



EFL HIGH-SCHOOL TEACHERS' PRACTICES OF STRATEGIES FOR CRITICAL THINKING INSTRUCTION IN WRITING CLASSES

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Abstract:

This study aims to investigate EFL high-school teachers' practices of strategies for CT instruction in their writing classrooms. The study was designed as a mixed-method one, using a questionnaire, and classroom observation as collecting data instruments. The sample consists of 103 EFL teachers from 21 high schools in Camau province, in the Mekong Delta region for quantitative data; five out of 103 teachers were purposely chosen to be observed to collect qualitative data. The finding of the study revealed that EFL high-school teachers' practices of CT strategies used in writing classrooms were at a high level but at the lowest rate. At the same time, the results from classroom observation showed that EFL teachers used three more including setting real writing tasks, presentation, and student questioning in addition to the seven CT strategies presented in the research. From the findings, some pedagogical implications and recommendations are promoted in the hope that EFL teachers can effectively employ strategies for teaching CT in writing classrooms. Finally, the study's limitations and suggestions for further research were also highlighted.

Keywords: critical thinking, EFL high-school teachers, EFL writing, practices, strategies

1. Introduction

Critical thinking (CT) is not new in many education systems throughout the world, yet it seems that many EFL Vietnamese teachers are unfamiliar with it. Ho et al., (2018) stated that CT is a new and ambitious objective that needs further documents to guide EFL Vietnamese teachers in how to help students to be critical thinkers in specific subjects. In

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Vietnam, CT development for students is gradually being paid much attention by educators and teachers. Not only in universities but also in high schools, students are expected to become critical thinkers after leaving school. It is also explicitly mentioned in the new program that one of the primary goals of schools is to help students develop CT, creative, and problem-solving skills (MoET, 2017).

In English language teaching, writing is intertwined with thinking most. Chaffee (2014) indicated that writing is the process of thinking. Learning to be a good writer is to learn to be a critical thinker. Several studies emphasized the significant influences of CT on students' writing performance (Nguyen, 2016; Rashtchi & Khoshnevisan, 2020; Tsui, 1999). Thus, writing is considered the most important strategy which would help to make the transformation from declarative to procedural knowledge and make critical thinking a life skill (Benesch, 2001; Chaffee, 2014; Condon & Kelly-Riley, 2004).

However, writing skill in Vietnamese upper-high schools is frequently restricted to making sentence and grammatical points of those phrases or rote memorizing sample texts provided by teachers. Meanwhile, being able to write successfully requires more than linguistic knowledge and memory of sample texts; it also encourages students to write in order to learn how to construct their texts independently, as well as active interaction with other writers in the learning process (Pham & Truong, 2021). The issue discussed here is that, despite the fact that there are a great number of specific strategies for CT instruction, it is challenging to effectively use CT strategies in EFL classrooms, especially in writing classes, in Vietnam where passive and examination-oriented learning culture is typical. The question of how EFL high-school teachers use CT strategies in EFL writing classrooms is still unresearched. As a result, this study was conducted to address the question. Based on the findings, it can help policymakers, educators and EFL teachers gain a deeper understanding of practices of CT strategy implementation and evaluate the current situation of students' CT development in the Mekong Delta context.

The study seeks to answer the following research question:

- What are EFL high-school teachers' practices of implementing strategies for critical thinking instruction in their writing classrooms?

2. Literature review

2.1. Critical thinking

There are many definitions for CT. John Dewey, an American philosopher, and Psychologist first introduced the term 'reflective thinking' (Dinuta, 2015; Fisher, 2001). According to Dewey (1910), the main features of reflective thinking include the abilities of an individual to be the owner of their thinking, to raise questions, and to find relevant information, as well as reasoning to support or reject a particular belief.

From a cognitive psychological perspective, Paul (1985) defines CT as - learning how to ask and answer questions of analysis, synthesis, and evaluation. Meanwhile, Sternberg (1986) explicates CT as "*the mental processes, strategies, and representations people*

use to solve problems, make decisions, and learn new concepts" (p.3). Ennis (1993) offers as a definition of CT "*reasonable reflective thinking focused on a number of deciding what to believe or do"* (p. 180). Those definitions demonstrate that CT refers to one's cognitive process in which one receives and processes sources of information, and deals with problems arising in his/her mind.

Additionally, the cognitive process is clearly described by Bloom (1956). He terms 'critical thinking' as the ability to gain knowledge through the exploration of ideas concerning the following six levels: knowledge, comprehension, application, analysis, synthesis, and evaluation. Then, Bloom's revised taxonomy by Anderson and Krathwohl (2001) provides a more adequate progression of steps which include six major categories of cognitive skills: "*remembering, understanding, applying, analyzing, evaluating and creating"* (Krathwohl, 2002, p.212). The first three are considered lower-order thinking skills, whereas the last three suggest higher-order thinking skills (Kennedy et al. 1991). In short, CT is a complex concept and is defined in different ways from different views. It can be recognized that this term can be closely used among related forms including higher-order thinking, problem-solving, decision-making, and creative thinking (Facione, 1990), or an individual's ability to think about his thinking and is acknowledged as a higher-order thinking skill (Halpern, 1998).

Furthermore, Wen (2009) proposed a theoretical model of CT, which is easy to be operated in the teaching process. According to her, CT consists of two levels: meta-thinking ability and thinking ability. Meta-thinking refers to the ability to plan, check, adjust, and assess one's own thinking while thinking ability refers to cognitive skills including analytical ability, reasoning ability, and evaluating ability; standards including clarity, relevancy, logic, profundity, and flexibility; emotional traits involving curiosity, open, confidence, just and integrity, and perseverance. In a similar fashion, Bailin and Battersby (2010) considered the spirit of inquiry, the role of open-mindedness, fair-mindedness, curiosity, and the respectful treatment of others as parts of CT. Paul and Elder (2012) also remind us of the importance of the willingness in thinking critically. They emphasize students' willingness to examine their own thinking, analyze it to identify weaknesses, and reconstruct their thinking in order to improve it.

Liu (2018) develops a theoretical framework for an English writing course based on Wen's model. According to Liu, the teaching objectives of CT in an English writing course are defined as a set of the following abilities (see Table 2.1), which writing learners are expected to achieve through writing classes.

In short, CT is thought to involve both cognitive and affective domains (Ennis, 1987, 1996; Facione, 1992, 2015). The characteristics of CT can reflect the affective characteristics of a critical thinker who is described as being skeptical, curious, open-minded, fair-minded, honest, and confident (Facione, 1990). Also, CT indicates the abilities of an individual to ask and answer questions, make decisions, solve problems, analyze, and evaluate sources of information in different contexts.

Table 2.1: The teaching objectives of CT in an English writing course

Meta-thinking ability (self-planning, self-regulation, self-assessment)		
Thinking ability		
Cognitive		Emotional traits
Skills	Standard	
Analytical ability: analyze the readers before writing, establish the purpose of writing, and analyze the format/structure of each type of text including the introduction, the body, and the conclusion. Reasoning ability: draft the effective thesis statement Evaluating ability: figure out the strengths and weaknesses of writings, judge the convincing of the evidence and logic in the argument.	Clarity: whether the thesis is clear? Is it understandable to readers? Relevancy: whether the thesis statement is relevant? Logicity: whether the content is coherent Profundity: whether the argument is profound and broad) Flexibility: whether it is to argue the thesis from the different views	Curiosity: learners can determine the topic by looking up the reference and are willing to put forward the questions and eager to learn new things. Open: Learners can accept the peer's positive and negative feedback. Confidence: learners can positively express ideas in group discussions and challenge the authorities. Just and integrity: learners can tell the rights in front of the different topics. Perseverance: learners can persist in the whole writing course.

Many definitions and models for CT have been offered. Nobody's definition, however, fits all needs or is acceptable for every situation. CT is defined in this study as both cognitive and affective traits. It refers to a set of skills such as question-asking answering appropriately, analyzing, synthesizing, and evaluating sources of information and/or learning materials. By doing this, students are able to construct new knowledge by themselves and make their own decisions on language knowledge and writing strategies. Additionally, CT involves abilities of reflection and autonomy in student learning; it also manifests in students' open-mindedness, curiosity, confidence, and respectful treatment of others.

2.2. Critical thinking and writing relationships

The links between CT and writing were demonstrated in many studies (e.g., Indah, 2017; Nguyen, 2016; Quitadamo & Kurts, 2007). Applebee (1984) and Resnick (1987) agreed that writing improves thinking because through writing assignments learners require to think and arrange their ideas, evaluate and choose suitable tools to make their writings clear and coherent to readers. In other words, writing is a process of doing CT, a product that communicates the results of CT. In the writing process, learners develop their CT skills involved in generating ideas by using a problem-solving process, employing a range of cognitive and linguistic skills. Similarly, Schafermen (1991) explains that 'writing forces students to organize their thoughts, contemplate their topic evaluate their data in a logical fashion and present their conclusions in a persuasive manner'. Good writing is therefore a reflection of good critical thinking.

Meanwhile, Bean (1996) explains that there is a relationship between writing and CT that focuses on solving problems. He states that writing assignments have the flexibility to integrate CT tasks into writing courses because the writing process involves CT. Chaffee (2014) argued that critical writers are those who are able to articulate their ideas clearly and persuasively in writing; understand and evaluate what they read; discuss ideas in an informed, productive fashion. Therefore, teachers need to clearly design CT activities to engage students in doing writing tasks in groups to generate and discuss ideas and organize logically because the development of thinking and the improvement of writing go hand in hand, and effective thinking can also contribute to effective writing (Lin, 2018).

2.3. Principles for CT development

CT is thought to be the key capacity that learners need to possess in such a society of rapid changes. Selecting suitable CT strategies leads to effectiveness in CT development because different contexts may favor different approaches and strategies depending on the contextual characteristics and the nature of criticality that contexts focus on (Ennis, 1996). In order to train students to be critical thinkers requires teachers to follow CT principles to design learning activities suiting their learners and their real teaching contexts. Here are principles that teachers need to be taken into account.

According to Fahim and Ghamari (2011), teachers' perceptions of CT, classroom atmosphere, student interactions, and forms of assessment are crucial principles of CT development. Especially the process of assessment, they explain that involving in marking each other' papers based on the grading criteria given benefits students in understanding the difference between being critical in a negative manner and being constructive. Also, that students assess their own papers on the basic given criteria helps them develop metacognitive skills and judgments-making skills.

Furthermore, the integrated skills (speaking, writing, and reading) in EFL classrooms contribute to the development of learners' CT. Fahim and Ghamari (2011) suppose that useful forms of oral work such as debate, presentation, conversation questions, and small group collaborative learning need to be encouraged in the process of CT. Regarding the integration of writing in CT development, Fahim and Ghamari (2011) also suggest a number of writing tasks that they believe are useful for students' CT development such as summary, 'compare' & 'contract', peer review, finding different perspectives on the same issue tasks and so on. Concerning the importance of reading in thinking, it is supposed that both reading and writing involve generic skills that are directly associated with critical processes. Note-taking and recognizing the structure of a text are essential factors in reading critically. Moreover, Moon (2007) emphasized the importance of student interaction, reflection, the atmosphere of the class, writing skills, assessment, and metacognition in promoting CT among students.

2.4. Strategies for critical thinking instruction

Several strategies were highly recommended for fostering learners' CT in EFL classrooms. For instance, Rezaei et al., (2011) and Zhao, et al., (2016) suggested numerous practical strategies including debates, problem-solving tasks, self-assessment, peer assessment, explicit instruction, teacher questioning, and active and cooperative learning strategies. Also, dialogue, questioning, and discussion are three key strategies that allow students to demonstrate their thinking skills (Burbules, 1993; Moss, 2004). Chen (2017) argues that classroom activities such as discussion, dialogue, debating, group work, and presentation prepare students for the actual writing assignments. Meanwhile, Liu (2018) revealed that using multi-draft writing and establishing students' writing portfolio help not only foster analyzing abilities, CT abilities, and problem-solving skills but improve Chinese students' writing abilities also. In the Vietnamese context, Nguyen (2019) also proposed a number of strategies such as debates; self-reflection and standardization of thinking; voluntary cooperation; combining active teaching methods, and classroom interaction. These strategies are under different names, but they share common purposes of creating favorable conditions for learners to interact, share, exchange their ideas, and thoughts, and offer time to reflect on themselves. By doing so, learners become more confident, open-minded, and autonomous in learning.

Although many teaching strategies for developing EFL learners' CT are proposed, the study considers seven CT strategies, which serve as the framework for creating the questionnaire items and observation checklist, as well as the initial themes for the data analysis in the current study. The CT strategies chosen for the current study are not all, but it is predicted that other possible CT strategies that EFL high school teachers employ enhance students' CT abilities, and there might be strategies that are never used by participants. As a result, the study is planned to determine which CT strategies are frequently used among the seven, and whether participants use any other CT strategies in their practices. The succeeding parts will delineate CT strategies used in the current study.

2.4.1. Questioning

Questioning (or teachers' questions) is an indispensable part of teachers' practices to get students involved in thinking about and understanding the text (Paul & Elder, 2007; Peterson & Taylor, 2012; Wilen, 1991). It is an instructional strategy to provoke student thinking, learning, and communicating ideas and knowledge (Tofade, Elsner, & Haines, 2013; Wilen, 1991). Posing questions appropriately creates opportunities to give teachers insights into potential problems students are facing as well as their present levels so as to scaffold low-achieving students timely and stimulate CT for high-achieving ones. It is, therefore, necessary to clarify what is meant by 'questioning'.

Questioning is rooted in the work of Socrates, a Greek philosopher as it refers to the teacher's activity to promote student thinking and articulation of their opinions or ideas for efficient learning (Maphosa & Wadesango, 2016; Şeker & Kömür, 2008). Meanwhile, Zhang et al., (2018) uses the term 'questioning' to refer to a process in which

a teacher poses and gives feedback based on students' responses, questions could be posed by teachers or generated by students. From the social constructivist learning theory, questioning is important because teachers act as facilitators of student learning and students as active and autonomous participants of new knowledge (Farrell & Mom, 2015). Questioning in this study is defined as questions generated by the teacher to promote student thinking, interaction, and participation in processing knowledge of a particular area.

According to Bloom (1956), questions can be classified into two levels: higher and lower-level questions. Lower-level questions are those at the knowledge, comprehension, and simple application levels of the taxonomy, while higher-level questions are those requiring complex application (e.g., analysis, synthesis, and evaluation skills). Questions at the lower levels are usually appropriate for:

- evaluating students' preparation and comprehension;
- diagnosing students' strengths and weaknesses;
- reviewing or summarizing content.

Questions at higher levels of the taxonomy are usually most appropriate for:

- encouraging students to think more deeply and critically;
- problem-solving;
- encouraging discussions;
- stimulating students to seek information on their own.

It can be inferred that the level of student thinking is generally related to the level of questions that teachers ask. The higher level of questions is, the higher level of learners' thinking achieve. Therefore, Gibbs (2001) suggested several strategies to support teachers' questioning effectively in thinking classrooms: (1) asking questions that have many possible answers; (2) providing adequate wait time for students to formulate their responses; (3) providing feedback as soon as they answer and keeping the discussion open; (4) calling on all students, but quickly move on another student if one chooses not to answer; (5) using think-aloud so that students can immediately practice their thinking.

2.4.2. Discussion

Discussion is a traditional model of teaching in educational settings. The term 'discussion' has been described by different authors in many ways. Jahng (2012) and Prince (2004) state that discussion-based pedagogies are teaching approaches in which various forms of dialogue are used to achieve particular learning outcomes. Meanwhile, Orlich et al., (2013) stated that discussion is a teaching technique that involves an exchange of ideas, with active learning and participation by all concerned. For this study, discussion refers to conversations in groups or in class where students can discuss a particular topic, exchange their ideas, and learn actively in writing classes.

In order for group or/and class discussions to be effective, Tredway (1995) argues that an effective discussion is one that is planned and executed using an original text and open-ended questions designed to elicit true student voice by engaging them on an emotional level through meaningful, experiential instruction. Besides, Zhao, et al., (2016)

indicated that the instruction of the fundamental rules and skills in discussions is crucial. They could be listening attentively, responding appropriately, building on others' ideas, inviting others to respond, asking clarifying questions, expressing agreement or disagreement, and providing and requesting justification for assertions (Gunning, 2008). Moreover, choosing suitable and thought-provoking topics can be attributed to the stimulation of CT among English learners.

2.4.3. Project-based learning

Another highly valued instructional strategy for CT development is project-based learning (PBL). PBL is a modern teaching method aimed at students, connecting students' experiences with school life and stimulating serious thinking as students gain new knowledge. PBL has also been designed with a specific project-based section after each unit in the Tieng Anh textbooks being used in Vietnamese high schools.

There is no one specific existing definition of PBL (Baş, 2011). Thomas (2000) states that PBL "*is a model that organizes learning around projects*" (p. 1). It can be different tasks with questions and problems that involve students in problem-solving and investigative activities. Meanwhile, Solomon (2003) argues that PBL is all about learning through experiences. Kubiato and Vaculova (2011) and Bell (2010) shared the same idea that PBL is an instructional method centered on the learner who is guided by a teacher during all the steps of the project. To sum up, PBL is a learner-centered instructional method, which allows in-depth investigation of a topic worth learning more about.

According to Hidayati and Nurjanah (2017) and Saptaria and Setyawan (2021), the characteristics of PBL can be summarized as follows: (1) *student-driven* (PBL involves student taking the initiative to solve a problem, even if it is not required); (2) *educational activities* (PBL requires a variety of educational activities to explore and understand the problem); (3) *end product* (PBL results in an end product, such as a thesis, report, a plan, or a model); (4) *time-intensive* (PBL often involves work that goes on for a considerable length); (5) *advisory role of the teacher* (the teacher acts as an advisor rather than authoritarian figures, guiding students at different stages of the process).

Most importantly, when using PBL, teachers need to know the principles of PBL and its stages before implementing it. The principle of PBL is the question or problem which is served to organize and drive activities. These activities culminated in a final product that addresses the driving question (Adderley, 1975). Additionally, three stages of PBL activities were suggested by Han and Bhattacharya (2001); Hastuti and Setiawan (2021) as follows: (1) *planning* -- it consists of choosing topics, searching resources, and organizing; (2) *creating and implementing* -- covering the activities of developing thought and documentation then coordinating and blending; and (3) *processing* -- conducting a reflection and follow-up. During the implementation of those stages, the teacher takes the role of a facilitator who convinces every student contributes actively to their group.

2.4.4. Process writing

In addition to using PBL for enhancing certain CT skills, process writing (PW) is the choice of many educators and teachers. PW is an approach to writing, where language learners focus on the process by which they produce their written products rather than on the products themselves. Applebee (1986) argues that the process approach “*provided a way to think about writing in terms of what the writer does (planning, revising, and the like) instead of in terms of what the final product looks like (patterns of organization, spelling, and grammar)*” (p. 96). Likewise, Brown (2001) states that writing is a thinking process, a writer produces a final written product based on their thinking after the writer goes through the thinking process. In other words, the term ‘process writing’ is viewed as a teaching writing strategy in which students experience a multi-step writing process and multi-feedback is provided during students’ process of writing.

The writing process usually involves several steps. Chaffee (2014) proposed a model of thinking-writing including six stages: generating ideas, defining a focus, organizing, drafting, and revising. Likewise, Crawford et al., (2005) mentioned five phases of the writing process including rehearsing, drafting, revising, editing, and publishing. He said that these steps don't have to be carried out in order, but that students still need time to assess their own work and make changes and edits. In short, although there is a multitude of steps in the process of writing and itself is dynamic, a typical sequence is comprised of three steps: prewriting, drafting, and revising (Onozawa, 2010). Each writing teacher has a preferred way of approaching the writing process, from simpler to more complex depending on the level of the learners, and the purpose of writing.

It can be inferred that multi-feedback in process writing is dominant, which improves students’ CT. Moreover, peer review and brainstorming, which are commonly done before and after writing, are also believed to help in idea generation and improvement (Bean, 2011; Ferris, 2003; Min, 2005; Rao, 2007). Zeng (2012) discovered that her students' CT had improved in terms of relevance, clarity, and coherence after four months of employing a six-step technique that involves resource gathering and evaluation, writing and revision, post-writing evaluation, and feedback.

2.4.5. Writing portfolios

A writing portfolio serves as an effective method for developing and reinforcing CT skills (Mulnix & Mulnix, 2010). ‘Portfolio’ is understood in different views. Genesee and Upshur (1996) define a portfolio as “*a collection of a student’ works that demonstrate to students and others their efforts, progress, and achievement in given areas*” (p.99). Similarly, Carey (2000) states that portfolios are collections of students’ work over a course or a program and can be an effective method of demonstrating student progress in the area of CT. In addition, establishing a portfolio is considered an alternative kind of assessment. Supporting this point, Buckley et al., (2009) consider a portfolio as a “*learning and assessment tool*” and a collection of evidence that the learning process has taken place (p.283). Liu (2018) uses the term ‘writing portfolios’ as exercise books that record the

whole course of students writing, including the pre-writing phase (brainstorming, and group discussion), the in-writing phase (the first draft, the peer-feedback and self-feedback, and the post-writing phase (the second draft, teacher-student feedback, and third draft). In short, a portfolio can be viewed as a folder keeping students' tasks, showcasing students' efforts and student learning progress; it is also considered a kind of alternative assessment in the teaching and learning process.

Hamp-Lyons and Condon (2000) and Lam (2018) noted that *collecting, delayed evaluation, reflection, and selection* are essential components in all portfolio-based programs when discussing the characteristics of writing a portfolio. According to them, *collection* is about the compilation of multiple artifacts, such as interim and final drafts; *delayed evaluation* allows students to revise their work regularly; *reflection and self-assessment*, in which students are scaffolded to make informed decisions about the quality of their portfolio works; and *selection* encourages students to strategically choose their best works for grading and celebrating achievements. They further claimed that collection and selection are highly associated with reflection, through which student evaluate their works-in-progress by feedback in the portfolio process while delayed evaluation helps students monitor their writing development with enhanced autonomy and move their learning forward.

2.4.6. Self and peer assessment

More literature reviews suggest the use of assessment forms helps students to be more responsible with their learning and develop their CT. Shirkhani and Fahim (2011) recommended a number of ways to encourage CT through assessment including ongoing assessment, criterion-referenced, CT activities in teachers' assessment, frequent feedback, and co-develop criteria for assessment. However, the current study focuses on self and peer assessment.

Self-assessment is defined as a process where "*students are directed to assess their performance against pre-determined standard criteria...[and] involves the students in goal setting and more informal, dynamic self-regulation and self-reflection*" (Bourke & Mentis, 2011, p. 859). Meanwhile, peer assessment is a type of assessment where a learner evaluates another learner's work. Reinholz (2016) defined peer assessment as "*a set of activities through which individuals make judgments about the work of others*" (p. 1). As demonstrated by Bozkurt (2020), self- and peer-evaluation can be a potent learning activity in addition to an assessment tool. She said that self and peer assessment help students see their own weaknesses and learn by observing peers' work, supporting the development of abilities including self-regulation, critical thinking, and decision-making.

For successful assessment, students must be prepared for it in advance. Preliminary preparation is necessary for this purpose, including: (1) discussing and defining assessment criteria with students; (2) conducting instructions with the students on how to apply the criteria; (3) providing feedback to students on their assessment, including evidence-based discussion on possible differences with assessments by the teacher or the colleagues (Kirkova, 2007).

2.4.7. Classroom learning environments

Possessing strategies for CT is necessary but not sufficient for engaging in CT, therefore, one key element is contributed to CT development that cannot be ignored is the structure and attitude in the classroom learning environment (CLE). Establishing a community of learners was discussed as an important way to increase writing fluency for diverse learners and support the use of higher-level thinking. Learning environment refers to 'the social, psychological, and pedagogical contexts in which learning occurs and which affect student achievement and attitudes' (Fraser, 1998, p.3). In other words, the classroom environment includes learners' needs, motivations, and sense of control (Buck, 2002), as well as classroom arrangement, which is defined as a set of techniques and skills that allow a teacher to effectively control students in order to create a positive learning environment for all students.

Kurland (1995), Halpern (1996), and Unrau (1997) indicated that the most successful classrooms are those that encourage students to think for themselves and engage in CT. Later on, Mathews (2003) described a classroom that invites students to learn actively and think critically have these features in common:

- 1) Teachers and students share responsibility for the classroom climate
- 2) Teachers model the thinking process for students and support students as they share their thinking strategies.
- 3) There is an atmosphere of inquiry and openness.
- 4) Students are given support, but just the right amount of it.
- 5) The arrangement of the space makes it easy and natural for students to work together and talk to each other.

Regarding classroom arrangement, Crawford et al., (2005) suggested that circle-seating is one of the ways of arranging classroom spaces to help students interact with each other. Additionally, Ezzedeen (2008) stated that U-shaped seating makes pave the way for students to interact and discuss, and debate since they are facing each other that grant them enough chance to instigate their schemata because teaching CT in traditional classrooms is not easy work due to the dominance of traditional instructors on students' opinion and ideas (Barnawi, 2010).

3. Methodology

3.1. Research design

The study has adopted a mixed-methods design, using both quantitative and qualitative research to investigate EFL high school teachers' practices of implementing CT strategies in writing classrooms. The reason for choosing these methods is that they allow the researcher to deepen the data collected (Creswell, 2014). The qualitative and quantitative data can be merged into one large database or the results used side by side to reinforce each other (Creswell & Plano Clark, 2007). Besides, a means of convergence of quantitative and qualitative would help triangulate data sources and minimize the weaknesses of the other (Jick, 1979). A good questionnaire can help to explore how

participants think and perceive the themes (Reid, 2003) while observation enables the researcher to create a picture of the living natural world of those being observed and an understanding of the way they commonly approach everyday classroom activities (Flick, Kardorff & Steinke, 2004).

3.2. Research instruments

A questionnaire and classroom observation were employed as research instruments. The questionnaire aimed to seek quantitative data related to teachers' practices in writing classrooms and classroom observation was employed to gain qualitative data to explore an in-depth understanding of EFL high-school teachers' practices of strategies for CT instruction, as well as other CT strategies they applied in their actual teaching.

3.2.1. Questionnaire

The questionnaire was designed to obtain information regarding EFL high-school teachers' practices of implementing CT strategies. It is chosen because of the ability to collect data on a large scale and its benefits in time, in terms of effort and financial saving (Brown, 2000; Dörnyei, 2003). In addition, Creswell (2014), Malhotra (2006) and Wilkinson and Birmingham (2003) stated that questionnaires can be used to supplement the qualitative data, and hence, the data analysis is internally consistent and coherent.

The questionnaire comprises two sections including 42 questions and was designed by the researcher based on the reviewed literature:

- Section I: It is used to collect the participants' demographic information including name (optional), email address/ Zalo phone number, gender, workplace, years of teaching, and qualifications.
- Section II: This section includes 42 questions (from item 1 to item 42) regarding teachers' practices of implementing CT strategies in writing classes. The questions were also divided into 7 CT strategy groups. Each item represented one step or/and activity that teachers do in their real teaching. These steps/ activities were collected from the previous research presented in the literature: questioning (items 1 to 6), classroom learning environment (items 7 to 12), discussion (items 13 to 18), PBL (items 19 to 24), process writing (items 25 to 30), writing portfolio (items 31 to 36), self and peer assessment (items 37 to 42). This section was designed with the five-point Likert scales, ranging from 'never' to 'always' to examine how frequently EFL teachers applied these CT strategies in their writing classes.

Before it was officially distributed to the participants, the questionnaire was pilot-tested with 23 teachers who shared similar teaching contexts with the target participants. The obtained data were run via the Statistics Package for the Social Sciences (SPSS) program version 20.0 to ensure its reliability, which resulted in a Cronbach alpha value of 0.93, indicating that the questionnaire was a reliable instrument for data collection in this study.

3.2.2. Class observation

The observation was used to gain a deeper understanding of EFL high-school teachers' practices of implementing CT strategies. According to Somekh and Jones (2005), observations are considered one of the most significant data collection tools as it involves researchers being present in a situation and recording their impression of what occurs. Therefore, an observation instrument was conducted firstly to capture teaching strategies EFL teachers used to develop students' CT skills, then, to triangulate the data sources and increase the reliability of the quantitative data and further understand the actual happenings of teachers' writing classes.

Additionally, an observation sheet was prepared for the researcher to note down what was happening in the observed class. An observation checklist was also designed in order to collect observational data, as well as for data analysis. In addition, after each class, there was a post-discussion where the researcher raised some questions related to the teaching and learning process of that class to make it clearer. The classroom observation was carefully done within nine weeks, from the twenty-third week to the thirty-first week of the second semester of the Vietnamese school year 2022-2023. There was a total of 15 classes observed.

3.3. Participants

There are two participant groups: one for the questionnaire and the other for the classroom observation. The official survey included 103 EFL instructors from 21 different high schools who freely participated. For the observation, five out of 103 teachers, whose names were coded as Teacher A, Teacher B, Teacher C, Teacher D, and Teacher E to ensure that all of the participant's private information was kept confidential. These participants were selected purposefully based on their mean scores of the questionnaire survey. They are EFL teachers from three different high schools with teaching experience ranging from 11 to more than 20 years, and ages ranging from 34 to 48. This selection category was applied since the researcher wanted to get more comprehensive information about teachers' perceptions of CT strategies in teaching EFL writing from different points of view.

4. Results and discussion

4.1. Results

4.1.1 Results of quantitative data

First of all, a Descriptive Statistics test was employed to examine the average mean score of EFL high school teachers' practices of CT strategies. The mean score of the teachers' practices of CT strategies was slightly high ($M= 3.55$). The test result showed that teachers' practices of CT strategies were fairly more than the medium level. Table 4.1. displays the result of the test.

Table 4.1: Participants' practices of CT strategies in writing classes (N=103)

Variable	Min.	Max.	Mean	SD
Practices	2.60	4.21	3.55	.37

Next, a One Sample T-test was used to test whether there was any difference between the mean score of teachers' practices of CT strategies (M=3.55), at a slightly high level and the test value of 3.5, the lowest score at the usually used level (Oxford, 1990). The result of this test shows that there was not any significant difference between the teachers' practices (M=3.55; SD =.37) and the test value 3.5 ($t=1.43$; $df=102$; $p=.155$). Thus, it can be concluded that teachers usually employed CT strategies, at the lowest scale.

Then, an Independent Sample T-test was administered to test whether there was a difference between male teachers' and female teachers' practices of CT strategies. The test result revealed that there was not any significant difference between male teachers' and female teachers' practices of CT strategies ($p=0.14$). To conclude, male and female teachers had similar practices with regard to CT strategies. The details are presented in Table 4.2.

Table 4.2: The effect of participants' gender on their practices of CT strategies (N=103)

Variables Gender	N	Means	SD
Questioning	Male	3.91	.47
	Female	3.97	.48
Classroom learning environment	Male	3.31	.59
	Female	3.23	.55
Discussion	Male	3.64	.42
	Female	3.77	.46
Project-based learning	Male	3.49	.46
	Female	3.61	.54
Process writing	Male	3.48	.54
	Female	3.64	.53
Writing portfolio	Male	3.27	.40
	Female	3.42	.50
Self and peer assessment	Male	3.12	.51
	Female	3.44	.53
Total	Male	3.46	.37
	Female	3.59	.41

Another Independent Sample T-test was administered to check the influence of years of teaching on teachers' practices of CT strategies. The test results indicated that there was not any significant difference in teachers' years of teaching in their practices of CT strategies. ($p=0.090$). To conclude, the number of teaching years had no influence on teachers' practices of CT strategies. Put briefly, teachers' practices of CT strategies were the same despite differences in years of teaching. Table 4.3. presents the results of the test.

Table 4.3: The effect of participants' teaching experience on their practices of CT strategies (N=103)

Variables	Years of teaching	N	Means	SD
Questioning	1 - 10 years	38	4.10	.55
	10 - 20 years	65	3.87	.39
Classroom learning environment	1 - 10 years	38	3.26	.58
	10 - 20 years	65	3.25	.55
Discussion	1 - 10 years	38	3.86	.48
	10 - 20 years	65	3.66	.43
Project-based learning	1 - 10 years	38	3.67	.51
	10 - 20 years	65	3.53	.52
Process writing	1 - 10 years	38	3.74	.55
	10 - 20 years	65	3.52	.51
Writing portfolio	1 - 10 years	38	3.40	.50
	10 - 20 years	65	3.37	.47
Self and peer assessment	1 - 10 years	38	3.42	.58
	10 - 20 years	65	3.32	.52
Total	1 - 10 years	38	3.63	.39
	10 - 20 years	65	3.50	.37

Besides, a Paired Samples T-test was run to compare participants' practices of CT strategies among each pair of strategy groups: questioning-classroom learning environment, classroom learning environment - discussion, discussion - PBL, PBL - process writing, process writing - writing portfolio, writing portfolio - self and peer assessment, and self and peer assessment-questioning, discussion – process writing. The test results showed that EFL high-school teachers' practices of *PBL and process writing* were the same ($p=0,640$), at a high level. This similarity was also found in pairs of CT strategies, *writing portfolios and self and peer assessment* ($p=0,550$), but at the medium level.

On the other hand, the Paired Samples T-test result revealed that teachers' practices of pairs of CT strategies including *questioning - classroom learning environment, classroom learning environment - discussion, discussion - PBL, process writing - writing portfolio, and self and peer assessment - questioning* were not the same ($p=0,000$; $p=0,000$; $p=0,002$; $p=0,000$; $p=0,000$ respectively). Teachers' practices of CT strategies regarding questioning, discussion, process writing, and PBL were at a high value than portfolios, self and peer assessment, and classroom learning environment. It could be inferred that teachers' practices of CT strategies including questioning, discussion, process writing, and PBL were the highest while portfolios, self and peer assessment, and classroom learning environment were the least. To conclude, EFL high school teachers were at a high level of frequency of four CT strategies including questioning, discussion, process writing, and PBL ($M=3.95$; $M=3.73$; $M=3.63$; $M=3.57$ respectively) while they were infrequent employers of portfolios, self and peer assessment, and classroom learning environment ($M=3.38$; $M=3.36$; $M=3.25$). The rank of the seven CT strategies is presented in Table 4.4.

Table 4.4: Teachers' practices of CT strategies in writing classes

Strategies	Min.	Max.	Mean	SD	Ranking
Questioning	2.83	5.00	3.95	.47	1
Discussion	2.00	4.67	3.73	.45	2
Process writing	2.33	4.83	3.63	.53	3
Project-based learning	2.00	4.83	3.57	.52	4
Writing portfolio	2.00	4.50	3.38	.48	5
Self and peer assessment	1.48	4.67	3.36	.54	6
Classroom learning environment	1.83	4.50	3.25	.55	7
Total mean = 3.55 (M=3.55)					

As illustrated in Table 4.4, EFL teachers used questioning, discussion, process writing, and PBL more frequently than portfolios, self and peer assessment, and classroom learning environments.

4.1.2 Results of qualitative data

The observations demonstrated that the participants' use of CT strategies in writing classrooms varied. They commonly employed strategies such as questioning, CLE, and discussion and used self and peer assessment and process writing the least. They were especially unwilling to implement PBL and portfolios. Most notably, presentations and student questioning, and setting real writing tasks, were reflected in the classes observed.

4.2 Questioning

The results from the observation data revealed that most of the questions participants asked in the classroom were lower-level questions, and the frequency of high-level questions was less than the lower-level ones. In other words, the participants tended to use lower-level questions more than the higher-level ones. For example, in teacher A's classes, the teacher asked eleven lower-level questions and only four are high-order ones. Likewise, the observation of teachers B', C', and E's classes shared the same stories. This result is not similar to the result from the questionnaires showed that teachers' uses of higher and lower-level questions were the same ($M=3.95$; $M=3.75$; $p=0.023$). To conclude, in terms of the qualitative results, teachers' use of higher-order questions that invite CT skills in the classes observed is of a low frequency.

As observed in teacher C's classes, after delivering the questions, the teacher usually paused for three to five seconds waiting for his students to give answers. This also appeared in the classes of teachers A, D, and E; however, it was not a lot reflected in teacher B's classes.

The analysis of the observation data indicated that teachers *usually allow wait time* (at least three seconds) for students' responses or for students to think about alternative points of view. In contrast, teacher B's class rarely saw wait time used right after the teacher's questions. The teacher often answered his own questions after he asked.

Similarly, the data from the observations revealed that the participants timely provided *informative feedback and encouraged students to keep sharing*. The following extracts from participants' classes explained it,

Teacher: Can you tell me some benefits of online learning?

Student: Learn anywhere and anytime.

Teacher: *Good*, which one do you prefer, face-to-face or online learning?

Student: I prefer face-to-face learning.

Teacher: *In your opinion*, are there any disadvantages of face-to-face learning?

(Teacher A, Class 1)

Teacher: What do you know about Trang An?

Student 1: It's like a Ha Long Bay in the land.

Student 2:

Teacher: *Let's talk! Be comfortable*

Teacher: *Anything else?* Share your ideas, please.

(Teacher B, Class 2)

Teacher: *Ok, good.... Any other ideas? Other groups' ideas?*

Student: Entertainment.

Teacher: *Good, thank you....* 'you can use the ideas in the Reading section to add more ideas.

(Teacher E, Class 1)

5. Discussion

The analysis of the observation data showed that *teachers choose writing topics that are related to student life and not the same as topics in the textbooks* so that interest students in discussion and engage them to think. This was reflected in the classes of teachers C and D. Writing topics were assigned to students such as 'write a wildlife organization: GREENPEACE' (Teacher C, class 3); 'write a paragraph about benefits as a member of the 10A14' (Teacher D, class); write a website advertisement for an ecotour to Hoi An/Camau Cape Class (Teacher D, class 3).

As for the *instructions made by teachers in terms of basic rules and skills* before the discussion, the data did not reveal that teachers guided students on how to discuss effectively. With regard to *thought-provoking questions*, this kind of question was seldom asked by students in the classes observed. In contrast, the teacher's behavior of *inviting students to show their building on/(dis)agreement with others' ideas* and *asking students to give explanations and justification for their answers* was reflected a lot in the classes observed. The details are presented in the following table.

Table 4.5: Participants' behavior inviting CT skills

Teachers' behavior	
Inviting students to show their building on/(dis)agreement with others' ideas	Asking students to give explanations and justification for their answers
- Do you agree with Trang? - Do you agree with Tuan? - Any other ideas? (Teacher A, Class 1 and 2)	- Why do you think so? - Can you explain why? - Why do you put 3 and 5 in A? (Teacher A, Class 1 and 3)
- You divide the letter into seven parts. It's OK. Any other ideas? (Teacher B, Class 3)	
- Do you agree? Any other ideas? - Is it Ok? Do you agree? (Teacher C, Class 1 and 3)	Why do you choose it? What do you base on to choose? Why do you choose that phrase? (Teacher C, Class 1 and 2)
- Do you have other comments? - So, do you like it?/Any questions/feedback? (Teacher D, Class 2)	Why do you choose it? What are your explanations? (Teacher D, Class 1)
- Ok, Good. Other groups' ideas? - Do you agree with your friends' ideas? (Teacher E, Class 1 and 2)	-Why do you choose that answer? (Teacher E, Class 1 and 3)

In conclusion, the observation data revealed that teachers' use of the class discussion strategy in the classes observed was at a high frequency. This is the same as the results of the quantitative data that teachers' practices of using discussion were at a high level ($M=3.73$), ranked second among seven CT strategies, preceded by the question strategy.

5.1 Classroom learning environment

The class observation was done to observe whether the participants' writing classes displayed the features of CLE facilitating CT development or not. These features involve the structure of the classroom, teachers' behavior toward students' responses, classroom arrangement, and inviting students to answer each other's questions.

With regard to *structuring the classroom for CT*, it was not unusual to see students seated in groups or pairs, but not be coached by the teachers to interact and cooperate with each other. Take teacher B's class 1 as an example, the teacher put students in groups and asked them to choose TWO of eight points listed in the textbook to discuss and write about, however, the teacher did students' work/ affair instead of instructing them on how to discuss. Teacher E's class 2 was too. The observation sheet showed that when the teacher asked students to exchange their papers and assess their writing in pairs, some students were observed doing nothing or doing it individually. This means that although the students were grouped into small groups or pairs, they were completing their tasks individually, or doing nothing. To conclude, really effectiveness of group work and pair work was largely unseen in the EFL writing classes observed.

According to the observation sessions, the teachers' behavior of *accepting students' responses without judgment to encourage exploring possibilities* was at high frequency. The repeated phrases in the observation sheet such as "Good. Any other ideas", "Thank you.

Who else?", "It's OK, anything else? "Perfect", and "OK, your answer was not wrong because we had many answers to this question" explained it. The information also supported the point that teachers often provide positive feedback for students' responses and encourage incorrect responses with supportive comments. This was also evidenced by the results from the questionnaires (M=3.51)

Concerning *classroom arrangement*, the researcher as the observer did not see any changes in student seats. The U-shaped or/and circle seating was not arranged though it is important for learners to naturally interact and discuss. In other words, ways of arranging classroom space to help students easily interact with each other were not reflected in the actual writing classes.

This confirms the results from the questionnaire that teachers' practices of CLE regarding arranging the U-shaped and circle seats were at a low level (M=2.61; M=2.55)

5.2 Self and peer assessment

The data from observation analysis revealed that the participants often *raised questions to boost students' ability to self-assess and encourage students to recognize their own strengths and weaknesses in their writing, as well as their friends*. This kind of information is shown in Table 4.6.

Table 4.6: Participants' questions encouraging student assessment

Participants' questions	Extracts
Does your friend's paper have any mistakes?	Teacher A, Class 1
Are there any grammatical mistakes?	Teacher C, Class 3
Does your friend's paper follow the format? Does your friend's paper involve three elements as required? Does your friend's paper have enough the number of words as required?	Teacher D, Class 3

On the other hand, the activities of self-assessing and assessing each other were not reflected in the classes observed. The observation sheet revealed that the teachers asked students to exchange their papers and encouraged them to identify mistakes in the papers without any rubrics or criteria given. The data from post-discussions confirmed these results. For instance, teacher E shared, "*There were no criteria, I just asked them to assess their friend's paper based on some elements such as content, grammar, and spelling.*" (Teacher C)

The observation checklists also showed that the other classes had the same stories. Furthermore, the recurring statements in the quick-post discussions such as "*In my opinion, students can't mark their own writing*". (Teacher A, Class 1), "*I think that students do not have enough English proficiency to self-correct their own writing and correct each other as well.*" (Teacher B, Class 2) "*I found that letting students self-assess their own papers or assess each other will not bring benefits.* (Teacher C, Class 1) are all an indication of the participants' less interest in the self and peer assessment strategy. The findings are similar to the result from the questionnaire that teachers' practices of CT strategies in terms of

self and peer assessment were at a medium level ($M=3.36$), ranked sixth among seven CT strategies.

5.3 Process writing

The findings from the observation indicated that teacher C *followed three steps of the processed-writing approach* including prewriting, drafting, and revising although it was shown in the interview that he seemed not to be confident with what he already knew about PW. Different activities were organized for *students to work on their ideas* such as watching videos, pair-work, question-answering, and presentation. Multi-feedback such as peer feedback, teacher feedback, oral feedback, and written feedback was adopted in his writing classes. Additionally, the teacher provided adequate time for students' writing process and opportunities to revise their papers (from the current lesson to the next lesson: about a week).

5.4 PBL and writing portfolio

Based on the observation data, two CT strategies including PBL and Writing portfolio were hardly implemented in the classes observed. One participant from the post-discussion sessions reported that the participant has never heard the term 'Portfolio' as a result, he never employed it in his classes. For example,

Observer: Do you ask your students to create a portfolio by collecting their writing papers after feedback?

Teacher: No, I don't, I've never heard the term "portfolio".
(Teacher D, Class 3)

With regard to PBL, teacher B shared in the quick -post discussion,

Observer: May I ask you one more question do you apply PBL in your writing classes?

Teacher: Never, my students do projects in speaking lessons.
(Teacher B, Class 3)

It can be concluded that PBL and Writing Portfolio were hardly used by the participants in the current study. This is consistent with the result from the questionnaire that teachers' practices of CT strategies in terms of Writing portfolio was at a medium level ($M=3.57$; $M=3.38$). However, as for PBL, it is not the same story, the results from the questionnaires showed that teachers' use of PBL was at a high level ($M=3.57$).

5.5 Other CT strategies

In addition to Questioning, Discussion, CLE, PW, and Self and peer assessment, three more CT strategies including presentations, student questioning, and setting suitable writing tasks appeared in the classes observed, according to the observation sessions.

a. Presentations

The data extracted from observing class 1 of teacher C indicated that the teacher invited three students (Long, Quynh, Khiem) to present their work - a paragraph about the benefits of blended learning. In the same vein, the teacher invited three other students (Thinh, Vinh, Xuan) to present their website advertisements respectively. Then, the teacher encouraged students to raise questions after their friends' presentations.

b. Student questioning

After the presentations, the teacher paused for three to five minutes and encouraged students to share their thoughts on or raise questions related to what the presenter talked about, then the teacher gave comments and feedback. Following were the questions posed by students and their feedback on their friends' presentations.

Table 4.7: Participants' uses of student questioning

Teacher C, Class 3	Teacher C, Class 3
<p>Questions were asked by students: S1: In your opinion, what do you think about blended learning? S2: I have no question, but I think you should add more ideas to make your paragraph more convincing. S3: I really love your presentation; I have a question: Are there any disadvantages of blended learning? S4: What are the roles of teachers in blended learning? S5: Do you think blended learning is important? Why? S6: Do you think Ss prefer blended learning to traditional one? And why?</p>	<p>Some questions and feedback from students: 1) What should I do if I want to book this tour? (Because the advertisement did not provide a phone number or email address for tourists to contact with) S: No responses. 2) I will not book your tour because it is not attractive.</p>

c. Setting suitable writing tasks

In addition to presentations and student questioning, teachers assigned students real writing tasks that are relevant to students' lives in order to engage them in thinking. This was evident in teachers C and D's classes. The result is similar to the finding in the interview session that teachers assigned real tasks in writing classes.

5.6 Discussion

The study found a significant difference in the implementation of CT strategies. Teachers tended to employ questioning, discussion, process writing, and PBL than portfolios, self and peer assessment, and CLE according to quantitative data. Meanwhile, based on the observation data, EFL teachers used strategies such as questioning, CLE, and discussion the most, while self and peer assessment and process writing were used the least. They were particularly averse to implementing PBL and portfolios into their actual writing classes. It could be concluded that the study's EFL teachers employed various strategies

to enhance students' CT. This is comparable with the finding of Angraeny and Khongut (2022), who demonstrated that teachers employed a variety of teaching strategies to encourage students' CT at a certain level. However, the current study' EFL teachers only repeatedly use some common strategies which are a part of their teaching routines.

Indeed, due to their convenience and teachers' teaching habits, the two top frequent strategies that EFL teachers used are questioning and discussion. The finding might support the findings of Chau and Cunningham (2021) indicating that the most common approach that participants in the study used was asking open-ended and critical questions, and organizing seminars, debates, and discussion activities for students. EFL teachers use questioning and discussion the most because they do not require spending much time or effort preparing for questions and discussion-based activities; second, teachers may already be accustomed to asking questions and organizing discussion-based activities as part of their daily teaching routines. Furthermore, Craft (2000) and Li & Walsh (2011) demonstrated that the teachers might be familiar with 'asking questions to students', and it was a typical behavior all teachers would do in the classroom. Especially, the study's EFL high-school teachers tended to use lower-level questions more than higher-level ones based on the classroom observation session. This concurs with the finding of Blosser and Patricia (1995), about 60 percent of teacher questions require only recall facts, 20 percent require students to think, and 20 percent are procedural in nature.

Meanwhile, process writing and self and peer assessment were the least frequently used by EFL teachers. The reason could be that the teachers do not have enough time to cover all steps of each strategy. Another possible reason could be the teachers have a limited understanding of the two. Using these strategies, both teachers and students devote much time to selecting the topics, gathering information, writing about the topics, and providing feedback, thus, these alternative approaches require teachers to be qualified and trained in order to use it effectively while they may not know the exact step of each strategy. Consequently, they did not use them.

Another interesting finding reached in the present study is that there was no evidence of PBL adoption in teachers' actual teaching. Writing portfolios shared the same stories. That is, portfolios were not employed in the observed classes. It could be inferred that what the teacher participants mentioned was inconsistent with what was being observed. A university lecturer at Cantho University and also a teacher trainer for EFL teachers shared that EFL teachers complained that they did not have enough time to cover a lot of things in a 45-minute period (Nguyen, 2023, personal interview). They are only given one period for the segment "Project and Looking Back," which is insufficient for them while PBL requires a huge effort from teachers to implement it successfully; as a result, teachers seldom ever use PBL and portfolios. Additionally, doing projects is a flexible part that teachers can use or not, depending on the level of English ability of students. Teachers who have an inadequate understanding of what and how to implement PBL and portfolios in EFL classrooms could be the explanation for their lack of use of the two strategies because teachers have to or need to understand what a writing

portfolio is only then they can have a smooth flow of carrying out this strategy (Swaran Singh, et al., 2022).

The last finding from the current study is that in addition to strategies presented in the research presentation, student questioning, and setting suitable writing tasks were employed in the observed classes. Regarding presentation, Fahim and Ghamari (2011) suppose that useful forms of oral work such as debate, presentation, conversation questions, and small group collaborative learning need to be encouraged in the process of CT. Moreover, King (1995) stated that peer questioning plays a key role in developing students' CT skills through the use of thought-provoking questions. Learning from peers is different from learning from teachers because it allows more space for stress-free discussions, diverse solutions, and conflicting arguments (Heyman, 2008). In addition, Rashtchi and Khoshnevisan (2020) suggested that to facilitate the practice of CT skills, selecting topics is indispensable in a writing class. Moreover, selecting appropriate topics that center around the six thinking skills mentioned by Marzano and Pollock (2001) contributes to CT and writing.

6. Conclusion, implications, and limitations

The study found some main findings which address the research question related to EFL teachers' practices of CT strategies in writing classrooms. The first finding is that EFL high-school teachers' practices of CT strategies were at a high level but at the lowest rate. Most intriguingly, there was some overlap between the questionnaire and observational results. The results of the questionnaire revealed that the study's EFL teachers tended to frequently use questioning, discussion, PW, and PBL more frequently than portfolios, self and peer assessment, and CLE, while the results of the observation revealed that EFL teachers typically used strategies like questioning, CLE, and discussion and used self and peer assessment and PW the least, especially PBL and portfolios were not used in teachers' actual teaching. Surprisingly, the observed classes exhibited that EFL teachers used presentation, student questioning, and setting suitable writing tasks in addition to CT strategies mentioned in the literature.

The major findings of the study revealed some useful implications for English language teaching and learning. First of all, it is necessary to gradually change EFL teachers' and students' mindsets about English language teaching and learning. Second, creating a sharing and learning environment where students are respected and valued is a must-thing for students' CT development. However, the study has limitations. First of all, the number of participants for both quantitative and qualitative research was not truly large enough to be representative of the population as expected, which could limit the generalizability of the results. Second, due to the time limitation, the participants of the study were restricted to five for the observation, working in three high schools in the Camau province of the Mekong Delta region. Furthermore, the observation should have taken place throughout the whole semester rather than only nine weeks.

7. Recommendations

Based on the limitations, two suggestions were made for further studies in order to make the generalizability possible. First, future studies in the field can recruit bigger samples of EFL high-school teachers for qualitative research. Also, EFL teachers from various contexts such as primary, secondary, and higher education, should be subjects of future research. Due to the features of observation research, findings may only reflect a certain location, at a specific moment, but they cannot be generalized to others. Second, students' perceptions of CT and CT strategies in EFL classrooms should be the participants of upcoming research because, as found in the current study, students' attitudes are contributed to the effectiveness of the CT strategy implementation. Lastly, the researcher suggests that further research should be conducted over an extended period of time, particularly qualitative research. This will provide more opportunities for researchers to obtain rich, thorough descriptions of social situations and events, as well as improve interpretation (DeMunck & Sobo, 1998).

Conflict of interest statement

The authors declare no conflicts of interest.

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