



# SHAPING THE TURKISH LEARNING ENVIRONMENT TO BOOST CRITICAL THINKING BY EFL TEACHERS

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## ABSTRACT

The classroom learning environment is one of the most significant points of access to education for learners as it also provides time, interaction, and socialization for students to cultivate their critical thinking. The current study highlights the EFL teachers' perceptions and experiences of configuring a supportive learning environment to spur critical thinking. It also investigates the emerging factors classroom learning environment that affect EFL teachers' integration of teaching critical thinking. This study is framed by an exploratory qualitative research design in which a grounded theory approach is utilized through extensive semi-structured interviews as a research instrument. The data was collected from twelve EFL-experienced teachers who have voluntarily participated. To interpret the findings, a constant comparative technique was employed as the primary data analysis technique. The results show that the classroom learning environment's psychological, pedagogical, and social factors influence the integration of CT, introducing a parachute model to boost learners' critical thinking skills.

**Keywords:** Critical Thinking, Classroom Learning Environment, Teachers' Critical Thinking Strategies, EFL Teachers

## 1. INTRODUCTION

Through such dynamic world, the educational system undergoes several challenges due to globalization trends, in addition to the growing cultural and social diversities in English language classrooms. Since the beginning of the 21st century, the objectives of the educational system have raised a question in every individual's mind; Which skill does the classroom learning environment (CLE) need to demonstrate for learners to cope with the rapid changes in each aspect of such fast-moving world? For an answer, the concept of 21st-century skills, which is "not new, just newly important" (Silva 2009, p. 631), has emerged; it encompasses creativity, critical thinking (CT), and problem-solving, enabling learners to tackle the challenges of this fast-changing world (Bayley, 2022). The straightforward outcome of the 21st-century education system is to create an engaging CLE based on teaching methodologies educating minds, rather than merely dictating facts. Educators also are in need to be guided through the challenging process of integrating the 21st-century skills, particularly mastering CT skills, which are becoming more predominant in curricula (Chu, Reynolds, Tavares, Notari & Lee, 2021). Thus, CT skill, is considered the highly prized educational goal (Larsson, 2017) and the best product of an adequate education system, plus being one of the fundamental skills in the framework of the 21st-century CLE (Dwyer, Hogan & Stewart, 2014).



Despite the much literature echoing the significance and necessity for incorporating CT in EFL classrooms, there are ambiguous perceptions of what CT exactly means as a 21<sup>st</sup>-century skill and the process of how successfully it can be integrated in teachers' practices is a clear flaw in the current education system (Varas, Santana, Nussbaum, Claro & Imbarack, 2023). Therefore, mastering teaching CT is still considered a challenging task requiring EFL teachers to utilize their efforts and time into finding better techniques to create a thought-provoking CLE. However, it emerges that rare attention has been drawn to exploring the factors that influence EFL teachers' practices of integrating CT. To address the issue, in this paper we collected interview data from EFL teachers and analyzed it based on grounded theory to arrive at new insights in an uncharted area of how teachers instruct CT in their English language teaching. Since there were no predefined themes in place, the transcribed responses from participants underwent an in-depth analysis, where each line was meticulously examined using a wheel technique to reveal themes and sub-themes that can characterize the factors contributing to the development of the psychological, pedagogical, and social aspects of a CLE within the Turkish context.

## 2. THEORETICAL FRAMEWORK

Despite the notoriously blurred conception of CT (Chen, 2017), it has been broadly explained and evolved throughout history by many researchers who developed diverse interpretations of CT with varying emphases on different scopes (Green, Hammer & Star, 2009). Indeed, most perspectives attempting to define CT provide analogous interpretations that are interlinked, in addition to the existing list of definitions that share overlapping similarities (Pardede, 2015). According to Davies and Barnett (2015), the roots of CT as a concept are deeply grounded in three main academic disciplines: a) philosophical approach, by Greek philosophers, who applied the traditional theory of reasoned argument, focused on logic and rhetorical argumentation, and what individuals can perform under the best circumstances to deliver ideal critical thinkers (Sternberg, 1986), b) cognitive psychological method, by psychologists who adopted psychological and sociocultural perspectives, underlined how individuals profoundly think, rather than pointing to the characteristics of the ideal critical thinker (Sanavi & Tarighat, 2014), and including a regulative function on behaviors and decisions. The educational approach, on the other hand, which has been devised as an essential procedure of the educational system with the contributions of Bloom's (1956) and Facione's (1990) works, stems from experimental research and the increasing publication by educational practitioners in the last decades. It is mainly based on classroom observations and years of classroom experience, as it also describes CT as higher-order thinking skills, besides several dispositions. Consequently, it turns the spotlight on the twofold nature of CT (cognitive skills and dispositions). Regardless of the varying perspectives on CT, there are three common areas for agreement in defining CT: abilities, dispositions, and the importance of the background. Russell epitomized CT as the combination of three major aspects: "Attitude + Knowledge + Thinking Skills" (Russell, cited in Halpern, 2013, p. 8). Thus, CT can be encapsulated in the forms of attitude, besides background knowledge and higher-order skills of thinking.

On the other hand, CLE, in which learners actively take part; serves as a stimulating and amusing atmosphere to engage learners with real-life contexts (Chu et al., 2021), is considered a minor community in which constituent traits impact attitudes toward the



learning outcomes (Khine, Fraser, Afari, Oo & Kyaw, 2018). In fact, CLE has been embodying further scopes than physical targets, yet it encompasses the entire learning setting, mainly the culture and the relation between learners and teachers (Mathews & Lowe, 2011). Accordingly, CLE, which entails three major aspects: psychological, pedagogical, and social aspects influencing learners' achievement and attitudes (Skordi & Fraser, 2019), plays a significant role in the success of learners' outcomes and the integration process of CT into teachers' practices (Mutlu & Yıldırım, 2019). In this context, the factors of the CLE affect learners' CT skills psychologically, pedagogically, and socially. The psychological CLE embodies the relationship between and among learners and teachers, the pedagogical CLE embodies the teaching methods and determination, while the social CLE stresses the culture. Culture has been believed by several authors to have an obvious effect on learners' ability to develop CT skills, arguing that significant challenges are confronted by some cultures to implement CT skills (Manalo, Kusumi, Koyasu, Michita, & Tanaka, 2013). To name a few, cultures based on test-focused, religious philosophies, and conventional social places unimportance upon CT as they merely involve acceptance and obedience, rather than questioning, criticizing, and thinking (Memduhoğlu & Keleş, 2016). Much literature indicates that culture norms and language barriers have a negative effect on teaching CT, more specifically, in the non-Western cultures where English language is taught as a second language (Wang & Wu, 2023). Taking this into account, the Turkish CLE, which belongs to the eastern culture relying on cultural concepts of language learning (Alagozlu, 2007), can be described as a culturally dependent classroom.

## 2.1. Previous Studies on Teachers' Practices and Integration of CT

The gradual evolution of CT among learners is becoming insufficient unless EFL teachers are equipped with both CT aptitudes and CT-aligned pedagogies as debated by numerous researchers (e.g., Cáceres, Nussbaum & Ortiz, 2020). Yuan, Liao, Wang, Kong and Zhang (2022) utilized a systematic review to theoretically analyze how EFL teachers perceive and integrate CT into their daily teaching practices. By synthesizing 25 relevant studies conducted between 2010 and 2020, the authors' review concluded that although some EFL teachers have evolved their awareness of integrating CT into their teaching practices, many EFL teachers still hold insufficient perceptions of how to incorporate CT because of their deficiency of pedagogic knowledge. The findings also demonstrated that a huge gap was found between the existing curriculum reform calling for the integration of CT and the actual classroom teaching practices controlled by the conventional teaching methods that focus on culture-based contexts (Tan, 2017). Moreover, qualitative research done by Yuan, Yang, and Lee (2021) to investigate how Hong Kong pre-service EFL teachers promote their CT tendencies and CT-aligned pedagogies rested on their compulsory 10-week overseas program in a New Zealand university. The participants, originated in China and had no experience of aboard studying, were exposed to genuine teaching practices of CT during the immersion course. The results revealed that the pre-service EFL teachers are in an indispensable need to be drawn up for an efficacious integration of CT into their teaching strategies. On the other hand, a significant study was carried out by O'Reilly, Devitt and Hayes (2022) who explored 25 research papers addressing the characteristics and teaching methodologies of CT in young learners' education between 2015 and 2021. Through a systematic analysis, the findings outlined that when teachers hold sufficient insights of what exactly CT means and how to integrate



it into their classroom practices, young learners can quickly develop their CT skills. Hence, it is a decisive step for EFL teachers to be acquainted with certain standards to consistently maintain the expected outcome of teaching CT.

Within the Turkish context, various studies have been conducted to investigate teachers' understanding and knowledge base about the integration of CT into their practices. Bakir (2015) surveyed 1106 pre-service teachers studying in 7 different sections at a Turkish university to examine their CT dispositions based on several variables. The findings illuminated general low teachers' dispositions toward the process of CT. Moreover, another important study was completed by Çansoy, Parlar, and Polatçan (2018) who examined 18 descriptive, 18 rational, and 9 experimental studies related to the inclination of CT of the teacher candidates in the Turkish literature. Utilizing thematic content analysis, the findings illustrated that candidates' inclination toward CT was generally low. Comprehensively, considering the above studies that detected the integration of CT in EFL teaching classrooms, teachers' experiences of different self-regulations recognize the significance of CT, nevertheless, they still have some shortage of what CT undoubtedly entails and how to comprise it into their daily practices. This study thus targets an in-depth understanding of what CLE developing factors influencing EFL teachers' practices and experiences of the integration of teaching CT. Hence, the present study is undertaken to respond to the following main research question:

- What developmental factors interact to influence EFL teachers' integration of teaching critical thinking in the Turkish learning environment?

### **3. RESEARCH METHODOLOGY**

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

Addressing the teachers' development of CT through optimizing the Turkish CLE, the current study targets at gaining in-depth insights into how EFL teachers shape and organize their CLE to promote CT as an essential competency in the learning process. For such a purpose, this research is framed by exploratory qualitative research design, applied in Turkey during the spring term of 2022, utilizing a grounded theory approach as a systemized theory in which data are gathered on an iterative basis through theoretical sampling until saturation is maintained. This technique is implemented to; a) examines beyond description and allows the data lead to an emerging theory about the phenomenon (Ary, Jacobs & Razavieh, 2010), and b) present an in-depth interpretation of the phenomenon usage (McCrohon & Tran, 2019). Employing personal open-ended interviews as the primary data collection instrument, open, axial, and selective coding were carried out to qualitatively analyze the derived data using a constant comparative method and achieve the research credibility by drawing accurate conclusions reflecting the real world (Maindonald, 2011).

#### **3.2. Setting and Participants**

Participants were recruited from several private schools through a theoretical sampling, in which the researchers initiated selecting a trusted participant exemplifying the theoretical construct, continuing to choose new participants until saturation is achieved (Ary, Jacobs & Razavieh, 2010). One method of theoretical sampling is snowballing, in which the researchers interview a few convenient individuals from a pre-defined population to serve as the data source (Cohen, Manion & Morrison, 2013), which is a significant feature of qualitative research, in particular interviews (Geddes, Parker &



Scott, 2018). Accordingly, the participants were selected on criteria-based choices according to the teachers' experiences with the phenomenon such as heads of the English department and coordinators who are familiar with the decent provision of textbooks. 21 participants were invited, 13 already accepted the invitation, while one teacher was excluded due to poor internet connection and lack of transcription, in total of a sample of 12 EFL teachers (7 females and 5 males) serving in different private schools in different districts of Turkey, namely Istanbul, Izmir, and Ankara.

Participants in the current study (see Table 1) include 10 Turkish teacher among whom; an American citizen, another British citizen, all of whom are serving in the Turkish educational context. They play an essential role in designing materials, preparing the curriculum, ensuring high standards of teaching practices, and leading regular department meetings with other teachers. For validating data collected, some teachers showed their interest in the research topic since they attended seminars and conferences. This purposive-snowball technique plays a crucial role in the three phases of data collection: locating, accessing, and involving the participants (Cohen & Arieli, 2011). Firstly, emails with sufficient details about the research goal to a small number of participants were delivered by the researchers. Using past ties to gain good access to the potential participants (Cohen, Manion & Morrison, 2013), the researchers were secondly able to chase a chain of respondents' circle of acquaintances until it reached saturation, and lastly the interviewees were invited to for an individual Skype interview. To designate the participants' autonomy, pseudonyms were applied to change teachers' names, and they will henceforward be addressed by T1, T2, T3, and so on in the findings.

**Table 1. Participants of the study**

Participant	Years of experience	Qualification	Nationality	Roles
T1	5-10	BA, MA, CELTA, TESOL	Turkish	Regional HOD, Curriculum Specialist
T2	10-15	BA, MA, CELTA	American	HOD, Resources provider
T3	10-15	BA, CELTA	Turkish	HOD, Educational Content Creator
T4	15-20	BA, CELTA	Turkish	HOD, IATEFL webinar
T5	5-10	BA	Turkish	HOD
T6	5-10	BA, CELTA	Turkish	HOD
T7	10-15	BA, CELTA	Turkish	A Coordinator and Regional Supervisor
T8	10-15	BA, CELTA, TESOL	Turkish	HOD
T9	15-20	BA, MA, CELTA	British	HOD, IATEFL, and EF webinars
T10	5-10	BA	Turkish	HOD
T11	15-20	BA, CELTA, TESOL	Turkish	HOD, curriculum leader
T12	30-35	BA, TESOL	Turkish	HOD, ICIL conference





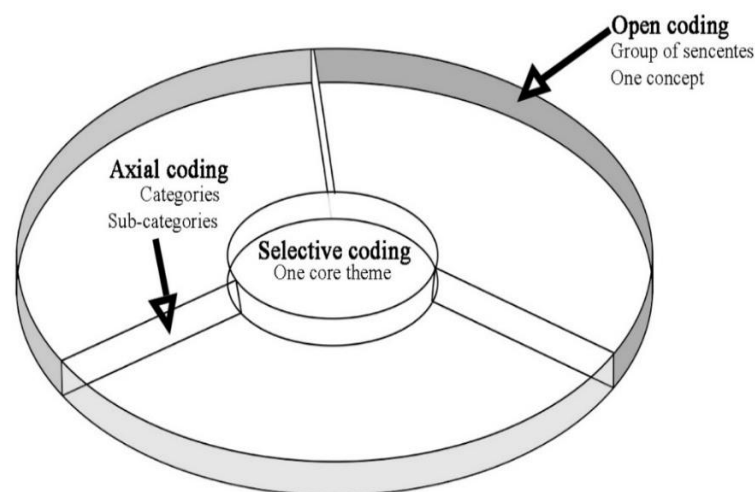
### 3.3.Data Collection Instruments and Procedures

Demographic information forms, utilized as the first collection instrument, are introduced to understand the participant teachers' background characteristics to achieve the eligibility criteria of the research. The process of collecting data was ruled by the emerging theory until the point of theoretical saturation was maintained. Consequently, the next source of data collection was an interview-style utilized as the main data-gathering instrument to carry out that study. The interviews, which primarily depend on personal open-ended questions (Seidman, 2006), are semi-structured protocols, involving questions prepared by the researchers in advance (see Appendix A). The reason for choosing a semi-structured interview is to probe an in-depth understanding of the participants' interactions and experiences of the phenomenon (Heigham & Croker, 2009). Prior to the interview, informed consent for the interview recording and transcription was provided by each participant to provide equivalent qualitative data.

The interview process was extensive and lasted up to 28-40 minutes using Skype interviews which indeed outbalance the drawbacks of the data collection process (Sullivan, 2012). The interviews were in accordance with dialogue-based, constantly inviting the interviewees to enlarge their perspectives by offering examples (Sandberg & Pinnington, 2009). During the interview, probing questions were occasionally inclined for deeper insights into the participants' thoughts. The content of the interview was recorded and transcribed in English through a true verbatim technique to prevent a biased view by the researchers allowing them to provide a full and genuine transcript version of the recording, ensuring the ideology of credibility. On the other hand, the fact that the researchers were nominated by a trusted partner sustained the fundamental interaction between the researcher and the participants who showed great interest in the topic by being open and honest in their responses.

### 3.4.Data Analysis Procedures

Creswell (2005) described the Ground theory as "the process in which the researcher collects data, instantly analyzes it, and then bases the decision about what data to collect next on this analysis" (p. 433). Because of the absence of any pre-defined themes (Dikilitaş & Mumford, 2018), the data in the current study were gathered and analyzed by detecting similarities and differences among the interviewees' responses to the phenomenon to form preliminary categories, then themes. Following these procedures, a constant comparative technique, involving three distinct stages of coding; open, axial, and selective coding (Strauss & Corbin, 1998), was employed as the predominant analysis method in Grounded theory (Ary, Jacobs & Razavieh, 2010). This technique was purposely introduced as a wheel (see Figure 1.) with a central core (categories) and extending spokes (sub-categories), which drives the researchers to refine the data on how teachers configure a supportive CLE for teaching critical thinking.



**Figure 1. A wheel design reviewing the process of data analysis.**

Open coding refers to the data fractured into concepts and categories, while axial coding refers to the development of main categories and subcategories by accumulating data back together. On the other hand, selective coding refers to the integration of the developed categories to construct the theoretical framework. The cyclical process of data analysis inductively continues forming, comparing, and verifying the concepts of the phenomenon until theoretical saturation is maintained. After the three initial interviews, inductive analysis of the gathered data enabled the researchers to explore the insight patterns and conditional propositions to develop the relationships between categories and identify underlying themes from the verbal data. Thus, using this analysis technique spurs the researchers to establish the best possible fit of various choices of concepts to a group of indicators to reinforce the emerging themes.

Multiple strategies and procedures were performed in the present study to ensure credibility, namely, transferability, reliance, confidentiality, and dependability. Transferability, relying on a sufficiently rich description of the context instead of generalization (Richards, 2003), was provided by enough interviews and datasets of the phenomenon until saturation is maintained. Ensuring the credibility of the data gathered (Richards, 2003), member checks were conducted by sending the verbal transcript and transcript approval form via email, asking the participants to review, respond to transcripts, and comment on the results. Also, anonymity as a desirable standard to ensure the confidentiality of qualitative research (Tilley & Woodthorpe, 2011) was performed to minimize disservices to participants and institutions mentioned during the interviews. Hence, anonymity guided the researchers through substantial ethical codes of practice to achieve the participants' privacy.

### **3.5.Limitations**

According to this research, the lack of suitable member samples in the current study is one of the significant limitations. Moreover, this study solely focuses on the teachers' attitudes toward the factors forming a supportive CLE to boost CT skills depending on a single instrument through semi-structured interviews without supporting the results with a second instrument like observing the actual learning process inside classrooms. The current research generally examined three factors of CLE s: social, physical, and



pedagogical, to develop CT skills, however, it is recommended that each factor can be investigated independently to gain an in-depth understanding of each factor. Furthermore, this study stressed teacher-learner interactions, not learner-learner nor school-teacher elements such as a resolution support system. However, the students' attitudes were taken into consideration during the interviews being the core of the learning process.

#### 4. RESULTS

##### TEACHERS' PRACTICES AND EXPERIENCES OF INTEGRATING AND TEACHING CT

Due to the absence of any pre-defined themes, the transcribed responses of the participants were analyzed and classified line by line using a wheel technique that drives themes and sub-themes to emerge. According to research questions, the current study targeted exploring the developing factors of the psychological, pedagogical, and social CLE that emerged because of integrating CT skills by EFL teachers who are teaching in the Turkish context. The data analysis concluded that the participants' descriptions of configuring a critical CLE revolved around three main themes: 1) Inflating the atmosphere, 2) Steering the climate, and 3) Resisting the wind. These themes were categorized with sub-theme definitions (see Table 2), and conceptually supporting quotes.

**Table 2. Major emerging themes with sub-themes in terms of teachers' instruction of CT**

<b>Inflating the atmosphere</b>	<b>Steering the climate</b>	<b>Resisting the wind</b>
Ensuring safety and freedom	Breaking routines	School policy
Showing respect and empathy	Tailoring to learners' needs	Culture and traditions
Motivating and encouragement	Framing real-life climate	Rigid seating classroom
	Charging student-centred climate	

##### *INFLATING THE ATMOSPHERE*

The key theme revealed by the findings indicated the research teachers' attitude toward the psychological factors of the CLE to spur the classroom atmosphere into a more impressive one with a backdrop of CT skills. Most of the teachers illustrated that establishing a safe atmosphere plays a crucial role at the outset in fostering learners' CT skills through ensuring safety and freedom, showing empathy and respect, and motivating. The results highlighted that ensuring safety and freedom as a sub-theme allows learners to feel safe for committing mistakes and fear no embarrassment of to interact (Edmondson & Lei, 2014). Thus, most participants stated that at learners feeling comfortable, they render into creative and tend to generate more ideas, as they confirmed:

Excerpt 1: Safe to be wrong.

If they feel relaxed or comfortable, they can produce more ideas, if they feel they will be approved by the teachers ... they feel brave to make creativity there. They don't feel shy, they don't feel guilty, and they know there is no wrong answer. Everybody's ideas are correct, that's why they can produce. (T3)

Based on aforementioned excerpt, setting up a safe atmosphere, "where risks can be taken, mistakes can be made" (Cortez, Gayle & Preiss, 2013, p. 2) and judgments can be disregarded, enables learners to develop their CT skills since there is neither a wrong nor right answer, and CT should not be evaluated. As a social-emotional factor addressing tension-filled moments (Mayo, 2010), the participants validated that CLE is required to tear down learners' barriers to engagement and interacting with their surrounding world (Wanless, 2016). Participants also highlighted that reflecting empathy and respect as





another sub-theme eases the integration of teaching CT by showing some TLC (tender, love, and care) and respecting their identities, as reflected:

Excerpt 2: Showing empathy.

The more you care, the more they're concerned. The more you're concerned, the more they become creative ... it isn't the teacher who's just telling us stuff, going, and collecting a paycheck. (T2)

The mentioned quote above epitomized that creating a tight bond with learners is considered the passport to integrating CT since the participants asserted that the more teachers care, respect, and listen, the highly learners are concerned and motivated to generate more ideas, and thereby develop their CT skills. Thus, motivating learners as the last sub-theme of psychological factors is an essential prerequisite for developing learners' CT skills. The participants manifested that motivated learners tend to explore, question, engage, and generate ideas; in case teachers do not motivate them, they block their potentials off, as verbalized:

Excerpt 3: Creativity and motivation.

Because motivated students are more creative. They want to take part in classes, they want to take part in activities once they're motivated. CT also promotes creativity and creativity promotes critical thinking. (T1)

According to the previous quotation, motivating paves the way for teachers to integrate CT because learners' propensity to think critically requires persistent motivation to process problems and make decisions (Fahim & Hajimaghsodi, 2014). Most participants illustrated that positive feedback and praising are techniques for motivating learners, providing them with more opportunities to energize their ideas and contribute to the development of their CT (Karaoglan Yilmaz & Yilmaz (2020). Thus, motivation, ensuring safety, and showing empathy are the teachers' primary psychological factors that positively influence the CLE while integrating CT in EFL classrooms.

#### ***STEERING THE CLIMATE***

The second major theme reflected the research participants' decisions toward the pedagogical factors that maintain the desired CLE to facilitate teaching CT skills. In this respect, the data collection displayed that the pedagogical techniques, guided to a supportive CLE to promote CT skills through breaking routines, tailoring to learners' needs, framing real-life climate, and changing student-centered climate, are the emerging sub-themes of steering climate. Most participants declared that breaking routines as a significant sub-theme enables teachers to capture their learners' attention and transform the CLE to be more dynamic which accordingly promotes learners' CT skills. Moreover, they recommended using riddles and competitions for breaking learners' boredom of the traditional techniques; as they develop excitement, eagerness to learn, and generate highly innovative outcomes, as supported:

Excerpt 4: Riddles and CT.

So basically, every lesson I enter the class, I set a riddle or puzzle on my board. And then they start thinking, while the answers are of course tricky ... they think that is just for fun. No, it is not. It is for fun to increase their ability to talk, create the language input, and then think critically without noticing. (T5)

The supported teachers' quote above proves that adapting some activities, namely riddles and competitions as routine breakers, increases the learners' curiosity to bring things together, then solve a problem or a puzzle since curiosity is intrinsic. Additionally, participants revealed that problem-solving techniques allow learners to be thinking-



seekers because they tend to be engaged, ask questions, and find solutions during the lessons (Aldan Karademir, 2019). On the other hand, the data analysis disclosed that tailoring the CLE to the learners' needs as a sub-theme linked to the participants' pedagogical factors boosts CT by using their voices in the way they are interested, as given:

Excerpt 5: Learners' interest.

The most important thing to raise their CT skills is to decide on an activity or practice based on their interests... the way to use the learners' voice is to pick up the topic, and connect an activity based on their interests. (T7)

According to the supporting statement above, leading the CLE to what, how, and where learners are interested encourages them to be autonomous and talented to think critically since participants thought that autonomous learners take their own decisions on how to learn independently among others, particularly upon regulating thinking (Nosratinia & Zaker, 2013). Furthermore, the research teachers stated that setting the CLE with real-life situations, as another significant sub-theme relevant to the pedagogical factors, guides learners and improves their CT skills as they asserted that authentic activities enable learners to fill the gap between the learning experience inside the classroom and their ability to be involved in real-life events to support the target language (Akbari & Razavi, 2016), as indicated:

Excerpt 6: Real-world objects and CT.

But this century kids especially get really affected by real things, not artificial things ... which can make them learn more deeply and clearly. In the environment, the real things in that classroom make the CT much higher. (T11)

Reviewing the above excerpt, the teachers implied that real-world activities allow learners to generate more ideas and think critically, suggesting that most CT activities can be performed outside the classroom because when learners are able to perform outside the boundaries of conventional CLE, they are required to take quick decisions and activate their metalinguistic skills and accordingly develop their CT skills (Illés & Akcan 2017). Lastly, participants demonstrated that charging student-centered learning, as a sub-theme related to the teachers' pedagogical factors, is one of the most interactive techniques for promoting CT skills, as highlighted:

Excerpt 7: Task-based learning.

My system is task-based, project-based learning along with a communicative approach... most of the time they forget that I am there... but when they're trying to communicate with each other, they fight basically, but they learn that is the best thing to enhance and deliver more creative ideas. (T9)

Based on the previous statement, a student-centered or task-based classroom, which depends on interaction and communication, enriches learners' opportunities to experience genuine real-life situations based on questioning, problem-solving, decision-making, and creativity (Córdoba Zúñiga, 2016). Therefore, participants postulate that teachers are ought to play the role of classroom facilitator, rather a controller, to generate autonomous learners through minimizing the teacher's role and providing multiple opportunities for them to offer more ideas.

### ***RESISTING THE WIND***

The third major theme addressed the research participants' social, and physical challenges encountered in teaching CT to smooth the CLE. To facilitate the integration of CT in EFL classrooms, the data analysis revealed that counteracting the challenges of



school policies, culture and tradition, and rigid seating arrangements, stands as the main sub-categories of teachers' challenges to building a supportive CLE. School policy as a sub-theme is regarded as one of the most social and physical constraint for teachers since the participants postulated that the process of integrating CT is impeded by some school policies, such as textbooks, following the curriculum and syllabus, which acts as obstacles for not only learners' willing to improve their CT, but for teachers as well, as mentioned: Excerpt 8: Following the syllabus.

Because many of the teachers are told to finish a book. Books are just guidebooks or tools. One of the tools to teach English and you can't improve the learners' creativity if you limit them to books. (T8)

This quote exemplified that learners are more passive if teachers limit them by school rules, school curriculum, or even following the book instructions that influence learners' development of developing CT skills. Participants suggested that to overcome this obstacle, schools should provide teachers with convenient opportunities to adapt the lesson plans to boost CT skills since textbooks are primarily based on repetitive activities that block learners from developing their CT skills. On the other hand, another vital sub-theme that reflects teachers' social problems to achieve a critical CLE is culture and traditions. Most of the participants reflected that culture and traditions disabled the process of CT among learners, pointing out that CT stems from culture, whereas the Turkish culture is based on religions, suggesting that it is against CT, as defined: Excerpt 9: Culture and CT.

Critical thinking at first comes from culture... and in the eastern part of the world, like Turkey, their culture is based on their religion and religion is about pure beliefs. So, if you are trying to add CT, it's like having a puzzle, but this CT piece is not fitting in the puzzle.

This statement pointed out that a religious-oriented culture is considered an essential barrier to the enhancement of CT because CT inevitably takes place in particular cultural contexts, responding to specific situations. Participants reported that as an Eastern culture, the Turkish CLE, which is culturally rooted rather than a context-free (Tan, 2017), centers around self-reflective views (Chen, 2017). Therefore, many participants believed that Turkish culture blocks learners from communicating with each other and thereby from developing their CT skills. In addition, the data analysis revealed that a rigid seating arrangement is the last sub-theme of teachers' social challenges to developing CT; participants emphasized that rigid, narrow, and crowded CLEs are considered barriers negatively affecting learners' CT skills development, as supported:

Excerpt 10: Crowded and rigid seating.

The class seating arrangement is very rigid here. They sit in rows, they see their heads, they see each other's necks and so it is not possible to move the seat... I guess we have to have smaller classes to encourage CT with the help of classroom seating arrangements. (T11)

The above-given quote uncovered that learners cannot develop their CT while sitting in rows, which blocks interacting. Many participants believed that rigid and crowded classrooms irreversibly consume time and effort to move chairs and stop learners from gaining the opportunity to participate. Moreover, crowded classrooms strand teachers from establishing an interactive CLE in which they ensure learners' participation (Yildiz, 2020). Hence, teachers and learners confront three major sub-themes that block them from CT development in terms of the social and physical CLE.



## 5. DISCUSSION

The current study aimed to detect factors influencing EFL teachers' integration of CT in the Turkish CLE. Upon completing the analysis of the gathered data, the results of this study disclosed three major themes along with sub-themes theoretically support them. Involving a well-personalized explanation of the transcribed responses of the data interview without any pre-defined themes, the Turkish CLE proved to be a central factor in the research participants' narratives about boosting CT among learners. Rested on the findings, the participating teachers suggested three major factors: psychological, pedagogical, and social impacting their integration of CT into the Turkish CLE. Figure 2 summarizes the themes and sub-themes, presented into a parachute graphic design (see Figure 2) inspired by the researchers to apply a metaphor befitting the topic.

Scientifically, a parachute, which stands for the process of CT in the findings, is described as a foldable umbrella-shaped device with steering lines allowing the parachutists or teachers to fall safely to the target of the CT environment via resisting the wind below. Considerably, the results proved that CT can be utilized as a flexible umbrella-shaped technique to provide a shelter against teacher-learner challenges that pose a threat to the CLE. The parachute assembly consists of three main components (harness system, canopy cover, and resistance system) which embody the three main themes in the current study. Consequently, the first theme is inflating the atmosphere, which requires fewer steps before, during, and after teaching CT, whereas, steering the climate as the second theme relates to teachers' decisions allowing them to guide learners' behavior to back up a critical CLE. Lastly, the third theme is resisting the wind, which represents the challenges blocking teachers and learners from providing a facilitating CLE to boost CT.

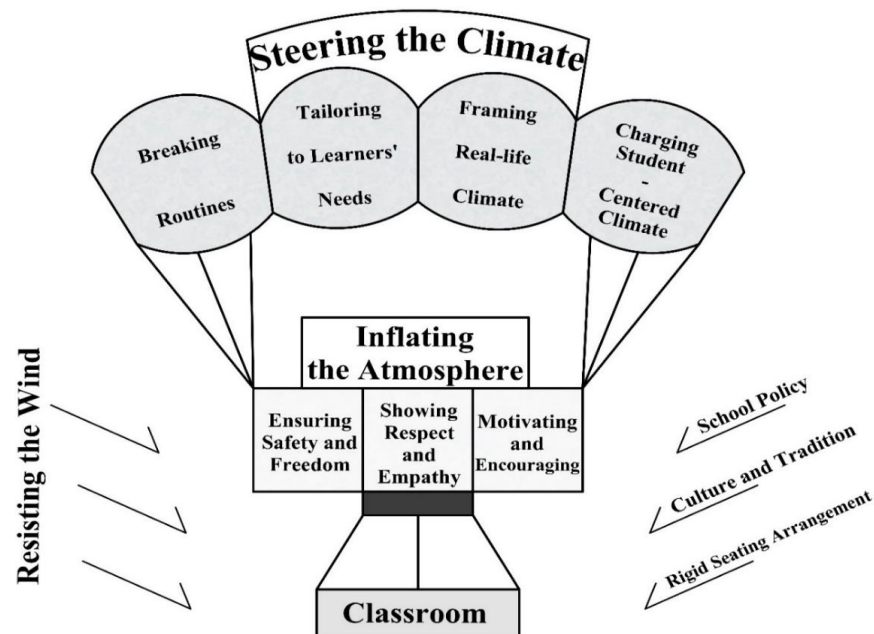


Figure 2. A parachute graphic design of the CLE with CT



Based on the teachers' significant narratives, the current study revealed that inflating a safe atmosphere is the first major psychological factor impacting EFL teachers' integration into CT. The teachers proved that this key theme serves as an accelerating base in which teachers render the CLE more comfortable to develop learners' CT skills. Acting as the infrastructure of the parachute, the research teachers highlighted that establishing a safe atmosphere is the tight cord that builds compact structure and sensible learner-learner and teacher-learner flexibility to develop CT skills. The teachers emphasized how the psychological sub-themes of a) ensuring safety and freedom, b) showing respect and empathy, and c) motivating and encouraging, positively contribute to establishing a safe CLE to boost learners' CT skills. The findings were in line with a study conducted by Arslan and Demirtas (2016) who concluded that the social-emotional CLE, particularly respect, self-confidence, empathy, and regulating emotions, effectively contribute to promoting learners' CT skills. Also, and Yin, Saad and Halim (2023) asserted that emotional interaction plays a crucial role in developing learners' CT skills.

The teachers suggested a promising practice, to enhance this safe psychological atmosphere, in which learners are encouraged to feel comfortable with mistake making by exploring new pathways and extending their CT, rather than seeking to give a 'right' or 'wrong' answer because 'without the possibility of, and the space for, risk and failure, there can be no creativity' (Henriksen, Creely & Henderson, 2019, p.4). Such a finding was confirmed by Gunawardena, Sooriyampola, and Walisundara, (2017) who highlighted that when learners knew there was no incorrect or insufficient answer, they became more interactive to utilize their thinking skills. The teachers also insisted on integrating decision-making into their teaching practice to develop learners' ability to make choices, give reasons, make their thinking perceptible and evaluate their risk-taking which promote their CT skills (Henriksen, Henderson, Creely, Carvalho, Cernochova, Dash & Mishra, 2021). The teachers expressed that inspiring student to be autonomous is considered a psychological aspect that affects the teachers' integration of CT. This result came in line with the results presented by Nosratinia and Zaker (2013) who proved that autonomous learning supports learners to grow more critical in foreign language learning as well as improving their CT skills.

Taking the outcomes into account, the findings disclosed that offering such flexibility requires a great resource of empathy and respect as a significant psychological aspect of teachers' integration of CT since such strategies trigger learners to develop more CT skills. This finding parallels with a study conducted by Ampuero, Miranda, Delgado, Goyen, and Weaver (2015) in which they envisaged the outcomes of teaching CT and empathy' effect on solving environmental problems. With the help of community-based research, the results concluded that social empathy contributes to the role of CT in solving problems because the participant students felt an outstanding tendency to utilize their CT skills upon given the opportunity. On another scale, the research teachers reckoned that motivating and encouraging learners to be more creative is the key to achieving an influential psychological CLE to boost CT. This finding was emphasized by research conducted by Fahim and Hajimagsoodi (2014) who postulated that motivation holds a significant position in fostering learners' CT skills. A similar conclusion was claimed by Wichadee (2014) and Hashemi and Ghanizadeh (2012). Thus, many previous studies corroborate the present findings of the serious need for establishing safe psychological atmosphere (Hattie, Hodis & Kang, 2020; Ryan & Deci, 2020).

The second major factor impacting EFL teachers' integration of CT into the Turkish CLE is steering the classroom climate that reflects the teachers' pedagogical decisions





allowing them to guide and develop learners' behavior to support a critical CLE. Acting as the parachute's rigid framework, the teachers confirmed that such skills are spread out as roof branches of a shelter extending to steer the learning climate in which teachers provide stability while teaching CT. These branches or skills empower teachers to direct the climate of CLE providing a swing-free descent to achieve CT skills. Quotes from the research sample teachers highlighted that breaking some traditional routines, tailoring the CLE to the learners' needs, framing real-world climates, and charging student-centered environments are the branches of the parachute model or the teachers' pedagogical aspects to steer the CLE to boost CT.

The participating teachers interpreted breaking routines as a powerful pedagogical factor impacting the development of learners' CT and increasing learners' curiosity since learners become less interested in traditional activities and techniques. In support of this finding, Yuan, Liao, Wang, Kong and Zhang (2022) revealed that EFL teachers well prepare learners to think critically by raising their curiosity and interest, more specifically, by guiding them to be involved in the learning process when they can select critical contexts related to their personal life. Moreover, Aldan Karademir (2019) suggested a tight and positive correlation between curiosity and problem-solving skills, which supports CT. An additional pedagogical factor tremendously affecting the development of learners' CT is customizing the CLE to the learners' styles. The teachers indicated that leading the CLE to where, what, and how learners are interested is positively associated with learners' development of CT skills. This finding was advocated by a study conducted by Nosratinia and Soleimannejad (2016) who suggested that EFL teachers should design the CLE in a favorable interactive way among learners to improve their CT skills since they are instructed into more favorable topics to them.

The teachers further reflected on sketching CLE in accordance with real-life activities which positively influences learners' CT skills because they empower learners to easily shift between visceral and intellectual thinking processes through cognitive and metacognitive procedures in which they are involved in thought-provoking tasks, such as argument evaluation (Simonovic, Vione, Stupple, & Doherty, 2023). CLE, reasonably, is unstrained by a solid setting, but rather it extends beyond the classroom with cushions. Based on the current results, charging a student-centered CLE is an additional critical pedagogical factor supporting learners' CT skills. In this research, teachers suggested that supplying learners with interactive student-centered materials, such as games and competitions, offering better opportunities to interact and develop their CT skills. This echoes the findings of Djamas and Tinedi (2018) who employed interactive multimedia materials, such as games, designed by 4 expert participants and based on student-centered learning to test 30 high school students' CT skills. The results demonstrated that an interactive student-centered CLE shall strengthen learners' CT skills.

According to the third theme, the teachers drew attention toward the barriers negatively affecting both teachers and learners from steering the climate in which both resist the challenges pushing them up to achieve a critical CLE. As the skeleton of the parachute, the parachute works through resisting the wind or problems, namely some school policies, curriculum, textbooks, and traditional culture, which the research teachers confront while teaching CT. The teachers illuminated that CT is based upon the culture type, and the Turkish CLE, is ranked as an eastern culture, based on rigid religious philosophies. Deprecating culture or social background while defining CT poses challenges to employing CT in real-world contexts and limits the term to the borders of a CLE (Higgins, 2014). As various studies have recently highlighted additional effort ought



to be paid to fill the gap between the learners' real world around them and their learning outcomes (Álvarez-Huerta, Muela & Larrea, 2022). Therefore, Turkish learners lack interaction among each other due to several traditional backgrounds affecting their process of CT. This finding was introduced by Alagozlu (2007) who verified that Turkish students are faced by difficulties expressing their thoughts orally, which prevents them from developing their CT.

Moreover, the teachers indicated an additional constraint influencing their integration of CT, namely rigid, limited, and crowded CLEs that impair teachers' role to improve learners' CT skills since that participants assumed that a rigid and crowded environment consumes time and effort to move chairs and stop learners from having the opportunity to participate. This finding resonated with Al-Kindi and AL-Mekhlafi (2017) and Yildiz (2020), who suggest that utilizing some real-world materials such as carpets and floor cushions, and setting up a flexible setting order, such as U shape, improves their development of CT.

## 6. CONCLUSIONS AND RECOMMENDATIONS

The current research paper investigated the practices and integration of teaching CT by EFL teachers serving in various private schools in Turkey in terms of detecting the developing factors of the Turkish EFL CLE. The participants believed in the impact of psychological, pedagogical, and social elements of the CLE upon the integration process of teaching CT in EFL classrooms. In this context, the findings of the study suggested a parachute graphic design illustrating the integration of CT and explicitly stands for a metaphor befitting the topic. In terms of the parachute model, teachers are provided with a safe landing in the CLE with the target of incorporating CT. Shaping a foldable umbrella device, the parachute design is supported by three major factors: (a) psychological, (b) pedagogical, and (c) social aspects that work together to resist the teacher-student challenges and boost a supportive CLE of the integration process of CT. Thus, the parachute model raises the teachers' awareness of the psychological, pedagogical, and social aspects of CLE influencing the process of teaching CT inside EFL classrooms to develop their learners' CT skills.

Considering these discussions, the CLE is found to play a crucial role in boosting CT skills. Therefore, a research agenda should adopt higher interest and awareness to include an investigation of CT CLE according to teaching specific learners, such as young, adults or university students. Further, it is recommended that each element of the CLE can be independently investigated to boost the process of teaching CT in terms of gaining an in-depth understanding of each factor. Due to the absence of predefined themes and the pre-fixed definition of CT, it is highly recommended to investigate directly on the assessment of some other key aspects of CLE that may affect CT, such as the connection between teachers' experiences and professionalism. Additionally, future research may examine learner-learner and school-teacher elements such as a resolution support system. Ultimately, future studies can entail an extensive presentation and particular regions of Turkey to increase generalization. The current study suggested programs or seminars can be built on such current efforts to address the school system or curriculum to maximize relevant interaction between teachers and learners, drawing attention to concrete skills and strategies that support the process of CT.



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- **Appendix A**

### **INTERVIEW QUESTIONS**

#### **The first interview questions:**

##### **Topic 1: Understanding of CT in terms of teachers and school**

1. Can you tell me as much as possible about your experiences as a teacher?
2. Have you heard the term 'critical thinking' before, when where and why?
3. What does CT mean to you?
4. Have you attended any training before? Or read books and articles on it?
5. How is CT placed by your school curriculum? Namely, how is CT put in the curriculum?
6. How do your colleagues understand and interpret CT?

#### **The second interview questions:**

##### **Topic 2: Teachers' experiences with integrating CT**

7. How do you build the social and physical classroom settings to improve CT?
8. How does CT inform your practices? How does CT influence your practices?
9. How do you encourage critical thinking among learners without teaching it?
10. How do you use students' voice in the process of critical thinking?
11. What procedures do you use to evaluate learner's critical thinking?
12. What kind of activities do you use to improve students' critical thinking?
13. What kind of teaching materials do you use to improve students' critical thinking?
14. What are your experiences when you want to integrate critical thinking into your teaching?
15. How do you think your colleagues think about CT and integrate it in their teaching?  
Do you have some examples?
16. What are the students' reactions and experiences in CT-based or supported teaching?  
Can you give examples?
17. Have you ever given formal talks about critical thinking or involved in any research about critical thinking?