 1
Results of Descriptive Statistics for the RT, ER, and WE
As Table 1 informs, considering “subscales of the ELTRI, the largest mean scores belong to the critical elements ($M = 3.936, SD = 0.883$) and the cognitive elements ($M = 3.720, SD = 0.926$), respectively. Concerning the components of the LTERI, the highest mean scores were calculated for AD ($M = 4.003, SD = 0.780$) and the seeking social support ($M = 3.838, SD = 0.802$), in turn. Regarding the components of the ETS, the highest mean scores were found for the EE ($M = 5.142, SD = 1.288$) and SE: students ($M = 5.025, SD = 1.348$), respectively. Subsequently, as noted above, the researchers used the Kolmogorov-Smirnov Test to examine the normality distributions of the collected data”. Table 2 presents the findings of the Kolmogorov-Smirnov Test.

### Table 2

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Subscales</th>
<th>Kolmogorov-Smirnov Z</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELTRI</td>
<td>Practical</td>
<td>341 1.00 5.00 3.570</td>
<td>1.067</td>
</tr>
<tr>
<td></td>
<td>Cognitive</td>
<td>341 1.00 5.00 3.720</td>
<td>0.926</td>
</tr>
<tr>
<td></td>
<td>Learner (affective)</td>
<td>341 1.00 5.00 3.690</td>
<td>1.041</td>
</tr>
<tr>
<td></td>
<td>Meta-Cognitive</td>
<td>341 1.00 5.00 3.710</td>
<td>0.873</td>
</tr>
<tr>
<td>LTERI</td>
<td>SS</td>
<td>341 1.00 5.00 3.653</td>
<td>0.760</td>
</tr>
<tr>
<td></td>
<td>SM</td>
<td>341 1.00 5.00 3.533</td>
<td>0.715</td>
</tr>
<tr>
<td></td>
<td>AD</td>
<td>341 1.00 5.00 4.003</td>
<td>0.780</td>
</tr>
<tr>
<td></td>
<td>Reappraisal</td>
<td>341 1.00 5.00 3.688</td>
<td>0.753</td>
</tr>
<tr>
<td></td>
<td>Suppression</td>
<td>341 1.00 5.00 3.516</td>
<td>0.769</td>
</tr>
<tr>
<td></td>
<td>Seeking Social Support</td>
<td>341 1.00 5.00 3.838</td>
<td>0.802</td>
</tr>
<tr>
<td>ETS</td>
<td>CE</td>
<td>341 1.00 7.00 4.923</td>
<td>1.275</td>
</tr>
<tr>
<td></td>
<td>EEt</td>
<td>341 1.00 7.00 5.142</td>
<td>1.288</td>
</tr>
<tr>
<td></td>
<td>SE: Students</td>
<td>341 1.00 7.00 5.025</td>
<td>1.348</td>
</tr>
<tr>
<td></td>
<td>SE: Colleagues</td>
<td>341 1.00 7.00 4.609</td>
<td>1.301</td>
</tr>
</tbody>
</table>
As Table 2 shows, because “the sig value for the data collection tools was larger than the significance level (0.05), the researchers ensured that the collected data were normally distributed. Thus, the researchers answered the research questions using parametric statistical procedures. For this purpose, they employed the LISREL 8.80 statistical package to measure the structural associations between RT, ER, and WE. They used the chi-square magnitude, the Root Mean Squared Error of Approximation (RMSEA), the comparative fit index (CFI), and the normed fit index (NFI) to assess the model fit. As noted by Jöreskog (1990), the value of the chi-square should be lower than 3. Plus, the value of the RMSEA should be lower than 0.1. Additionally, “the NFI with a cut value greater than 0.90, GFI with a cut value greater than 0.90, and CFI with a cut value greater than 0.90 indicates a good fit” (Jöreskog, 1990, p. 214). As Table 3 reports, the calculated value of the chi-square/df ratio (2.863) was acceptable. Also, the estimated value of the RMSEA (0.074) was acceptable. Moreover, the values” of the fit indices, GFI (0.931), NFI (0.944), and CFI (0.925), were acceptable.

Table 3
Results of Fit Indices (Model 1)
<table>
<thead>
<tr>
<th>Model</th>
<th>Cut value</th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
<td>87</td>
</tr>
<tr>
<td></td>
<td>2.863</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td></td>
<td>0.074</td>
</tr>
<tr>
<td>GFI</td>
<td>0.9&gt;</td>
</tr>
<tr>
<td></td>
<td>0.931</td>
</tr>
<tr>
<td>NFI</td>
<td>0.9&gt;</td>
</tr>
<tr>
<td></td>
<td>0.944</td>
</tr>
<tr>
<td>CFI</td>
<td>0.9&gt;</td>
</tr>
<tr>
<td></td>
<td>0.925</td>
</tr>
</tbody>
</table>

Figure 2. The Associations among RT, ER, and WE Presented through Schematic Representation of Path Coefficient Values (Model 1)
The researchers inspected “the strengths causal associations between the RT, ER, and WE through the t-values and standardized estimates. Figure 2 and Figure 3 depicts that RT positively influenced ER ($\beta = 0.54, t = 10.19$) and WE ($\beta = 0.74, t = 16.63$) and the t-value was larger than 1.96. The effect of ER on WE was significantly positive ($\beta = 0.61, t = 13.65$), and the t-value was larger than 1.96.

Table 4

<table>
<thead>
<tr>
<th>Fit Indices (Model 2)</th>
<th>Model</th>
<th>Cut value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>851.14</td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>315</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.702</td>
</tr>
<tr>
<td>RMSEA</td>
<td>&lt;0.1</td>
<td>0.071</td>
</tr>
<tr>
<td>GFI</td>
<td>0.9+</td>
<td>0.920</td>
</tr>
<tr>
<td>NFI</td>
<td>0.9+</td>
<td>0.956</td>
</tr>
<tr>
<td>CFI</td>
<td>0.9+</td>
<td>0.941</td>
</tr>
</tbody>
</table>

Table 4 reports the acceptable criteria for fit indices in the Model 2. That is, the acceptable fit thresholds for the chi-square/df ratio (2.702) and the
RMSEA (0.071) were achieved. Moreover, the calculated values were acceptable for GFI (0.920), NFI (0.956), and CFI (0.941).

**Figure 4.** The Associations among RT, ER, and WE Presented through Schematic Representation of Path Coefficient Values (Model 2)

**Figure 5.** Model 2 Displaying T Values for Path Coefficient Significance
Figure 4 and Figure 5 (Model 2) present the associations among RT, ER, and WE and all subscales of ETS through the schematic representation of path coefficient values. As it is shown, RT significantly and positively correlated with all subscales of ETS as following: CE ($\beta = 0.85$, $t = 17.50$), EE ($\beta = 0.81$, $t = 17.18$), SE: students ($\beta = 0.70$, $t = 15.36$) and SE: colleagues ($\beta = 0.64$, $t = 12.68$). Additionally, the correlation between ER and all subscales of ETS was inferred. It means, ER positively correlated with CE ($\beta = 0.65$, $t = 12.83$), EE ($\beta = 0.73$, $t = 16.63$), SE: students ($\beta = 0.61$, $t = 12.93$) and SE: colleagues ($\beta = 0.59$, $t = 10.81$).

After that, the researchers ran a Pearson product-moment correlation to verify the associations among RT, ER, and all the subscales of ETS.

**Table 5**

*Results of the Correlation Coefficients among RT, ER, and the Subscales of ETS*

<table>
<thead>
<tr>
<th></th>
<th>RT</th>
<th>ER</th>
<th>CE</th>
<th>EE</th>
<th>SE: Students</th>
<th>SE: Colleagues</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ER</td>
<td>0.557**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE</td>
<td>0.903**</td>
<td>0.715**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EE</td>
<td>0.873**</td>
<td>0.818**</td>
<td>0.731**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE: Students</td>
<td>0.756**</td>
<td>0.689**</td>
<td>0.690**</td>
<td>0.726**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>SE: Colleagues</td>
<td>0.702**</td>
<td>0.633**</td>
<td>0.697**</td>
<td>0.650**</td>
<td>0.764**</td>
<td>1</td>
</tr>
</tbody>
</table>

As Table 5 informs, significant correlations existed between RT and the subscales of ETS: CE ($r = 0.903$, $p < 0.01$), EE ($r = 0.873$, $p < 0.01$), SE: Students ($r = 0.756$, $p < 0.01$), SE: Colleagues ($r = 0.702$, $p < 0.01$). Additionally, it was found significant correlations existed between ER and the subscales of ETS: CE ($r = 0.715$, $p < 0.01$), EE ($r = 0.818$, $p < 0.01$), SE: Students ($r = 0.689$, $p < 0.01$), SE: Colleagues ($r = 0.633$, $p < 0.01$).
5. Discussion

This research purported to disclose the association between university teachers RT, ER and WE. Based on the data screening, RT and ER positively and significantly predict the EFL university professors’ WE (Model 1). The beneficial effect of RT on ER was also confirmed in higher education (Model 1). Moreover, the contributions of RT as well as ER to WE subscales were found (Mode 1).

Considering the first research question, the gained findings documented that RT could predict the EFL university professors’ WE. Additionally, the attained results disclosed the positive effects of RT on the subscales of WE, “namely cognitive engagement, emotional engagement, and SE (students and colleagues). That is, the gained results uncovered that the quality of the EFL university professors’ thinking directly affected their WE in terms of cognitive, emotional, and social perspectives. Aligned with the gained results, this argument may be made that the reflectivity might have led to active and skillful conceptualization, analysis, synthesis, and evaluation of the university professors’ activities. In other words,” through the lens of RT, the participants might have practiced more profound thinking skills and used efficient strategies to overcome challenges and uncertainties at their workplace.

The gained findings are in accordance with those of the previous studies (e.g., Barni et al., 2019; Burić & Macuka, 2017; Burić & Moè, 2020), disclosing that teacher WE was highly correlated with their self-efficacy. Furthermore, in accord with the obtained results, Heydarnejad et al. (2021b) found that higher-order thinking skills can be strong predictors of university professors’ emotions and teaching style preferences. Additionally, corroborating with the gained findings, Aslan et al. (2022) uncovered that teachers’ professional development is highly entangled with their reflexive
practices. Likewise, “consistent with the attained results, Amirian (2022) disclosed that there were positive relationships between higher-order thinking skills, self-efficacy beliefs, and teaching style preferences among EFL university professors. Finally, the findings of this research lend credence to those of the former body of research (e.g., Li, 2022; Rahimpour et al., 2020; Rahmati et al., 2019).” They documented that teacher RT can foster their immunity.

A line of discussion for the findings may be presented with the help of the language teacher RT model, proposed by Akbari et al. (2010). In accord with this model, it may be argued that the participants who were reflective might have been more involved in practical, cognitive, affective, meta-cognitive, and critical evaluation of their job duties. This state might have been very useful for the participants to control and manage teaching procedures with an open mind and self-awareness. Therefore, the reflective participants might have been more successful to regulate their emotions in unpleasant situations. Additionally, another reason for the gained results may be attributed to self-determination theory (SDT). Aligned with SDT, it may be argued that the participants who were reflective in their teaching, might have delivered quality instruction and seek out innovative teaching processes. As they could reach higher motivation, better performance, and sustainability, they might have more regulate successfully their emotions at the workplace (Schaufeli & Salanova, 2011). Furthermore, to recap the discussion of the gained results, it may be referred to the model of teacher engagement (Klassen et al., 2013). Along with this model, it may be argued that the participants who embarked on cognitive evaluation, they might have engaged in SE at their workplace. This, in turn, might have been facilitative to earn a better picture of their emotions and the ways through which they might have regulate them in difficulties.
Regarding the second “research question, the obtained findings unveiled that ER could predict the EFL university professors’ WE. That is, the attained results uncovered that the more the participants applied emotion regulatory strategies, the higher WE they might have experienced in their job duties. Furthermore, the obtained results disclosed that ER positively influenced the subscales of WE, namely emotional engagement, cognitive engagement, and SE (students and colleagues). Considering the achieved findings, it was disclosed that the participants who could monitor their emotional experiences and expressions might have produced more emotional balance in their professional lives. The obtained results are congruent with those of Fathi et al. (2021) and Xie (2021). They found that ER could highly predict WE among teachers. Moreover, the obtained results are in line with those of Keleynikov et al. (2021), revealing that teacher mindfulness and ER had a protective role in psychological distress and WE during the COVID-19 pandemic. Plus, the gained results are in accordance with those of Zheng et al. (2022), disclosing that university teacher ER was highly correlated with their self-efficacy and L2 grit. Likewise, the obtained results are consistent with the findings of Namaizandost et al. (2022). They uncovered” that the Iranian university professors WE and self-efficacy were positively affected by their ER.

The gained results may be ascribed to the underpinning theories of ER and teacher WE. Along with the results of the research, it may be argued that as the participants’ ER was characterized by “appraisal, attention deployment, situation modification, seeking social support, and situation selection” (Wang et al., 2021, p. 4), applying each of these emotion regulatory strategies might have been a step toward emotional balance in their professional lives. Additionally, another justification for the gained findings can be linked with this fact that using ER might be associated with
self-awareness and self-regulation (Heydarnejad et al., 2021b; Jiang et al., 2016), thoughtful decisions (Wang et al., 2022), psychological well-being and L2 grit (Li et al., 2022), social relationships with students and colleagues (Mulyani et al., 2021), and consequently engagement in their job (Li et al., 2021). In other words, ER might be a way to decrease the impact of working conditions and aid work-life balance.

Furthermore, the obtained findings indicated that RT could influence the participants’ ER (Model 1). Considering this outcome, it may be argued that RT and cognitive evaluation might have helped the participants to regulate and monitor their emotional experiences more efficiently. In other words, “the amalgamation of cognition and emotion might have shaped effective self-awareness, self-regulation, self-monitoring, and self-assessment among the university professors” (Namaziandost et al., 2022, p. 25), thus helping them perform better in personal and professional demands. The achieved results are in accordance with prior research (e.g., Bleakley et al., 2020; Gkonou & Miller, 2020; Song, 2021), highlighting that teacher emotions are directly affected by their higher order thinking skills.

6. Conclusion

To summarize, this research evidenced the contributions of RT and ER to WE in higher education. The findings mirrored that RT and ER work as a compass for university professors and give direction in the teaching journey and protect them in teaching challenges and difficulties. This affects the attitudes of professors toward the teaching profession, as well as their communication with students, parents, and colleagues. Furthermore, the significant effect of RT on ER was inferred by the study findings. Attention to the associations among RT, EM, and WE in the educational contexts, particularly in higher education deserve more attention and research.
The gained findings may be beneficial for pertinent stakeholders particularly for educators, in the higher education contexts. Teachers, as well as university professors, need to acquire knowledge related to RT implementation and ER strategies. “Therefore, a particular attention should be given to cultivate higher order thinking skills, as well as RT in pre-service and in-service teacher training pograms. Moreover, training courses should be arranged for making teachers able to regulate their emotions during teaching difficulties. In that way, they have better opportunities to gain better mental health and greater self-confidence while teaching. Finally, teachers can be beneficiary of the gained findings. They should earn comprehensive knowledge of ER if they are going to manage their emotions during teaching tensions. By doing” so, they can control their anxiety and stress, make appropriate relationships with others in the educational centers and take over challenging situations.

This research suffered from some limitations needing to be considered in the interpretation of the gained findings. First, this research adopted a quantitative design, thus to present an in-depth picture of the causal links among TR, ER, and WE, more mixed-methods studies are needed. Secondly, the demographic variables of the university professors and their possible links with TR, ER, and WE were not explored in this research; Thus, they can be a promising line for further research. Additionally, it is recommended to examine whether RT, ER, and WE can influence learners’ reflective thinking, ER, and engagement.

References


The Impacts of Reflective …


