Exploring Iranian EFL Teachers' Critical Thinking Dispositions and Reflective Teaching

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Abstract

To effectively and reflectively impart knowledge to their students, Iranian EFL teachers should cultivate their critical thinking dispositions (CTDs). Therefore, the aim of this mixed-methods study is twofold: Firstly, to explore how CTDs and their role in reflective teaching (RT) are addressed and perceived among EFL teachers, and secondly, to explore the interplay between EFL teachers' CTDs and RT. To do so, 303 Iranian EFL teachers participated in this study. The data collection instruments were two questionnaires, namely CT dispositions and RT questionnaires, and a semi-structured interview. Upon collecting the data, Pearson correlations and Structural Equation Modeling (SEM) using AMOS 20 were used to analyze the quantitative data. Moreover, the descriptive qualitative content analysis technique was used to analyze the qualitative data. The quantitative findings indicated that the largest statistically significant value, which identified the strength of the relationships between CTDs and RT, was attributed to integrity. This value showed that the integrity explains 13 percent of the variance in RT scores based on Regression Weights for RT and CTDs. The second significant variable was perseverance, which explained six percent of the variance in RT scores. Courage and humility variables also explain one percent of the variance in RT scores. Moreover, the qualitative results indicated that CTDs played a significant role in Iranian EFL teachers' RT practices. The findings may have implications for the Iranian EFL stakeholders, EFL teachers, and EFL teacher training programs.

Keywords: Critical Thinking Dispositions, Reflective Teaching, EFL Teacher, Mixed-Methods Approach

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Second language (L2) teaching is an intricate phenomenon, and L2 teachers play a key role in this process. They are actually viewed as the creators of the first model of the target language as well as the ones that develop the curricula, assess student progress, and facilitate learning. Teachers have various roles in different language teaching theories (Budsankom et al., 2015; Cansoy & Türkoglu, 2017; Marcos et al., 2008). According to Akbari (2007), constructivist pedagogy, a social and educational philosophy based on the belief that knowledge is actively constructed by learners and not passively received (Richards & Schmidt, 2010), places a strong emphasis on giving instructors the autonomy and confidence to make decisions. Teachers now play the role of facilitators and design dynamic environments for teaching and learning. It appears that the new strategy calls for specific attributes in teachers; therefore, they can function in a variety of settings. Given their individual characteristics, the adjustments consequently had a direct impact on teachers' professional development (PD) within the context of teacher education. Critical thinking (CT) and reflective teaching (RT) were the main considerations made in educational contexts (Cotter & Tally, 2009; Toppin & Chitsonga, 2016).

Recently, the significance of CT skills has been emphasized for academic achievement and life (Ghanizadeh, 2017). Budsankom et al. (2015) noted that one of the most essential components for success in educational settings is CT. Byrnes and Dunbar (2014) defined CT as an intellectual and disciplined process that competently conceptualizes, applies, analyzes, synthesizes, and evaluates the data collected from different sources, such as experience, observation, reflection, communication, or reasoning, and it is like a leader to educational beliefs and actions (Paul & Elder, 2012). As Hitchcock (2017) points out, a critical thinker not only has CT skills but also uses them when the situation calls for it. These tendencies are referred to as dispositions, and they show themselves in a person's mental attitudes. CTDs can be defined as consistent willingness, motivation, inclination, and intention to be engaged in CT while reflecting on significant issues, making decisions, and solving problems (Elder, 2005). As a result, once they start teaching, language instructors with CTDs will be able to establish dynamic learning environments. To distribute the knowledge to their students proficiently, language teachers need to develop their CTDs (Ku et al., 2014). While many language teachers seek to teach higher thinking skills, most of them do not have the knowledge or skills to do so (Cansoy & Türkoglu, 2017). Without extensive training in these skills, teachers cannot think critically and achieve CT in their educational settings (Avalos, 2011; Alavi et al., 2021). According to Alexander (2017), language instructors frequently teach at a low cognitive level, and instruction for language teachers, in his opinion, is the solution to this issue. His research findings indicated that teaching CT skills is essential for teacher PD. Teachers need to develop their CT abilities as well as understand how to teach these skills to their students. One of the most important tasks of teachers is to teach students CT skills in a way that helps them with social, environmental, and ethical decision-making processes (Yu, 2014). By teaching CTDs, teachers can help shape democratic students who use different CTDs to solve everyday problems. However, the most important factor for this training is that teachers must know the skills of CT and use

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them to solve problems. Researchers (e.g., Amirian et al., 2023; Hoorijani & Heidari Tabrizi, 2023) believe that these exercises are successful when practiced on a daily basis, and teaching them without practical use is a waste of time and prevents students from developing CTDs.

CT contains many mental processes and numerous dispositions that are directly related to the notion of reflective teaching (RT) (Marin & De la Pava, 2017). Forawi (2016) defined RT as "a response to past experiences and involves conscious recall and examination of the experiences as a basis for evaluation and decision-making and as a source for planning and action" (p. 32). Reflective practice has astonishingly affected the field of teacher development and teacher education, and the contexts of English as a Foreign Language (EFL) are no exception (Farrell, 2014). Cotter and Tally (2009) believed that if L2 practitioners hope to make use of their time and make progress, reflective practice is undoubtedly among the priorities. Glenn (2011) suggests that in EFL teaching contexts, reflective practice is employed to (1) enhance teaching contexts' quality and achievement and (2) create independent, self-motivated, and energetic language learners and teachers. The way teachers engage in reflection and choose special behavior in language learning and teaching processes may be the influence of teachers' CTDs. Consequently, the significance of teacher CT and its dispositions and valuable contributions to make pedagogical improvement in different respects triggered conducting the current study. Reflection is both a significant part of CT in general and an essential factor in teacher development in particular (Dastgoshadeh & Jalilzadeh, 2022). Since it is often believed that reflectivity affects one's CT, both theoretical theories and empirical research have attempted to link reflective thinking with RT in relation to CT (e.g., Abdar & Shafaei, 2022; Mermelstein, 2018). According to Choy and Oo (2012), reflective thinking enhances CT and is a component of the CT process, which involves examining and making judgments about past events.

In relation to the topic, a number of research studies have been carried out on CTDs and RT separately or in combination with other variables in EFL contexts. As an example, in their study, Malmir and Mohammadi (2018) investigated the impacts of RT and self-efficacy on professional success, and the results demonstrated that both RT and self-efficacy were significant indicators of professional success. Additionally, Slade et al. (2019) found that RT made a significant contribution to the activities of pre-service teachers. Furthermore, the study conducted by Shirazizadeh et al. (2019) examined the correlation between teacher reflection, resilience, and stress within the EFL setting, and the findings revealed a favorable correlation between RT and resilience. The findings of Rahimpour et al. (2020) provided evidence for the direct impact of RT on language teacher immunity. In addition, in a recent study, Hoorijani and Heidari Tabrizi (2023) found that CTDs have significant effects on improving Iranian EFL learners' argumentative writing development. However, to the researchers' knowledge, no study has explored the relationships between these variables among Iranian EFL teachers. Suppose teaching 'how to think' as the primary goal of education should encompass both mental abilities and thinking dispositions. In that case, it is necessary to have a vivid

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picture of how it is dealt with in the Iranian ELT context. Moreover, the findings of this study would provide some recommendations for the development of CT dispositions and RT in Iranian EFL teacher education.

Literature Review

Theoretical Framework

The conceptualization of CT is often understood to include two distinct components, namely Cognitive Skills and Affective Dispositions (Willis, 2004). According to this conceptual framework, an exemplary critical thinker possesses a consistent inclination towards curiosity, a strong foundation of knowledge, a reliance on rationality, an open mindset, adaptability, impartiality in evaluation, honesty in acknowledging personal biases, prudence in rendering judgments, a willingness to reassess perspectives, clarity in addressing matters, organization in intricate subjects, diligence in acquiring pertinent information, rationality in the selection of criteria, concentration in inquiry, and perseverance in pursuing outcomes that are as accurate as the subject matter and the contextual factors allow (Murphy et al., 2014). Cognitive skills, such as analysis, inference, deductive reasoning, and inductive reasoning, are a collection of higher-level thinking abilities that are believed to be taught and conveyed (Brown, 2007). One of the common characteristics of critical thinkers is their inclination to use CT abilities at the right moment. These inclinations are sometimes referred to as dispositions, and they manifest in an individual's cognitive attitudes (Hitchcock, 2011). Glaser (1941), Ennis (1991), and Facione (1990) have proposed the most advanced published ideas of the dispositional and attitudinal components of a critical thinker.

In 1991, Ennis developed a list of mental habits that included the characteristics of the ideal critical thinker. The disposition component is defined as the inclination and drive to use CT, encompassing qualities such as truth-seeking, open-mindedness, maturity, inquisitiveness, and self-confidence. Academics often see CT as including both skills and dispositions. Facione (1990) defines the inclination to participate in CT as the persistent internal drive to address issues and make judgments via the use of CT skills. Therefore, motivation is considered an essential need for the development of CT skills and abilities. Elder and Paul (2008) contend that effort and perseverance are key attributes that bolster CT. The authors argued that persistence is a cognitive attribute that contributes to an individual's capacity for CT. Therefore, similar to metacognition, motivation seems to be a prerequisite for CT since those without drive are unlikely to demonstrate CT. Several studies on motivation have indicated that tasks that are difficult or challenging, especially those that require higher-order thinking skills, maybe more motivating for students compared to tasks that could be easily addressed via the rote application of a predetermined algorithm (Broussard & Garrison, 2004; Linnenbrink & Pintrich, 2002; Pintrich, 2003).

Numerous scholarly investigations have examined the concepts of instructors' RT and CT from various theoretical frameworks. Shangarffam and Rahnama Roud Poshti (2011) conducted research to investigate the relationship between CT, self-efficacy, and

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attitude toward effective teaching among instructors. Toy and Ok (2012) performed experimental research in Turkey to evaluate the effectiveness of a CT-based instructional course on topic understanding and CT. They found that although students provided via CT instructions showed greater academic performance and disposition compared to traditional supervision, the difference was not significant. The results indicated a significant correlation between clear thinking and teachers' self-efficacy, as well as their judgments of the meaning and components of successful teaching. In their study, Mousapour Negari and Beiranvand (2013) examined the impact of RT on the development of CT skills among Iranian EFL instructors and observed a noteworthy impact. In their study, Soodmand Afshar and Farahani (2015) investigated the correlation between the teaching experience of EFL instructors and their RT and found that teaching experience had a substantial impact on the teachers' RT abilities. In a study conducted by Noormohammadi (2014), the correlation between RT and teacher efficacy and autonomy was examined, and the findings revealed a substantial positive association between teachers' self-efficacy and RT. According to the study conducted by Sharifi and Abdolmanafi Rokini (2014), observed instructors enhance their professional qualities by engaging in RT and evaluating and judging their peers. In a study conducted by Mahmoodi-Shahrebabaki and Rajabi-Kondlaji (2015), the researchers examined the correlation between teaching experience and reflectivity. The findings of the study revealed a negative association between these two variables. In the study conducted by Choy et al. (2017), it was observed that reflective thinking had a role in enhancing the self-efficacy and instructional awareness of EFL instructors. Parsi (2017) investigated the correlation between the CT abilities of EFL instructors and their use of motivating tactics. The study found no statistically significant association between these two factors. Nevertheless, a significant correlation was seen between CT and the instructional success and effectiveness of educators. In their study, Parsi and Ashraf (2020) examined the correlation between the teaching experience of EFL instructors and their CT abilities. Their findings revealed a significant association between teaching experience and CT skills. The study conducted by Keyvanloo et al. (2023) investigated the relationship between CT, autonomy, and teaching experience among EFL teachers in both public and private educational settings. The findings revealed that, with the exception of deduction, all subcomponents of instructors' CT were shown to have a strong predictive relationship with instructors' independence. Furthermore, experience was shown to be a more accurate and significant predictor of their independence. The study conducted by Abdar and Shafaei (2022) revealed a statistically significant positive correlation between instructors' reflective thinking and their teaching style. In their research, Amirian et al. (2023) investigated the significant impact of critical thinking (CT), positive and practical views, and preferred instructional approaches on the effectiveness of professors and, therefore, the overall performance of the educational system. The results indicated that instructors' teaching style choices are strongly influenced by their skill in CT and their positive and practical views.

Critical Thinking

Fisher and Scriven (1997, p. 20) defined CT as the "skilled and active interpretation and evaluation of observations, communications, information, and argumentation." CT is regarded as an essential skill (Buczynski & Hansen, 2010; Heinrich et al., 2015). Recent studies in the field of education emphasize the need for CT skills for academic and life success. Some researchers have called CT one of the most important prerequisites of success in this century (Henderson Hurley & Hurley, 2013). In the last two decades, researchers have paid special attention to CT, and various definitions have been suggested to describe it (Combs et al., 2009; Elder & Paul, 2013). Although many studies have been conducted in this area, and almost all researchers and educators agree that CT skills are essential for teachers' success in teaching, there is no agreed-upon definition or method for measuring and teaching students CT skills (Dwyer et al., 2012; Hancock & Scherff, 2010; Ku et al., 2014; Paul & Elder, 2012; Semerci, 2011). The most important step in developing teachers' CT skills and inclinations is to become familiar with their own thinking. Assessing their own thinking helps them improve their CT. This awareness also plays an important role in transmitting and teaching this skill. In their studies, researchers refer to this awareness as metacognition (Evens et al., 2014).

Researchers and educators tried to improve students' CT skills in their educational design. To do this, they focused on explicit CT teaching using argument mapping and other types of reasoning (Elder & Paul, 2013). Although their findings showed that educational strategies are useful for developing and promoting CT, more research is needed on the quality and manner of this training. Slavin (2012) investigated pre-university preparation and the responsibility of curriculum officials to improve high-level thinking skills. He believed that the majority of students who entered universities struggled with their CT, reading, and writing abilities. However, due to the inadequacy of the teaching fundamentals, teachers are refraining from focusing on enhancing students' CT skills. Cansoy and Türkoglu (2017) assessed how well asynchronous discussion forums (ADFs) worked for developing CT skills. In this study, they identified students' interaction patterns and their CTDs, which were identified through asynchronous discussion. Qualitative analysis of the data showed in detail how students' discussions shifted from lower to higher levels of CT. The findings of this study demonstrated how students' CT abilities might be developed in a large academic classroom by using Socratic conversations during group discussions.

Reflective Teaching

Richards and Schmidt (2010, p. 491) defined reflection as "the process of thinking back on and considering experiences in order to better understand the significance of such experiences." According to Stanulis et al. (2012), RT is the reaction against positivism, a philosophy that is embraced by the cultural framework within which the technical model of rationality is embedded implicitly and sometimes explicitly. In the Post-method era, teachers are expected to be reflective practitioners (Gilbert, 2011; Kumaravadivelu, 2005; Marcos et al., 2008). It has been emphasized that teachers who contemplate their teaching

can significantly improve their practice. Approximately all L2 teachers and researchers believe that teachers can improve their practice by consciously and systematically reflecting on their teaching experiences (Farrell, 2014). In addition, RT can help inexperienced language teachers better understand the standard principles of teaching as well as their own teaching methods. An effective RT program can increase EFL teachers' teaching ability and their better understanding of teaching processes and, ultimately, students' learning. Teachers can also use the principles of this program for self-assessment as one of the main phases of language development (Desimone et al., 2014).

Reflective thinking has two challenges: First, teachers need to keep an eye on everything that worries students in their classrooms. They should be aware of all the factors that can make the situation favorable or unsuitable for students to learn, as well as the consequences of those factors. Second, teachers must also be aware of the factors influencing the teaching context, the surrounding environment, and the context in which students learn (Collin et al., 2013; Goldhaber & Cowan, 2014; Mellati et al., 2022). Awareness of how to make appropriate educational decisions using reflective thinking is a prerequisite for turning this process into an automated exercise. This process is then added to the daily activities of the classroom. In such circumstances, one can expect the effectiveness of such a strategy. Its effectiveness depends on modeling, nurturing, and teaching directly to the prospective teachers (Guilfoyle et al., 2020).

The next step in the process of CT is reflection. If the process of CT is properly taught to new teachers, they can benefit from knowing their thoughts and promoting CT among their students. If the principles of teaching are conducted properly, teachers will think critically about the factors that affect their teaching, and if they do not reach the desired result, they will reflect on the results of their CT (Turan, 2016). Teachers who do not have CT prefer to use the ideas and attitudes of others instead of their own attitudes and ideas. Critical reflection and thinking are not limited to the mentioned issues but also include feelings and passions in the classroom. L2 teachers are well aware that passion is very important, along with educational knowledge and skills (Hennissen et al., 2017).

During the critical stage of reflection, the teacher makes the best decision using CT and considering the available options. The use of CT requires teachers to be aware of the historical, socio-political, and moral context of the educational context. Therefore, through critical reflection, a practitioner could contextualize problems and weigh different options (Kim & Klassen, 2018; Akbari et al., 2010). However, it should be noted that critical reflection does not mark the end of the reflection process. On the contrary, the result of this stage of reflection, either in the form of a judgment or a decision for further reflection, becomes the beginning point for another cycle of reflection (Akbari, 2007).

The Role of Critical Thinking and Reflection in ELT
Due to the close relationship between language development and thinking, instruction in higher-order thinking abilities should be incorporated into an L2 curriculum (Shirkhani & Fahim, 2011). Scholars have placed considerable emphasis on the critical

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nature of cultivating higher-order thinking abilities within foreign language classrooms (e.g., Amirian et al., 2023; Choy et al., 2017; Keyvanloo et al., 2023). Furthermore, empirical data substantiates the efficacy of concurrently instructing CT skills and the foreign language (e.g., Taghizade et al., 2019; Yazdankhah et al., 2022). As Lipman (2003) observed, in addition to facilitating students' progression through the academic levels, it is the job of instructors to foster CT in their students. Instructors of foreign languages are obligated to assist students in developing CT skills concurrently with the language learning process. Mahyuddin et al. (2004) argued that the integration of CT skills into ELT curricula has significant potential for enhancement.

Teachers have to develop CT abilities and engage in reflective practices to effectively convey knowledge to their students (Samanci, 2015; Zhou et al., 2012). Despite the aspirations of a number of instructors to impart higher-order thinking abilities, they often face a deficiency in either the requisite information or the instructional approaches to effectively teach these higher-order abilities (Cansoy & Türkoglu, 2017; Geçit & Akarsu, 2017). To foster CT and reflection in L2 teaching, it is important to extensively instruct instructors in these abilities, hence enabling them to develop into critical thinkers (Avalos, 2011). According to Samanci (2015), it is the responsibility of educators to impart to learners the CT abilities that facilitate the development of social, ethical, environmental, and moral decision-making processes. In order to shape and exemplify democratic persons who have acquired diverse modes of thinking, instructors must exhibit CT abilities (Avalos, 2011). To effectively teach CT skills, it is necessary to engage in regular practice of both the language and the application of CT abilities. Excessive reliance on memorization knowledge without conceptualization hinders the development of students' CT abilities (Sherblom, 2010).

Regarding CTDs in the Iranian EFL context, the study of Taghizade et al. (2019) was selected as the first empirical study. They investigated the interplay of CT explicit teaching, academic writing, CT skills, and CTDs of Iranian learners. For this purpose, 140 undergraduate Iranian EFL students were selected. They were divided into the experimental and control groups. Both groups received instruction in academic writing courses for 15 weeks. However, the experimental group received instruction integrated with CT strategies. Three instruments were employed including the researcher-developed essay test, the Ennis-Weir Critical Thinking Essay Test, and the California Critical Thinking Dispositions Inventory (CCTDI). According to the results, the mean scores of the experimental and control groups differed significantly. The results also showed that although some CCTDI subscales (analyticality, CT inquisitiveness, CT self-confidence, and systematicity) had significantly different mean posttest scores from one another, other subscales (truth-seeking, cognitive maturity, and open-mindedness) did not show significantly different posttest scores. The experimental group outperformed the control group on the academic writing test. Reviewing this study is significant in supporting the theoretical foundation of the present study regarding CTDs in the Iranian EFL context.

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Due to the qualitative part of the present study, the qualitative investigation of Yazdankhah et al. (2022), who explored the perceptions and opinions of teacher educators regarding CT and its function in teacher professional development (TPD) through transformative learning as its primary framework (Mezirow, 1987), was reviewed in this section. Thirty EFL teacher educators took part in in-depth interviews for the aim of data gathering. The whole process of data collecting was recorded in audio format to facilitate future reference during data analysis. To get familiarity with the data, the interviews were transcribed and then subjected to member checking with the participants. Reflective thematic analysis was used to analyze the gathered data. The results revealed that cognition, metacognition, and self-attainment—three primary themes—emerged as the significant factors regarding teacher educators' experiences with and attitudes toward CT and its use in teacher professional development (TPD). This study could support the results of the qualitative part of the present study regarding the application of CT skills and dispositions in teaching, especially in RT and teacher education.

Considering the main variables of the present study, the third empirical study was Dastgoshadeh and Jalilizadeh's (2022) study, which looked at the relationship between EFL teachers' RT and CT and their PD. They also looked into which PD elements may most accurately predict RT and CT. To do so, 45 Iranian EFL instructors from Sanandaj took part in the study. They completed three questionnaires, including a Teachers' Professional Development Questionnaire to measure the teachers' PD, a Teachers' Reflective Thinking Questionnaire to assess the teachers' reflective thinking, and a Critical Thinking Appraisal Form to measure the teachers' critical thinking. The relationship between professional development and its subscales with RT and CT was assessed using Pearson's product-moment correlation coefficient. A multiple linear regression analysis was conducted to examine the potential predictive relationship between PD components and RT and CT. The findings showed that among the three PD areas —subject-matter field, dedicated field, and pedagogical field—the pedagogical field had the strongest correlation with the ability to predict both RT and CT. The significance of reviewing their study as empirical research is that their findings could lend support to the theoretical foundations of the present study regarding CTDs and RT as the main variables.

Regarding RT in the Iranian EFL context, the empirical study of Namaziandoust et al. (2023) examined a structural model of RT, emotion regulation, and work engagement among EFL university instructors. The English Language Teacher Reflective Inventory, The Language Teacher Emotion Regulation Inventory, and The Engaged Teacher Scale were administered to 341 EFL university professors. To examine the gathered data, they employed a structural equation modeling (SEM) method. A higher level of RT methods among university professors was found to be associated with greater work engagement. The results also showed that participants with stronger emotion regulation had more RT styles. The significance of reviewing this research as an empirical study for the present study lies in the fact that the relationships among RT, emotion regulation, and work

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engagement could provide a solid theoretical background to support the findings of this study regarding RT.

Another empirical study with regard to RT in the Iranian EFL context is the study of Rezaei et al. (2021), who conducted a mixed-method study to assess the impact of academic degree and teaching experience on five characteristics of RT for Iranian EFL teachers. In this respect, 142 EFL teachers with 4–30 years of teaching experience completed a 29-item Likert scale RT Questionnaire. In addition, a semi-structured interview with 16 EFL teachers was done to gather more detailed triangulated data on their levels of reflection and the associated issues. The results showed that teachers' academic background and experience had significant effects on their RT, with the emotive dimension showing the least impact. The findings showed a significant connection between the two research variables and the RT aspects. Additionally, the interview results showed that the biggest barriers to RT were a lack of time, imposed curricula, and poor teacher preparation programs. The rationale behind selecting this study to review as an empirical study was that their findings could present a background to lend credence to the qualitative and quantitative results of the present study.

In a similar line of studies, Farahian and Rajabi (2022) investigated the degree of reflection and obstacles to reflection among EFL teachers. To this end, 98 EFL teachers were chosen for this study based on an experimental research methodology, and the English language teacher reflection inventory was given to each of them. Twenty participants from the same pool were questioned to compile the inventory's results. For the study's second phase, an open-ended questionnaire was administered to the same subjects, which examined the obstacles to instructors' reflective practice. This phase also aimed to learn more about these obstacles. A Barriers to Reflective Practice Questionnaire was prepared and provided to the teachers based on the data that was obtained from the literature. The research found that reflection was not highly practiced by EFL teachers. The most significant barriers to their reflection, according to them, are top-down curriculum, disregard for teachers' authority, teachers' propensity for traditional teaching methods, instructors' workload, a lack of appropriate training programs, and an inadequate atmosphere for reflection. Reviewing this study could be beneficial for the purpose of the present study regarding the real practice of RT in the immediate context under study.

Reflection is both an important part of CT and an essential factor in teacher professional development (TPD). Moreover, in relation to effective issues, teacher reflection is another factor that leads to improving classroom processes and develops confidence and motivation among both teachers and students (Farahian & Rajabi, 2022). While RT has been around in teacher education, and EFL teachers are highly motivated to be involved in reflective practices, the scarcity of research and practice in the Iranian context is quite noticeable. Furthermore, reflection, mostly at the theoretical level, is advantageous and has many merits (Demirbag et al., 2016). As far as the researchers of the present study reviewed the literature, no empirical research study has been conducted to show the connection between these two constructs and to explore the EFL perceptions

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toward them in the Iranian EFL context. As a result, this study was an attempt to fill this gap. Thus, the present study aimed to answer the following research questions:

Which one of CT dispositions proposed by Paul and Elder (2012) is a stronger predictor of reflective teaching in the Iranian EFL context?

What are the Iranian EFL teachers' perceptions toward the role of CT dispositions in reflective teaching?

Method

Participants

The participants included Iranian EFL teachers who have been teaching the English language at different levels in different language institutes in Tehran, Iran. Due to time limitations, cost, and practicality, the researchers used convenience sampling and selected 303 Iranian EFL teachers as the participants. The researchers employed this type of sampling because of the accessibility and availability of the participants. However, it is prone to sample biases (Alvi, 2016). The researchers minimized biases in participant selection and enhanced research accuracy by assessing and adjusting sample representativeness, and the researchers diversified convenience samples by distributing surveys at different times and places to create a representative cross-section of the target population. Their age ranged between 20 to 50 years old. In addition, 114 (37.6%) of the participants were male, and 189 (62.4%) were female. They had different years of teaching experience. The teaching experience of 90 instructors (29.7%) was less than five years, 81 (26.7%) were between 6-10 years, 102 (33.7%) were between 11-20 years, and 30 (9.9%) were more than 20 years. Moreover, regarding their education levels, 77 (25.4%) of them had BA degrees, 124 (40.9%) had MA degrees, 58 (19.1%) were Ph.D. holders, and 44 (14.5%) had TESOL or other related international teaching certificates. Their first language was Persian, and their second language was English.

Instrumentation

CT Dispositions Questionnaire (CTDQ)

The CT dispositions questionnaire was created with the purpose of measuring the degree of CT dispositions among EFL teachers. Eight thinking dispositions were included in the first version of this researcher-made questionnaire, which had 60 items and was based on the categorization of CTDs proposed by Paul and Elder (2012). These dispositions were: (1) intellectual humility; (2) intellectual integrity; (3) intellectual autonomy; (4) intellectual perseverance; (5) intellectual empathy; (6) intellectual courage; (7) confidence in reason; and (8) fair-mindedness. The questionnaire consists of a series of self-report statements on the beliefs of the teachers, and each is expressed on a Likert scale from false to true.

A first edition of the CTDQ, which included 60 questions with a Likert-scale format, was administered to 303 EFL teachers. The collected data were sent to SPSS for factor analysis with maximum likelihood factoring, iteration, and an oblique (Direct Olimin) rotation. Then, Maximum likelihood analysis revealed the presence of 16 factors for the

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items with the Eigenvalues of more than 1. Based on the results of the Scree test, the researchers decided to keep four main factors for the following analyses. The results of the parallel analysis also confirmed the results of the Scree test. Based on these analyses, the researchers deleted some items of the questionnaire from 60 to 55 (Questions numbers 4, 29, 43, 45, & 54 were deleted based on the results of this analysis), and the questions that had a factor loading greater than 0.40 were kept.

The researchers performed Exploratory Factor Analysis (EFA) to check the validity of the questionnaire in the real context. The findings of this analysis also showed that the inventory measures the four mentioned factors. Based on the results of this analysis, five questions of the questionnaire were deleted. Studying previous related studies, the researchers called them Intellectual Integrity (II), Intellectual Perseverance (IP), Intellectual Courage (IC), and Intellectual Humility (IH). When someone has II, he or she is respectful to others. They also need to be respected by others. When someone has an IP, he or she loves learning. They have a tendency not to stop learning by the time the learning process gets complicated. When someone has IC, he or she may have a consciousness of negative and positive beliefs and emotions. When someone has IC, he or she may have knowledge of self-deception, bias, and prejudice (Elder & Paul, 2013).

The maximum likelihood estimation procedure and confirmatory factor analysis (CFA) in AMOS 24.0 software were also utilized by the researchers to verify the validity of the CTQ. The questionnaire's 55 questions loaded four separate criteria, according to the results. The researchers evaluated how well the model matched the data using the values of many fit indices, including the root mean square error of approximation (RMSEA), comparative fit index (CFI), goodness-of-fit index (GFI), and Normed fit index (NFI). A good match between the data and the model is indicated by values more than 0.90 for the CFI, GFI, and NFI, whereas values over 0.95 are considered to be an excellent fit (Byrne, 2010). According to several language scholars, RMSEA values up to 0.08 suggest a reasonable fit, whereas values less than 0.05 imply a very excellent fit to the model (Byrne, 2010). Inspection of standardized estimates signaled that several items (Items 3, 8, 10, 15, 18, 22, 24, 30, 35, 42, 47, 49, 50, and 57) had the minimum loading on the four factors, with a standardized estimate of less than .3. All of these items were deleted to reach a reasonable fit. The rest of the questions had standardized estimates between .55 and .85. Inspection of adjustment indices and the covariate table showed that if several residual errors were deleted, an improvement in the fit of the model would be performed. The researchers deleted the questions of the questionnaire that did not fit the model (items 1, 11, 13, 14, 16, 17, 20, 25, 26, 28, 32, 33, 34, 36, 37, 39, 40, 42, 44, 46, 48, 51, 53, & 60). In consequence, the four-factor model contained 25 questions. The latest version of the questionnaire was piloted by the researchers with 50 participants from a similar sample to ensure that the reliability index was acceptable. The reliability index of .82 (r =.82) was obtained using the Cronbach Alpha coefficient.

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Language Teacher Reflective Inventory (ELTRI)

To assess the instructors' degree of reflectivity in their classrooms, the researchers employed an RT inventory that was developed by Akbari et al. (2010). ELTRI was developed according to five main elements of English language teacher reflection that were practicality (6 questions), cognitivism (6 questions), metacognitive strategies (7 questions), affective filters (3 questions), and CT (7 questions). Practicality refers to the real practice of teaching in language classrooms. ELTRI consists of 29 questions on a 5-point Likert scale ranging from 1 (Never) to 5 (Always). The reliability and validity of the questionnaire have been proved in previous studies in this teaching context (Akbari et al., 2010). However, to ensure its reliability, the questionnaire was piloted by the researchers with 40 instructors whose teaching contexts were similar to those of the participants. The Cronbach Alpha coefficient data showed a reliability index of .89 (r =.89). The rationale behind employing this instrument was that it was employed by different researchers (e.g., Namaziandoust et al., 2023; Roohani & Moosavi Avandi, 2019; Xiaojing et al., 2022) in various contexts, and its reliability, which computed using Cronbach's coefficient ($r=0.90$), and validity were reported and assured by its authors and other researchers in the field.

Semi-structured Interview

After administering the questionnaires, the first author of the study conducted semi-structured individual interviews with 20 teachers. The interview's main goal was to gather more detailed data on how teachers perceived CT and RT in their teaching practices. The interviews were conducted face-to-face, and they were conducted in English. To minimize the impact of language proficiency of the participants on the quality and depth of the responses, the participants were allowed to switch to their native language whenever they could not express their responses accurately in English. Each session lasted roughly 20 minutes; however, there was no specific timeframe for the interviews since the nature of semi-structured interviews is iterative and interpretive. Therefore, if there was a need to dedicate more time to each interview, the first researcher of the study, as an interviewer, would extend the interview timeframe. The longest interview was 21 minutes, and the shortest one lasted 17 minutes. The interview sessions were held within a month. The researchers developed the interview questions. Then, five subject-matter experts examined and approved the interview questions to ensure their content validity. The interviews were transcribed after being recorded with the participant's consent.

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Data Collection Procedure

An explanatory sequential mixed-methods research design was used in the present study. As a result, the current study was initially conducted using a quantitative correlational strategy followed by a supportive qualitative approach (Creswell & Plano Clark, 2011). A statistics-by-themes joint display approach is used to combine the quantitative and qualitative data. Joint displays in mixed-methods research serve as a visual depiction of the integration of quantitative and qualitative findings (Guetterman et al., 2015).

Quantitative Phase

The participants were 303 Iranian EFL teachers who have been teaching the English language at different levels in different language institutes in Tehran, Iran, and they were selected based on a convenience sampling method. The first researcher collected the data, and she explained the purpose of the study to the participants. Then, the participants' consent was obtained through a consent form before the data collection, and they were reminded that they were free to take part in the study. Afterward, teachers who were accessible during their break in the language institutes met in the teachers' room to complete the CTDQ and ELTRI in person, while other instructors got the questionnaires by email. Prior to answering the questionnaires, the participants were asked to write down their demographic information, including gender, age, education level, and job experience. Additionally, the teachers were told that their information would remain confidential and be used only for this research, and the results did not have any effect on their jobs and payments.

Qualitative Phase

Twenty teachers, who were selected randomly from the study's participants, underwent the semi-structured individual interviews. The participants were informed about the purpose and the timing of the interview before the sessions began (Bakhshi et al., 2022). The interviews were done by the study's first author. Each interview lasted 20 minutes, and all interviews were recorded and later transcribed with the participants' permission. Subsequently, member checking was conducted to verify the trustworthiness of the data. The data was analyzed using the descriptive qualitative content analysis approach as described by Creswell (2012). The transcripts underwent several reviews by two subject matter specialists and were then coded. The assessment of dependability (reliability) was performed using the inter-rater agreement technique (Ary et al., 2018). Consequently, two experts were responsible for coding the transcripts to assess the inter-rater dependability, or reliability, of the coding procedure. The findings indicated a high level of agreement between the retrieved codes by two experts, suggesting a strong inter-rater dependability (reliability) in the coding process.

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Data Analysis

To analyze the quantitative data, the researchers used Pearson correlations. Then, they employed SEM using AMOS 20. SEM is a statistical procedure employed to confirm a model of relations that is hypothesized to exist among several variables (Skaalvik & Skaalvik, 2010). To inspect the hypothesized model's goodness of fit, several fit indices such as GFI, AGFI, RMSEA, CFI, IFI, TLI, and NFI are used. The SEM analysis included five phases, namely model specification, identification, model estimation, goodness of fit determination, and model respecification (Violato & Hecker 2007). Moreover, to analyze the qualitative data, the descriptive qualitative content analysis technique (Creswell, 2012) was employed.

Results

The Quantitative Phase

The researchers used Multiple Regressions (MR) to answer the first research question. The results of these analyses are presented in the following tables.

Table 1.
The Results of Goodness-of-Fit Index (GFI)

Model	RMR	GFI	AGFI	PGFI
Default model	1.356	1.000	.993	.067
Saturated model	.000	1.000		
Independence model	16.414	.785	.678	.524

The results of this table show the Goodness-of-Fit Index (GFI) value of 1.000 that considered an excellent fit.

Table 2
The Results of Root Mean Square Error of Approximation (RMSEA)

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.000	.000	.127	.683
Independence model	.253	.224	.284	.000

The results of Table 2 represent that RMSEA value is less than 0.05, and there is a good fit.

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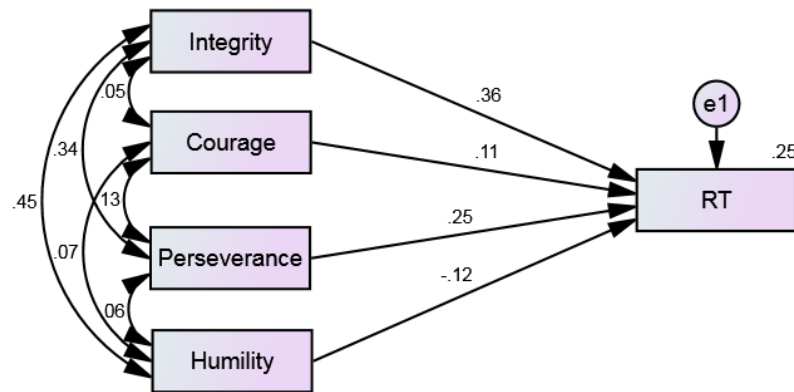**EXPLORING IRANIAN EFL TEACHERS' CRITICAL THINKING**

Figure 1. *The Results of MRs for Reflective Teaching*

As can be seen in Figure 1, the largest prediction is attributed to the integrity and perseverance variables.

Table 3.
Regression Weights for Reflective Teaching and Dispositions of CTDQ

			Estimate	SE.	CR.	P	Label
RT	<---	Integrity	1.108	.183	6.057	.000	
RT	<---	Courage	.305	.134	2.283	.022	
RT	<---	Perseverance	.642	.137	4.695	.000	
RT	<---	Humility	-.503	.236	-2.135	.033	

The results of this table confirm that all four variables made significant contributions to variances in RT scores according to Regression Weights for RT and CTDs. Based on Table 3, the first significant factor is integrity (1.108), and the second one is perseverance (.642). In addition, the third and fourth variables are courage (.305) and humility (-.503), respectively.

Table 4.
Standardized Regression Weights for the Variables in the Model

			Estimate
RT	<---	Integrity	.362
RT	<---	Courage	.115
RT	<---	Perseverance	.252
RT	<---	Humility	-.120

Table 4 presents the variables that were included in the model and their respective contributions to the prediction of the RT scores. When every CTD is compared, integrity is shown to have the highest statistically significant value (.362). According to this value,

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integrity accounts for 13% of the variance in RT scores based on Regression Weights for RT and CTDs. Perseverance is the second significant variable (.252), accounting for 6% of the variance in RT scores. One percent of the variance in RT scores is also explained by the courage (.115) and humility (-.120) variables based on Regression Weights for RT and CTDs.

Table 5.
Squared Multiple Correlations for Reflective Teaching

	Estimate
RT	.250

According to Table 5, integrity, courage, perseverance, and humility account for 25% of the variances in the Iranian EFL instructors' perceived reflective teaching practices. All in all, the quantitative results showed that integrity, perseverance, courage, and humility dispositions are the stronger predictors of reflective teaching, respectively.

The Qualitative Results

In regard to the second research question, the semi-structured interview was employed. The interview data were analyzed using a descriptive qualitative content analysis technique (Creswell, 2012). The researchers went over the interview transcripts numerous times before coding them to examine the categories and subcategories. After reading the categories and subcategories multiple times, the major themes were identified. The following table presents the major themes and the related codes.

Table 6.
The Major Themes and the Related Codes

No.	Theme	Code	Frequencies
1	Improving RT through Empowering CT Dispositions	1. Strengthening CTDs	45%
		2. Learning CTDs	26%
		3. Developing RT	68%
		4. Reflective thinking	35%
2	Improving Metacognitive Skills Required in RT by Enhancing CT Skills	1. Metacognition	78%
		2. CTDs application	89%
		3. Reflective practices	53%
		4. Monitoring	22%
3	Empowering Self-efficacy Required in RT by Acquiring CT Dispositions	1. Self-efficacy	36%
		2. Acquiring CTDs	41%
		3. Reflection	75%
		4. Self-belief	21%

Improving RT through Empowering CT Dispositions

Most participants believed that RT could be enhanced by strengthening the CT dispositions of EFL teachers. Nader, in this regard, noted,

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If EFL teachers could learn CT dispositions properly in teacher education programs, they could improve their reflective teaching in their classes, too. I think there is a direct relationship between CT dispositions and reflective teaching in L2 education.

He believed that CT dispositions played a significant role in RT in the Iranian EFL context, and teacher education programs should equip prospective teachers with a good command of CT dispositions in which they are able to reflect on their teaching practices. Elahe, in this respect, pointed out, "CT dispositions and skills could develop reflective teaching in my view since CT skills are the bases of reflective teaching in L2 classes. A teacher who does not have CT skills could not teach in a reflective way." She maintained that without CT skills, RT could not be achieved, and there is a direct relationship between CT skills and RT.

Improving Metacognitive Skills Required in RT by Enhancing CT Skills

Some participants believed that one of the main factors in RT in improving the metacognitive skills of EFL teachers, and these skills could be developed through improving CT dispositions and skills. Samaneh, in this regard, stated,

Metacognition is a main part of reflective teaching in the new era of L2 instruction. Metacognitive skills are improved by learning and applying CT skills and dispositions in classrooms. Reflection on teaching practices requires monitoring different events happening in the class in which this monitoring skill is part of teachers' metacognition.

She maintained that metacognitive skills could be achieved through CT dispositions, and monitoring skill as a main part of RT is a by-product of learning and applying CT dispositions. Ahmad, in this respect, noted, "RT is a metacognitive process in which a teacher constantly reflects on his/her own teaching during the teaching process, and the metacognitive skills required in RT should be acquired via CT dispositions." He regarded RT as a metacognition process in which acquiring CT dispositions and skills could develop EFL teachers' metacognition and metacognitive skills.

Empowering Self-efficacy Required in RT by Acquiring CT Dispositions

Some participants maintained that through learning CT dispositions, the self-efficacy of EFL teachers, which is a main part of RT, is developed. Ali, in this regard, pointed out,

CT dispositions and skills could improve the self-efficacy of L2 teachers. Self-efficacy is a basic trait in RT. L2 teachers could reflect on their practices if they have good views of their own abilities and skills. As a result, RT could be developed by acquiring CT dispositions, consciously or subconsciously.

He considered EFL teachers' self-efficacy as a main facet of RT and as a by-product of the CT dispositions, which could be improved by learning CT dispositions both

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consciously or subconsciously. Aram, in this respect, stated, "RT includes the sense of self-belief (self-efficacy), which is improved through applying CT skills." She believed that CT skills and dispositions could enhance the self-belief (self-efficacy) of EFL teachers.

All in all, the participants perceived that CT dispositions play a significant role in Iranian EFL teachers' RT practices in the Iranian EFL context.

A statistics-by-themes joint display procedure was used to integrate the quantitative and qualitative results, as illustrated in Table 9. In mixed-methods research, joint displays provide a framework for integration by combining, comparing, connecting, and linking qualitative and quantitative data or results to explore meta-inferences (Guetterman & Moss Breen, 2021).

Table 7.
Joint Display of Quantitative and Qualitative Results

Overarching Research Theme	Quantitative Results	Qualitative Results	Mixed-methods Meta-inferences
The relationships between CTDs and RT	According to the table's results, integrity, courage, perseverance, and humility account for 25% of the variances in the Iranian EFL instructors' perceived reflective teaching practices.	1. Improving RT through Empowering CT Dispositions 2. Improving Metacognitive Skills Required in RT by Enhancing CT Skills 3. Empowering Self-efficacy Required in RT by Acquiring CT Dispositions	The quantitative findings indicated that the largest statistically significant value attributed to integrity. This value shows that integrity explains 13 percent of the variance in RT scores. The second significant variable is perseverance which explains six percent of the variance in RT scores. Courage variables also explain one percent of the variance in RT scores. Moreover, the qualitative results indicated the participants believed that CT dispositions play a significant role in Iranian EFL teachers' RT practices in the Iranian EFL context.

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The results of Table 7 revealed that they complemented each other, and the mixed-methods meta-inferences showed there could be a significant relationship between CTDs and RT.

Discussion

The findings of the first research question (the quantitative results) indicated the largest statistically significant value regarding the CT dispositions attributed to integrity. According to this value, integrity accounts for 13% of the variance in RT scores. Perseverance is the second significant variable, accounting for 6% of the variance in RT scores. One percent of the variance in RT scores is also uniquely explained by the courage and humility dispositions. Moreover, the findings of the second research question (the qualitative results) indicated the participants perceived that CT dispositions play a significant role in Iranian EFL teachers' RT practices in the Iranian EFL context. The integration of quantitative and qualitative findings revealed that they complemented each other, and the mixed-methods meta-inferences showed there could be a significant relationship between CTDs and RT.

The results lend credence to the results of different studies in the Iranian EFL context (e.g., Dastgoshadeh & Jalilizadeh, 2022; Farahian & Rajabi, 2022; Namaziandoust et al., 2023; Rezaei et al., 2021; Taghizade et al., 2019; Yazdankhah et al., 2022) who found that there were relationships among CT skills and dispositions and other constructs, such as teacher PD, work engagement, and self-efficacy. The results also lend support to the CTDs (Facione, 1990), theoretical framework of the study, in which an exemplary critical thinker possesses a consistent inclination towards integrity (behaving in accordance with their professed beliefs), perseverance (sticking to challenging tasks and never give up), courage (ready to speak up for what is right), and humility (the quality of being open to one's limitations, receptive to new ideas, and willing to revise one's beliefs), which are the strong predictors of RT.

Based on the results of the first research question, the largest statistically significant value was the integrity dimension, which focuses on issues such as respect and understanding of the class community. This indicated that due to external factors, such as their position in the classroom, teachers may be highly motivated and be satisfied with their professions, or vice versa. They may lose motivation and be dissatisfied with their profession. This finding is also consistent with current teacher education studies in other contexts, such as China, South Korea, and Turkey, where teachers have more control and credibility because of integrity in the classroom than their counterparts in Western countries (e.g., Kim & Klassen, 2018). In addition, the results indicated that teachers who used reflective practices had more consistent beliefs and actions (intellectual integrity). The results lend credence to those of Faghihi and Anani Sarab (2016), whose results revealed a relatively low level of reflection, with the teachers under study tending to rely more on their own rationality in teaching, and they concluded that for teachers to develop desirable levels of integrity, they should involve themselves more in exploring their students' learning styles and critical aspects of the teaching context. In addition, Brown

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(2001) claimed that two attitudinal constructs, namely integrativeness, and attitude toward the educational context, affect motivation for L2 education. The results also align with the research of Leitch and Day (2000), who carried out an investigation aimed at elucidating Dewey's theories on CT. They asserted that teachers who have reflective thinking skills are able to develop and implement a set of attitudes related to their methods of instruction. They contend that in order for instructors to be considered reflective educators, they must do more than just master CT. It is clear that CT is important yet insufficient for EFL teachers. It would appear to be sufficient when CT leads to a reflective practice or when instructors' reflective ideas and practices are consistent. The existence of such a robust positive correlation may draw attention to how dependent RT is on CT. But it is important to remember that practice and thinking are two separate things. In other words, a teacher with CT skills may not always be able to instruct in a reflective manner (Soodmand Afshar & Farahani, 2015). Everyone, including instructors, has a certain degree of CT. But what matters is how much of this capacity for thought is really put to use. Of paramount significance is the degree to which this fundamental cognitive ability (CT) is operationalized in language learning classrooms (RT). Moreover, perseverance or stability of the teaching profession was another high-ranking factor which is directly related to the relatively safe and stable work environment of teachers (Ghanizadeh, 2017).

About the importance of CT dispositions, Turan (2016) claims that CT does not simply mean the correct use of skills in the right field and includes more comprehensive concepts. CT can even be an attitude or a criterion for identification when a skill or willingness is needed to exert mental effort. He also argued that students who seem to lack CT skills may have a high ability to use CT skills but, for various reasons, are reluctant to use these skills. In other words, the process of deep and focused thinking is a prerequisite for specialization in any field. Based on these results, individual tendencies are considered essential for critical thinkers because these tendencies can be the basis of a set of individual behaviors in their community. Therefore, the person who intends to use the CT skill should have received both the capacity of this skill and the talent to use it properly.

It is believed that, unlike skills, inclinations cannot be taught. Tendencies are nurtured solely through modeling and putting them into practice (Evens et al., 2014). This means that the tendency to use CT reflects the individual's mental framework and ability to use CT. The results of the questionnaire showed that appropriate behavior in the environment was of great importance among Iranian English teachers. In this regard, about 85 participants in the present study are aware of the significant impact of the living environment on their ability to think critically. They are well aware that the living environment plays a key role in shaping their ideas and thoughts. This means that Iranian teachers value their beliefs and try to act in accordance with their personal beliefs and dispositions. Moreover, Alexander (2017) believed that CT dispositions and principles are taught only through culture building and not through transmission. He believes that the best environment for teaching intellectual tendencies is a cultural environment in

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which students are immersed in their culture. If the training transfer model is used only to train the tendencies of CT, it will not bring the expected results. Because, in this case, only the principles are transferred, and there is no obligation to perform and implement them.

The results of the second research question showed that most participants believed RT could be enhanced by strengthening the CT dispositions of EFL teachers. Through enhancing the CT skills and dispositions, EFL teachers are able to "locate problems, question goals, explore contexts, analyze possibilities, and craft appropriate educational experiences to benefit learners" (Baleghizadeh & Javidanmehr, 2014, p. 21). Indeed, L2 teachers can develop their CT and RT abilities by using CT skills and dispositions to improve their decision-making and problem-solving abilities (Farahian & Rajabi, 2022). Similar to other Asian nations, long-standing pedagogical problems in Iran's educational system are caused by a widespread belief that conventional, teacher-centered, rote, memorization-driven, and receptive learning modalities are highly valued and should only be taught for test scores. Such recommendations, which seem to leave little to no space for a learner-centered problem-based curriculum where the development of creativity and CT talents predominates greatly, are preoccupied with and inclined toward test-oriented materials (DeWaelsche, 2015; Lee & Sriraman, 2013).

The findings of the second research question aligned with the results of Rahimi and Weisi (2018), who demonstrated that cognitive and critical reflection among the subscales of reflective practice strongly predicated research practice, while practical and cognitive reflections strongly predicted self-efficacy. Furthermore, across the various subscales of self-efficacy, it was shown that effectiveness for instructional methods and efficacy for classroom management exhibited a significant positive correlation with research practice. Similarly, efficacy for instructional strategies and efficacy for student engagement had a strong positive correlation with reflective practice. Furthermore, the study's results revealed noteworthy and positive correlations between reflective practice, self-efficacy, and research practice among EFL instructors. The researchers concluded that EFL teachers who engage in greater reflective practice within their instructional settings exhibit higher levels of self-efficacy in classroom management in the Iranian EFL context. Furthermore, the present findings are in agreement with the results of the research conducted by Moradkhani et al. (2017), which showed that, with the exception of critical reflection, all other subscales of reflection exhibited statistically significant positive associations with teachers' self-efficacy. The findings of the study also indicated that metacognitive reflection emerged as the only predictor of instructors' self-efficacy. In contrast, the examination of the interview data revealed the association between reflection subscales and instructors' self-efficacy, which may be attributed to one of the four primary factors: mastery experience, vicarious experience, verbal persuasion, and physiological/emotional arousal.

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Conclusion

The findings suggested that the determination of CT dispositions in language programs, the development of CT instructional materials, and CT training instruction in teacher education programs could enhance language teachers' reflective practices. It is suggested that administrators and teacher educators provide EFL instructors the chance to engage in self-reflection on their teaching practices. This practice may include participation in research endeavors and the enhancement of their teaching effectiveness. The implications of these results suggest that teacher trainers should prioritize the cultivation of reflective thinking and teaching skills among their practicing instructors. Furthermore, it is essential to acknowledge the significance of teacher training courses in enhancing the capacities of novice instructors in terms of reflective thinking and instructional practices. It is recommended that novice language instructors consider participating in teacher training courses offered by experienced and skilled teacher trainers, which aim to enhance the quality of teaching practices by promoting reflective thinking and facilitating teaching growth. Language educators are recommended to prioritize the incorporation of reflective thinking and teaching strategies since these factors have a direct impact on the effectiveness of teaching methodologies. Moreover, since there is no "one-size-fits-all" framework, pre-service teachers should be gradually exposed to different frameworks. If teacher educators are interested in incorporating reflective practice into their curricula, they should give serious thought to the issues raised by the literature.

Regarding the debate over whether higher-order thinking is culturally specific, Davidson (1998) made the valid point that even if one accepts that higher-order thinking is less prevalent in some cultures, this does not imply that thinking instruction in those settings should stop. This calls for empowering EFL teachers to adopt a reflective practice and increase their knowledge of the significance of paying attention to their feelings, experiences, and reactions, as well as assessing and monitoring their own activities.

The findings of the present study hold some implications for Iranian EFL stakeholders, EFL teachers, and EFL educators. Teachers, especially inexperienced teachers, can participate in discussions, think about their own teaching, and benefit from each experienced teacher. Repetition and encouragement of such activities can provide teachers with a level of awareness about their teaching methods and different ways of evaluation. Without such activities, waiting for a change in the teaching method of teachers will be futile and out of reach. Therefore, educational environments should provide places to share teachers' experiences so that they can discuss their activities without judgment or prejudice. Expanding these activities on CT and its relationship to RT can increase teachers' openness and creativity, responsibility, commitment, and even intimacy among them. In addition, different reflective approaches can be taught to teachers by using the experiences of experienced teachers, participating in various conferences, and reading specialized journals. After the training phase, the authorities should monitor the teachers to ensure the effectiveness of the training. Teachers need to learn how to evaluate or improve their reflective approaches. Familiarity of teachers with

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different attitudes and beliefs and their strengths and weaknesses can enhance the quality of teachers' instruction. In addition, building and designing blogs and interactive sites can be a good environment in which to share teachers' experiences. Teachers can discuss their concerns and needs and select appropriate decisions and activities using instant feedback. Recording, disseminating how different teachers teach, and sharing them in such places can provide them with immediate and effective feedback so that they can use them to improve their teaching quality and critical thinking skills. The significance of CTDs for English language instructors lies in the fact that they can deal effectively with students who are experiencing learning difficulties. CTDs must be addressed by the pertinent stakeholders who are actively engaged in enhancing the professionalism of English language instructors across various EFL/ESL settings. Regular workshops and courses may be organized with the intention of cultivating and augmenting the CTDs of English language instructors, thereby increasing the frequency with which they implement these skills in their pedagogical approaches.

The present study suffered from some limitations. The researchers did not examine the demographic variables, such as the participant's level of education, gender, and age, as well as their socio-economic status. Future studies can replicate and complete this study by examining these variables. This research did not explore the conceptions of teachers toward the challenges and opportunities of RT; therefore, further research can be undertaken to investigate the EFL teachers' conceptions of these important factors. The conceptions of teachers toward reflective feedback (RF) and the way they use students and colleagues' RF to modify classroom activities and their teaching methods were not addressed in the present study; as a result, they could be studied in future research. Another limitation of the present study was that the qualitative results highlighted the perceived significance of CTDs in Iranian EFL teachers' reflective practices, and the results could not be generalized to other EFL contexts. As a result, qualitative studies could be conducted on this topic in other EFL settings to complement the qualitative results of this study. Moreover, the present study used CTDs based on the categorization of CTDs proposed by Paul and Elder (2012), and future studies could replicate the present research employing other CTD taxonomies both in Iranian and non-Iranian EFL contexts. Since this study employed the semi-structured interview to collect the qualitative data, further studies could use other instruments, such as group interviews and observation, to replicate the qualitative part of this study. Finally, as the present study employed an explanatory sequential mixed-methods research design, future research could use other mixed-methods designs, like exploratory or embedded ones, to replicate the present study.

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Appendix A
Critical Thinking Dispositions Questionnaire

Instruction

The following questionnaire is part of a research project that investigates teacher's critical thinking dispositions. Your valuable opinions and answers will be appreciated. Please read each item carefully and select the response you think is the best one by clicking the right place. Even if you are not sure of your choice, but you think you know which is best, mark that response. Thank you very much in advance for your participation.

Age: **gender:** male ☐   female ☐   **Level of teaching:**
Years of teaching experience: **Degree / Certificate:**

	Items	False	Mostly false	More false than true	More true than false	Mostly true	True
1	I am aware that my prejudices or biases might influence my thinking.						
2	I know that the beliefs I have accepted uncritically can keep me from seeing things as they are.						
3	I am aware that my ideas have been shaped by the environment I was raised in.						
4	I am well aware that sometimes I fail to live in accordance with my professed beliefs.						
5	I sometimes hide my hypocrisy from myself and from others.						
6	I sometimes catch myself using double standards.						
7	I monitor my thinking and amend my mistakes.						
8	I open my mind to the possibility that I might be wrong and another person might be right.						
9	I am afraid of ridicule or exclusion from social groups so I try to conform to group standards						
10	I believe the popularity of a belief makes it legitimate.						
11	I believe my perspective is the most reasonable one.						
12	I am ready to abandon beliefs I have passionately held for a long time.						
13	When I read a book or an article, I try to state in my own words what the author is trying to say.						
14	I sometimes hide my motives.						
15	I think for myself and do not passively accept the beliefs of others.						
16	I am moved by reason and change my mind in the face of sound reasoning and evidence.						

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	Items	False	Mostly false	More false than true	More true than false	Mostly true	True
17	I admit mistakes and change my view when faced with sound reasons to do so.						
18	I admit that there are situations I try to be submissive because I am afraid of possible consequences.						
19	I am willing to engage in dialogue to understand other perspectives.						
20	I display patience in solving complex problems.						
21	I have confidence in the truth of my own beliefs.						
22	I sometimes claim more than what I actually know						
23	I feel ashamed to say 'I don't know something, so I usually decide to say something.						
24	I actively study the viewpoints of other cultures in order to gain new knowledge and insight.						
25	I reflect on the issues I was wrong in the past.						

Appendix B
Reflective Teaching

Dear respondent
This questionnaire is devised with the aim of looking into your actual teaching practices as a reflective teacher. To that end, your careful completion of the questionnaire will definitely contribute to obtaining real data which is crucial for more accurate findings. The information will be kept confidential and will be used just for research purposes. Thank you very much in advance for your time and cooperation.

Age:　　　　　gender: male ☐　　　female ☐　　　　Level of teaching:
Years of teaching experience:　　　　　Degree / Certificate:

Items	Never	Rarely	Sometimes	Often	Always
1. I have a file where I keep accounts of my teaching for reviewing purposes.	1	2	3	4	5
2. I read books/articles related to effective teaching to improve my classroom performance.	1	2	3	4	5
3. As a teacher, I think about my teaching philosophy and the way it is affecting my teaching.	1	2	3	4	5

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Items	Never	Rarely	Sometimes	Often	Always
4. I think of ways to enable my students to change their social lives in fighting poverty, discrimination, and gender bias.	1	2	3	4	5
5. I think of inconsistencies and contradictions that occur in my classroom practice.	1	2	3	4	5
6. I talk to my students to learn about their learning styles and preferences.	1	2	3	4	5
7. I think of classroom events as potential research topics and think of finding a method for investigating them.	1	2	3	4	5
8. I talk about my classroom experiences with my colleagues and seek their advice /feedback.	1	2	3	4	5
9. I think of the ways my biography or my background affects the way I define myself as a teacher.	1	2	3	4	5
10. In my teaching, I include less-discussed topics, such as old age, AIDS, discrimination against women and minorities, or poverty.	1	2	3	4	5
11. I think of writing articles based on my classroom experiences.	1	2	3	4	5
12. I participate in workshops/conferences related to teaching / learning issues.	1	2	3	4	5
13. After each lesson, I write about the accomplishments/failures of that lesson or I talk about the lesson to a colleague.	1	2	3	4	5
14. I look at journal articles or search the internet to see what the recent developments in my profession are.	1	2	3	4	5
15. I talk to my students to learn about their family backgrounds, hobbies, interests and abilities.	1	2	3	4	5
16. I think about the political aspects of my teaching and the way I may affect my students' political views.	1	2	3	4	5
17. I think of the positive/negative role models I have had as a student and the way they have affected me in my practice.	1	2	3	4	5
18. I carry out small scale research activities in my classes to become better informed of learning/teaching processes.	1	2	3	4	5
19. I try to find out which aspects of my teaching provide me with a sense of satisfaction.	1	2	3	4	5
20. I think about instances of social injustice in my own surroundings and try to discuss them in my classes.	1	2	3	4	5
21. I discuss practical/theoretical issues with my colleagues.	1	2	3	4	5
22. I think about the ways gender, social class, and race influence my students' achievements.	1	2	3	4	5

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EXPLORING IRANIAN EFL TEACHERS' CRITICAL THINKING

Items	Never	Rarely	Sometimes	Often	Always
23. I ask my students whether they like a teaching task or not.	1	2	3	4	5
24. I think of outside social events that can influence my teaching inside the class.	1	2	3	4	5
25. I ask my peers to observe my teaching and comment on my teaching performance.	1	2	3	4	5
26. I think of ways through which I can promote tolerance and democracy in my classes and in the society in general.	1	2	3	4	5
27. I think of the meaning or significance of my job as a teacher.	1	2	3	4	5
28. I observe other teachers' classrooms to learn about their efficient practices.	1	2	3	4	5
29. I think about my strengths and weaknesses as a teacher.	1	2	3	4	5

Appendix C
Interview Questions

1. Are you familiar with CT dispositions and reflective teaching concepts?
2. How could you apply CT skills in your teaching practices?
3. Do you apply CT dispositions and skills in your reflective practices in your class?
4. In your opinion, is it effective to employ CT skills and dispositions to reach more reflective teaching practices? Please elaborate.
5. What could Iranian EFL teachers do to increase the role of CT skills and dispositions and RT in their teaching practices?