

Turkish EFL Teachers' Conceptualizations of Critical Thinking and Critical Thinking Related Practices

Pınar ERSİN

Marmara University

Özlem KAŞLIOĞLU

Marmara University

Abstract

Critical thinking (CT) has been emphasized as a foundational 21st century skill. Accordingly, incorporating CT in pedagogy has become a major goal for the purpose of empowering individuals by helping them become creative thinkers, question their ego and bias, learn from their mistakes, think in a self-regulated manner, which are lifelong skills. Like in other subject areas, CT integration is also emphasized in English language teaching (ELT). Considering the key role of teachers in any pedagogical implementation, the present study aimed to explore how in-service teachers of English as a foreign language (EFL) in Turkey conceptualize critical thinking and perceive to promote critical thinking in their classrooms. The findings revealed the teachers' positivity towards CT pedagogy, but limited conceptualization and integration of CT. These findings might be relevant for educational authorities at Turkish Ministry of National Education (MoNE), curriculum designers, and teacher trainers at ELT departments.

Keywords: in-service teachers; English as a foreign language; critical thinking conceptualization; critical thinking integration

Introduction

In the 21st century, we are faced with ever increasing problems related to climate change, plastic pollution in oceans, deforestation, biodiversity, sustainability, viral outbreaks and pandemics, natural hazards, food and water security, migration, and the urgent challenge to develop affordable low-carbon technologies and make the transition to use them. In addition, development of digital technologies and networks that are transforming our access to and processing of information, and the research and development work on artificial intelligence and its applications have a strong impact on how societies, politics and commerce function globally.

To combat with these changes and challenges experienced globally, for social empowerment, and to increase chances of employability, individuals need to possess the confidence and skills

to adapt in changeable conditions, be open-minded, have the ability to judge acceptability of information and seek to be well-informed for their decision-making. In line with the global demands, critical thinking (CT) has lately been identified as a foundational skill for the 21st century, although inculcating critical thinking habits in individuals has been a goal of education for decades.

An important goal for educational settings has been to teach processes of critical thinking associated with open-mindedness and the habit of truth seeking that can be applied in a wide range of real-life contexts as well as learning (Facione, 1990; Paul & Elder, 2006). CT skills can be cultivated with training whether it is studied 'in its own right' (Gelder, 2005, p.43) or embedded across the curriculum. The integration of CT across the curriculum requires teachers to accommodate strategies into their pedagogy that would foster learners' CT skills through the right instructional strategies, materials and content choice (Djamàa, 2018). While there is consensus about the benefits for CT training as evidenced by research (Davidson & Dunham, 1997; Chapple & Curtis, 2000), studies have shown that its integration in education has not been a smooth process (Mok, 2009; Şengül & Üstündağ, 2009; Li, 2016). Considering the key role of teachers in the implementation of policies and educational goals, the purpose of this study was to explore how teachers of English as a foreign language (EFL) in Turkey conceptualize critical thinking and perceive to promote critical thinking in their classrooms. EFL teachers were also asked to comment on the context related factors that might influence their integration of critical thinking in foreign language teaching. It was hoped that the findings of this study could shed light on the perspectives of teachers regarding their readiness and practices to integrate CT and challenges they face in the process, which together may inform policy makers, teacher trainers and material designers in similar contexts.

Definition of Critical Thinking

There are various definitions of critical thinking in the related literature. Facione (1990, p.3) offers a comprehensive definition of CT by stating that it is 'purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based'. For Ennis (2011a, p.1) it is 'reasonable and reflective thinking focused on deciding what to believe or do'.

The common principles of these and other definitions available in the literature suggest that CT is the goal-directed and reflective process of using cognitive skills and strategies to judge the validity and reliability of assumptions and sources of information, to make inferences, to evaluate outcomes, to solve problems, and to make informed decisions (Paul, Elder & Bartell, 1997; Halpern, 1999; Pithers & Soden, 2000).

Central to CT are abilities such as analysis, interpretation, evaluation, and making judgment. The Delphi Project report (Facione, 1990) has identified a set of core skills that critical thinkers

are expected to employ: *Interpretation* refers to comprehending the meaning and significance of data; *Analysis* involves the process of identifying ideas and arguments, establishing inferential relationships among statements to convey information, beliefs, judgments; *Evaluation* is the skill of assessing the credibility of information and the validity of the inferential relationships among statements; *Inference* is about gathering concrete evidence to draw logical conclusions; *Explanation* refers to justifying that one's reasoning is based on evidential, methodological and contextual considerations. Lastly, *Self-regulation* refers to monitoring of one's own reasoning, judgment and when necessary amendment of those processes (Facione, 1990, pp.13-19). A critical thinker can employ the above listed processes effectively and is open-minded, inquisitive, can formulate plausible hypotheses based on questioning and evidence, and draw cautious conclusions (Ennis, 2011b).

Bloom's Taxonomy and Critical Thinking

In 1956, Bloom and his colleagues argued for a more holistic form of education and for that purpose worked on a classification of educational objectives. As a result of this work, they identified three learning domains: cognitive, psychomotor and affective. Cognitive domain refers to knowledge and intellectual skills and consists of six levels including *knowledge, comprehension, application, analysis, synthesis and evaluation*. Affective domain on the other hand includes attitudinal domain regarding feelings and emotional operations within which are *receiving, responding, valuing, organization and characterization*. Thirdly, psychomotor domain is related to skills-based operations such as manual or physical activities encompassing the levels of *reflex movements, basic fundamental movements, perceptual abilities, skilled movements, and non-discursive movements*. Within the scope of the present study, the focus is on the cognitive domain of Bloom's taxonomy.

Based on the widely acknowledged revised version of the taxonomy (Anderson & Krathwohl, 2001), *Remembering* is the first level of cognitive domain that is about knowing common terms, basic concepts and principles and recalling information. The second level in the hierarchy is *Understanding* which refers to comprehending meaning, interpreting, rewriting, stating a problem in your own words. *Applying* is the third level of cognitive domain that involves manipulating or modifying data and drawing graphs, application of gained knowledge into new situations and theories into practical situations. Within the taxonomy, these first three levels are categorized as lower order thinking skills. *Analyzing* is the first level of higher order thinking and the fourth of the cognitive domain. This level describes abilities such as breaking information into parts, differentiating facts and inferences, identifying bias or intent, evaluating information and its relevancy through analyzing, investigating, and explaining. *Evaluating* is the fifth level of the cognitive domain and refers to making informed judgment, critique, and arriving at conclusions or making choices based on reasoned arguments. *Creating* is the highest level of thinking domain that involves putting elements together to form a novel, coherent whole, and to create an original product. In line with the taxonomy, teaching of thinking skills is

described as teaching a set of lower and higher order skills with CT particularly associated with the higher order ones including processes such as interpreting information, establishing cause-effect relations, making inferences and predictions, evaluating outcomes, and problem solving and creativity (Anderson & Krathwohl, 2001).

In classrooms, questions asked by both learners and teachers play a key role in the development of CT skills (Savage, 1998; Şeker & Kömür, 2008). Through appropriate questioning strategies that are representative of each level of the taxonomy, and especially for the higher order levels, teachers can engage learners in deep and complex thinking. As Case (2005) argues, teachers should make sure that the questions they formulate do not merely call for regurgitating facts but making judgments and evaluating alternatives to promote CT skills. While teachers can foster deep thinking through a selection of purposeful questions, it is equally important that students are encouraged to formulate their own questions to make sense of any input they are processing. As Paul and Elder (2019, p.64) put it 'thinking is not driven by answers but by questions'.

Integrating Critical Thinking in English Language Teaching

Globally there is growing emphasis on moving away from rote learning towards discovery and inquiry-based learning in education (Pennycook, 1994). Various ways in which CT skills can be integrated in foreign language teaching have been proposed. For example, content-based instruction, particularly using literature as content, is considered an effective way of teaching foreign language skills while enabling the enhancement of critical thinking with the right materials and strategies in the classroom (Lazar, 1993; Tsai & Shang, 2010). In line with the constructivist perspective, problem-based learning in the foreign language classrooms may also challenge learners to make sense of situations through exchanging ideas and information while contributing to the development of students' CT skills and knowledge (Temel, 2014; Şendağ & Odabaşı, 2009).

The development of core skills of reading, writing, listening, and speaking are also closely related with the development of CT. One of the skills that learners need to develop is to be able to read and think critically when they are dealing with texts written in English (Bharuthram, 2012; Sato, 2016; Vered, 2016). When reading in the target language, learners can be encouraged to use skimming, scanning strategies, look for main and supporting ideas, and guess meaning from context, compare and contrast texts, distinguish fact from opinion, reflect on meanings, ideology of texts and detect bias. Therefore, they can utilize cognitive skills like inferencing, analyzing, synthesizing, and evaluating that are key to CT (Facione, 2007). To that purpose, while a wide range of reading texts can be used in classrooms, the use of literary texts has been specifically stressed for their value to stimulate critical thinking (Oster, 1989; Lazar, 1993; Djamàa, 2018).

When language learners are expected to produce an argumentative piece of writing, express their opinions or take part in a debate, they can be encouraged to prepare for such tasks by seeking to be well-informed, using credible sources as their basis for information and argumentation, be open-minded about other points of view and ready to change position when there are good reasons for that (Freeley & Steinberg, 2000; Davies & Barnett, 2015). Likewise, opinion exchange activities or a debate enhances students' critical listening skills as they need to listen to their opponents with great attention, take notes while listening and use limitations in opponents' ideas and phrasing to their advantage to win a debate.

Another way in which students can apply critical thinking is by reflecting on target language and their learning process, which can positively contribute to their foreign language development (Carter, 2004; Tarone, 2005). Learners can reflect on the links between the target language and native language in lexis, syntax, and grammar, identify and use language patterns, use their knowledge of grammar to deduce the meaning of new words and structures, and use appropriate language-learning strategies (Liaw, 2007). Learners can thus monitor their own language development and learning process more effectively.

Teacher Related Studies on Critical Thinking

There has been a growing number of research on both pre – and in-service teachers' CT skills, their conceptualization and implementation of CT. Studies that have examined the CT skills of pre-service teachers from different subject areas have found that they are at a moderate or low level (Özdemir, 2005; Batanieh & Zghoul, 2006; Güven & Kurum, 2008; Şen, 2009; Beşoluk & Önder, 2010; Çetinkaya, 2011; Aktaş & Ünlü, 2013; Coşkun, 2013; Maltepe, 2016). Other studies that have looked at the relationship between pre-service teachers' CT skills and a range of variables have been able to establish certain correlations. For example, Bayat (2014) found a positive correlation between CT tendencies and academic writing skills of 181 pre-service teachers (PTs) from different subject areas, Bökeoğlu and Yılmaz (2015) were able to establish a negative correlation between PTs' CT levels and anxiety levels in relation to conducting research. In addition, several research studies established that pre-service teachers had misconceptions of CT and a limited understanding of how to implement it (Tufan, 2008; Wagley, 2013; Petek & Bedir, 2018).

With regards to in-service teachers, findings indicate limited understanding and ineffective integration of CT in different contexts across the globe. In Gelen's (2002) study with Turkish primary school teachers, although participants perceived themselves quite adequate in promoting thinking skills, the findings suggested that their classroom practices were inadequate. In a study with 80 in-service teachers of physics, Şengül and Üstündağ (2009) found that participants had low level CT tendencies and did not include any activities to develop critical thinking in their teaching. Similarly, Mok's (2009) case study in the Hong Kong context with English language teachers showed that teachers lacked knowledge of skills and techniques to

enhance students' thinking skills and that their questioning was poor, and allowance of wait time was insufficient. In Malaysian higher learning institutions, Choy and Cheah (2009) found that teachers mainly focused on students' comprehension of the subject matter while they perceived themselves to be encouraging CT in their classrooms. In China, Li (2016) also found that teachers had positive attitudes towards integrating thinking skills in their classrooms, yet their knowledge about thinking skills was limited and they lacked appropriate instructional strategies to integrate CT into their pedagogy. As Li (2016, p.286) comments 'if teachers lack both content and pedagogical knowledge, innovation can only stay at the policy level'.

Critical Thinking in the Turkish Context

In the Turkish context, findings from different studies and assessments indicate that Turkish students have low or limited critical thinking skills. PISA exams that aim to measure '15-year-olds' ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges' (oecd.org) have revealed that in 2012 Turkish students' average ranked 41st in reading, 42nd in mathematics and 45th in science out of 65 countries and were below OECD average for each subject area. According to 2015 results, Turkish students performed considerably lower in all areas compared their 2012 averages and overall ranked 44th out of 65 countries. In 2018, Turkey ranked 31st amongst 37 countries. 2018 results indicated an overall improvement in Turkish students' performances, while their averages for all areas remained well below OECD average. For all the assessment years, students who scored level 5 or higher in three areas ranged between 2-5% of all students who sat PISA exams. For higher education in Turkey, results of standardized university entrance tests that are administered nationwide reveal a similar trend. In 2018 around two million students who sat the exam had a mean net of 4 correct answers out of 24 questions based on Turkish language and literature, and a mean net of 4 out of 40 questions in Mathematics (Önal & Erişen, 2019). Overall, Turkish students' poor performances on tests that measure thinking skills from a lower to higher level spectrum indicate that rote learning is still dominant in classrooms which causes students to struggle with higher-level thinking processes (Sağlam & Büyükuysal, 2013; Önal & Erişen, 2019).

Turkish Ministry of National Education (MoNE) have identified CT as a basic skill in its 2006 and 2015 curriculum documents (Aytan, 2016), and as a fundamental skill for the 21st Century in its 2018 policy document (MoNE, 2018). While MoNE in Turkey asserts integration of CT skills within all subject areas, little is known about EFL teachers' conceptions of CT and views of enhancing students' CT in EFL classrooms in Turkey. Considering the impact of teachers beliefs' and views' on their instructional practices and decision-making (Borg, 2006), it is useful to explore EFL teachers' views on the subject so that appropriate support at various levels such as curriculum and material development, pre – and in-service training frameworks can be developed appropriately and effectively. To that end, the following research questions were formulated:

1. How do Turkish in-service teachers of English as a foreign language conceptualize critical thinking?
2. What are these teachers' self-reported instructional practices about integrating CT skills?
3. What are these teachers' views about challenges they and their students face in CT integration and application?

Methodology

Participants

Twenty-five Turkish in-service teachers of English as a foreign language participated in the present study on a voluntary basis. For data collection, convenience sampling method was used. When the data were collected, participant teachers were working at nineteen different practicum schools in partnership with Department of English Language Teaching (ELT) of a state university in Istanbul, Turkey. The practicum partnership involved elementary, secondary or high schools, which were either state schools under the supervision of MoNE or private schools run by foundations.

Senior pre-service teachers (PTs) of the department were asked to hand out a survey to their mentor teachers at the English language teaching department in their practicum schools. Twenty-five teachers out of 120 returned the surveys to the researchers. Teachers have been assigned with numbers herein.

Data Collection Tool and Procedure

Data collection tool for this study was a Critical Thinking (CT) survey constructed by the researchers. It consisted of fifteen questions four of which targeted at collecting demographic information about participant teachers. The remaining eleven open-ended questions aimed at collecting information about the teachers' conceptualization of CT, their integration of CT into their classroom practice, and views regarding the challenges they and their students experience in integrating and applying CT.

Data were collected from in-service teachers via the abovementioned survey in the Fall semester of 2019-2020 academic year.

Data Analysis

Data collected from the CT surveys were analyzed using content analysis technique (Weber, 1990). Responses of the participants were classified into codes in terms of the purpose of the study. After suitable codes were identified, the data were systematically reanalyzed to identify examples of each code, which can be tallied. Quantitative counts and frequencies of

the codes allowed the researchers to interpret data more meaningfully. Then, similar codes were gathered into more conceptual categories. To ensure consistency and inter – rater reliability, both researchers coded the data separately and compared their categories. For that comparison, following Miles and Huberman's (1994) inter-rater formula, each rater's coding was grouped into 'agree' and 'disagree' categories. When the reliability formula (reliability = number of agreement/total number of agreement + disagreement x 100) was applied, reliability co-efficiency was found to be .89. The consistency level was high as the raters grouped similar codes under similar categories.

Results

Demographic Information

When demographics of the twenty-five participant in-service teachers were examined, it was seen that more than half of them graduated from ELT departments (17/25) while the remaining teachers (6/25) graduated from English or American Literature departments and two of them held TEFL/TESOL certification. Out of 25 teachers, two of them held MA degree in Educational Management or Linguistics. While 14 out of 25 participants worked at state-run schools, 11 worked at private schools. More than half of them (17/25) worked at secondary level and the rest (8/25) worked at elementary level. Ten out of 25 teachers can be considered novice with one to five years of teaching experience whereas the remaining 15 teachers are experienced ones with teaching experience ranging from six to 34 years. The table below summarizes the demographic information about the participating teachers (see Table 1).

Table 1

Demographic information of the teachers

University graduation		<i>N</i>
ELT		17
Philology		6
TEFL/TESOL		2
School administration		<i>N</i>
MoNE		14
Private		11
School type		<i>N</i>
Elementary		8
Secondary		17
Teaching Experience		<i>N</i>
Novice		10
Experienced		15

N = number of teachers

Teachers were also asked whether or not they received any training on CT and its integration into their pedagogy. As shown in the table below, eight of the teachers (six experienced and two novice) did not receive any training on CT integration whereas the remaining 17 teachers stated that they received training. Nine out of these 17 teachers did not identify whether they received pre-service and/or in-service training although the options were provided to them. When remaining teachers' responses were analyzed, it was seen that three teachers received in-service training on CT integration, four teachers received pre – service training, and one teacher received training at both levels.

Table 2

Training on CT integration

	<i>N</i>
No training	8
Training but unidentified	9
Training at pre-service level	4
Training at in-service level	3
Training at both levels	1
Total 25	

N= number of teachers

Conceptualization of Critical Thinking

To explore how the participating teachers conceptualize CT, they were asked to define it. Also, within their conceptualization of CT, teachers were asked to elaborate on the MoNE policies and coursebooks they used as these can be potentially influential factors in the teachers' conceptualization and implementation of CT.

None of the teachers left the definition question empty, all of them giving extended definitions. The provided definitions demonstrated that teachers had varied and fragmented understandings of CT. "Thinking clearly, independently, efficiently, and rationally" was the most repeated definition in teachers' answers, with seven mentions. "Understanding logical connections between ideas" was the following predominant definition with four mentions. "Analyzing the subject objectively" or "analytical method of thinking used in decision making" was the equally repeated definition by teachers, with again four mentions. "Asking questions and wondering, making research" or "asking questions, being curious and being not satisfied with what is taught at school" was another definition mentioned by teachers three times (see Table 3).

Table 3

Definition of CT

Definition	Times mentioned
Thinking clearly	7
Understanding logical connections between ideas	4
Analyzing the subject objectively	4
Asking questions	3

Few teachers identified key elements for CT such as thinking involved in problem solving as in “ability to use logic to solve a problem” (T17); formulating inferences as in “asking questions to understand something beyond the obvious meaning” (T3); and evaluating as in “evaluation of an issue in order to form a judgment” (T2). The definition by T14 is a rare comprehensive one to illustrate the issue:

“Reading between the lines, inferencing clues, analyzing/questioning new information and synthesizing with the help of verifiable, reliable data”.

As seen, limited number of the teachers mentioned higher order thinking skills such as “analysis” and “evaluation” in their descriptions. These are in fact Bloom’s Taxonomy level descriptors but none of the teachers referred to the taxonomy. Only one teacher used the term “higher order thinking skills” in his definition without elaborating on it. Interestingly, none of the teachers mentioned “creativity” in their definitions. Furthermore, when teachers’ definitions were compared to the core skills reported in the Delphi Project, the definitions lacked emphasis on “explanation”, which is reasoning based on concrete evidence and methodological facts, and “self-regulation”, which is constant self-monitoring one’s reasoning and judgment. Open-mindedness was another untouched aspect in teachers’ definitions although it is an indispensable characteristic of a critical thinker. Although participating teachers articulated some true characteristics of CT, the definitions lacked clarity and wholeness. Each teacher mentioned only one or two traits of CT. None of the teachers were able to provide a thorough and multidimensional definition.

The participant teachers worked at either MoNE or private schools. In Turkey, both school administrations are accredited by and follow the MoNE principles and regulations. It is assumed that the extent of the teachers’ awareness and knowledge about the current policies of MoNE regarding CT could be an influential factor in the teachers’ conceptualization of CT. When asked, more than half of the participants (13/25) said that they did not know anything about the current policies of MoNE about CT. Two teachers expressed that MoNE did not do anything to integrate CT in their policy.

Remaining ten teachers said that MoNE had started to pay attention to CT integration. They said that the books published and the exams prepared by MoNE included different questions expecting students to find different ideas about topics, activities encouraging students’ self-improvement including observation and experiment, and lesson plans integrating criticism and evaluation. One teacher expressed his opinion as follows:

“The system is changing in terms of CT. Two-three years ago, we used to have exams which were mostly based on multiple choice questions and these questions used to try to examine one specific kind of knowledge... Recently, the policies have changed and the questions in the exams are putting pressure on students in terms of CT. Students are now expected to understand paragraphs, relate the ideas and find the most

appropriate answer. We still have a long way, but these attempts are encouraging students to think critically.” (T15)

The teachers were asked to state the textbook types and materials they used at their schools and then comment on the CT integration in the textbooks and materials. Less than half of the teachers (10/25) reported that they used textbooks prepared by private publication companies whereas only two teachers used textbooks prepared by MoNE for instruction at school. Six teachers used both publications. Remaining teachers used multiple sources; i.e., textbooks prepared by the school itself (2/25); textbooks prepared by the school itself and private publication (2/25); materials prepared and compiled by himself (1/25); materials prepared by himself and private publication (1/25); and all types of materials except for the MoNE ones (1/25) (see Table 4).

Table 4
Textbooks used by the teachers

Textbook prepared by	N
MoNE	2
Private publication	10
Both	6
Other	7
Total	25

N = number of teachers

When their comments were asked, almost half of the teachers (12/25) reported that the materials they used in teaching English had sufficient amount of CT integration and the rest (11/25) said that CT integration in materials was limited. The remaining two teachers reported that there was no CT integration in the materials they used. Out of these two teachers, one used materials prepared by private publication companies whereas the other used self – prepared materials as seen in Table 5.

Table 5
Textbooks used by the teachers

	N
Sufficient CT integration	12
Limited CT integration	11
No CT integration	2
Total	25

N = number of teachers

The teachers then were asked to give examples about how the materials they used helped encourage students' CT skills, if applicable. They gave similar responses. Most teachers (14/25) gave examples such as “games and activities, pictures and texts with a lot of questions” in vague terms. They reported that ‘activities’ made students ‘think in detail’ or ‘indulge in unlimited

thinking'. The process of thinking or how thinking is achieved with what type of questions was not stated clearly.

Few teachers (5/25) defined materials as the ones that make students "solve problems, evaluate solutions, create solutions, see different situations/options, analyze what they learned before" but they did not provide concrete examples. These verbs were left without evidence and support.

Limited number of teachers (4/25) emphasized "student-centeredness" in materials such as requiring students "to use unique experience and perspective, to achieve specific points themselves without teacher's support, to figure out their needs and strengths".

Only two teachers described how the materials help encourage CT in detail:

"When approaching a text, it gets students to ask questions about authors, their motivation for writing, encourages students to draw conclusions about characters/reading between the lines/encouraging creative responses." (T5) "Students question, find out ideas (make connections), think about reason and result, learn how to respect and take other people's opinions into account." (T9)

To sum up, teachers were not able to provide sound and accurate definition of CT although they had high perceptions of the concept. None of the teachers left this question empty. As for MoNE policies, more than half of the teachers (13/25) were unaware of the policies, which can stem from either the frequent changes of the ministers or the ministry policies. Teachers used varying teaching materials published by MoNe, private publication companies, both, or self-prepared materials. Almost half of the teachers (12/25) thought their ELT materials integrated CT to a sufficient degree while others (11/25) thought ELT materials achieved this to a limited degree or not at all (2/25). Teachers failed to provide clear examples of activities and the way in which those could encourage critical thinking. When commenting about materials, only a few teachers referred to processes that involve higher order thinking like establishing cause-effect relations, inferring, focusing on different perspectives and problem solving. Activities were mostly named without establishing how they would be utilized to promote CT.

Self-Reported Practices

In addition to the activities integrated in the materials that the teachers used, the teachers were also asked to share their comments on the activities that they themselves used. More specifically, they were asked to elaborate on how these activities promoted and encouraged their students' CT skills. Almost all the teachers mentioned a variety of activity and technique names without any elaboration on them. Asking open-ended questions or questions about a picture or a text that already exists in the textbook was the most frequently mentioned teaching technique to encourage CT skills. It was followed by debates and discussions. They

were undefined and were only provided as key words without any details. Likewise, projects and assignments, the third mostly mentioned activity type, were neither defined nor described in detail. Problem solving activities and games followed projects with three mentions each. The activity types including the seldom mentioned ones are shown in Table 6.

Table 6

Activities and tasks teachers use to encourage students' CT skills

Activities and/or tasks	Times mentioned
Questions	12
Debates (undefined)	8
Projects (undefined), assignments (undefined)	7
Problem solving activities	3
Games	3
Mind maps	2
Peer collaboration	2
Peer assessment	2
Jigsaw activities	1
Role plays	1

As seen, almost all of the teachers just provided generic names but did not express how these activities contributed to CT development or why these activities were preferred as CT-related ones. Only three teachers elaborated on the activities instead of giving activity names as umbrella terms. They said that in the classroom they used activities, which encouraged students to think freely in a detailed way; to find the answers themselves; and to make connections between the topic and their own lives. Instead of activity names, three other teachers shared their question types such as “What would you do if you experienced this? In your opinion? Agree? Disagree?” Even though limited number of teachers tried to elaborate on how the activities improved students' CT skills by stating their questions, these questions were not supported by procedural evidence. How these questions triggered CT-oriented activities was not explained.

One other teacher neither gave the activity name nor the elaboration but he described what he did in the class as follows:

“Mostly, I talk about some different kinds of situations and I leave them alone thinking and choosing the thing that they want. Also, they produce some solutions for problems. Then, we will be able to discuss about the topic and evaluate the thinking process. I make them notice that they can talk about everything they want but it's not a must to decide who is right.” (T23)

This specific teacher's language sounded a teacher-centered one, again lacking the steps of an ongoing process of CT promotion.

When teachers were asked how often they based their questioning strategies in a way to encourage their students' CT skills, the same number of teachers said that they sometimes or frequently formed their questions to encourage CT skills (see Table 7).

Table 7

Frequency of teachers' questioning strategy based on CT

	<i>N</i>
Not really	1
Sometimes	10
Frequently	10
Always	4
Total	25

N = number of teachers

Furthermore, the teachers then were asked to give examples of the questions that they asked students to promote their higher order skills and CT. Twenty-three out of 25 teachers answered this question and provided various sample question types. The most commonly mentioned question type was asking students 'why?' to prompt them to provide further explanations for their answers. The second common question type was 'what is the cause/reason of...?'. That question type was followed by 'what do you think about...?' which invites students to express opinions on a topic or an issue, and 'do you agree or disagree with...?' which expects students to commit to an opinion. A significant number of teachers also included factual recall or understanding questions in their lists. Teachers included 'define...', 'explain in your own words...', 'is this correct or not?', 'what is...?' A few teachers also listed questions they used like 'what would you do in the same situation?', 'what would happen if...?' 'what is the main idea of the text?' to encourage higher thinking. One teacher wrote about a process that involved students writing a story without an ending, then exchanging stories with a peer and writing an ending to their peer's story.

None of the teachers gave problem-solution, compare-contrast, cause-effect type question examples and only one included creativity type question example in their answers. Three teachers listed self-evaluation questions such as 'what do I need to improve?', 'what went well?' which are noteworthy but irrelevant as the teachers were asked to provide examples of questions related to their own teaching and implementation process.

To wrap up, teachers gave activity names in broad classifications without further detail. Questions that they used to improve CT skills were limited to the textbook material in hand. Students were encouraged to 'think in a detailed way' but how this is achieved was not refined. Only four teachers reported that they 'always' used CT developing questions. The rest of the teachers (21/25) saw it as something to implement from time to time, but not central to their instruction. Most of the questioning strategies reflected higher order thinking skills (HOTS), which indicated that teachers were able to construct these questions. However, they also gave a remarkable number of questions reflecting lower order thinking skills. Questions that

promote lower order thinking skills are also necessary as they form the foundation of CT but they are insufficient in themselves for CT promotion.

Challenges Related to Critical Thinking Integration

In order to understand the challenges teachers and students face, teachers were first of all asked to comment on whether and to what degree they believed their students could apply CT. Most of the teachers (10/25) thought that their students were ‘sometimes’ able to apply CT and seven teachers thought their students could ‘frequently’ apply CT. Seven of the teachers responded that their students were ‘not really’ able to apply CT. The table below summarizes the results (see Table 8).

Table 8

Students' frequency of CT application

	<i>N</i>
Not really	7
Sometimes	10
Frequently	7
Always	1
Total	25

N = number of teachers

Teachers were then asked to state what challenges them in CT integration during instruction. Nineteen out of 25 teachers answered this question. Teachers showed the tendency of relating the challenges they faced to external factors. According to teachers, students were the primary factor that hindered their CT implementation. In particular, students' unwillingness to participate and lack of interest in the CT-bound lessons were highlighted as factors that negatively impacted teachers' CT integration (11 mentions). The teachers said that their students did not want to give answers to CT oriented questions, that they avoided thinking analytically and critically, and that they imitated their classmates instead of creating new ideas. The main reason for this, in the teachers' opinion, was that the students were not accustomed to CT-based activities. Other factors that teachers mentioned were traditional textbooks designed around teacher-centered methodology (seven mentions), and time constraints with the pressure to cover the syllabus (six mentions). Two teachers also mentioned students' low proficiency level as a challenge for CT integration (see Table 9). None of the teachers mentioned any limitations or challenges related to their own skills in CT integration.

Table 9

Challenges that teachers face in CT integration

Challenges	Times mentioned
Students' reluctance	11
Teacher-centered textbooks	7
Time constraints	6
Students' low proficiency level	2

Moreover, teachers were asked to state the challenges they thought their students faced in applying CT. Four teachers did not answer this question while the remaining 21 teachers stated several different challenge types. When the teachers' answers were analyzed, students' not being accustomed to CT was the most frequently mentioned challenge (12 mentions). Teachers stated that students were used to traditional teaching methods. For the teachers, starting with mother tongue and earlier years of education, the students had the habit of being spoon-fed, teacher-centered methodology and rote learning. Students' unfamiliarity with CT oriented activities caused them "to choose the easy way to reach the end" (T19) and students "not to think. They just want the answers." (T20). Students' low proficiency level and lack of topical knowledge were mentioned three times. For teachers, when students did not have background information about the topic, they preferred not to participate in CT related activities, but rather just answered understanding and remembering questions.

Speaking anxiety and the size of classroom followed this, mentioned twice and once, respectively (see Table 10).

Table 10

Challenges that students face in CT application

Challenges	Times mentioned
Unfamiliarity with CT	12
Lack of topical knowledge	3
Low proficiency level	3
Speaking anxiety	2
Size of classroom	1

To wind up, students' application of CT showed parallelism to that of teachers' as both parties reportedly 'sometimes' used CT skills and strategies. Furthermore, the teachers listed students' unwillingness to get involved in activities that require higher order thinking as the biggest challenge in the integration phase. According to the teachers, students' unfamiliarity with the CT integrated methodology was the most dominant challenge in the application phase. In the teachers' views, students were passive because they had not been exposed to this methodology since the early years of their education life.

Discussion and Implications

A number of key issues emerged from the data analysis in the present study. The first one is related to the teachers' understanding of the concept of CT. This study showed that participating English language teachers in Turkey defined CT in a fragmented way with expressions such as 'thinking clearly' or 'understanding logical connections' failing to address a thorough conceptualization, in line with findings of Li (2016) and Stapleton (2011). Half of the teachers did not think the textbooks they used to teach English integrated CT sufficiently, while the other half thought there was sufficient integration but were not able to describe or

exemplify this integration in explicit terms. Moreover, the number of teachers that received training in their undergraduate or in-service years was limited. Although teachers seemed to conceptualize CT in their own ways, the lack of training can be the reason for the fragmented and non-congruent definitions. Therefore, there is a strong case for arguing for both pre – and in-service teacher training, based on well-established standards, supported by evidence of research, and reinforced with high quality, to develop CT integration. In addition, such training should be tailored according to the subject area and consider contextual factors, teachers' and learners' needs in order to make a difference (Williams, 2005; Petek & Bedir, 2018).

Teachers will not be able to increase their knowledge and confidence without assistance and guidance. More than half of the participant teachers pointed out their lack of knowledge about the current policies of MoNE regarding CT, which is not a desired outcome. As Stapleton (2011) suggests the curricula should clearly illustrate the types of instruction and questions that support CT. Moreover, continuing professional development activities and in – service training programs can be regularly organized by education authorities of MoNE to enlighten and to update the practicing teachers. Teachers can attend these seminars to be updated about the continual changes in MoNE policies, CT and other 21st century skills and developments. These activities can be backed up with some workshops organized by teacher trainers working at departments of ELT with their partner schools to show the hands-on practice of promoting CT in language classrooms. This could lead to more tailored and context-sensitive provision of training for in-service teachers. For the same purpose, online discussion platforms can be established by schools for teachers so that teachers can exchange their ideas, experiences, practices with each other. MoNE can give technical support to these nationwide platforms, which can be freely used as a resource and data bank for all teachers.

Second, the study points out that all the teachers welcomed the idea of integrating CT in their language classrooms as they reported. However, when the teachers were asked to report the activity types and questioning strategies they used to promote CT, they listed some overall activity names but they did not really emphasize how and why these specific activities gauge understanding and encourage higher order thinking. Only four teachers 'always' integrated CT in their classrooms and most of their students 'sometimes' applied CT. To that purpose, the teachers mainly used additional referential and display questions to supplement the questions found in textbooks. The question examples the teachers provided indicated that they fostered higher thinking through a narrow range of analysis and evaluation type of questioning strategies such as asking 'why?' and 'what would you do?'. These findings related to the limited practices of teachers are consistent with those of other studies (Mok, 2009; Şengül & Üstündağ, 2009; Li, 2016). Hence, customized professional development programs as discussed above can be organized so that teachers get support as to how they can prepare specific materials and activities to promote CT (Petek & Bedir, 2018). With question examples that the teachers listed, one further finding was that only one teacher gave a sample question emphasizing the "creating" aspect of CT as defined by the revised version of Bloom's taxonomy. This is interesting because the ability to put forward a novel product through creative thinking is a

core skill as indicated both in Bloom's Taxonomy and the Delphi Project. It is also one of the most important and useful skills in the 21st century. Sadly, the teachers did not acknowledge it as part of their instructional practices. This and the above mentioned findings are consistent with Turkish students' poor PISA exam performances in higher level thinking, and previous studies that found rote-learning is common in Turkish classrooms which causes students to struggle with higher level thinking processes (Sağlam & Büyükuysal, 2013; Önal & Erişen, 2019).

Finally, the teachers in the study pointed out the challenges that they faced in CT integration and their students faced in CT application. The biggest challenge for the teachers in CT integration was the students' unwillingness to participate in higher-order thinking activities. The teachers believed that traditional textbooks and pressure of class time because of the squashed curriculum were other challenges for their CT integration. This finding is consistent with that of Choy and Cheah (2009) and Li (2016). The reported challenges of the students were associated with mainly their unfamiliarity with CT incorporated lessons, followed by their inadequacy about the topic being discussed in class and their low English proficiency. In the teachers' viewpoints, all the challenges stemmed from externally driven factors. Teachers can be trained to self-reflect and self-evaluate themselves so that they can at least consider teacher-related drawbacks as well.

The present study has a number of limitations: the number of participants was small, all participants worked at K12 level, and data were based on self-reports. These yield several ideas for further research. A similar study can be conducted with a larger population size working at K12 or higher levels. Furthermore, there may or may not be discrepancies between what the teachers reported in the CT surveys and what they actually do in their classrooms. Therefore, follow-up classroom observations can be conducted to observe teachers' teaching practices over a period of time. In relation to the non-participant observations, stimulated recall protocols can be carried out with the teachers. In addition to classroom observations and stimulated recall interviews, focus group interviews with a smaller group of volunteering teachers can be conducted to have in-depth understanding of teachers' conception and practice of CT integration.

Conclusion

In conclusion, the present study aimed at exploring how Turkish in-service teachers of English as a foreign language conceptualize CT and perceive to promote it in their classrooms. The study also tried to find out the challenges that the teachers and their students encounter along the way. The abovementioned results and implications can be of interest to educational authorities working in MoNE and other policymakers trying to improve English language education in Turkey, particularly related to efforts involving curriculum design and successful adoption of policies. The results can also be useful for teacher trainers at departments of ELT who are willing to collaborate with teachers at K12 schools and offer subject-specific tailored training.

References

- Aktaş, G. S., & Ünlü, M. (2013). Critical thinking skills of teacher candidates of elementary mathematics. *Procedia Social and Behavioural Sciences*, 93, 831-835.
- Anderson, L.W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. New York: Addison Wesley Longman.
- Aytan, T. (2016). Evaluation of the 2006 and 2015 Turkish education program in secondary school curriculum in Turkey in terms of critical thinking. *Journal of Education and Learning*, 5(2), 38-46.
- Batanieh, R. F., & Zghoul, L. H. (2006). Jordanian TEFL graduate students' use of critical thinking skills (as measured by the Cornell critical thinking test, level 2). *International Journal of Bilingual Education and Bilingualism*, 9(1), 33-50.
- Bayat, N. (2014). Relationship between critical thinking levels of prospective teachers and their success of academic writing. *Education and Science*, 39(173), 155-169.
- Beşoluk, S., & Önder, I. (2010). Analysis of learning approaches, learning styles and critical thinking tendencies of prospective teachers. *Elementary Education Online*, 9(2), 679-693.
- Bharuthram, S. (2012). Making a case for the teaching of reading across the curriculum in higher education. *SA Journal of Education*, 32(2), 205-214.
- Bloom, B.S. (Ed.), Engelhart, M.D., Furst, E.J., Hill, W.H., & Krathwohl, D.R. (1956). *Taxonomy of educational objectives: Handbook I: Cognitive domain*. New York: David McKay.
- Borg, S. (2006). *Teacher cognition and language education: Research and practice*. London: Continuum.
- Bökeoğlu, O.C., & Yılmaz, K. (2015). Üniversite öğrencilerinin eleştirel düşünmeye yönelik tutumları ile araştırma kaygıları arasındaki ilişki. *Kuram ve Uygulamada Eğitim Yönetimi*, 41, 47-68.
- Carter, R. (2004). Language and creativity: The art of common talk. New York: Routledge.
- Case, R. (2005). Moving critical thinking to the main stage. *Education Canada*, 45(2), 45-49.
- Chapple, L., & Curtis, A. (2000). Content-based instruction in Hong Kong: Student responses to film. *System*, 28, 419-433.
- Choy, S. C., & Cheah, P. K. (2009). Teacher perceptions of critical thinking among students and its influence on higher education. *International Journal of Teaching and Learning in Higher Education*, 20(2), 198-206.
- Coşkun, M. K. (2013). Critical thinking tendencies of prospective religious culture and ethics knowledge teachers. *Journal of Ataturk University Institute of Social Sciences*, 17(1), 143 – 162.
- Çetinkaya, Z. (2011). Determination of the views of prospective Turkish teachers regarding critical thinking. *Journal of Ahi Evran University Kırşehir Faculty of Education*, 12(3), 93-108.
- Davidson, B., & Dunham, R. (1997). Assessing EFL student progress in critical thinking with the Ennis-Weir critical thinking essay test. *JALT Journal*, 19(1), 43-57.
- Davies, M., & Barnett, R. (2015). *The Palgrave handbook of critical thinking in higher education*. New York: Palgrave Macmillan.
- Djamàa, S. (2018). From book to screen: Adopting cinematic adaptations of literature in the EFL classroom to hone students' critical thinking skills. *Computers in the Schools*, 35(2), 88-110. DOI: 10.1080/07380.569.2018.1463010
- Ennis, R. H. (2011a). The nature of critical thinking: An outline of critical thinking dispositions and abilities. Retrieved from http://faculty.education.illinois.edu/rhennis/documents/TheNatureofCriticalThinking_51711_000.pdf
- Ennis, R. H. (2011b). Critical thinking: Reflection and perspective, part I. *Inquiry: Critical Thinking across the Disciplines*, 26(1), 4-18.

- Facione, P. A. (1990). *Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction*. Research Findings and Recommendations Prepared for the Committee on Pre-College Philosophy of the American Philosophical Association, ERIC Document ED315423.
- Facione, P. A. (2007). *Critical thinking: What it is and why it counts*. Milbrae, CA: The California Academic Press.
- Freeley, A. J., & Steinberg, D. L. (2000). *Argumentation and debate: Critical thinking for reasoned decision making*. (10th ed.). Stamford: Wadsworth.
- Gelder, T. (2005). Teaching critical thinking: Some lessons from cognitive science. *College Teaching*, 53(1), 41-46. DOI: 10.3200/CTCH.53.1.41-48
- Gelen, İ. (2002). Sınıf öğretmenlerinin sosyal bilgiler dersinde düşünme becerilerini kazandırma yeterliklerinin değerlendirilmesi. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 10(10), 100-119.
- Güven, M., & Kurum, D. (2008). Relationship between the learning skills of prospective teachers and their critical thinking tendencies. *Elementary Education Online*, 7(1), 53-70.
- Halpern, D. F. (1999). Teaching for critical thinking: Helping college students develop the skills and dispositions of a critical thinker. *New Directions for Teaching and Learning*, 89, 69-74.
- Lazar, G. (1993). *Literature and language teaching*. Cambridge: Cambridge University Press.
- Li, L. (2016). Integrating thinking skills in foreign language learning: What can we learn from teachers' perspectives? *Thinking Skills and Creativity*, 22, 273-288.
- Liaw, M. L. (2007). Content-based reading and writing for critical thinking skills in an EFL context. *English Teaching and Learning*, 31(2), 45 - 87.
- Maltepe, S. (2016). An analysis of the critical reading levels of pre-service Turkish and literature teachers. *Eurasian Journal of Educational Research*, 63, 169-184. <http://dx.doi.org/10.14689/ejer.2016.63.10>
- Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis: An expanded sourcebook*. (2nd ed.). Thousand Oaks, CA: Sage.
- MoNE (2018). Milli Eğitim Bakanlığı 2023 eğitim vizyonu. Retrieved from: http://2023vizyonu.meb.gov.tr/doc/2023_EGITIM_VIZYONU.pdf
- Mok, J. (2009). From policies to realities: Developing students' critical thinking in Hong Kong secondary school English writing class. *RELC Journal*, 40(3), 262-279.
- Oecd.org. <https://www.oecd.org/pisa/publications>
- Oster, J. (1989). Seeing with different eyes: Another view of literature in the ESL class. *TESOL Quarterly*, 23(1), 85-103.
- Önal, İ., & Erişen, Y. (2019). Öğretmen yetiştirme programlarında eleştirel düşünme becerilerinin kazandırılması ihtiyacı. *Akdeniz Üniversitesi Eğitim Fakültesi Dergisi*, 2, 62-78.
- Özdemir, S. M. (2005). Üniversite öğrencilerinin eleştirel düşünme becerilerinin çeşitli değişkenler açısından değerlendirilmesi. *Türk Eğitim Bilimleri Dergisi*, 3(3), 297-316.
- Paul, R., Elder, L., & Bartell, T. (1997). *California teacher preparation for instruction in critical thinking: Research findings and policy recommendations*. Dillon Beach, CA: The Foundation for Critical Thinking.
- Paul, R., & Elder, L. (2006). *The miniature guide to critical thinking: Concepts and tools*. 4th ed. Dillon Beach, CA: Foundation for Critical Thinking.
- Paul, R., & Elder, L. (2019). *The thinker's guide to Socratic questioning*. Lanham: Rowman & Littlefield
- Pennycook, A. (1994). *The cultural politics of English as an international language*. Longman, London.

- Petek, E., & Bedir, H. (2018). An adaptable teacher education framework for critical thinking in language teaching. *Thinking Skills and Creativity*, 28, 56-72.
- Pithers, R. T., & Soden, R. (2000). Critical thinking in education: A review. *Educational Research*, 42, 237-249.
- Sağlam, A., Ç., & Büyükuysal, E. (2013). Critical thinking levels of senior students at education faculties and their views on obstacles to critical thinking. *International Journal of Human Sciences*, 10(1), 258-278.
- Sato, T. (2016). The feasibility of critical reading in ELF settings: Teachers' roles and modifications. *The Asian EFL Journal Professional Teaching Articles*, 91, 107-126.
- Savage, L. B. (1998). Eliciting critical thinking skills through questioning. *The Clearing House*, 71(5), 291-293.
- Stapleton, P. (2011). A survey of attitudes towards critical thinking among Hong Kong secondary school teachers: Implications for policy change. *Thinking Skills and Creativity*, 6(1), 14-23.
- Şen, Ü. (2009). Türkçe öğretmeni adaylarının eleştirel düşünme tutumlarının çeşitli değişkenler açısından değerlendirilmesi [The evaluation of the various variables of Turkish teacher candidates' critical thinking attitude]. *Zeitschrift für die Welt der Türkei Journal of World of Turks*, 1 (2), 69-89.
- Şeker, H., & Kömür, S. (2008). The relationship between critical thinking skills and in-class questioning behaviours of English language teaching students. *European Journal of Teacher Education*, 31(4), 389-402.
- Şendağ, S., & Odabaşı, H. F. (2009). Effects of an online problem based learning course on content knowledge acquisition and critical thinking skills. *Computers & Education*, 53(1), 132-141.
- Şengül, C., & Üstündağ, T. (2009). Critical Thinking Disposition levels of physics teachers and state of critical thinking in classroom activities. Fizik öğretmenlerinin eleştirel düşünme eğilimi düzeyleri ve düzenledikleri etkinliklerde eleştirel düşünmenin yeri. Hacettepe Üniversitesi Eğitim Fakültesi Dergisi (H.U. Journal of Education), 36, 237-248.
- Tarone, E. (2005). Fossilization, social context, and language play. In Z. Han, & T. Odlin (Eds.), *Studies of fossilization in second language acquisition* (pp. 157-172). Clevedon: Multilingual Matters.
- Temel, S. (2014). The effects of problem-based learning on pre-service teachers' critical thinking dispositions and perceptions of problem-solving ability. *South African Journal of Education*, 34(1), 1-20.
- Tsai, Y., & Shang, H. (2010). The impact of content-based language instruction on EFL students' reading performance. *Asian Social Science*, 6(3), 77-85.
- Tufan, D. (2008). Critical thinking skills of prospective teachers: Foreign language education case at the Middle East Technical University. Unpublished MA thesis. Ankara, Turkey: Middle East Technical University.
- Vered, K. O. (2016). The critical nexus: Linked practices in reading, thinking and writing to develop discourse competency. *Journal of Academic Language and Learning*, 10(1), 155-168.
- Wagley, S. A. (2013). Critical thinking in teacher education: Perceptions and practices of teacher candidates and college faculty. Unpublished doctoral dissertation. USA: Capella University.
- Weber, R. P. (1990). *Basic Content Analysis* (2nd ed.). California: Sage Publications.
- Williams, R. L. (2005). Targeting critical thinking within teacher education: The potential impact on society. *The Teacher Educator*, 40(3), 163-187. DOI: 10.1080/088.787.30509555359