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CRITICAL THINKING IN ENGLISH LANGUAGE TEACHING
IN THE VIETNAMESE CONTEXT:
PERCEPTIONS AND UNIVERSITY STUDENTS' COMPETENCE

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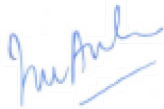
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STATEMENT OF CANDIDATE

This thesis has not been submitted for the award of any degree at any other university or institution.

To the best of my knowledge and belief, the thesis contains no material previously published or written by another author except where due reference is made.

Ethics approval for the study (5201800251) was obtained from the Faculty of Human Sciences Human Research Ethics Sub-Committee (Macquarie University) on April 19, 2018.

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ABSTRACT

This study examines the importance and feasibility of critical thinking (CT) in English language teaching (ELT) in the Vietnamese tertiary context. CT, which has now become a worldwide phenomenon, is considered to be one of the essential skills that students must learn in order to succeed in their studies at university and in their life after university. However, there exists a mismatch between a growing tendency in Vietnamese universities, due to globalization, to build CT into the curriculum of different disciplines, even the discipline of English Linguistics and Literature, on the one hand, and limited, dated literature on CT in ELT on the other hand. This study investigates CT in ELT in the perceptions of teachers and students at a leading public university in Vietnam, and examines senior students' competence in CT.

Evidence was collected through two questionnaires, two CT tasks and interviews in a qualitative case study within an interpretive research paradigm. Findings revealed (1) that CT, which all the participants could formulate an idea of, was perceived to be especially important in ELT, appropriate for Vietnamese students, and congruent with the Vietnamese context of ELT; (2) that a majority of the participants adopted positive attitudes towards the specification of CT as a programme/course learning outcome; and (3) that senior students' CT competence was evaluated to vary along a continuum, though mainly gathering around the average level.

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LIST OF ACRONYMS AND ABBREVIATIONS

AUN	:	ASEAN University Network
AUN-QA	:	ASEAN University Network Quality Assurance
B.A.	:	Bachelor of Arts
CDIO	:	Conceiving – Designing – Implementing – Operating
CT	:	Critical thinking
EAP	:	English for Academic Purposes
EF	:	Faculty of English Linguistics and Literature
EFL	:	English as a Foreign Language
ELL	:	English Language Learning
ELT	:	English Language Teaching
ESL	:	English as a Second Language
IELTS	:	International English Language Testing System
L1	:	First language
L2	:	Second/foreign language
STS2	:	Supplementary table S2
TESOL	:	Teaching English to Speakers of Other Languages
USSH	:	University of Social Sciences and Humanities
VNU-HCMC	:	Vietnam National University – Ho Chi Minh City

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CHAPTER 1: INTRODUCTION

The study reported in this thesis explores critical thinking (CT) in English language teaching (ELT) in the Vietnamese context. This introduction presents the background to the study, the research problem the thesis attempts to address, the aims and significance of the study, and an overview of the thesis.

1.1 BACKGROUND TO THE STUDY

CT has the reputation of being very important for students' success in their studies at university and in their life after university. In "P21 Framework for 21st Century Learning" (P21 Partnership for 21st Century Learning, n.d.), CT is listed as the first C of the 4Cs of Learning and Innovation Skills that students must learn in today's global economy. This framework, widely used by educators in the United States of America and in other countries, represents a comprehensive set of skills and knowledge which is essential for success in work, life and citizenship and which should be put at the centre of learning in the 21st century. CT has jumped from fourth place in the skill set required for the year 2015 to second place in the set required for the year 2020 in the Fourth Industrial Revolution according to the Future of Jobs Report of the World Economic Forum (Schöning & Witcomb, 2017). The World Economic Forum's Global Human Capital Report 2017, whose subtitle is "Preparing people for the future of work", states that "[m]any of today's education systems are already disconnected from the skills needed to function in today's labour markets and the exponential rate of technological and economic change is further increasing the gap between education and labour markets" (World Economic Forum, 2017, p. 34). CT is a vital skill that is increasingly valued in dynamic and changing workplaces.

In fact, in recent years, CT has become a worldwide phenomenon and one of the most sought after skills by employers. The great mobility, due to globalization, of students, teachers and staff contributes enormously to the increasing importance of CT skills at higher education institutions. As in other countries, CT has gained a great foothold in Vietnamese education. Education in Vietnam has become ever more future-oriented and internationalized in order to face increasing challenges from within the country as well as across the world. Greatly contributing to the challenges in the 21st century is information overload, which requires students to have the abilities "to evaluate multiple sources of information, judge the usefulness and reliability of its content, and make decisions about what to believe: abilities classified as

critical thinking skills" (Yang & Gamble, 2013, p. 398). There is a growing tendency in Vietnamese higher education institutions to build CT into the curriculum and to equip students with CT skills (Tran, Le Thanh Phan & Marginson, 2018). CT has been increasingly integrated into the curriculum of different disciplines, even the discipline of English Linguistics and Literature.

1.2   THE RESEARCH PROBLEM

Nowadays, "effective CT-enhanced EFL instruction is essential" (Yang & Gamble, 2013, p. 398). ELT has become much more complex in today's world, where "globalization has brought about an unprecedented level of diversity – linguistic, cultural, ethnic, religious and so on – within communities" (Saraceni, 2015, p. xi). English is "no longer "owned" by its native-speakers" (House, 2001), but has become a lingua franca, bringing up varied and complex issues concerning language education (Seidlhofer, 2005). Among them are the issues that arise from "the intersection of globalisation and new approaches to language and learning", which include inter-cultural and cross-cultural communication, identity and authenticity, and critical approaches to learning a language (Gollin-Kies, Hall, & Moore, 2015, p. 52).

However, the evidence to support CT in ELT is less than expected. Literature on this topic is limited and somewhat dated. The key article, which is widely cited by many scholars in the field, is Atkinson (1997). Yet, in his article, Atkinson (1997) presented four reasons why TESOL educators should be very careful when examining the notion of CT. The four reasons are: (1) CT is not "a well-defined and teachable pedagogical set of behaviors" (p. 71), but "more in the nature of a *social practice*" (p. 72); (2) CT has an "exclusive and reductive character" (p. 71): It is exclusive because it "marginalizes alternative approaches to thought" (p. 72), and reductive in that "all academically useful thinking skills" are reduced to "informal, and to a lesser degree formal, logic" in most current versions of CT (p. 77); (3) cultural problems may prevent non-native speakers from enjoying the benefits of its instruction; and (4) CT skills do not seem to generalize/transfer effectively "beyond their narrow contexts of instruction" (p. 71).

In the Vietnamese context, although CT has been brought into the English language classroom, not many studies have been carried out to construct a picture of how CT is practised in ELT. In other words, CT in ELT in the Vietnamese context has not been sufficiently explored.

The current situation requires that a clearer overall picture of CT in ELT in the Vietnamese context should be presented so that schools, teachers and students can be better informed to make appropriate adjustments to the curriculum with a view to increasing the effectiveness of

the teaching and learning of CT. In particular, the situation necessitates an investigation into how CT is understood and described in ELT, whether CT, as a Western cultural phenomenon, is relevant to Vietnamese university students, and if it is, how teachers can teach it.

1.3 AIMS AND SIGNIFICANCE OF THE STUDY

The aims of the study are: (1) to explore Vietnamese teachers' and Vietnamese students' perceptions of CT in ELT at tertiary level; (2) to identify their views on the specification of CT as a programme/course learning outcome, and (3) to investigate student performance in CT.

To this end, the study has been designed as an instrumental qualitative case study. The design enables the phenomenon, which is CT, to be investigated within its context, which is the Faculty of English Linguistics and Literature (EF), University of Social Sciences and Humanities (USSH), Vietnam National University – Ho Chi Minh City (VNU-HCMC). The study involves both teachers and students, which are the two key stakeholder groups, and the investigation was based on three data collection methods (questionnaires, CT tasks and semi-structured interviews). This design of the study allows triangulation of methods and triangulation of sources.

Aiming to explore the above-mentioned issues, this study hopes to contribute to the field of CT in ELT and benefit Vietnamese higher education. It is hoped that the study will enrich understandings of theoretical perspectives on CT in ELT, and supplement the empirical perspectives on the practices of CT in ELT in the Vietnamese context. In informing CT practices at the tertiary level in one institution in Vietnam, the findings of the study can provide a good source of reference for future policy making at that institution as well as in other similar contexts.

1.4 OVERVIEW OF THE THESIS

In addition to the present chapter – the introduction – describing the background to the study, identifying the research problem, presenting the aims and significance of the study, and providing an overview of the thesis, the thesis consists of five other chapters:

Chapter 2 presents a review of the literature relevant to this study in two separate sections: (1) theoretical background and (2) related studies. The first section consists of three main parts: definition of CT, the link between CT and ELT, and major issues of CT in ELT. The second section reviews and critiques a number of previous studies on CT in ELT.

Chapter 3 describes the methodology employed in the study. This chapter includes a presentation of the research questions and a discussion of the research design, followed by a description of the setting, the participants, the data collection procedures, and the data analysis process.

Chapter 4 analyzes the data and reports the findings on (1) students' and teachers' perceptions of CT in ELT, (2) their views on the specification of CT as a programme/course learning outcome, and (3) student performance in CT, under each of the three research questions.

Chapter 5 discusses the findings by relating them to the existing literature.

Chapter 6 closes the thesis by summing up the findings, drawing conclusions about the implications for practice, presenting the contributions and the limitations of the study, and suggesting directions for future research.

CHAPTER 2: LITERATURE REVIEW

In this chapter, the literature relevant to the topic of the present study is reviewed in two separate sections: (1) theoretical background and (2) related studies. There are three parts in the first section. The first part discusses the various ways in which CT has been defined, especially in the field of ELT. The second part of the section shows the link between CT and ELT. The third part analyzes four major issues of CT in ELT. Combined, the results of the reviews in the first section establish the basis for the design of research instruments and subsequent discussions of the findings. The second section reviews and critiques a number of previous studies on CT in ELT, focusing on those conducted in the Vietnamese context.

2.1 THEORETICAL BACKGROUND TO THE RESEARCH

2.1.1 Definition of critical thinking

There is no single and agreed-upon definition of the term. CT, as a complex concept, has been looked at from different perspectives and thus, defined in different ways. Although the concept of CT can be traced to the Greek philosopher Socrates, who "began this approach to learning over 2,000 years ago" (Fisher, 2011, p. 2), modern CT is often traced back to the work of Dewey.

More than a century ago, Dewey (1910), the father of modern CT, defined CT as "[a]ctive, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends" (p. 6). He referred to CT as "reflective thinking" and conveyed the importance of reasons and reasoning in his definition. Further developing Dewey's ideas, Glaser (1941), co-author of the *Watson-Glaser Critical Thinking Appraisal* – by far the most popular CT test – defined the concept by looking at its three main components. He explained:

> The ability to think critically, […], involves three things: (a) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences, (2) knowledge of the methods of logical inquiry and reasoning, and (3) some skill in applying those methods. Critical thinking calls for a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends. (Glaser, 1941, pp. 5-6)

Much later on, Ennis (1989) offered an explicit and succinct definition: "reasonable, reflective thinking that is focused on deciding what to believe or do" (p. 4). This definition "has gained

wide currency in the field" (Fisher, 2011, p. 4) and earned Ennis recognition as a leading contributor to the development of the CT tradition.

Taking an entirely new perspective, Paul, an internationally recognized authority on CT, defined CT as "that mode of thinking – about any subject, content or problem – in which the thinker improves the quality of his or her thinking by skilfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them" (Paul, Fisher, & Nosich, 1993, p. 4, as cited in Fisher, 2011, p. 5). What is new and interesting in this definition is that only through "thinking about one's thinking" can a person's CT ability be enhanced (Fisher, 2011, p. 5). However, Halpern (2014) went further when arguing that CT is "more than merely thinking about your own thinking or making judgments and solving problems"; it is "used to describe thinking that is purposeful, reasoned, and goal directed" (p. 8).

The above first four definitions proposed by Dewey, Glaser, Ennis, and Paul are categorized by Fisher (2011) as "classic definitions from the critical thinking tradition" (pp. 2-11). These definitions show that CT is "a changing idea but one which has a core which remains constant", as Fisher (2011, p. 12) remarks. Halpern (2014) also observes that different definitions of the term "tend to be similar with considerable overlap" (pp. 7-8).

In the field of ELT, Atkinson (1997) strongly argues that CT is not a well-defined notion. As he states, "Rather than being a well-explicated and educationally usable concept, critical thinking may be more in the nature of a *social practice*" (p. 72). Gieve (1998) and Davidson (1998), however, do not agree that the concept of CT is indefinable. According to Gieve (1998), as language is also a form of social practice, it is not surprising that there are disagreements over the meaning of the term, and that "one can find in its ambiguity evidence of tension between practitioners with different social interests" (p. 124). Yet, he still agrees with Atkinson (1997) that CT is a social practice, though "not necessarily tacit, unconscious, or unreflective […], as Atkinson suggests" (Gieve, 1998, p. 124). Unlike Gieve (1998), Davidson (1998) points out that even when there is a variety of definitions, "very little essential difference" can be found in them (p. 121). For him, CT seems to be "something more universally relevant than just a social practice" (p. 122).

More recently, by bringing together in a volume key articles with different views on CT in the particular context of higher education, Davies and Barnett (2015) have aimed to examine "the nature of critical thinking within, and its application and relevance to, higher education" (p. 2). The scholars have constructed a model of CT in higher education which attempts to incorporate all the key approaches in the area and the three main, rival but related, perspectives, namely

philosophical, educational and socially active perspectives. In the model, CT has both an *individual* dimension and a *sociocultural* dimension with "at least six distinct, yet integrated and permeable, dimensions: (1) core skills in critical argumentation (reasoning and inference making), (2) critical judgments, (3) critical-thinking dispositions and attitudes, (4) critical being and critical actions, (5) societal and ideology critique, and (6) critical creativity or critical openness" (Davies & Barnett, 2015, p. 8). Although this model is not specifically constructed for ELT, theories of CT identified by Davies and Barnett (2015) have been found relevant and applicable to the area (Wilson, 2016).

Debates on a clearly defined version of CT in ELT are still taking place (cf. Li, 2016), demonstrating that much remains to be resolved regarding the definition of CT in ELT. However, for the purposes of this thesis, the first four dimensions of CT in Davies and Barnett's (2015) model will be emphasized.

2.1.2 The link between CT and ELT

Before considering the major issues of CT in ELT, it is necessary to briefly describe, from a linguistic perspective, what is involved in the link between CT and ELT.

Teaching a language is not easy. Basically, it involves providing learners with the knowledge of the formal language system – the knowledge of pronunciation, vocabulary and grammar – in order to develop their linguistic competence (Fromkin, Rodman, & Hyams, 2014, p. 8). Yet, linguistic competence on its own is not enough for learners to communicate effectively in a language. Being able to understand others and being able to make oneself understood is the ultimate goal of learning a language. Fromkin et al. (2014) point to the need for linguistic performance, which refers to how learners use linguistic knowledge "in actual speech production and comprehension" (p. 8). Cook (1989) suggests that as "meaning is not constructed from the formal language of the message alone" (p. 41), more tools should be needed to "'do things with words' either actively, as language producers, or passively, as language understanders" (p. 42).
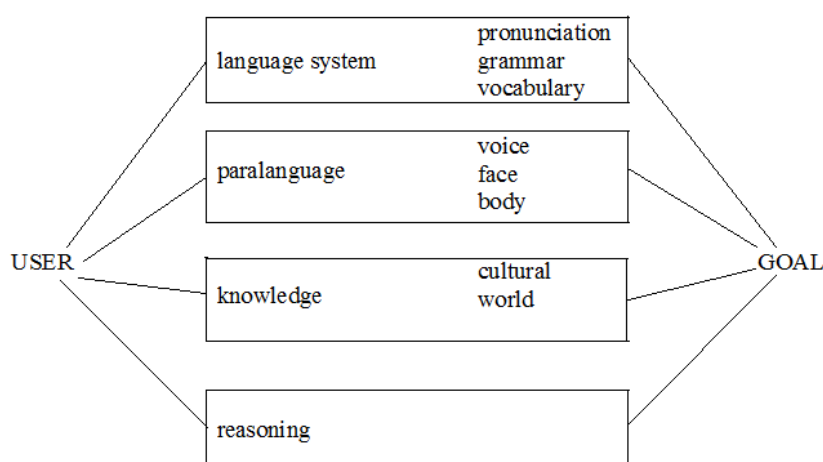
Figure 2.1: What language users need for their communication (Cook, 1989, p. 5)

As shown in Figure 2.1, what language users also need for their communication is paralanguage, the knowledge of the world and especially reasoning, connecting the other elements. Although Cook (1989) does not closely examine the term 'reasoning', the idea appears to fit well with the notion of CT discussed earlier.

Teaching a second/foreign language (L2) is difficult. Unlike first language (L1) learning, L2 learning is also influenced by the "functional interdependence between the development of L1 and L2 skills", according to Cummins' (1979, p. 227) "developmental interdependence" hypothesis. In addition, the "threshold" hypothesis proposes that "in order to avoid cognitive disadvantages and allow the potentially beneficial aspects of bilingualism to influence [the] cognitive and academic functioning", a threshold level of linguistic competence in L2 must be achieved (Cummins, 1979, p. 222). These two hypotheses, which have been supported by much empirical evidence, partly explain the difficulties in L2 teaching.

Teaching L2 linguistics is even more challenging. Linguistics, defined as "the study of language as a system of human communication" (Richards & Schmidt, 2013, p. 343), is often regarded as a highly specialized discipline. Teaching linguistics is much more than helping learners gain understanding about linguistic issues and debates, though even that is not a simple job. Teaching learners how to apply, analyze and evaluate what they have learned, and even how to create linguistic issues and debates should be the goals (Bloom, 1956; Anderson & Krathwohl, 2001).

From a linguistic perspective, the link between ELT and CT seems obvious. Yet, it has virtually never been made explicit, hence the need for further research.

2.1.3 Major issues of CT in ELT

2.1.3.1 CT and culture

One of the key issues in research on CT is CT and culture. CT is seen by many researchers as fundamental to Western thinking, for it is with Socrates, who embraced "a disposition for disciplined inquiry", that the concept "first emerges with clear emphasis in the Western world" (Furedy & Furedy, 1985, pp. 52-53). While researchers generally agree that CT is a Western concept, there has been extensive disagreement over whether CT is culturally appropriate for students from non-Western cultures and whether these students have competent CT skills (see, for example, Atkinson, 1997; Fox, 1994; Long, 2003; Stapleton, 2001).

One notable article that discusses CT and culture in TESOL is Atkinson (1997). Atkinson (1997) argues that CT is "a culturally based concept" and that "many cultures endorse modes of thought and education that almost diametrically oppose it" (p. 72). In his opinion, cultural problems may pose tough challenges to the teaching of CT to nonnative speakers and to nonnative speakers' CT learning. To illustrate this, the author reviews "extensive research pointing to vastly different understandings across cultures of three notions directly implicated in critical thought: individualism, self-expression, and using language as a tool for learning" (p. 89). Other researchers having the same cultural view as Atkinson (1997) include Ramanathan and Kaplan (1996) and Fox (1994). Quoted at the beginning of Atkinson (1997) were Fox's (1994) words:

> This thing we call "critical thinking" or "analysis" has strong cultural components. […] it is a voice, a stance, a relationship with texts and authorities that is taught, both consciously and unconsciously, by family members, friends, teachers, the media, even the history of one's country. (p. 125)

However, this argument has been challenged by other scholars in the field. On the one hand, Davidson (1998) doubts the accuracy of Atkinson's portrait of CT "as a Western, masculine, individualistic, adversarial, and coldly rational approach to life" (p. 121), explaining that "even if one grants the point that critical thinking is less practiced in cultures that value silence, imitation, submission, and conformity, this fact does not preclude the teaching of critical thinking to members of these cultures" (p. 121).

On the other hand, scholars have focused more on non-Western cultures, especially Asian cultures, for "[m]uch of the research on cultural bias in critical thinking has been conducted with reference to Asian students", as Bali (2015, p. 318) observes. Kubota (1999) critiques "the taken-for-granted representations of Japanese culture that appear in the applied linguistics

literature" (p. 30). She disagrees with arguments that tend "to dichotomize Western culture and Eastern culture and to draw rigid cultural boundaries between them", assuming that "there is a systematic, culturally determined way in which all members in a certain culture think, behave, and act" (p. 14). Oda (2008) claims that researchers often equate "the digressive and roundabout nature of non-Western students' rhetorical styles" with "a lack of logical and critical thinking abilities" (p. 155). Long (2003) observes that there has been a widespread misrepresentation that CT is associated with "being opinionated", leading to the common misconception that Asian students are "less critical than their Western counterparts" (p.231). Stapleton (2001) shares the same view and suggests that misinterpretations of L2 learners' CT ability may be due to "differing assumptions between the L1 and L2 culture" (p.506).

In addition, other researchers suggest that CT has parallels in Asian cultures. Asian learners are believed to demonstrate CT abilities in a different way from Western learners. Take, for example, Chinese culture and Japanese culture. Tan (2017) proposes a Confucian conception of CT in Chinese culture: "[CT] as judgement is manifested in the Confucian ideal of *li* [(normative behaviours)]" (p. 334). Long (2003) reports that compared to Western students, Japanese students seem more adept at the skills of listening, observing, seeking to understand multiple perspectives and resisting jumping to conclusions, which are, in CT, just as important as voicing one's own opinion.

Debates on the issue of CT and culture have a significant influence on discussions about the other major issues of CT in ELT that follow below.

2.1.3.2 The teachability of CT

Another major issue that most studies have concentrated on is whether CT can be taught. Although the response to the question is highly positive, this issue is also an area for disagreement.

A great number of scholars contend that CT is teachable. Among them are Browne and Keeley (2007), Ennis (1989, 2018), Fisher (2011), Gelder (2005), Halpern (1998, 2014), Kennedy, Fisher, and Ennis (1991), Khatib, Marefat, and Ahmadi (2012), and Paul and Elder (2008), who, in their studies, also put forward ideas on how to teach CT. To explain this phenomenon, Fisher (2011) states, "Critical thinking is now widely seen as a basic competency, akin to reading and writing, which needs to be taught" (p. v). More importantly, Ennis (2018) notes that "there is strong support for an affirmative answer to the question about whether critical thinking can be taught in a critical thinking course" (p. 176).

Despite the widespread agreement on the teachability of CT, an alternative perspective has been put forward in the area of CT in ELT. Atkinson (1997) focuses on the notion of CT as a *social practice* – "the kind of behavior in which an individual is automatically immersed by virtue of being raised in a particular cultural milieu and which the individual therefore "learns through the pores"" (p. 73). As social practices exist "at the level of common sense and tacitly learned behavior", they are very difficult, or even impossible for English language teachers to teach (Atkinson, 1997, p. 77). This argument is supported by Fox (1994) and Gee (2008).

2.1.3.3 CT instruction

Closely related to the question of whether CT is teachable is the question of how CT can be taught or how students can learn to be critical thinkers. Within the literature, a number of approaches to CT instruction have been developed and proposed.

Many researchers suggest developing CT skills through explicit and direct instruction. Numerous books are devoted to teaching CT skills. Some of these books are Bassham, Irwin, Nardone, and Wallace (2011), Browne and Keeley (2007), Cottrell (2005), Epstein, Kernberger, and Raffi (2006), Fisher (2011), Groarke and Tindale (2004), Halpern (2014), Hunter (2009), Moon (2008), and Paul and Elder (2008). The main topics that the books cover consist of asking the right questions, and understanding, identifying, analysing and evaluating ideas, reasoning, arguments, inferences, logical fallacies and errors in reasoning. They are considered "the basic skills or competencies displayed by good critical thinkers" (Fisher, 2011, p. v). Apart from books, academic papers also propose different methods for teaching CT. For example, recent papers describe argument mapping (Gelder, 2015) and debates (Llano, 2015; Wendland, Robinson, & Williams, 2015).

While generalists are interested in teaching CT skills directly and separately, specifists doubt the effectiveness of such an approach and advocate that CT be subject specific. Ennis (1989) distinguished four principal and central approaches to teaching CT. The four approaches are: (1) "the general approach", which "attempts to teach critical thinking abilities and dispositions separately from the presentation of the content of existing subject-matter offerings" (p. 4); (2) "the infusion approach", which tries to incorporate CT instruction in subject-matter instruction while making general CT principles explicit; (3) "the immersion approach", which similarly tries to incorporate CT instruction in subject-matter instruction, but without making general principles of CT explicit; and (4) "the mixed approach", which combines the general approach with either the infusion or immersion approaches.

When it comes to the topic of CT instruction in ELT, however, not many ideas have been offered. Atkinson (1997) briefly discusses the advantages of cognitive apprenticeship for nonnative-English-speaking students as an alternative approach to traditional CT instruction:

> Cognitive apprenticeship is based on the notion that all significant human activity is highly situated in real-world contexts – and that complex cognitive skills are therefore ultimately learned in high-context, inherently motivating situations in which the skills themselves are organically bound up with the activity being learned and its community of expert users. (p. 87)

In response to Atkinson's (1997) paper, Gieve (1998) suggests the need for an understanding of the difference between monological and dialogical views of CT. Monologic CT is "defined by the informal logic movement" (Gieve, 1998, p.126) while dialogic CT is "a form of dialogical discourse in which the taken-for-granted assumptions and presuppositions that lie behind argumentation are uncovered, examined, and debated" (Gieve, 1998, p.125). Benesch (1999) agrees with Gieve (1998) that dialogic CT is "a powerful tool for dissent across cultures and classes": Not only does teaching CT dialogically allow students "to articulate their unstated assumptions and consider a variety of views", but it also "promote[s] tolerance and social justice" (Benesch, 1999, p.576). In order to illustrate that dialogic CT can and should be taught, Benesch (1999) describes a classroom discussion in an English for academic purposes (EAP) reading class linked to an EAP writing class and an introductory social sciences course.

Other instructional strategies and techniques have also been developed for the improvement of EFL/ESL students' CT ability in recent years (see, for example, Khatib & Alizadeh, 2012; Thakur & Al-Mahrooqui, 2015). However, they have not been taken up to a significant extent, and further research is still needed to explore their potential.

2.1.3.4 The generalizability and transferability of CT skills

Central to the debates of how CT skills should be taught are the generalizability and transferability issues. In some cases, a distinction is made between the two terms. While "generalizable" means "capable of application across specific subjects or domains" (Siegel, 1991, p.18) or able to "generalize beyond their original domains of application" (Atkinson, 1997, p.85), "transferable" means able "to transfer effectively beyond [the] narrow contexts of instruction" (Atkinson, 1997, p.71). Although the difference between them is worth noting, the two terms are basically used interchangeably (Siegel, 1991; Atkinson, 1997). In sum, generalists endorse generalizabilty and transferability; specifists deny them.

One of the most comprehensive discussions as to the generalizability of CT is articulated in Siegel (1991). Siegel addresses the issue by analyzing the generalizability of the two central components of CT. The first component is the "reason assessment component", "which involves abilities and skills relevant to the proper understanding and assessment of reasons, claims, and arguments" (p.18). One aspect of the first component – the skills and criteria of reason assessment – is partly generalizable, both "in the theoretical sense that they are general and so *applicable* across a wide range of cases or domains" and "in the practical sense that it is *pedagogically useful* to teach them, or to expect them to transfer, across a wide portion of the curriculum" (p.19). In this aspect, Siegel shares some opinions with the generalists and others with the specifists. Another aspect of the first component is the epistemology underlying CT. This aspect is fully generalizable. The second component of CT, also fully generalizable, is the "critical spirit component", which is used to refer to "a complex of dispositions, attitudes, habits of mind, and character traits" (p.26).

Meanwhile, one of the very few papers that looks at the generalizability and transferability of CT in TESOL is again Atkinson (1997). Yet, this paper simply relies on "the uncertain empirical status of thinking skills transferability" (p. 87) to reach the conclusion that "once having been taught, thinking skills do not appear to transfer beyond their narrow contexts of instruction" (p. 71), without relating the issue to the nature of ELT.

2.2 PREVIOUS STUDIES EXAMINING CRITICAL THINKING IN ELT

In contrast to the substantial body of research on CT in general or CT in other disciplines, not much research has been undertaken on this notion in ELT.

In order to investigate whether Japanese students of English "display elements of critical thinking and an individualized identity" (Stapleton, 2002, p. 251), Stapleton (2002) conducted an attitude survey of 70 second-year Japanese university students in an English writing class, using a nine-item questionnaire, and held follow-up interviews with 10 randomly selected participants. The study found "little hesitation to voice opinions counter to authority figures" and "a firm grasp of elements of critical thinking" among the students (p. 251), which might suggest a significant change in traditional constructs claiming the opposite. Similarly, T. K. T. Nguyen (2016) examined Vietnamese non-major university students' attitude towards the six CT writing tasks in an English course and their perceived level of performance. The researcher employed a questionnaire with 12 items, interviewed the students and observed the classroom. The findings of the study showed that the students had quite a positive attitude towards CT

tasks, but they felt more confident of easier tasks. Although these studies are important in better understanding Asian students' beliefs and attitudes, they failed to consider how students' CT was actually manifested in their actual written production.

Evidence of CT in the writing of L2 learners, however, was closely examined in Stapleton (2001) and Floyd (2010). Stapleton (2001) had each of the writing samples from 45 Japanese undergraduate students "assessed blindly by two raters for elements of critical thinking" (p. 513). The results indicated that "the quality of critical thought depended on the topic content, with a familiar topic generating better critical thinking" (p.506). Floyd's (2010) study explored the effect of thinking in L2 on CT performance. Fifty-five Chinese students in IELTS preparation courses at the English language centre of Macquarie University participated in the research. Split-test versions of the *Watson Glaser Critical Thinking Appraisal ® Short Form A* in both English and Chinese were administered to two randomly split groups of participants: Group 1 took the version with half-test first in English and the second half in Chinese; Group 2 took the version with the half-test first in Chinese and the second half in English. Semi-structured interviews were later conducted with three students to obtain some insights into the test-taking experience. The four main findings of the research can be summarized as follows: (1) The students who took the first split-half in Chinese performed significantly better than those who took the same half of the split test in English first; (2) Group 1 students performed significantly better on the Chinese second half of the test; (3) Group 2 students, who took the English test second, performed as well as they did on the Chinese test, taken first; (4) The students found the English half-test more difficult. With this study, Floyd (2011) could "verify the connection between language proficiency and CT performance" (p. 290), seemingly supporting Cummins' "threshold" hypothesis (1979) (see earlier discussion in Section 2.1.2).

Choosing another angle from which the concept of CT can be viewed, Asgharheidari and Tahriri (2015) explored teachers' attitudes toward CT, its place in their work and the need for further training in the teaching of CT skills. The participants were 30 EFL teachers from 12 different language institutes in Iran. The instrument was a questionnaire consisting of eight Likert-type close-ended items. The analysis of the responses revealed that most of the participants had a clear idea of what the term "CT" means, that CT should be an important part of their job as a language teacher, and that they need more training in teaching CT skills. However, the first and principal item of the questionnaire (i.e. *I have a clear idea of what the term "critical thinking" means*), on which the remaining items were based, was too vague,

taking into account the debates on the definition of this concept. This may cast doubt on the validity of the study.

Other researchers are more interested in how CT works in the reality of an English language classroom. Jantrasakul (2012) examined the benefits of using CT-based EFL lessons in a Thai tertiary EFL class. She found that the students were highly motivated and fully active, but had insignificant language gain. Unlike the students in Jantrasakul's study, the experimental group learners in Yang and Gamble's (2013) experimental design, who "engaged in CT-enhanced activities such as debates and peer critiques" (p. 398), demonstrated a significant improvement in English proficiency, superior CT and academic achievement in a content-based exam, compared with the control group learners. The participants of this study were non-English majors at a large university in Taiwan.

T. T. B. Nguyen (2016) is an in-depth research project on CT in ELT in Vietnam. In this qualitative study with a case study design, data were collected through observations of skills-based and content-based classes, complemented by semi-structured interviews and document analysis. Participants included both teachers and students. Several interesting implications arise from this project. First, the implementation of CT in the Vietnamese EFL context is feasible "provided certain conditions are met, such as sufficient scaffolding, appropriate task difficulty level, relevant material choice, and suitable classroom arrangement" (p.2). Another interesting implication is that "the content-based classes, aiming to provide a socio-cultural understanding of English-speaking countries are more conducive to developing critical thinking than the skills-based classes, which aim to develop students' language skills" (p.2).

2.3 SUMMARY

In Section 2.1, the definition of CT, the link between CT and ELT, and the four major issues of CT in ELT have been discussed to build up a general picture of CT in ELT. It can be seen that literature on CT in ELT is limited and somewhat dated. Atkinson's (1997) article, which presented four thought-provoking reasons "why TESOL educators should be cautious about adopting critical thinking pedagogies in their classrooms" (p. 71), is controversial but widely cited. With an emphasis on the view that "Critical thinking is cultural thinking" (Atkinson, 1997, p. 89), the article has become either the basis or the focal point of discussions for most ELT-related studies on CT, some of which have been reviewed and critiqued in Section 2.2. Important as Atkinson (1997) is, the article was published more than twenty years ago. Since then, there have been few equivalent papers updating the situation of this still very current issue.

This suggests the need for further research, which employs a methodology that permits a thorough investigation of CT in ELT. The present study aims to fit in well with this context.

CHAPTER 3: METHODOLOGY

In Chapter 2, the key theoretical and empirical perspectives on CT in ELT have been reviewed to relate the study being reported to the relevant literature. This chapter presents the methodology that was employed to guide the present study. The chapter will begin with the research questions. Then, it will provide the rationale behind the design of the study as a qualitative case study within an interpretive research paradigm. The next two sections will describe the setting and the participants, followed by an overview of the data collection process and the data analysis process.

3.1   RESEARCH QUESTIONS

The research questions the study aims to address are:

1. What are the perceptions of English Linguistics teachers and students at the EF towards CT in ELT?
2. What are the views of English Linguistics teachers and students at the EF on the specification of CT as one of the learning outcomes for the Bachelor of Arts (B.A.) programme in English Linguistics and Literature, and for English Linguistics courses?
3. To what extent do Year 4 students at the EF demonstrate their competence in CT?

3.2   RESEARCH DESIGN

The nature of the research makes it necessary to employ a qualitative case study within an interpretive research paradigm, which enables the research issue to be looked at from different perspectives and the situation to be studied in depth.

3.2.1   Interpretive paradigm

A research paradigm is a conceptual framework that guides how a research study should be conducted and how research questions should be answered. "[V]iewed as a set of basic beliefs (or metaphysics) that deals with ultimates or first principles", a paradigm "represents a world view that defines, for its holder, the nature of the 'world', the individual's place in it, and the range of possible relationships to that world and its parts" (Guba & Lincoln, 1994, p. 107). According to Richards (2003), research paradigms are characterized by the "two intimately related aspects" (p. 33), which are ontology – "the nature of our beliefs about reality" (p. 33) – and epistemology – "the views we have about the nature of knowledge and the relationship between knower and known" (p. 35). The position of interpretivism in relation to ontology and

epistemology is that "reality is socially constructed", requiring that "the focus of research should be on an understanding of this construction and the multiple perspectives it implies" (Richards, 2003, p. 38). Stated simply, interpretivists believe that reality needs to be interpreted because there is no single reality or truth.

The interpretive paradigm is particularly appropriate for this study as it allows the accounting for the multiple realities of CT in ELT in the Vietnamese tertiary context, which are constructed by different individuals and in various ways.

3.2.2 Qualitative research

In order to acquire a thorough understanding of those multiple realities, qualitative research is more likely to be used, for interpretivism is one of the paradigms informing qualitative research (Creswell & Poth, 2018, pp. 22-24). Qualitative research "involves an interpretive, naturalistic approach to the world", which means that "qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them" (Denzin & Lincoln, 2018, p.10). As Richards (2003) explained, qualitative research is usually adopted for three main reasons. Firstly, it enables us to "explore the complexities and conundrums of the immensely complicated social world that we inhabit" (p. 8). Secondly, as "a person-centred enterprise", the qualitative approach is well suited to language teaching research (p. 9). Thirdly, qualitative research tends to have profound impact on the researcher him/herself and has great potential for transforming them (p. 9). These are exactly the reasons why qualitative research was selected for this study.

3.2.3 Case study

Case study research is defined by Stake (1995) as "the study of the particularity and complexity of a single case, coming to understand its activity within important circumstances" (p. xi). This definition focuses on particularity, complexity and contextualization as the key features of a case being studied in case study research. These features form part of the definition given by Creswell and Poth (2018), who also explain what a case is and describe the data collection methods needed. For Creswell and Poth (2018), case study research is "a qualitative approach in which the investigator explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information" (p. 96). The features included in these definitions provide the rationale for the choice of case study as the key method for this research.

Case studies can be classified into three types: intrinsic case study, single instrumental case study, and collective case study (Stake, 1995, p. 3). This research was designed as a single instrumental case study, in which one issue was investigated, and to illustrate this issue, one bounded case was selected (Stake, 1995, p. 3; Creswell & Poth, 2018, p.98). The case specifically selected for this research was the EF, USSH (VNU-HCMC), a large faculty of a well-established public university in Vietnam. The EF could satisfy the criteria, especially the most important criterion, for case selection because it was anticipated to "maximize what we can learn" (Stake, 1995, p. 4). At the EF, CT is being built into the curriculum of the undergraduate programme in English Linguistics and Literature. This research studies the particularity and complexity of the EF in order to understand CT in ELT in the Vietnamese tertiary context.

3.3 SETTING

The study was conducted at the EF. The EF's vision is "to educate students to become life-long learners and global citizens who are knowledgeable, highly skilled and employable, playing a proactive role in Vietnam's endeavours to integrate with the increasingly globalized world" (EF's Programme Specification, amended 2016). Its missions are: (1) "to provide learners with a solid foundation of knowledge and skills needed for their future employment, further studies of and research into the areas of ELT, translation and interpreting, literature, cultural studies and related fields", and (2) "to provide learners with essential intellectual and transferable skills needed for life-long learning, meeting their workplace requirements and Vietnam's international integration" (EF's Programme Specification, amended 2016).

In recent years, the EF's undergraduate programme has experienced noticeable improvements. In 2013, its B.A. programme in English Linguistics and Literature was certified for successfully completing the ASEAN University Network (AUN) actual quality assessment at programme level: The programme has been audited and found to be in accordance with the requirement of the standard details of the AUN Quality Assurance Standard (AUN-QA). In 2016, the programme started to be revised according to the CDIO (Conceiving – Designing – Implementing – Operating) Initiative. The programme learning outcomes have been amended, and CT has been specified as one of its desired learning outcomes (EF's Programme Learning Outcomes, CDIO-based, amended 2016).

The EF has five departments in charge of different courses in the three specialization streams of its B.A. programme. The five departments of the faculty include Language Skills; English

Linguistics; Translation and Interpreting; American-British Culture and Literature; and English Language Teaching. The three streams of specialization, one of which will be chosen by each of the EF students upon their successful completion of the fifth semester, consist of English Linguistics and Language Teaching, Translation-Interpreting, and American-British Culture and Literature.

English Linguistics courses, which form one of the focuses of this study, are offered by the Department of English Linguistics. There are six obligatory English Linguistics courses, including Introduction to English Linguistics, English Phonetics and Phonology, English Morpho-Syntax, English Semantics, Discourse Analysis, and Systemic Functional Grammar. These courses are taught to Year 3 and Year 4 students in all the three specialization streams except that students specializing in American-British Culture and Literature do not have to study Discourse Analysis and Systemic Functional Grammar. Students in the other two streams of specialization have to take either Discourse Analysis or Systemic Functional Grammar in their final semester at university.

3.4   PARTICIPANTS

Twelve students and four teachers participated in the study. They were Year 4 full time EF students who were taking an English Linguistics course, and EF teachers who were very familiar with English Linguistics subjects and Year 4 students of the EF. These numbers of participants, which the research study aimed to have, are appropriate to the scope and the scheduled time for this study, which is designed to be an exploratory investigation of CT. More importantly, the numbers are appropriate to the qualitative approach to research. As described by Richards (2003), one of the characteristics of qualitative inquiry is that it "usually focus[es] on a small number of (possibly just one) individuals, groups or settings" (p. 10). Table 3.1 gives a brief description of the participants.

Table 3.1: Number of student and teacher participants

Participants	Number of participants		
	Female	Male	Total
Students	8	4	12
Teachers	2	2	4

A summary of the student participants' background information in terms of whether they had taken an IELTS test, whether they had heard of the term "CT", and whether they had been formally trained in CT is presented in Table A7.1 (Appendix 7).

As final year students majoring in English Linguistics and Literature, the students had adequate competence in English for the proposed research activities. Although most of the students (9 students) had not taken an IELTS test, those who sat the test (3 students) could get quite high scores, i.e. overall band scores 8, 7.5 and 6.5. In addition, while all of the students had heard of the term "CT" before, not many of them (i.e. just three students) reported that they had been trained in CT. These students could learn CT skills from their Language Skills classes, where their teachers spent a few hours of the course explaining CT, giving students practice in developing CT skills, or embedding CT in the lessons. One of the students had a couple of hours training when joining a club at the university.

A summary of the teacher participants' background information in terms of age group, teaching experience, highest qualification completed, degree(s) obtained abroad, and formal training in CT is presented in Table A7.2 (Appendix 7).

All the teachers were highly experienced in teaching English. They also had experience working with Year 4 students at the EF. They were teaching English Linguistics subjects in the semester when the research was conducted, or used to teach them for a long time. Three of the teachers were Vietnamese, and the other was a visiting foreign teacher from a university in the United States. All of their postgraduate degrees had been obtained in either Australia or the United States of America. However, none of them had received formal training in CT.

3.5   DATA COLLECTION

3.5.1   Ethical considerations

Ethics approval for the study (5201800251) was obtained from the Faculty of Human Sciences Human Research Ethics Sub-Committee (Macquarie University) on April 19, 2018 (Appendix 1).

3.5.2   Access and permissions

The processes to gain access to the site and to find participants for the research were as follows. First, an email was sent to the Dean of the EF to ask for his permission to collect data at the faculty. Then, an invitation (Appendix 3A) was extended via email to potential teacher participants. In order to approach the student participants, the researcher, with the invigilator's

approval, entered the exam rooms at the end of the exam, gave a two-minute talk about the project, handed out the flyers (Appendix 3B), and announced that if the students were interested in the study, they could email the researcher or see her after the exam at the office. The twelve students and the four teachers who participated in the study were those who, among the ones who responded to the researcher's email, emailed her or saw her at the office, could later arrange their time to take part in the research activities.

3.5.3   Data collection methods

The case study was conducted at the EF over a five-week period from May to June 2018. The figure below outlines the process of data collection.
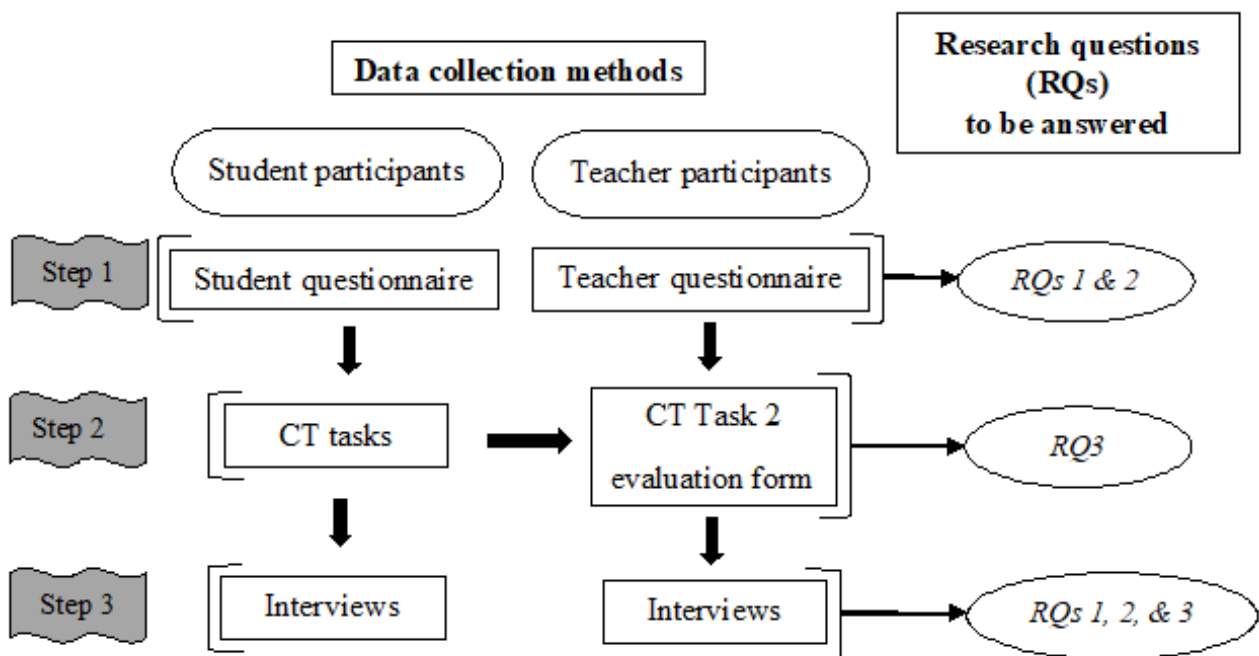
Figure 3.1: Outline of the data collection process

As shown in Figure 3.1, the three methods employed for data collection were questionnaires, CT tasks and semi-structured interviews. Such "a range of methods" can be employed in qualitative research "to establish different perspectives on the relevant issues" (Richards, 2003, p. 10). Although part of the questionnaires and the CT tasks do provide quantitative data, quantification can be used where "appropriate for specific purposes" in qualitative inquiry (Richards, 2003, p. 10). As Yin (2009) pointed out, "Some case study research goes beyond being a type of qualitative research, by using a mix of quantitative and qualitative evidence" (p. 19).

Taken together, the use of the three data collection methods for this case study guarantees triangulation, which helps achieve the purposes of confirmation and completeness (Arksey & Knight, 1999, p. 21). Different sets of data collected from multiple sources via different data collection methods can help minimize the chance of making errors or drawing wrong or hasty conclusions, and optimize the validity of the study (Arksey & Knight, 1999, p. 21; Stake, 1995, p. 8). Triangulation can increase confidence in data analysis and interpretation if data from multiple sources converge, and can reveal new issues or processes if data diverge (Arksey & Knight, 1999, p. 25). Presented below is the justification for and description of these three data collection methods.

3.5.3.1 Questionnaires

The questionnaire was employed in this research due to its effectiveness and efficiency. The questionnaire is useful in gathering information about people's beliefs, opinions, attitudes, and interests (Dörnyei & Taguchi, 2010, p. 5; Richards & Lockhart, 1996, p. 10). Regarding the efficiency, the questionnaire allows researchers to collect a large amount of information in a short period of time (Dörnyei & Taguchi, 2010, p. 6; Richards & Lockhart, 1996, p. 10), thus saving "researcher time", "researcher effort" and "financial resources" (Dörnyei & Taguchi, 2010, p. 6).

In this research, the questionnaire was specifically constructed for the purpose of gathering data on teachers' and students' perceptions of CT in ELT. The two versions of the questionnaire were the teacher questionnaire (Appendix 4A) and the student questionnaire (Appendix 4B), which contained 18 items and 16 items respectively. The versions were divided into three equivalent separate sections: Section 1 was intended to seek general background information that helped construct the respondents' profiles. Section 2 solicited information about their perceptions concerning the definition and description of CT in ELT, the major issues of CT in ELT, the specification of CT as a programme/course learning outcome, and the role of English Linguistics courses in developing students' CT skills. Section 3 asked the teachers about their evaluation of Year 4 students' competence in CT, and asked the students about their perceived level of competence in CT.

The questionnaires consisted of both closed and open-ended items. Most of the items were presented in a Likert-like format. Open-ended items were used where the study aimed for the exploration of diversity or what was beyond the range of possible answers. Many questionnaire items were written by the researcher, based on her review of the relevant literature. The others were adapted from those used in the research instruments of some previous studies, including

Chen (2017), Murguia, Occhi, Ryan, and Verbeek (2011), Orszag (2015), Skaggs (2015), and Yang and Gamble (2013).

3.5.3.2 CT tasks

The CT paper (Appendix 5A) was specially designed to obtain information on students' CT performance. The paper contained two CT tasks, which were preceded by the text "Climate change". The purpose of the text was to orientate the students to the topic, which would be further discussed in the two CT tasks that followed.

CT Task 1 was intended to find out whether the students could identify the reasoning error(s) in each of the five false climate claims. The task was written in multiple-choice format, with space provided for the students to briefly state the reasons for their choices. It was adapted from Supplementary table S2 (STS2), which presents the analysis of 42 common false climate claims (Cook, Ellerton, & Kinkead, 2018). Cook et al. (2018) used an approach based on CT methods to do the analysis. The approach, which "has been tested experimentally" (p. 2), focuses on "explaining the fallacious reasoning within misleading denialist claims" (p. 1). The analysis process has six steps, in each of which, the authors point out "locations where certain fallacies of reasoning are typically made" (p. 3). Five of the 42 claims were used in CT Task 1, which, however, just aimed to find out whether and how the students could identify reasoning error(s), without focusing on these six steps.

CT Task 2 aimed to shed light on how the students demonstrated their CT ability in academic writing. An IELTS Writing Task 2 question (see Free online IELTS practice tests for 2018) was selected as the question of CT Task 2, which asked the students to write an essay in response to an argument. In such an essay, the students had to "present a strong argument supported by evidence" (Williams, 2011, p. 12). Williams (2011) instructs that displaying CT skills, which "means discussing the advantages and disadvantages of different solutions and ideas" (p. 30), is more likely to help test takers achieve a band 6.5 or above in IELTS writing.

Each of the students' essays was then "blindly-reviewed" by the four teacher participants using the CT Task 2 evaluation form (Appendix 5C). The evaluation form was adapted from the public version of IELTS Task 2 Writing band descriptors, but it focused only on the dimensions of task achievement, and coherence and cohesion, where dimensions of CT are included, without taking into consideration the other two dimensions of lexical resource, and grammatical range and accuracy.

3.5.3.3 Interviews

The questionnaire and the CT paper were followed by semi-structured interviews, which aimed to gain a better understanding of the data previously obtained. As the participants' competence in English was adequate for the research activities, all the interviews were conducted in English and audio recorded to enable an accurate transcription. Some of the interview questions were written by the researcher, based on her review of the relevant literature while the others were adapted from the questions employed in Mercado (2014) and Tapper (2004).

The interview is "the main road to multiple realities" (Stake, 1995, p. 64), and semi-structured interviews are considered "particularly well suited for case study research" (Hancock & Algozzine, 2017, p. 47). Semi-structured interviews are flexible, though based on a predetermined set of open questions. Apart from the "main questions" focusing on the main points and guiding the interview, "follow-up questions" and "probes" help to add "depth, detail, vividness, richness, and nuance" to the research (Rubin & Rubin, 2005, p. 129).

One special function of the interview in this design was to collect retrospective data: The students were asked to go through their own responses to the CT tasks and provide retrospective clarification of their responses; similarly, the teachers looked back on their assessment process of the essays and made retrospective comments on their assessment as well as the students' competence. In order for the reliability of retrospective data to be enhanced, the data should be collected as soon as possible after task completion to ensure that the participants still remember what they have done (Ericsson & Simon, 1984). Therefore, the interviews with the students were conducted within 3 hours after their completion of the CT tasks, and those with the teachers were carried out within a few days after their assessment of the essays.

3.5.4 Pilot study

All the instruments were trialled before being used in the research. Among the participants, one teacher and three students took part in the pilot study. Only two minor typos needed to be corrected after the trial. No items in the instruments were changed. All the participants were found to be articulate in their interview sessions, and two of them, one teacher and one student, were particularly insightful. Therefore, the researcher decided to include the data from the pilot study in the actual study, for they were collected in exactly the same way as those in the actual study.

3.6   DATA ANALYSIS

Wolcott (1994, p. 11) identifies the three categories of data analysis as *description*, *analysis*, and *interpretation*. Although these categories are not "mutually exclusive", and lines are not "clearly drawn where description ends and analysis begins, or where analysis becomes interpretation", the categorization is necessary in transforming qualitative data "into authoritative written accounts" (Wolcott, 1994, p. 11). The data collected in this study was analyzed "throughout the whole research process" (Richards, 2003, p. 268) in three phases, which are equivalent to Wolcott's (1994) three categories.

The first phase of data analysis was to describe or "develop case study database" (Yin, 2009, p. 41). It involved gathering the responses to questionnaires, CT tasks, and CT Task 2 evaluation form, and transcribing the interviews. Thus, the database of this case study research contained completed teacher questionnaires and student questionnaires, responses to CT tasks, completed essay evaluation forms, the audio recordings of the interviews and their transcripts.

Building on the first phase was the analysis phase, where key factors and relationships in the data were identified (Wolcott, 1994, p. 10). This second phase consisted of two sub-phases: frequency counts of quantitative data and thematic analysis of qualitative data. The frequency of the responses to the closed questionnaire items, the answers to CT Task 1 and the scores given to the essays was counted. The responses to the open-ended questionnaire items and the interviews were coded into codes, and then codes were combined "into broader categories or themes" (Creswell & Poth, 2018, p. 184), for thematic analysis. In other words, this process went through three types of coding: *open coding*, i.e. "breaking down the data for the purpose of categorising, conceptualising and comparing"; *axial coding*, i.e. organizing the data by "relating categories to subcategories and making connections between categories"; and *selective coding*, i.e. identifying a central category, and then refining and integrating other categories accordingly (Richards, 2003, p. 276).

The final phase of data analysis was the interpretative phase. As explained by Wolcott (1994), the purpose of interpretation is "to make sense of what goes on, to reach out for understanding or explanation beyond the limits of what can be explained with the degree of certainty usually associated with analysis" (pp. 10-11). In this study, interpretation involved making sense of the frequency of the quantitative data and "abstracting out beyond the codes and themes to the larger meaning" of the qualitative data (Creswell & Poth, 2018, p. 195).

3.7   SUMMARY

Chapter 3 has presented the methodology used in the study to investigate CT in ELT in the Vietnamese tertiary context. The design of the study as a qualitative case study within an interpretive research paradigm has been justified, and its different processes have been described. The study involves both teachers and students, and data were collected through two questionnaires, two CT tasks and semi-structured interviews, which allows not only triangulation of sources but also of methods. The findings of the study will be reported in the next chapter.

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CHAPTER 4: DATA ANALYSIS AND FINDINGS

The preceding chapter has described the methodology used in the study. In this chapter, the participants' responses to the questionnaires, CT tasks and interview questions will be analyzed in a combined manner, and reported under each of the three research questions. A discussion of the findings will be presented in Chapter 5.

Relevant quotations from the participants' responses will be used to capture their voices. The quotations will be de-identified by using numbers: S1 to S12 for student 1 to student 12, and T1 to T4 for teacher 1 to teacher 4. To distinguish the quotations taken from the open-ended items in the questionnaires and those taken from the interviews, the references $_Q$ and $_I$ will be used. For example, quotations from the questionnaires completed by S1 and T1 will be referenced as $S1_Q$ and $T1_Q$ respectively, and those from the interviews with S1 and T1 will be referenced as $S1_I$ and $T1_I$ respectively. For ease of reading, grammatical mistakes in the quotations will be slightly edited, to ensure clarity.

4.1 RESEARCH QUESTION 1: What are EF teachers' and students' perceptions towards CT in ELT?

4.1.1 Definitions of CT in ELT

4.1.1.1 Students' definitions

Question 8 of the student questionnaire (see Appendix 4B) was designed to find out how the students understood CT in English language learning (ELL). Although three of the students could not give a definition of CT in ELL, all of them could give illustrative examples. CT in ELL was defined as:

> the skills used to make judgments or conclusions based on careful observations ($S2_Q$)

> an attitude in which you feel doubtful about any knowledge delivered to you by your teacher, then you openly express your own stance to your teacher ($S4_Q$)

> the ability to ask questions […] and provide rational explanations ($S9_Q$)

> the process of thinking and analyzing information actively and skillfully ($S11_Q$)

It was also described as involving giving comments and judgements ($S1_Q$), asking questions ($S10_Q$), acquiring rules and adapting them for use with exceptions ($S3_Q$), and solving problems ($S1_Q$, $S10_Q$). To other students, CT meant realizing and avoiding fallacies ($S7_Q$), organizing the ideas and presenting them logically ($S8_Q$), looking at things from different perspectives and

being able to select the best one to adopt (S5$_Q$, S6$_Q$), and being aware that what was said by teachers and what was found in books were "not necessarily true" (S12$_Q$).

To illustrate their definitions, the students gave examples of CT in using English verb tenses (S5$_Q$, S9$_Q$, S12$_Q$), collocations, idioms, and proverbs (S3$_Q$, S7$_Q$), in understanding a topic or a text (S2$_Q$, S6$_Q$, S10$_Q$), in coming up with a solution (S1$_Q$, S11$_Q$), in writing a paragraph (S8$_Q$), and in arguing and defending one's stance (S4$_Q$). The students' examples were quite clearly written. For instance, one of the students wrote,

> An example of CT in ELL is how a learner analyses details in a reading text to answer a reading comprehension question. For example, in order to identify the tone of a passage, the learner must look at the way the author arranges his or her ideas, his or her word choice and his or her attitude represented in the passage. (S2$_Q$)

In order to delve further, question 10 asked the students to give an example of when their CT was nurtured in an English Linguistics classroom. Interestingly, their examples could be equally classified into two groups. The first group consisted of examples that focused on exercises given (S2$_Q$, S3$_Q$, S4$_Q$, S7$_Q$, S8$_Q$, S9$_Q$), for example the exercise of drawing tree diagrams in a Syntax class (S7$_Q$). The second group included those that paid attention to classroom activities (S1$_Q$, S5$_Q$, S6$_Q$, S10$_Q$, S11$_Q$, S12$_Q$), for example answer justification and peer feedback in exercise correction (S1$_Q$) and recognition of errors in a coursebook (S5$_Q$, S12$_Q$).

4.1.1.2 Teachers' definitions

The responses to Question 10 in the teacher questionnaire (see Appendix 4A) showed what CT in ELT meant to the teachers. The teachers' definitions were clear and focused. Two of them included the ideas of being logical and making evaluations or judgements. In particular, CT was defined as "the objective and logical analysis and evaluation of information" (T1$_Q$) or the skills to "think logically, analyse and solve problems, make judgements" (T2$_Q$). An example was given by T2$_Q$ to clarify her[1] definition: When reading a text, the students "should be able to tell whether they agree or disagree with the author(s) and why". T3$_Q$ stated that "CT in ELT is reflected in the ability to look at something from different perspectives", for example "from the perspective of a native speaker and a non-native speaker". The way of looking at things in

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[1] The usage of *he/she* in this thesis is due to stylistic reasons. The pronoun does not necessarily reflect participants' true gender.

this definition was shared by T4$_Q$, who defined CT in ELT as the ability to present a problem and to give pros and cons (T4$_Q$).

Question 11 asked the teachers to give an example of when they nurtured their students' CT in the classroom. In response to this question, all the teachers wrote about classroom activities: Students were asked to give the most logical possible remarks of their classmates' translation (T1$_Q$), "to agree or disagree with the suggested answers in the textbook" (T2$_Q$), to compare between English and Vietnamese (T3$_Q$), and to "argue in favor of one structure versus another" and to "provide arguments" (T4$_Q$).

4.1.2 Opinions about the major issues of CT in ELT

Question 10 of the student questionnaire and question 12 of the teacher questionnaire were included to see what opinions the students and the teachers had about the major issues of CT in ELT. Their opinions are presented in Table A8.1 (Appendix 8).

4.1.2.1 Students' opinions

The following results feature prominently. First, all the students disagreed that CT could not be taught. Yet, more than 60% (eight students) believed that CT was acquired through an unconscious process of socialization during childhood. Second, the students held different views as to whether CT was a culturally based concept. Third, ten students (over 80%) saw Vietnamese culture as a major obstacle to benefiting from CT instruction. In spite of that, eleven students (over 90%) were opposed to the statement that CT was more appropriate for Western students than Vietnamese students. Nine students (75%) even contended that CT could properly fit into the Vietnamese context of ELL. In addition, over 90% of the students acknowledged the special importance of CT in ELL, and all of them thought that it was a generalizable and transferable skill, being able to function satisfactorily beyond both its original domains of application and its contexts of instruction. In fact, questions 10.1 and 10.9 supported each other, like opposite sides of the same coin, and the results obtained could confirm the internal validity of the questionnaire.

In the interviews, the students pointed out the dimensions of large power distance, strong uncertainty avoidance, and collectivism in Vietnamese culture as a hindrance to CT learning. In particular, in Vietnamese culture, older people and superiors were respected and feared (S1$_I$, S4$_I$), younger people and inferiors were expected to be obedient (S3$_I$), arguments, disagreements, and conflicts should be avoided (S4$_I$, S5$_I$, S12$_I$), and Vietnamese people tended to use collective "we" rather than individual "I" (S7$_I$).

However, all the students insisted that CT was appropriate for Vietnamese students. According to some students, Vietnamese culture was changing, though slowly, and becoming more open ($S4_I$, $S3_I$, $S10_I$). $S11_I$ stated that Vietnamese learners nowadays tended to learn and apply what was supposed to be good from other cultures. He added that when learning English, they also learned the cultures of English-speaking countries, to which CT belonged. Other students saw the appropriateness of CT to Vietnamese students in this globalized world ($S3_I$) and integration era ($S7_I$), where Vietnamese learners had more opportunities to study abroad and communicate with foreigners ($S8_I$), and were more likely to express their opinions ($S10_I$). $S4_I$ even argued that "[F]rom my own opinion, all humans are the same. We have the same brain, we have the same ability to perceive, so basically we can get all of the concepts".

In fact, the students mentioned various aspects of ELL in which CT plays a significant role, from understanding language materials and lessons ($S2_I$, $S5_I$, $S6_I$, $S7_I$, $S8_I$, $S10_I$, $S12_I$), acquiring the knowledge of the formal language system ($S3_I$, $S4_I$, $S7_I$, $S9_I$, $S11_I$), discovering the differences and similarities between English and Vietnamese ($S3_I$), to improving their linguistic performance ($S1_I$, $S3_I$, $S8_I$, $S6_I$) and linking knowledge with life ($S11_I$). They also described the multiple roles of CT in their specialized fields of study. For example, CT could help students specializing in English Linguistics deal successfully with exceptions in analyzing the language ($S3_I$). It could help students specializing in Language Teaching learn how to cope with different kinds of students and various situations they might encounter in the future ($S1_I$, $S10_I$), and develop their future students' CT ability ($S11_I$). As regards the students specializing in Translation-Interpreting, CT would help them deeply understand what a text or a speaker meant, and manage the information well to provide correct translations ($S8_I$, $S9_I$, $S12_I$). Above all, as $S4_I$ stated, CT kept him curious about his major:

> … being critical will keep the students curious, and want to know more about the subjects. When they have an inquisitive mind, they can widen their knowledge, and they can develop themselves in language learning, not limit it to the classroom but also learn at home or everywhere. ($S4_I$)

4.1.2.2 Teachers' opinions

The teachers' opinions, as presented in Table A8.1, shared several fundamental similarities with the students'. First, three out of four teachers (75%) were against the idea that CT was not a teachable pedagogical set of behaviours although half of them still admitted the role of childhood socialization in facilitating the acquisition of this skill. Second, three of the teachers

asserted the special importance of CT in ELT. Moreover, all the teachers believed that CT was generalizable and transferable.

The difference between the teachers' opinions and the students' lay in the issue of CT in ELT and culture. The teacher participants were equally split over whether CT was a culturally based concept and whether CT was more appropriate for Western students than Vietnamese students. However, three of them (75%) disagreed that Vietnamese culture prevented Vietnamese students from enjoying the benefits of CT instruction, and the same number of teachers believed that CT could properly fit into the Vietnamese context of ELT.

Although half of the teachers agreed that CT was more appropriate for Western students, in the interviews, all of them stressed that it was entirely appropriate for Vietnamese students:

> In the age of globalization, […] the distinction between Western or Eastern concepts has become very blurred now, and whatever is good for students, […] we should try to teach them. (T3$_I$)

> Nowadays, the East and the West learn from each other, so the distance is not very much any more. So even though the Vietnamese students are not as critical as the Western students, if we help them with CT, […] they will improve their CT skills. I think they can learn. (T1$_I$)

> Thinking is a human ability, a human skill, so everybody thinks, and everybody thinks logically because […] that's the way we function. If we were not logical animals, we would have died, we would have perished a long time ago. So, everybody thinks logically. Sometimes, we think illogically, too, but that's because of part of biology. (T4$_I$)

The teachers did not think that Vietnamese culture could prevent Vietnamese students from learning CT or at least they hoped it would not because we were now living in "the modern day, different from the old days" (T1$_I$). Two of them were more careful when saying that Vietnamese culture might or could have undesirable effects, but commented that "after some time [university students] will learn how to do it, and they will be willing to do it" (T2$_I$) or "it depends on the teacher and how the teacher implements that in the classroom, too" (T3$_I$).

In addition, the teachers explained in different ways the important role of CT in ELT in general and in their specialized fields of teaching. One of the explanations was that English was a Western language, and people in Western cultures were "used to looking at things from different perspectives or looking at things at the so-called deep structure of things", so Vietnamese people could "learn a lot from that" when learning the language (T3$_I$). This explanation was notable in that it discussed the relationship between language and culture. The role of CT was also seen in enabling students "to be more logical in their reasoning, to avoid

fallacies when arguing a point, and to recognize the fallacies in other people's arguments" (T1$_I$). One teacher even emphasized that in Linguistics, his specialized field of teaching, CT was "all we do", stating that "basically the students have to be thinking critically about everything we teach" (T4$_I$).

4.2   RESEARCH QUESTION 2: What are EF teachers' and students' views on the specification of CT as one of the learning outcomes for the B.A. programme in English Linguistics and Literature, and for English Linguistics courses?

4.2.1   Views on the specification of CT as a programme/course learning outcome

The students' and teachers' responses to Question 11 of the student questionnaire and Question 13 of the teacher questionnaire, which concern how the participants viewed the specification of CT as a programme/course learning outcome, are summarized in Table A8.2 (Appendix 8).

4.2.1.1   Students' views

Three observations can be made about the students' views on this matter. First, the students showed positive attitudes toward the specification of CT as a programme/course learning outcome: All the students expressed the need for having CT as one of the desired learning outcomes for the B.A. programme, and a majority of them (over 80%) perceived the need for specifying it as a course learning outcome for all the English Linguistics courses at the EF. The second observation to be made is that almost all the students acknowledged the usefulness of CT to their lives, future careers and future studies. Only one student (8.3%) felt doubtful about whether it would be useful for his future studies. However, the practices of teaching and evaluating CT skills at the EF, which were reflected in the responses of the students, did not match their perceptions. Only four of the students (33.3%) reported that instruction of CT was incorporated in lessons in English Linguistics courses, and seven of them (58.3%) either strongly agreed or agreed that evaluation of CT skills was incorporated in English Linguistics courses.

Being well aware of the benefits of CT, all the students, in the interviews, expressed their willingness to develop their CT skills through reading newspapers, reading more about CT in books, watching videos on YouTube, or joining a course. Many of them suggested that CT should be taught at university either in a separate course in their first or second year or with CT being integrated into other courses or in both ways. Some students suggested that CT should be taught earlier, when students were in secondary schools (S9$_I$) or even in primary schools (S4$_I$).

Discussing the ways to enhance CT skills, one student remarked, "I think learning CT is a process. It cannot be acquired for only one or two courses but through time" (S9$_I$).

Although CT was thought to be quite a new concept to many Vietnamese students (S1$_I$, S2$_I$, S5$_I$, S6$_I$), a majority of the students found CT relevant to Vietnamese university students. One student explained:

> Because when Vietnamese students are at the university level, they have to study different subjects, and these subjects often involve their ability to analyze and make judgments. And […] they have to study research in order to write essays and a thesis. (S2$_I$)

4.2.1.2 Teachers' views

Similar trends emerge from the teachers' responses. First, three out of four teachers (75%) either agreed or strongly agreed that it was necessary to include CT as one of the learning outcomes for both the programme and English Linguistics courses at the EF. This was because CT was "something that you need anywhere" (T4$_I$) and because CT was beneficial not only to EF students but also to all learners in general (T3$_I$). T2$_I$ stated, considering the teaching context:

> […] if we don't put that as a learning outcome, then the teachers will not pay attention to that and will not emphasize the importance of CT. […] if we put that as a learning outcome, then we can make sure the students will achieve that by the end of the course. (T2$_I$)

Just one teacher strongly disagreed with the inclusion of CT as a programme learning outcome and had no opinion about its inclusion as a course learning outcome. The reason given by this teacher was that if CT was specified as a programme learning outcome, the faculty would need to "design a separate course in CT skills, and encourage all the teachers in the faculty to integrate CT skills in their subjects" (T1$_I$), which was a hard-to-solve problem. He expressed his worry:

> I think our students are of different levels, some are high, and some are low. So, it is a challenge to teach them CT skills. If we design a course that is very easy for them, it may look, it may sound ridiculous. But if we don't do that, some of the students or most of the students cannot learn CT skills because maybe that course is not difficult for some students, but they may be too difficult for the other students. (T1$_I$)

Second, all the teachers agreed that CT was useful for students' lives, future careers and future studies. In the interviews, the teachers asserted that CT was relevant to Vietnamese university students and suggested teaching it at university. T1$_I$, who previously taught CT at the EF,

suggested combining a separate course in CT with the integration of CT into other courses. He thought that the faculty should design a different syllabus from the previously used syllabus or simplify it to make it easier for all EF students to understand and acquire. $T2_I$ stated that either method was good for the students while $T3_I$ was not sure which method was better. In contrast, $T4_I$ asserted that CT should be integrated because if CT was taught in its own course, it would be boring with "the same skill over and over and over". However, according to this teacher, the students needed to be taught "the style of argumentation" first ($T4_I$).

In addition to these views, the teachers also contributed some ideas for implementing CT effectively. First, the development of CT skills can start in intermediate English courses because in beginning courses, students do not really "have the tools to start making logical connections in language" ($T4_I$). Second, students should be taught CT before they enter university. If they are not taught CT in junior high or senior high, "better late than never, university students should be trained in that" ($T3_I$). At university, the course on CT should be taught early, before Academic Writing and other specialized courses ($T2_I$) are taught. Third, teachers need training to teach CT or integrate CT into their courses ($T2_I$) and to evaluate the skill ($T4_I$).

However, there were mixed findings with respect to the self-reported practices of the teachers. Two of the teachers (50%) reported planning their lessons to incorporate instruction of CT skills. These teachers also claimed that they felt prepared to incorporate CT into their course although one of them did not indicate this on the questionnaire. The reason why this teacher did not give a response to this questionnaire item was that he considered feeling prepared was essential for linguistics teachers. To him, "all linguistics is about CT" ($T4_I$). He was also the only teacher who stated in the questionnaire that he did not encounter obstacles in CT instruction.

The two other teachers had no opinion about whether their lessons were planned to incorporate CT instruction and also about whether they felt prepared to incorporate CT into their course: To one of them, CT was "like a by-product" ($T3_I$), but to the other, CT teaching was very natural, "like a second instinct" ($T1_I$). $T1_I$ stated, "Whenever I go to my class, then, I naturally teach them CT … very naturally".

As regards CT assessment, half of the teachers reported planning their courses to incorporate it. One teacher had no opinion about whether her course was planned to incorporate assessment of CT. In the interview, she explained it was because "the format of the midterm or the final exam should be prescribed by the EF" ($T3_I$). The fourth teacher indicated in the questionnaire

that his course was not planned for CT assessment. When he clarified his opinions, CT turned out to play an important role in his assessment:

> I don't know what happens in the other subjects, but in my subject, which is Translation Practice, the more they think clearly and logically, the more correct their translation will be, so CT and the correct translation go side by side. (T1$_I$)

In the interviews, three of the teachers reported that they did not pay much attention to or even did not have any idea about teaching CT when they first started teaching English, but that they changed their way of teaching later on, especially after coming back from their studies abroad. Only the visiting foreign teacher reported integrating CT into his ELT since the beginning of his career. When asked about the challenges they faced in implementing CT in the classroom, the teachers mentioned the students' unquestioning acceptance of their teachers' words (T1$_I$), their challenges to get prepared to answer all the students' questions (T2$_I$), students' unwillingness to cooperate (T3$_I$), and students' language proficiency and culture (T4$_I$).

4.2.2 Views on the relationship between CT and English Linguistics courses

4.2.2.1 Students' views

On the one hand, all the students, in the interviews, shared their belief that good CT skills were needed in English Linguistics courses. S3$_I$ strongly stated that "if you don't have CT skills, you cannot learn, you cannot be a good learner in Linguistics". On the other hand, all of them, through their responses to Question 12 in the questionnaire and the interview questions, believed that these courses could help develop their CT skills. This reciprocal relationship between CT and English Linguistics courses was thought to be fostered through specific exercises, assignments and classroom activities (for example, S9$_I$, S11$_I$). Also, some students highlighted the significance of proper and effective instruction from teachers (S4$_I$, S6$_I$, S12$_I$).

Next, Question 13 in the student questionnaire was concerned with how the students ranked English Linguistics courses offered at the EF in the order of importance for developing CT skills. *Introduction to English Linguistics* and *English Phonetics and Phonology* were generally ranked the lowest while *Semantics*, *Systemic Functional Grammar* and *Discourse Analysis* were generally ranked the highest. The rank of *English Morphology and Syntax* somewhat varied. To some students, *Introduction to English Linguistics* was the lowest ranked course because it was the very first linguistic course that introduced students to basic linguistic concepts, theories and practice (S1$_Q$, S6$_Q$, S8$_Q$, S9$_Q$). Other students considered that *English Phonetics and Phonology* was ranked the lowest because of the following reasons: learning how to produce sounds and practising transcribing words do not contribute much to the

development of judgement ability (S2$_Q$, S11$_Q$), phonetic and phonological rules are quite clear and unchangeable (S3$_Q$, S11$_Q$), and the study of sounds is "less controversial" (S4 $_Q$). Notably, one student ranked *Introduction to English Linguistics* the highest because it was "the fundamental course for all EF students to explore more in Linguistics" (S7$_Q$). He added that promoting CT in this course would not only help students in the learning process but also boost their CT skills.

4.2.2.2 Teachers' views

All the teachers confirmed the reciprocal relationship between CT and English Linguistics courses, which was believed to depend on how activities or exercises were designed. The types of exercise that the teachers recommended included problem-solving type of assignments (T1$_I$, T4$_I$) and open-ended questions (T2$_I$, T3$_I$). A problem-solving assignment was "like a mathematics problem" (T1$_I$), and the responsibility of the teacher was to find data and give students problems to solve (T4$_I$). As regards open-ended questions, T3$_I$ encouraged students to ask questions regarding what they had read or what was going on in class. In a different way, T2$_I$ explained,

> … normally, you should ask students […] not just, for example, true or false, but why true, why false. Or if they provide an answer, then "Why do you think this is the best answer?", for example. So I think if you keep asking why, then they have to think. (T2$_I$)

However, opinions were mixed regarding the ranking of English Linguistics courses (Question 15 of the questionnaire). T1$_Q$ ranked *English Morphology and Syntax* the highest because the course "studi[ed] the structure of words and sentences and require[d] a great deal of analysis". He ranked *English Phonetics and Phonology* the lowest because it "put more emphasis on description than analysis". To T2$_Q$, *Discourse Analysis* was "an advanced course for senior students" and therefore was ranked the highest while *Introduction to English Linguistics* was a "foundation course" and was ranked the lowest. Yet, T3$_Q$'s opinions stood in total contrast to T2$_Q$'s. T3$_Q$ thought that *Introduction to English Linguistics* was the most important for developing CT skills because it covered "a wide range of issues with comparison of different languages in the world" while Discourse Analysis was considered "the least important" because it was "very theoretical", and "to cover what [was] in the course material [was] hard enough". However, according to T4, these courses could not be ranked and should equally develop CT. He explained:

Linguistics is a science and should be taught as a "discovery" process for students. […] All courses ought to develop CT as they apply the new concepts (as opposed to repeat concepts). (T4$_Q$)

4.3 RESEARCH QUESTION 3: To what extent do Year 4 students at the EF demonstrate their competence in CT?

4.3.1 General evaluation

Questions 14 and 15 of the student questionnaire and Questions 16 and 17 of the teacher questionnaire deal with the evaluation of Year 4 student competence in CT. The findings on the general evaluation is presented in Table 4.1, and those on the evaluation of student competence in six dimensions of CT is presented in Table A9A (Appendix 9A).

Table 4.1: General evaluation of student competence in CT

	Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*
Students' self-perception (n = 12)			2 (16.7%)	9 (75%)	1 (8.3%)		
Teachers' evaluation (n = 4)				4 (100%)			

The students were evaluated by all the teachers to have an average level of competence. The other scores given by the students themselves and by the teachers ranged considerably, though mostly concentrating on the average level, for both the general evaluation and the evaluation of student competence in six dimensions of CT.

In the interviews, when the teachers were asked whether graduates of the programme had well-developed CT skills for their future careers and/or future studies, one teacher gave a negative response and the other three teachers replied that they were not sure. However, when asked about the students in their classes, one of the latter teachers stated that one third of the students were very critical (T2$_I$), and another stated that some of her students "seem[ed] to be quite mature", and "seem[ed] to be able to think critically" (T3$_I$). The visiting foreign teacher remarked:

> I've seen that the students can do a good job. […] I mean those people are brilliant, and […] they are very good thinkers. […] Today, [one student] was asking questions that my graduate students don't ask.

The students' responses seemed commensurate with the teachers'. The students did not think that they had well-developed CT skills. The most confident student could just claim that he had

"enough" of these skills for his future career and future studies, but that he still needed to greatly improve it (S2$_I$). Moreover, many students felt that they were not conscious of being critical thinkers in their studies. Not very conscious as they were, CT did happen quite frequently in the students' self-reported practices. For example,

> When I do those activities, I just think that I'm doing my job, not being a critical thinker. […] Usually, I will look at the problem, and then […] try to find out different solutions to the problem, and then give them or show them to my friends, and then we can finally reach a conclusion, or find a final solution to problems. (S2$_I$)

> I always ask a question in my mind. And I always have doubt whether it is true or false. (S10$_I$)

In contrast, some other students who reported being conscious as a critical thinker sometimes showed that what they did was not actually CT. For example,

> I always listen to [my teacher] because it's the best way to understand what the author means and the point that the teacher taught. (S7$_I$)

> I'm very new in the field of Linguistics, so when I read books, usually I try to understand first. […] I cannot have any question concerning: Is that theory suitable? Is that theory more logical? I just try to understand the basic ideas that the author tries to say, but I cannot judge, I cannot criticize whether he/she has a very good idea. I cannot do that. No. (S4$_I$)

This situation was explained by one of the students: "I don't believe that I'm a conscious critical thinker because for 16 years in school, I have never been taught CT skills" (S3$_I$). Another student, who had an opportunity to participate in an exchange programme for Southeast Asia students, observed,

> I noticed that Vietnamese students have lower ability in terms of expressing their own ideas. Myself I was very insecure and I was very reluctant to express my ideas. But some students from Singapore, Malaysia or Indonesia, they are very confident, and they can effectively and thoroughly show their opinions in front of other students. So for my own observation, there's a big gap between Vietnamese students and foreign students. (S4$_I$)

4.3.2 Students' demonstration of their CT competence

4.3.2.1 Through CT Task 1

CT Task 1 (see Appendix 5A for this task) aimed to find out whether the students could identify reasoning errors in false climate claims. Overall, the numbers of correct answers per student and per statement, which are shown in Table A9B (Appendix 9B), are not high. Just three

students (25%), who were students 9, 10 and 11, scored above the average. Student 8 could not give any correct answer. As regards the statements, only two statements, statements 1 and 3, received an average and above number of correct answers. No student provided a completely correct answer for statement 2. In the follow-up interviews, some of them could not clearly describe how they performed the task (e.g. $S2_I$, $S8_I$). Most of them described their task performance as the process of relying on their background knowledge or on their instinct (e.g. $S1_I$, $S3_I$, $S6_I$). Two students ($S9_I$, $S11_I$) reported analyzing the argument structure. One of these two students said,

> I read the statements first and then I read all the options, and then I try to separate the statements into conclusion and reason. After that, I try to find their relation. Again, I compare with four of the options and then I choose one. ($S9_I$)

Notwithstanding the incorrect choices in the multiple-choice section, most of the students demonstrated that they could identify reasoning errors through their explanation of the reasons for their choices, both on the CT paper and in the interview. In particular, the following is how they explained the reasoning error(s) for each claim.

For the first claim "There is no empirical evidence that humans are causing global warming", all the students could provide ample empirical evidence of anthropogenic global warming. Four students ($S2_I$, $S9_I$, $S10_I$, $S12_I$) pointed out that the error in the claim was in the use of the word "no", which signified "a certainty" ($S9_I$), turning the claim into "an absolute statement" ($S2_I$). Two students ($S2_I$, $S9_I$) could roughly express Cook et al.'s (2018) idea that "absence of evidence is not evidence of absence" (STS2).

The students, however, were not successful in explaining the reasoning errors in the second climate claim "Antarctic sea ice is on the increase and casts doubt on global warming". Most of them could only explain one of the two fallacies. Four students ($S2_{Q\&I}$, $S3_{Q\&I}$, $S10_{Q\&I}$, $S12_{Q\&I}$) indicated that the increase in Antarctic sea ice was due to various other factors, apart from temperature. Three other students ($S4_Q$, $S6_{Q\&I}$, $S8_{Q\&I}$) could convey, to some extent, the idea that global warming does not refer to local warming conditions, and thus, does not simply mean the increase in Antarctic sea ice.

The third false climate claim "CO2 is not a problem because it's a colorless, invisible gas" did not cause much difficulty to the students. All of them spotted that the irrelevance between the substance's colourlessness and invisibility, and its unharmful effects was the reasoning error in the claim. For example, one student wrote:

Uses irrelevant reason to reach a conclusion. CO_2 may be colorless and invisible to naked eyes but it is its interaction with other substances and what it causes to the atmosphere that count. (S9$_Q$)

When dealing with the fourth claim "Species can adapt to climate change", all the students, even the two students who chose the correct answers in the multiple-choice section, directed their attention to the use of the plural noun "species", which means "all species". Some students argued that not all species could adapt to climate change or had adaptive abilities while other students found it rare to find a species being able to adapt. None of them mentioned the speed of climate change: climate change is "actually changing much faster than usual natural climate change, and faster than species can adapt to" (Cook et al., 2018, STS2).

Finally, the explanations advanced by a majority of the students (i.e. ten of them) for the fifth claim ("Polar bear numbers have increased so they're in no danger from global warming") were similar to those proposed by Cook et al. (2018). They centred on the argument that the increase in polar bear populations did not mean that polar bears were not threatened by climate change as the populations were influenced by a variety of factors.

4.3.2.2 Through CT Task 2

CT Task 2 was intended to seek understandings of how the students demonstrated their CT ability in academic writing. The tables in Appendix 9C present the frequency distribution of the scores of all the students' essays given by each teacher. Those in Appendix 9D present the scores given by different teachers to each student's essay. The tables in the two appendices illustrate the two different aspects of the issue and show two notable findings.

First, the students' scores, both analytic and holistic, ranged enormously, from *not competent* to *highly competent* (Appendix 9C), which means that the students' competence levels in CT were significantly different. The difference, however, depended on the evaluation made by each of the teachers. It can be easily seen that the scores given by T1 and T4 ranged more widely than those given by T2 and T3.

Second, the scores given by different teachers to each student's essay were also spread out, which suggested that the teachers evaluated CT differently. For example, the second dimension of CT in S1's essay was graded completely differently by the four teachers (Table A9D.1.1, Appendix 9D), or S7's essay was evaluated at three different levels (levels 1, 3 and 4) by the four teachers (Table A9D.7.2). However, the holistic scores generally varied less than the analytic scores. In such a situation, S2's essay deserves attention as it was graded 4 by all the teachers (Table A9D.2.2), indicating that S2 demonstrated a high level of CT competence.

In the interviews, the teachers' comments on the students' performance were also significantly different:

> I think in general, just a few of them have an average or above average level. Most of them are under average. (T1₁)

> Because they didn't develop their ideas fully with enough supporting details, with enough examples, with enough support, with enough arguments, and they didn't look from different points of view. They didn't look at different aspects of the same issue. (T1₁)

> I think that students have different problems. Some of them may have different perspectives, so they look at the problem from different perspectives. But then I don't know because of their lack of time or something, they couldn't develop their arguments very well. […] for example, they didn't give enough examples to convince the reader. […] and some other students […] don't have counter-arguments. So, they only argue for one side. (T2₁)

> I think [their CT competence]'s ok. It's somewhere in middle, between 3 and 4. (T2₁)

> I really like the way they reason, they argue […] about climate change, […] so students demonstrate competent enough CT skills, and I think that they had thought about the issue very carefully before they wrote. So, that's why I marked all 4, number 4 overall. (T3₁)

> Through the essays, […] a lot of them take it to the personal level […], so they say my family or […] my neighbor. So that's something that they should avoid in an essay. The other one is that […] the paragraphs were not very coherent, […] so maybe it was in their head, but it was not in the paper. […] So they have to be more explicit and make sense. […] When we finish the argument, the last sentence of the arguments should summarize your main point, and how it connects to the main point. I didn't see that much. […] So, that's why I didn't give everyone an excellent. (T4₁)

This situation was quite problematic and needed pondering over. The teachers saw different things in the same essay in spite of the fact that they reported reading the essays carefully before grading them, which means that the scores given were not simply from their first impression.

4.4 SUMMARY

This chapter has presented three sets of findings. Their main points are as follows: (1) CT in ELT was perceived to be appropriate for Vietnamese students and congruent with the Vietnamese ELT context; (2) A majority of the participants adopted positive attitudes towards the specification of CT as a learning outcome for the B.A. programme in English Linguistics and Literature and for all the English Linguistics courses at the EF; (3) The students performed

at different levels on CT tasks although most of them demonstrated an average level of competence in CT, according to the very varied assessments by the teachers. These findings will be discussed in depth in the next chapter.

CHAPTER 5: DISCUSSION

This chapter discusses the findings by relating them back to the literature on CT in ELT reviewed in Chapter 2. This chapter serves a dual purpose: as a bridge between CT in ELT in the Vietnamese context and its overall current situation, and with a focus on the significance of the concept's peculiarities in that particular context. The discussion is organized in four sections, namely definition of CT in ELT, the link between CT and ELT, CT and culture, and CT instruction.

5.1 DEFINITION OF CRITICAL THINKING IN ELT

The very first question that the participants were asked about their perceptions was the question concerning how they would define or describe CT in ELT. The participants had to write their answers, using their own words. The purpose of asking them to define or describe CT was to give an indication of their own understandings of this concept.

In response to the question, all the participants could formulate an idea of this abstract concept. They defined CT in ELT in various ways. It can be said that there are as many definitions as there are participants in this study although overlap can be found between some of them. However, when the definitions are studied more carefully, a connection can be seen among them. CT in ELT appears to be a multifaceted concept, or a concept that is "made up not of a single skill, but rather a set of skills" (Long, 2003, p. 230), and each participant chose to focus on one or two of its aspects or provided definitions for one or two of its skills. Mayfield's comment – "These definitions differ mainly in the skills, actions, and traits they choose to emphasize" (Mayfield, 2014, p.5) – would apply to this situation. Going into more depth, when a distinction is made between "definition" and "description", most of the participants' responses seem to be more like descriptions, rather than definitions, of different dimensions or characteristics of CT in ELT.

It can be clearly seen that all the participants showed an awareness of what CT was. Their definitions and descriptions were short and precise. All the teachers and some students who had more experience with the concept defined it more fully than the other participants. The fact that the participants were engaged with thinking accurately about the concept supports the validity of the rest of the study in terms of the other responses they gave in the questionnaires, the tasks the students did, and the evaluation the teachers made. In general, the participants' definitions

and descriptions give us a precise idea of how CT in ELT is understood by EF teachers and students, contributing to the conceptualization of the notion and the comprehensive description of its characteristics. Knowing how CT in ELT is conceptualized in Vietnam is an initial but key step in understanding this concept as it is happening in the Vietnamese context.

5.2 THE LINK BETWEEN CRITICAL THINKING AND ELT

The findings of the study confirm the link between CT and ELT in general and that between CT and English linguistics teaching in particular. The teachers' and the students' opinions can be cited as highly positive evidence for the links. According to the participants, CT plays an important role in numerous aspects of ELT and ELL, and ELT, for its part, contributes to the development of CT. Similarly, students in English Linguistics courses need good CT skills, and English Linguistics courses, in return, help enhance students' CT skills. In other words, CT and ELT go hand in hand, and CT and English linguistics teaching also exist in a reciprocal relationship. The participants' explanations and examples seem to be basically the verbal descriptions of Cook's (1989) figure showing language users' tools for communication (see Figure 2.1), and then go far beyond that to other specialized aspects of ELT. It is possibly partly due to these reasons that a majority of the teachers and the students have taken positive attitudes towards the specification of CT as one of the learning outcomes for the B.A. programme in English Linguistics and Literature and for all the English Linguistics courses at the EF, as indicated in their questionnaire responses.

According to the findings, however, the significance of the relationships largely depends on how teachers design and implement assignments, tasks and activities. It is at this point that the visiting foreign teacher participant has stronger and clearer opinions about all aspects of the relationships, indicating that CT and ELT in general, or English Linguistics in particular, in his views, are inseparable and intimately bound together. As he emphasized, "You can turn any lesson into a CT lesson in reality" or "When we look at the Linguistics fields, all of them involve CT". Apart from classroom activities, the relationships also rely on the extent to which the faculty makes sensible moves in promoting CT in the programme. Students' positive learning attitudes and their cooperation, though not emphasized in this study, are also of great importance.

In the ways mentioned above, the findings make the link between CT and ELT explicit and comprehensible, forming the basis for further exploration of CT in ELT.

5.3   CULTURE AND CRITICAL THINKING IN ELT

Findings from this study contribute to a better understanding of whether CT in ELT, as a Western cultural phenomenon, is relevant to Vietnamese university students, and whether Vietnamese students are deficient in CT skills, which are two key questions regarding the issue of CT and culture.

5.3.1   The relevance of CT to Vietnamese university students

From the evidence presented in this study, it is generally strongly agreed that CT is appropriate for Vietnamese students and congruent with the Vietnamese context of ELT. It is also generally held that CT is relevant to Vietnamese university students. These findings show some consistency with the arguments advanced by the scholars who see possibilities for CT in Asian countries (see, for example, Kubota, 1999; Long, 2003), and with the positive research findings presented in a number of notable ELT-related studies on CT (see, for example, T. T. B. Nguyen, 2016; Stapleton, 2002).

However, the differences between the teachers' and the students' opinions on the issue of CT in ELT and culture may need further clarification. The first difference is in their opinions about whether CT is a culturally based concept. The students' divergent views may account for their lack of full understanding of the idea of "culturally based concept". This is not surprising because this idea is complex and abstract, thus hard to grasp for those who have not carefully examined it. In contrast, an equal split among the teachers reflects the debate on the issue. The second difference is in participant views on whether CT is more appropriate for Western students than Vietnamese students. Almost all the students expressed disagreement, which suggests that they believed CT offered equal opportunities to Western students and Vietnamese students. The results seemingly show the students' willingness to learn as well as their confidence in their own abilities, attributes and learning environments to acquire and develop the skills. The teachers were again equally split over their responses to the question, which contributes to the existing debate. The last difference is in their opinions about the influence of Vietnamese culture on CT learning. While most of the students agreed that it has negative effects, most of the teachers did not. A possible reason for the difference could be in the teachers' life experience and especially their overseas experience. While most of the students had never been overseas, all the teachers spent parts of their lives learning, and, for some of

them, even working in English-speaking countries. As a result, in the interviews, while the students tended to look at 'culture' as a system of "rules or norms that substantially determine personal behaviour" (Atkinson, 1999), the teachers underlined "both the individual nature of culture and the cultural nature of the individual" (Atkinson & Sohn, 2013, p. 669). The students' responses seem to support Atkinson's (1997) argument that "many cultures endorse modes of thought and education that almost diametrically oppose critical thinking" (p. 72). The teachers' understanding of culture, meanwhile, seems to be more in line with "culture from the bottom up" – "culture as understood and enacted by its individual users" (Atkinson & Sohn, 2013, p. 669), and "culture" in the dynamic constructivist approach – something that people "construct in specific human encounters where mutual relations and power are part of the context" (Dahl, 2014).

5.3.2 Vietnamese university students' competence in CT

Although the students had not been formally trained in CT, the findings of the study indicated that they possessed more than a low level of competence in CT. For example, to some extent, the students could identify reasoning errors and justify their answers. They could also demonstrate some critical thought in their essays.

According to the teacher evaluations, the students' level of competence ranged mostly from *poor* (Likert score 2) to *good* (Likert score 4) for holistic scores, and more widely for analytic scores, from *not competent* to *highly competent*. This would suggest that generally the students demonstrated a more or less average level of competence, with most of them having an average level as in the general evaluations of all the teachers. With regard to dimensions of CT, however, their competence varied greatly: There were dimensions in which some students were highly competent, and other dimensions in which some students were not competent at all. Most notably, one of the students demonstrated a high level of competence through his essay, which was given a high score by all the teachers in both holistic and analytic markings. This means that the student was competent not only in CT in general but also in most of the dimensions of CT as well. The findings from the CT tasks were strongly supported by the teachers' comments and the students' self-perceptions conveyed in the interviews.

All these findings suggest a more optimistic view of Vietnamese students' competence in CT. Instead of being judged as poor or deficient, their CT competence should be viewed as existing along a continuum. This view seems to be encouraging, providing students with motivation for enhancing their CT skills.

5.3.3   An alternative view of the notion of culture

Within the literature on CT in ELT as a culturally based concept, including Atkinson (1997), the notion of culture, though not explicitly defined, is mostly used in accordance with the "received view of culture" (Atkinson, 1999). According to the received view, cultures are seen "in their most typical form as geographically (and quite often nationally) distinct entities, as relatively unchanging and homogeneous, and as all-encompassing systems of rules or norms that substantially determine personal behavior" (Atkinson, 1999, p. 626). Thus, the notion tends to be perceived as a monolithic and static entity, with its essentialist nature being emphasized. Such a perception is not necessarily false, but it overlooks the complexity of culture in today's global world, and hence is too static to align with CT. The findings of this study on the relevance of CT to Vietnamese students and on Vietnamese students' competence in CT point to the possible need for an alternative view of culture. That is the notion of culture in the social constructivist approach: cultures as dynamic and fluid constructs, affording possibilities for CT. This notion would better account for CT as it is currently happening in the Vietnamese ELT context (Vo, 2018).

5.4   CRITICAL THINKING INSTRUCTION

For the teachers and the students in this study, to teach or not to teach CT is not the question. There was a strong belief among them that CT is teachable and should be taught to students. They also strongly believed that CT is generalizable (beyond its original domains of application) and transferable (beyond its contexts of instruction). These beliefs match the views of a great number of scholars (see, for example, Ennis, 2018; Fisher, 2011; Siegel, 1991) but contradict Atkinson (1997), who specifically discussed the teachability and transferability of CT in ELT. The accounts of difficulties with CT that the students reported, and the challenges that they faced in the multiple-choice section of CT Task 1, which required in-depth knowledge of CT, showed their real need for CT learning. Davidson (1998, p. 121) and Gieve (1998, p. 126) had personal experiences with Asian ESL students who reported similar accounts. That is why Davidson (1998) recommends, "Maybe even more than the L1 teacher, we as L2 teachers have good reason to introduce higher level students to aspects of critical thinking" (p. 121). In spite of that, many teachers and students did not deny the possibility of acquiring CT through an unconscious process of socialization during childhood, part of the nature of a *social practice* that Atkinson (1997) emphasizes.

The question for the participants is, however, one of how and when to introduce CT. There is a wide divergence of opinion on these issues. First, all the four principal approaches to teaching CT discussed by Ennis (1989), which are "the general approach", "the infusion approach", "the immersion approach" and "the mixed approach", were mentioned in the interviews by the participants. The participants made the suggestions based on either their experience, their knowledge or even their intuition. The teacher who previously taught CT in a separate course at the EF and the visiting foreign teacher were the ones who had a lot of experience in this area. The former endorsed the mixed approach, stressing the need for a syllabus that is well designed and suitable for all students. The latter preferred "the infusion approach", drawing attention to teaching "the style of argumentation" in the initial stage and teaching CT through problem-solving assignments later on. Regarding when to start introducing CT, participants' opinions varied depending on factors like students' age, year, or English language proficiency. Yet, these opinions shared a common feature: the necessity for early introduction of CT, either in the students' school life, or if not, then in their university life, or in their English learning life (i.e. when they have sufficient language proficiency to start making logical connections in language). Each of these areas requires further research and good decision making if CT is to be taught effectively.

Another issue of interest is the crucial role of teachers in CT instruction. The findings of the study highlight the need for teacher training in integrating CT skills into their courses and evaluating the skills. It is of great importance that teachers know how to do those things and also be willing to do them.

In this study, the teachers, who were all experienced in teaching English, evaluated the students' CT through the essays differently. There may be several possible reasons for these individual differences in CT evaluation. First, holistically grading essays in general and CT in particular largely depends on the grader's subjective perception. Second, without rater training, the CT dimensions may be interpreted differently by the teachers. Last but not least, for practical purposes, the CT dimensions in the evaluation form were adapted from the dimensions of task achievement, and coherence and cohesion of IELTS Task 2 Writing band descriptors. Yet, according to Cotton and Wilson (2011), examiners tend to find the grading of coherence and cohesion, followed by that of task achievement, more difficult and more problematic than the grading of the other two criteria. Teacher training, based on a carefully constructed rubric, is believed to be an effective measure to raise the level of agreement among teachers. It will be very helpful not only for evaluation but also for the scaffolding of CT skills.

5.5   SUMMARY

This chapter has discussed the findings of the study and related them to existing literature. The reality of CT in ELT in the Vietnamese tertiary context has been highlighted against the background of the current situation of CT in ELT. Parallels, convergences and divergences have been discussed, providing useful insights into CT in ELT in this particular context. CT, which is generally considered as a Western cultural phenomenon, is undoubtedly relevant to today's Vietnamese university students, especially when cultures are seen as dynamic and fluid constructs rather than monolithic and static entities. In this study, awareness of what CT was and how important it was in ELT could be seen among the teachers and the students. The students also possessed more than a low level of competence in CT. In fact, Vietnamese students' CT competence, instead of being judged as poor or deficient, should be viewed as existing along a continuum. However, it is important for teachers and researchers to find out suitable and effective ways to teach CT in the Vietnamese ELT context.

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CHAPTER 6: CONCLUSION

This chapter concludes the thesis. A summary of the main findings and the implications that arise from those findings are presented in Section 6.1 and Section 6.2 respectively while Section 6.3 describes the contributions of the study, Section 6.4 addresses the limitations of the study, and Section 6.5 outlines recommendations for future research.

6.1 FINDINGS

The three sets of findings reported and discussed in the previous chapters can be summarized as follows:

First, the teacher and student participants had a good idea of what CT in ELT was, as demonstrated in their definitions and descriptions of the concept. In their perceptions, CT in ELT was teachable, generalizable, and transferable. CT was also perceived to be especially important in ELT, appropriate for Vietnamese students, and congruent with the Vietnamese context of ELT. The participants generally supported the teaching of CT to Vietnamese students. Moreover, Vietnamese culture, when seen by most students from the received view, hindered Vietnamese students from benefiting by CT instruction, but was not thought to exert such strong effects, when viewed by most teachers from the dynamic constructivist approach as discussed in early sections (see Sections 4.1.2 and 5.3.1).

Second, a majority of the teachers and the students showed the essential need for building CT into the B.A. programme in English Linguistics and Literature and the curricula of all the English Linguistics courses at the EF. However, they suggested that practical measures needed to be taken for the learning outcomes to be achieved because for the moment, there was not a high level of congruence between the participants' views and the practices of teaching and evaluating CT skills at the EF, as reflected in their questionnaire and interview responses.

Finally, according to the teacher evaluations, most of the students demonstrated an average level of competence in CT. The students' levels were spread out along a continuum, yet mostly concentrated on the middle point. The students could, to some extent, demonstrate their CT in the evaluation of arguments and in their academic writing in English.

6.2   IMPLICATIONS OF THE STUDY

In exploring how CT is currently handled in ELT in the EF case, this study carries some significant implications for the practices of teaching and learning CT in this particular case as well as possibly for those in similar contexts.

The findings of the study present an encouraging picture, indicating favourable conditions for CT instruction at the EF. However, making CT a learning outcome implies the necessity to make changes in teaching and learning activities as well as assessment tasks. If CT is to be taught in a separate course, it is necessary to develop a suitable syllabus. If CT is to be integrated into English Linguistics courses, it is important to design teaching and learning activities that can help best achieve it. Problem-solving assignments, which require teachers to have or develop techniques to find data and to turn data into assignments, and open-ended questions, which call for techniques to ask the right questions, are the most strongly recommended in the study. In addition, assessment tasks should be designed to enable judgement of whether and how well students' performances satisfy the learning outcome. In other words, the study suggests that aligning teaching/learning activities and assessment tasks with CT as a learning outcome should be conducted at both the programme level and the course level, and should be implemented by both the individual teacher and the whole faculty (Biggs & Tang, 2011).

6.3   CONTRIBUTIONS OF THE STUDY

This study has been able to make several significant contributions to the field of CT in ELT.

First, the study further develops research on CT in ELT. While most studies have examined either teachers' perceptions or students' perceptions, this study involved both tertiary level students and their teachers, and made sense of these two key stakeholder groups' perceptions by both combining them and comparing them.

The second main contribution of the study is that it enhances understanding of the multiple realities of CT in ELT, which are obviously constructed in various ways. This study is among the few that have made an attempt to link participants' perceptions to their actual practices of CT, which were demonstrated in academic writing. Also, this study is among the first in which students' CT in academic writing has been assessed by a group of teachers. Its findings revealed another dimension of the reality of CT in ELT that all those who were involved in had to face.

In addition, the study also contributes to the field in terms of research methods. The research methods employed, as well as the research instruments adapted and designed, are relevant not only to this study, conducted at the EF, USSH (VNU-HCMC), but also to studies that might be conducted in other higher education institutions in Vietnam as well as in other countries.

6.4   LIMITATIONS OF THE STUDY

The current study has three main limitations, one related to the content of the study and the others to the methods employed.

The first limitation is that the study did not examine the students' CT ability in speech. CT ability in speech and CT ability in writing form fundamental parts of students' academic lives, and taken together, will definitely give clearer and more accurate indications of students' CT ability in voicing their opinions. However, it is beyond the scope of a Master's thesis to also include the investigation of the same students' CT ability in oral skills. Such a study requires a longer timeline to design and carry out.

The second limitation, which is typical of case study research, is its impossibility to produce reliable generalizations. Although the study was designed as a single instrumental case study to study CT in ELT in the Vietnamese tertiary context, the nature of a case study offers limited possibility for the transferability of its findings. However, Stake (1995) and Simons (2009) maintain that the aim of case study is not generalization, but particularization − to understand "the case itself" (Stake, 1995, p. 8) or "to present a rich portrayal of a single setting to inform practice, establish the value of the case and/or add to knowledge of a specific topic" (Simons, 2009, p. 24). In addition, when looked at from a different perspective, case study research does allow for "naturalistic generalizations" – "conclusions arrived at through personal engagement in life's affairs or by vicarious experience so well constructed that the person feels as if it happened to themselves" (Stake, 1995, p. 85).

The third limitation relates to the method of recruiting participants. With the method employed in this study, the participants who were recruited may have had a particular interest in the topic of the research, which is CT. However, the participants of this study included teachers and students who expressed interest and disinterest in CT, as found in the interviews.

6.5 RECOMMENDATIONS FOR FUTURE RESEARCH

The current study was small in size and was conducted in only one research site in Vietnam. Further research on a larger scale is needed to depict a more comprehensive picture of Vietnamese teachers' and students' perceptions of CT in ELT, and Vietnamese students' competence in CT. Multiple case studies or a collective case study carried out across Vietnam would allow better generalization and comprehensiveness in addition to depth and richness.

Also, aiming to have a more comprehensive understanding of CT in ELT, a research study which involves students demonstrating their CT not only in academic writing but also in academic discussions, a limitation of this study, provides a prospect for future research.

Regarding the major issues of CT in ELT, the discussion chapter suggested ideas for further research. Where there was a divergence of opinions among the participants, there is a need for more studies. Thus, in-depth research is desirable on the issues of how and when CT should be introduced to ELT, what kinds of teaching and learning activities and assignments can best enhance CT skills, and whether a carefully constructed assessment rubric of CT will facilitate the grading process and reduce the impact of subjective perception from graders.

6.6 SUMMARY

This chapter has summarized the findings of the study and highlighted its contributions. The present study examined the perceptions of both teachers and students towards CT in ELT. Although it was unavoidable that the perceptions of these two key stakeholder groups were different in several aspects, all the participants generally supported the teaching of CT to Vietnamese students, considering its appropriateness to the Vietnamese ELT context. A majority of them showed positive attitudes towards the specification of CT as a learning outcome for the B.A. programme in English Linguistics and Literature and for all the English Linguistics courses at the EF. The study also linked the students' perceptions to their performance in CT. According to the varied assessments by the teachers, most of the students demonstrated an average level of CT competence in the evaluation of arguments and in their academic writing in English. The findings obtained from analyzing the three sources of data have sufficiently answered the three research questions the study aimed to address. These findings, together with the research design, have contributed significantly to the field of CT in ELT. The chapter has also presented the implications and limitations of the study, as well as recommendations for future research. In spite of not being a sound basis for generalization, the

study can provide clear understandings of CT in ELT in the Vietnamese tertiary context. Moreover, some of the insights gained from the study are institution independent, and may be beneficial to those who are working in the field elsewhere and those who are simply interested in CT in ELT.

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RE: HS Ethics Application - Approved (5201800251)

FHS Ethics <fhs.ethics@mq.edu.au>   Thu, Apr 19, 2:20 PM

to Stephen, me

Dear A/Prof Moore,

Re: "Critical Thinking in English Language Teaching in the Vietnamese Context: Perceptions and University Students' Competence"(5201800251)

Thank you for your application.

The above application was reviewed by The Faculty of Human Sciences Human Research Ethics Sub-Committee. The Faculty Ethics Sub-Committee wishes to thank you for such a well-written submission. Approval of this application has been granted, effective 19th April 2018. This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

https://www.nhmrc.gov.au/book/national-statement-ethical-conduct-human-research

The following personnel are authorised to conduct this research:

A/Prof Stephen Moore

Ms Nu Anh Thi Vo

Please note the following standard requirements of approval:

1.   The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2.   Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 19th April 2019

Progress Report 2 Due: 19th April 2020

Progress Report 3 Due: 19th April 2021

Progress Report 4 Due: 19th April 2022

Final Report Due: 19th April 2023

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-ethics/resources

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Sub-Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Sub-Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-ethics/resources

5. Please notify the Sub-Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-ethics/post-approval

https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-ethics/resources/research-ethics

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Dr Naomi Sweller

Chair

Faculty of Human Sciences

Human Research Ethics Sub-Committee

FHS Ethics

Faculty of Human Sciences Ethics
C5C-17 Wallys Walk L3
Macquarie University, NSW 2109, Australia
T: +61 2 9850 4197 | http://www.research.mq.edu.au/
Ethics Forms and Templates
https://www.mq.edu.au/research/ethics-integrity-and-policies/ethics/human-ethics/resources
The Faculty of Human Sciences acknowledges the traditional custodians of the Macquarie University Land,
the Wattamattageal clan of the Darug nation, whose cultures and customs have nurtured and continue to
nurture this land since the Dreamtime. We pay our respects to Elders past, present and future.

Appendix 2

Participant information and consent forms

Appendix 2A

Participant information and consent form – to EF lecturers

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109

Phone: +61 (0)2 9850 8742
Fax: +61 (0)2 9850 9199
Email: stephen.moore@mq.edu.au

Chief Investigator's / Supervisor's Name & Title: Associate Professor Stephen Moore

Participant Information and Consent Form

Name of Project: Critical Thinking in English Language Teaching in the Vietnamese Context: Perceptions and University Students' Competence

You are invited to participate in a study of critical thinking (CT) in English language teaching (ELT) in Vietnam. The purpose of the study is to investigate CT in ELT in the perceptions of teachers and students at the Faculty of English Linguistics and Literature (EF), University of Social Sciences and Humanities, Vietnam National University – Ho Chi Minh City, and the students' competence in CT.

The study is being conducted by Ms. Nu Anh Thi Vo (Email: nu-anh.vo@students.mq.edu.au) to meet the requirements of the MRes degree under the supervision of A/Prof Stephen Moore (Email: stephen.moore@mq.edu.au) of the Department of Linguistics.

If you decide to participate, you will be asked to complete a questionnaire regarding your background, your perceptions of CT in ELT and your evaluation of EF senior students' level of competence in CT. In addition, you will evaluate the students' CT through their response to a CT task and take part in an interview. The questionnaire and the evaluation of students' CT through their response to a CT task should take you about 75 minutes to do. The interview should take you another 30 minutes, and will be scheduled at your convenience. The interview will be audio recorded to enable an accurate transcription, and the audio recording will be stored on the researcher's password protected desktop. In appreciation of your time and effort, you will receive the equivalent of AUD60 upon completion of all the tasks.

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. Only the researcher (Ms. Nu Anh Thi Vo) and her supervisor (A/Prof Stephen Moore) will have access to the data. A summary of the results of the data can be made available to you on request (via email).

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, _____ *(participant's name)* have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name:_____
  (Block letters)

Participant's Signature: _____ Date:_____

Investigator's Name:_____
  (Block letters)

Investigator's Signature: _____ __ Date:_____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au) or Dr. Nguyen Thi Hong Tham, Vice Dean, Faculty of English Linguistics and Literature, University of Social Sciences and Humanities (telephone +84 938375345; email hongthamnguyen@hcmussh.edu.vn). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)

Appendix 2B

Participant information and consent form – to EF students

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109

Phone: +61 (0)2 9850 8742
Fax: +61 (0)2 9850 9199
Email: stephen.moore@mq.edu.au

Chief Investigator's / Supervisor's Name & Title: Associate Professor Stephen Moore

Participant Information and Consent Form

Name of Project: Critical Thinking in English Language Teaching in the Vietnamese Context: Perceptions and University Students' Competence

You are invited to participate in a study of critical thinking (CT) in English language teaching (ELT) in Vietnam. The purpose of the study is to investigate CT in ELT in the perceptions of teachers and students at the Faculty of English Linguistics and Literature (EF), University of Social Sciences and Humanities, Vietnam National University – Ho Chi Minh City, and the students' competence in CT.

The study is being conducted by Ms. Nu Anh Thi Vo (Email: nu-anh.vo@students.mq.edu.au) to meet the requirements of the MRes degree under the supervision of A/Prof Stephen Moore (Email: stephen.moore@mq.edu.au) of the Department of Linguistics.

If you decide to participate, you will be asked to complete a questionnaire regarding your background, your perceptions of CT in ELT and your perceived level of competence in CT. In addition, you will do two CT tasks and take part in an interview. The questionnaire and the CT tasks should take you about 90 minutes to do. The interview should take you another 30 minutes, and will be scheduled at your convenience. The interview will be audio recorded to enable an accurate transcription, and the audio recording will be stored on the researcher's password protected desktop. In appreciation of your time and effort, you will receive the equivalent of AUD30 upon completion of all the tasks.

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. Only the researcher (Ms. Nu Anh Thi Vo) and her supervisor (A/Prof Stephen Moore) will have access to the data. The researcher's supervisor will be unaware of those students choosing to participate. A summary of the results of the data can be made available to you on request (via email).

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

I, _____ *(participant's name)* have read and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name:_____
  (Block letters)

Participant's Signature: _____ Date:_____

Investigator's Name:_____
  (Block letters)

Investigator's Signature: _____ ___ Date:_____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au) or Dr. Nguyen Thi Hong Tham, Vice Dean, Faculty of English Linguistics and Literature, University of Social Sciences and Humanities (telephone +84 938375345; email hongthamnguyen@hcmussh.edu.vn). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S [OR PARTICIPANT'S] COPY)

Appendix 3

Recruitment of participants (invitation extended to EF lecturers and flyer)

Appendix 3A

Invitation extended to EF lecturers

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109

MACQUARIE University
SYDNEY·AUSTRALIA

Phone: +61 (0)2 9850 8742
Fax: +61 (0)2 9850 9199
Email: stephen.moore@mq.edu.au

Invitation
extended to lecturers of the Department of English Linguistics,
EF, USSH, VNU-HCMC

Dear (name of the lecturer),

You are cordially invited to participate in a research study titled "Critical Thinking in English Language Teaching in the Vietnamese Context: Perceptions and University Students' Competence". The purpose of the study is to investigate critical thinking (CT) in English Language Teaching (ELT) in the perceptions of teachers and students at the Faculty of English Linguistics and Literature (EF), University of Social Sciences and Humanities (USSH), Vietnam National University – Ho Chi Minh City (VNU-HCMC), and the students' competence in CT. The study is being conducted by me, Nu Anh Thi Vo (Email: nu-anh.vo@students.mq.edu.au), to meet the requirements of the MRes degree under the supervision of A/Prof Stephen Moore (Email: stephen.moore@mq.edu.au) of the Department of Linguistics.

Your participation in the study will make a useful contribution to the field of CT in ELT and benefit Vietnamese higher education. It will help provide further insights into how CT is understood and described in ELT, whether CT, as a Western cultural phenomenon, is relevant to Vietnamese university students, and if it is, how teachers can teach it.

If you decide to participate, you will be asked to complete a questionnaire regarding your background, your perceptions of CT in ELT and your evaluation of EF senior students' level of competence in CT. In addition, you will evaluate the students' CT through their response to a CT task and take part in an interview. The questionnaire and the evaluation of students' CT through their response to a CT task should take you about 75 minutes to do. The interview should take you another 30 minutes, and will be scheduled at your convenience. The interview will be audio recorded to enable an accurate transcription, and the audio recording will be stored on the researcher's password protected desktop. In appreciation of your time and effort, you will receive the equivalent of AUD60 upon completion of all the tasks.

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. Only the researcher (Ms. Nu Anh Thi Vo) and her supervisor (A/Prof Stephen Moore) will have access to the data. A summary of the results of the data can be made available to you on request (via email).

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence.

Thank you for taking the time to read this invitation. If you are willing to participate in this study or have any further questions, please contact me via email (nu-anh.vo@students.mq.edu.au).

The Participant Information and Consent Form is attached to this Invitation for your information. If you decide to participate, please complete the form and return it to me via email or at the EF, USSH, VNU-HCMC.

Are you:
- a **critical thinker**?
- a **Year 4** student
in an **English Linguistics course**
(EF, USSH, VNU-HCMC)?

You are invited to participate in a research study that is investigating critical thinking in English language teaching and students' performance in critical thinking:

"Critical Thinking in English Language Teaching in the Vietnamese context: Perceptions and University Students' Competence"

This research study **AIMS** to: -

- Seek further insights into how critical thinking is understood and described in English language teaching in the Vietnamese tertiary context and whether critical thinking, as a Western cultural phenomenon, is relevant to Vietnamese university students.

This research study will **INVOLVE**: -

- Completing a questionnaire which will take approximately 30 minutes; and
- Doing 2 critical thinking writing tasks in approximately 60 minutes; and
- Participating in an interview lasting approximately 30 minutes with one of the researchers.

You will **RECEIVE**:-

- *AUD30 (or VN Dong equivalent) for completing all the three tasks.*

If you would like to participate in this research study, please email the researcher directly at the email address given below and include your best contact telephone number, or see her after class at the Faculty of English Linguistics and Literature (EF), University of Social Sciences and Humanities (USSH), Vietnam National University – Ho Chi Minh City (VNU-HCMC).

Ms. Vo Thi Nu Anh, MRes student, Department of Linguistics, Macquarie University, Australia
(nu-anh.vo@students.mq.edu.au).

Appendix 4

Questionnaires

Appendix 4A

Teacher questionnaire

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109

MACQUARIE University
SYDNEY·AUSTRALIA

TEACHER QUESTIONNAIRE

This questionnaire is intended to obtain information on your perceptions of critical thinking (CT) in English language teaching (ELT) and your evaluation of the level of competence in CT of senior students at the Faculty of English Linguistics and Literature (EF), University of Social Sciences and Humanities (USSH), Vietnam National University – Ho Chi Minh City (VNU-HCMC). Please read the instructions carefully, and then answer the questions in each section. There are 18 questions in this questionnaire. It should take you about 30 minutes to complete.

SECTION 1: General background information:

Please answer the questions by ticking the box as appropriate.

1. What gender are you?   ☐ Male   Female

2. Which age group are you in?   ☐ 30 or under   ☐ 31-40   ☐ 41 and over

3. How long have you been teaching English?

    ☐ less than 10 years   ☐ 10-20 years   ☐ more than 20 years

4. What is the *highest* qualification you have completed? ☐ Masters   ☐ PhD
    ☐ Other (Please specify): ....

5. Was any of your degrees obtained abroad?
    ☐ Yes (Please answer Question 6 before going to Question 7)
    ☐ No (Please go to Question 7)

6. a. Which degree(s) did you obtain abroad? You can tick more than one box here.

    ☐ Bachelor   ☐ Postgraduate diploma   ☐ Masters   ☐ PhD
    ☐ Other (Please specify): ....

    b. In which country did you obtain that / those degree(s)? You can tick more than one box here.

    ☐ Australia   ☐ England   ☐ Philippines   ☐ United States of America
    ☐ Other (Please specify): ....

7. Which year are you currently teaching? You can tick more than one box here.

    ☐ Year 3   ☐ Year 4

8. Have you ever been formally trained in critical thinking?
    ☐ Yes (Please answer Question 9 before going to Section 2)
    ☐ No (Please go to Section 2)

9. Please provide further information about the course. (*When and where did you take the course? What is the name of the course? How many hours does the course consist of?* etc.) Please write your answer in the space provided below.

    ....
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    ....

SECTION 2: Your perceptions of critical thinking (CT) in English language teaching (ELT):

10. How would you define or describe CT in ELT? Could you please give an example of CT in ELT? Please write your answer in the space provided below.

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11. Could you please give an example when you nurtured your students' CT in your English Linguistics classroom? Please write your answer in the space provided below.

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12. What are your views on the following issues of CT? Please tick the box as appropriate.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
12.1. CT is not a teachable pedagogical set of behaviours.					
12.2. CT is acquired through an unconscious process of socialization during childhood.					
12.3. CT is a culturally based concept.					
12.4. CT is more appropriate for Western students than Vietnamese students.					
12.5. Vietnamese culture prevents Vietnamese students from enjoying the benefits of CT instruction.					
12.6. CT is especially important in ELT.					
12.7. CT can properly fit into the Vietnamese context of ELT.					
12.8. CT is a generalizable skill (beyond its original domains of application), i.e. it can be applied to many different activities.					

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
12.9. CT is a transferable skill (beyond its contexts of instruction), i.e. it can be taught and learned to be used in other settings and situations.					

13. What are your views on the specification of CT as one of the programme learning outcomes for the B.A. Programme in English Linguistics and Literature at the EF, USSH (VNU-HCMC)? Please tick the box as appropriate.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
13.1. It is necessary to include CT as one of the programme learning outcomes for the B.A. Programme in English Linguistics and Literature.					
13.2. It is necessary to include CT as one of the course learning outcomes for all the English Linguistics courses.					
13.3. CT is useful for students' lives.					
13.4. CT is useful for students' future careers.					
13.5. CT is useful for students' future studies.					
13.6. My lessons are planned to incorporate instruction of CT skills.					
13.7. My course is planned to incorporate evaluation of students' CT skills.					
13.8. I have feelings of preparedness to incorporate CT into my course.					
13.9. I often encounter obstacles as I promote increased CT skills in class.					

14. Do you think that English Linguistics courses can help develop students' CT skills?
    ☐ Yes (Please answer Question 15 before going to Section 3)
    ☐ No (Please go to Section 3)

15. a. Please rank the following English Linguistics courses in the order of importance for developing CT skills by numbering them from 1 to 6, where 1 is least important and 6 is most important.
    15.1. Introduction to English Linguistics   ☐
    15.2. English Phonetics and Phonology   ☐
    15.3. English Morphology and Syntax   ☐
    15.4. English Semantics   ☐
    15.5. Discourse Analysis   ☐
    15.6. Systemic Functional Grammar   ☐

b. Could you please explain the reasons for your highest and lowest ranking? Please write your answer in the space provided below.

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SECTION 3: Your evaluation of the level of competence in CT of senior students at the EF, USSH (VNU-HCMC):

16. How would you rate the students' CT ability in general?

Very poor ☐   ☐   ☐   ☐   ☐   *Excellent*
           1   *2*   *3*   *4*   *5*

17. How would you rate the students' ability to:

	Not competent	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*
17.1. look for the logic in arguments					
17.2. tell the difference between reasonable and unreasonable arguments					
17.3. look at arguments from various perspectives					
17.4. to explain how a specific conclusion can be reached					
17.5. clearly organize their thoughts					
17.6. construct their own well-reasoned arguments					

18. Do you have any other comments on any issue raised in the questionnaire?

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....
....

Thank you very much for completing the questionnaire. If you are willing to take part in the next stages of the research, please provide your contact details below. These details will be stored in a separate location from the questionnaire.

Name: ....

Email: ....

Phone number: ....

Department of Linguistics
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109

MACQUARIE
University
SYDNEY·AUSTRALIA

STUDENT QUESTIONNAIRE

This questionnaire is intended to obtain information on your perceptions of critical thinking (CT) in English language learning and your perceived level of competence in CT. Please read the instructions carefully, and then answer the questions in each section. There are 16 questions in this questionnaire. It should take you about 30 minutes to complete.

SECTION 1: General background information:

Please answer the questions by ticking the box as appropriate.

1. What gender are you?   ☐ Male   ☐ Female

2. Which year of study are you in?   ☐ Year 3   ☐ Year 4

3. Have you ever taken an IELTS test?
    ☐ Yes (Please answer Question 4 before going to Question 5)
    ☐ No (Please go to Question 5)

4. a. What are your most recent IELTS Test Results? Please write your answer in the space provided below.

    Listening: ....   Writing: ....
    Reading: ....   Speaking: ....

    Overall Band Score: ....

    b. When did you take the test? ....

5. Have you ever heard of the term 'critical thinking' before?   ☐ Yes   ☐ No

6. Have you ever been formally trained in critical thinking?
    ☐ Yes (Please answer Question 7 before going to Section 2)
    ☐ No (Please go to Section 2)

7. Please provide further information about the course. (*When and where did you take the course? What is the name of the course? How many hours does the course consist of? etc.*) Please write your answer in the space provided below.

    ....
    ....
    ....
    ....

SECTION 2: Your perceptions of critical thinking (CT) in English language learning:

8.   How would you define or describe CT in English language learning? Could you please give an example of CT in English language learning? Please write your answer in the space provided below.

     ....
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     ....

Page 1 of 4

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9. Could you please give an example when your CT was nurtured in an English Linguistics classroom? Please write your answer in the space provided below.

....

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....

10. What are your views on the following issues of critical thinking? Please tick the box as appropriate.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
10.1. CT is not a teachable pedagogical set of behaviours.					
10.2. CT is acquired through an unconscious process of socialization during childhood.					
10.3. CT is a culturally based concept.					
10.4. CT is more appropriate for Western students than Vietnamese students.					
10.5. Vietnamese culture prevents Vietnamese students from enjoying the benefits of CT instruction.					
10.6. CT is especially important in English language learning.					
10.7. CT can properly fit into the Vietnamese context of English language learning.					
10.8. CT is a generalizable skill (beyond its original domains of application), i.e. it can be applied to many different activities.					
10.9. CT is a transferable skill (beyond its contexts of instruction), i.e. it can be taught and learned to be used in other settings and situations.					

11. What are your views on the specification of CT as one of the programme learning outcomes for the B.A. Programme in English Linguistics and Literature at the EF, USSH (VNU-HCMC)? Please tick the box as appropriate.

	Strongly disagree	*Disagree*	*No opinion*	*Agree*	*Strongly agree*
11.1. It is necessary to include CT as one of the programme learning outcomes for the B.A. Programme in English Linguistics and Literature.					
11.2. It is necessary to include CT as one of the course learning outcomes for all the English Linguistics courses.					
11.3. CT is useful for my life.					
11.4. CT is useful for my future career.					
11.5. CT is useful for my future studies.					
11.6. Instruction of CT is incorporated in lessons in English Linguistics courses.					
11.7. Evaluation of students' CT skills is incorporated in English Linguistics courses.					

12. Do you think that English Linguistics courses can help develop students' CT skills?
    ☐ Yes (Please answer Question 13 before going to Section 3)
    ☐ No (Please go to Section 3)

13. a. Please rank the following English Linguistics courses in the order of importance for developing CT skills by numbering them from 1 to 6, where 1 is least important and 6 is most important.
    13.1. Introduction to English Linguistics ☐
    13.2. English Phonetics and Phonology ☐
    13.3. English Morphology and Syntax ☐
    13.4. English Semantics ☐
    13.5. Discourse Analysis ☐
    13.6. Systemic Functional Grammar ☐

    b. Could you please explain the reasons for your highest and lowest ranking? Please write your answer in the space provided below.

    ....
    ....
    ....
    ....
    ....
    ....
    ....
    ....

SECTION 3: Your perceived level of competence in CT:

14. How would you rate your CT ability in general?

Very poor ☐   ☐   ☐   ☐   ☐   *Excellent*
        1   *2*   *3*   *4*   *5*

15. How would you rate your ability to:

	Not competent	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*
15.1. look for the logic in arguments					
15.2. tell the difference between reasonable and unreasonable arguments					
15.3. look at arguments from various perspectives					
15.4. to explain how a specific conclusion can be reached					
15.5. clearly organize your thoughts					
15.6. construct your own well-reasoned arguments					

16. Do you have any other comments on any issue raised in the questionnaire?

....
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....

Thank you very much for completing the questionnaire. If you are willing to take part in the next stages of the research, please provide your contact details below. These details will be stored in a separate location from the questionnaire.

Name: ....

Email: ....

Phone number: ....

Appendix 5

CT paper, answer key to CT Task 1, and CT Task 2 evaluation form

Critical thinking paper

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Faculty of Human Sciences
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MACQUARIE University
SYDNEY·AUSTRALIA

CRITICAL THINKING TASKS

There are two critical thinking (CT) tasks in this section. The CT tasks are intended to obtain information on your CT performance. Please read the following text about climate change, and then do the two CT tasks that follow. It should take you about 60 minutes to complete the tasks.

Note: The purpose of the text is to orientate readers to the topic of climate change, which will be further discussed in the two CT tasks that follow. The questions in the CT tasks, however, will not relate to the specific information in the text.

Climate change

In the disaster movie, 'The Day After Tomorrow', we see some of the terrible results of extreme climate change. In six days, a massive change of climate transforms the world. Millions of people are killed and hundreds of millions of people lose their homes. In New York there is a tidal wave. In Los Angeles there are huge tornadoes. The whole of Europe is covered by four metres of snow. But can these things really happen?

Most scientists think that the extreme events in the film are not possible. 'The film breaks the laws of physics!' says Mike Hulme, Director of Climate Change Research at the University of East Anglia, Britain. But many scientists believe that the film makes people think more seriously about climate change.

Some scientists think that climate change is very alarming. They say that Britain is getting warmer every year and that temperatures have risen 0.6°C in the last 140 years. Other scientists say that this increase in temperature is part of the Earth's natural cycle of very warm and very cold periods.

Scientists all agree everyone must think and learn about the Earth, the Sun and climate change. Then we can be sure that many of the terrible events in 'The Day After Tomorrow' will never happen.

(http://www.onestopenglish.com/clil/secondary/english-across-the-curriculum/geography-and-the-environment/pdf-content/climate-change-worksheet/550240.article)

Page 1 of 5

90

CT TASK 1: Identifying reasoning errors in false climate claims:

You should spend about 15 minutes on this task.

As Cook, Ellerton and Kinkead (2018) put it, "Misinformation can have significant societal consequences. For example, misinformation about climate change has confused the public and stalled support for mitigation policies."

You are going to read 5 false climate claims (**1-5**). Please identify the reasoning error in each false climate claim by circling the letter next to each correct answer. You should choose more than one reasoning error for question 2. Then, please briefly explain the reason(s) for your choice(s). There is an example at the beginning (**0**).

Example:

0. The Earth's climate has changed before, so humans are not responsible for current climate change.
   A. poses a distracting statement that has little bearing on the final argued conclusion and whose intent is to disrupt engagement with the point at issue *(red herring)*
   B. demands unrealistic standards of certainty before acting on the science *(impossible expectations)*
   C. assumes there is a single, simple cause of an outcome *(single cause)*
   D. misrepresents a situation or scientific understanding *(misrepresentation)*

   Reason(s): *Assumes only natural processes cause climate change. Just because nature drove climate change in the past doesn't mean it must always be the driver. We are confident that human activity is driving current climate change because human fingerprints are observed all over our climate system.*

1. There is no empirical evidence that humans are causing global warming.
   A. ignores relevant and significant evidence when inferring to a conclusion *(slothful induction)*
   B. simplifies a situation in such a way as to distort scientific understanding, leading to erroneous conclusions *(oversimplification)*
   C. demands unrealistic standards of certainty before acting on the science *(impossible expectations)*
   D. assumes there is a single, simple cause of an outcome *(single cause)*

   Reason(s): ....
   ....
   ....
   ....
   ....

2. Antarctic sea ice is on the increase and casts doubt on global warming.
   Please choose 2 answers.
   A. ignores relevant and significant evidence when inferring to a conclusion *(slothful induction)*
   B. simplifies a situation in such a way as to distort scientific understanding, leading to erroneous conclusions *(oversimplification)*
   C. demands unrealistic standards of certainty before acting on the science *(impossible expectations)*
   D. assumes there is a single, simple cause of an outcome *(single cause)*

   Reason(s): ....
   ....
   ....
   ....
   ....

3. CO2 is not a problem because it's a colorless, invisible gas.
   A. assumes there is a single, simple cause of an outcome *(single cause)*
   B. demands unrealistic standards of certainty before acting on the science *(impossible expectations)*
   C. poses a distracting statement that has little bearing on the final argued conclusion and whose intent is to disrupt engagement with the point at issue *(red herring)*
   D. misrepresents a situation or scientific understanding *(misrepresentation)*

Reason(s): ....
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....
....

4. Species can adapt to climate change.
   A. assumes that two subjects that share a single trait are equivalent *(false equivalency)*
   B. ignores relevant and significant evidence when inferring to a conclusion *(slothful induction)*
   C. simplifies a situation in such a way as to distort scientific understanding, leading to erroneous conclusions *(oversimplification)*
   D. misrepresents a situation or scientific understanding *(misrepresentation)*

Reason(s): ....
....
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....
....

5. Polar bear numbers have increased so they're in no danger from global warming.
   A. simplifies a situation in such a way as to distort scientific understanding, leading to erroneous conclusions *(oversimplification)*
   B. poses a distracting statement that has little bearing on the final argued conclusion and whose intent is to disrupt engagement with the point at issue *(red herring)*
   C. assumes that two subjects that share a single trait are equivalent *(false equivalency)*
   D. misrepresents a situation or scientific understanding *(misrepresentation)*

Reason(s): ....
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CT TASK 2: Academic writing:

You should spend about 40 minutes on this task.

Write about the following topic:

> *Some people think that instead of preventing climate change, we need to find a way to live with it. To what extent do you agree or disagree?*

Give reasons for your answer and include any relevant examples from your knowledge or experience.

Please write at least 250 words.

Please write your essay on page 5.

Thank you very much for completing the critical thinking tasks. If you are willing to take part in the interview, please provide your contact details below. These details will be stored in a separate location from the tasks.

Name: ....

Email: ....

Phone number: ....

Number: ....

Your essay:

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Appendix 5B

Answer key to CT Task 1

1.   A
2.   B & C
3.   C
4.   D
5.   A

Explanations

(Adapted from "Supplementary Table S2: Analysis of 42 Contrarian Claims" (Cook, Ellerton and Kinkead, 2018), http://iopscience.iop.org/1748-9326/13/2/024018/media/ERL_aaa49f_Table_S2_Analysis_of_42_Contrarian_Claims.pdf)

False climate claims	Stages	Analysis
1. There is no empirical evidence that humans are causing global warming.	1. Identify claim	There is no empirical evidence that humans are causing global warming.
	2. Argument structure	P1: There is no observed evidence for anthropogenic global warming (AGW). C: Humans are not causing global warming.
	3. Inferential intent	Deduction
	4. Validity	INVALID Appeal to ignorance. Absence of evidence is not evidence of absence, so the premise doesn't lead to the conclusion.
	4a. Hidden premises	P1: There is no observed evidence for AGW. *P2: If there was evidence of AGW, we would have seen it by now.* C: Humans are not causing global warming.
	5. Ambiguity	NONE
	5a. Resolve ambiguity	NA
	5b. Conclusion changed	NA
	6. Check premises	P1 is false: slothful induction. Many lines of evidence support AGW. P2 is true.
	Status of claim	FALSE The argument is invalid and a premise is false.

	Summary of fallacies	**Slothful induction:** Ignores the many observed climate patterns consistent with greenhouse warming, all of which add to the evidence that humans are causing global warming.
2. Antarctic sea ice is on the increase and casts doubt on global warming.	1. Identify claim	Antarctic sea ice is on the increase and casts doubt on global warming.
	2. Argument structure	P1: Antarctic sea ice is increasing. P2: If Antarctic warming was happening, then Antarctic sea ice would be getting thinner. C: Global warming isn't happening.
	3. Inferential intent	Deduction
	4. Validity	INVALID Premises refer to local warming conditions while the conclusion is about global warming, hence the premise does not lead to the conclusion.
	4a. Hidden premises	P1: Antarctic sea ice is increasing. P2: If Antarctic warming was happening, then Antarctic sea ice would be getting thinner. *P3: Global warming means warming everywhere.* C: Global warming isn't happening.
	5. Ambiguity	NONE
	5a. Resolve ambiguity	NA
	5b. Conclusion changed	NA
	6. Check premises	P1 is true. P2 is false: oversimplification. Changes in Antarctic sea ice depends on a number of factors. For example, winds blowing from the Antarctic continent have been increasing, pushing sea ice away from the land. This creates more open water, making it easier for more sea ice to form. P3 is false. Impossible expectations. Some regions may experience cooling or no temperature change during global warming.
	Status of claim	FALSE With the added hidden premise, the argument is made valid but contains two false premises.
	Summary of fallacies	**Oversimplification:** It's an oversimplification to say that temperature is the only factor driving Antarctic sea ice. Changes in Antarctic sea ice depends on a number of factors. For example, winds blowing from the Antarctic continent have been increasing, creating open water that essentially acts as a sea ice factory. **Impossible expectations:** Global warming doesn't mean that every single location on the planet is warming.

3. CO2 is not a problem because it's a colorless, invisible gas.	1. Identify claim	CO2 is not a problem because it's a colorless, invisible gas.
	2. Argument structure	P1: CO2 is invisible. C: CO2 is not a problem.
	3. Inferential intent	Deduction
	4. Validity	INVALID Just because you can't see something doesn't mean it's not a problem.
	4a. Hidden premises	P1: CO2 is invisible. *P2: No invisible gases can cause problems.* C: CO2 is not a problem.
	5. Ambiguity	NONE
	5a. Resolve ambiguity	NA
	5b. Conclusion changed	NA
	6. Check premises	P1 is true. P2 is false: red herring. Whether CO2 is visible or not is irrelevant to whether it affects climate change. People are also well aware that there are substances or phenomena that are invisible and yet harmful. E.g., carbon monoxide gas is poisonous, as is radiation from radioactive substances.
	Status of claim	FALSE With the added hidden premise, the argument is made valid but contains a false premise.
	Summary of fallacies	**Red herring:** A substance's visibility is irrelevant to whether it can have an impact. Substances can be invisible and yet still harmful. E.g., carbon monoxide gas is poisonous, as is radiation from radioactive substances. In fact, CO2's invisibility is a key element to the greenhouse effect – it lets in sunlight but traps infrared heat, which causes a range of climate impacts.
4. Species can adapt to climate change.	1. Identify claim	Species can adapt to climate change.
	2. Argument structure	P1: Species have adaptive abilities. C: Species can adapt to climate change.
	3. Inferential intent	Deduction
	4. Validity	INVALID Just because species can adapt to some climate change doesn't mean they can adjust to the rapid climate change happening now.
	4a. Hidden premises	P1: Species have adaptive abilities. *P2: Climate change is gradual enough that species have time to adapt.* C: Species can adapt to climate change.
	5. Ambiguity	NONE
	5a. Resolve ambiguity	NA
	5b. Conclusion changed	NA
	6. Check premises	P1 is true.

		P2 is false: misrepresentation. Mass extinctions happen when climate changes too fast for species to adapt. Currently species are going extinct at similar rates to past mass extinctions.
	Status of claim	FALSE The argument is made valid with an extra premise but the premise is false.
	Summary of fallacies	**Misrepresentation:** Assumes that climate change is gradual when it is actually changing much faster than usual natural climate change, and faster than species can adapt to. Mass extinctions happen when climate changes too fast for species to adapt. Currently species are going extinct at similar rates to past mass extinctions.
5. Polar bear numbers have increased so they're in no danger from global warming.	1. Identify claim	Polar bear numbers have increased so they're in no danger from global warming.
	2. Argument structure	P1: Some polar bear populations have increased in number. C: Polar bears are not threatened by global warming.
	3. Inferential intent	Deduction
	4. Validity	INVALID Just because some populations have increased doesn't mean they're not threatened by climate change.
	4a. Hidden premises	P1: Some polar bear populations have increased in number. *P2: If global warming threatened polar bears, all populations would decrease.* C: Polar bears are not threatened by global warming.
	5. Ambiguity	NONE
	5a. Resolve ambiguity	NA
	5b. Conclusion changed	NA
	6. Check premises	P1 is true. P2 is false and an oversimplification. There are a variety of factors influencing polar bear populations. One threat (hunting) has been removed but replaced with an increasing threat (melting sea ice).
	Status of claim	FALSE The argument is made valid with an extra premise but the premise is false.
	Summary of fallacies	**Oversimplification:** There are a variety of factors influencing polar bear populations. One threat (hunting) has been removed but replaced with an increasing threat (melting sea ice). Polar bears need sea ice to hunt so the shrinking of Arctic sea ice is endangering their populations.

Appendix 5C

CT Task 2 evaluation form

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MACQUARIE
University
SYDNEY·AUSTRALIA

CRITICAL THINKING TASK 2 EVALUATION FORM

Essay / Answer to Critical Thinking (CT) Task 2 number: --

Examiner's name (optional): ---

Please evaluate the essay on the following dimensions and provide comments where necessary:

Dimension The essay ...	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*
1. fully addresses all parts of the task					
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas					
3. looks at arguments from different perspectives					
4. manages all aspects of cohesion well					
5. sequences information and ideas logically					
6. skilfully manages paragraphing					
7. constructs well-reasoned arguments					

Your evaluation of the students' CT ability in general demonstrated through CT Task 2:

Very poor ☐   ☐   ☐   ☐   ☐   Excellent
        1   2   3   4   5

Any further comments:

Appendix 6

Interview questions

Appendix 6A

Interview questions for teachers

1. What role does critical thinking (CT) have in English language teaching and learning?
2. What role does CT have in your specialized field of teaching?
3. Do you think CT is culturally appropriate for Vietnamese students? Why? / Why not?
4. Do you think CT is relevant to Vietnamese university students? Why? / Why not?
5. Do you think Vietnamese culture prevents Vietnamese students from enjoying the benefits of CT instruction? Why? / Why not?
6. Do you think students in English Linguistics courses need good CT skills? Why? / Why not?
7. Should we teach CT to students? How should we teach it?
8. When you first started teaching English, how prepared did you feel to teach or promote CT in the classroom? How has that changed since?
9. What role does CT have in your daily lesson plans?
10. What role does CT have in your assessment of students' achievement?
11. What are the challenges you face in implementing CT in the classroom?
12. Do you think that graduates of your program have well-developed CT skills for their future careers and/or their future studies?
13. Could you please describe your process of evaluating the students' CT ability through their essays? How did you evaluate the essays? Do you have any other comments on the evaluation of the essays?
14. Do you have anything to add about teaching CT skills / CT in ELT?

Interview questions for students

1. What role does CT have in English language teaching and learning?
2. What role does CT have in your specialized field of study?
3. Do you think CT is culturally appropriate for Vietnamese students? Why? / Why not?
4. Do you think CT is relevant to Vietnamese university students? Why? / Why not?
5. Do you think Vietnamese culture prevents Vietnamese students from enjoying the benefits of CT instruction? Why? / Why not?
6. Do you think students in English Linguistics courses need good CT skills? Why? / Why not?
7. Are you conscious of being a critical thinker when you listen, discuss in pairs/groups, read, write assignments, give oral presentations, etc.? What sorts of things do you do when you are being a critical thinker?
8. Should schools teach CT to students? How should they teach it?
9. Do you think that you now have well-developed CT skills for your future career and/or your future studies?
10. Can you please explain in detail how you could identify reasoning errors in the false climate claims in CT Task 1?
11. Do you have anything to add about CT in English language teaching and learning?

Appendix 7

Participants' background information

Table A7.1: Student participants' background information

Whether or not they had taken an IELTS test

  Yes   = 3 (25%)

  No   = 9 (75%)

Whether or not they had heard of the term "CT"

  Yes   = 12 (100%)

Whether or not they had been formally trained in CT

  Yes   = 3 (25%)

  No   = 9 (75%)

Table A7.2: Teacher participants' background information

Age group

41 and over   = 4 (100%)

Teaching experience

More than 20 years   = 4 (100%)

Highest qualification completed

Masters   = 1 (25%)

PhD   = 2 (50%)

EdD   = 1 (25%)

Any degree(s) obtained abroad

Yes   = 4 (100%)

Formal training in CT

No   = 4 (100%)

Table A8.1: Students' and teachers' opinions about the major issues of CT in ELT

Questionnaire items	Student questionnaire (n = 12)						Teacher questionnaire (n = 4)					
	Item No.	*1*	*2*	*3*	*4*	*5*	Item No.	*1*	*2*	*3*	*4*	*5*
not a teachable pedagogical set of behaviours	10.1.	3 (25%)	9 (75%)				12.1.		3 (75%)	1 (25%)		
acquired through an unconscious process of socialization during childhood	10.2.		1 (8.3%)	3 (25%)	8 (66.7%)		12.2.		1 (25%)	1 (25%)	2 (50%)	
a culturally based concept	10.3.		3 (25%)	4 (33.3%)	4 (33.3%)	1 (8.4%)	12.3.		2 (50%)		2 (50%)	
more appropriate for Western students than Vietnamese students	10.4.	3 (25%)	8 (66.7%)		1 (8.3%)		12.4.		2 (50%)		2 (50%)	
(Vietnamese culture) preventing Vietnamese students from enjoying the benefits of CT instruction	10.5.		2 (16.6%)		5 (41.7%)	5 (41.7%)	12.5		3 (75%)		1 (25%)	
especially important in ELL/ELT	10.6.			1 (8.3%)	5 (41.7%)	6 (50%)	12.6.		1 (25%)		2 (50%)	1 (25%)
able to fit properly into the Vietnamese context of ELL/ELT	10.7.		2 (16.7%)	1 (8.3%)	7 (58.3%)	2 (16.7%)	12.7.			1 (25%)	2 (50%)	1 (25%)
a generalizable skill (beyond its original domains of application)	10.8.				7 (58.3%)	5 (41.7%)	12.8.				3 (75%)	1 (25%)
a transferable skill (beyond its contexts of instruction)	10.9.				7 (58.3%)	5 (41.7%)	12.9.				3 (75%)	1 (25%)

Note: 1 = strongly disagree, 2 = disagree, 3 = no opinion, 4 = agree, 5 = strongly agree

Table A8.2: Students' and teachers' views on the specification of CT as a programme/course learning outcome

Questionnaire items	Student questionnaire (n = 12)						Teacher questionnaire (n = 4; for item 13.8, n = 3)					
	Item No.	*1*	*2*	*3*	*4*	*5*	Item No.	*1*	*2*	*3*	*4*	*5*
CT as a programme learning outcome: necessary	11.1.				7 (58.3%)	5 (41.7%)	13.1.	1 (25%)			2 (50%)	1 (25%)
CT as a course learning outcome for all the English Linguistics courses: necessary	11.2.		1 (8.3%)	1 (8.3%)	6 (50%)	4 (33.4%)	13.2.			1 (25%)	2 (50%)	1 (25%)
Useful for students' lives	11.3.				6 (50%)	6 (50%)	13.3.				2 (50%)	2 (50%)
Useful for students' future careers	11.4.				4 (33.3%)	8 (66.7%)	13.4.				3 (75%)	1 (25%)
Useful for students' future studies	11.5.			1 (8.3%)	5 (41.7%)	6 (50%)	13.5				3 (75%)	1 (25%)
Instruction of CT: incorporated in lessons of English Linguistics courses[2]	11.6.		5 (41.7%)	3 (25%)	4 (33.3%)		13.6.			2 (50%)	2 (50%)	
Evaluation of students' CT skills: incorporated in English Linguistics courses[3]	11.7.		2 (16.7%)	3 (25%)	6 (50%)	1 (8.3%)	13.7.		1 (25%)	1 (25%)	2 (50%)	
I have feelings of preparedness to incorporate CT into my course.							13.8.			2 (50%)	1 (25%)	
I often encounter obstacles as I promote increased CT skills in class.							13.9.		1 (25%)	1 (25%)	2 (50%)	

Note: 1 = strongly disagree, 2 = disagree, 3 = no opinion, 4 = agree, 5 = strongly agree

---

[2,3] For one of the teachers, it refers to other courses that he was teaching (as he was not teaching English Linguistics courses that semester).

Student competence in CT

Evaluation of student competence in CT

Table A9A: Evaluation of student competence in six dimensions of CT

Questionnaire items	Student questionnaire (n = 12)						Teacher questionnaire (n = 4)					
	Item No.	1	2	3	4	5	Item No.	1	2	3	4	5
look for the logic in arguments	15.1.		5 (41.7%)	4 (33.3%)	3 (25%)		17.1.		3 (75%)	1 (25%)		
tell the difference between reasonable and unreasonable arguments	15.2.		5 (41.7%)	2 (16.6%)	5 (41.7%)		17.2.		1 (25%)	1 (25%)	2 (50%)	
look at arguments from various perspectives	15.3.		2 (16.7%)	3 (25%)	6 (50%)	1 (8.3%)	17.3.		2 (50%)	2 (50%)		
to explain how a specific conclusion can be reached	15.4.		4 (33.3%)	5 (41.7%)	3 (25%)		17.4.		2 (50%)	1 (25%)	1 (25%)	
clearly organize their thoughts	15.5.	1 (8.4%)	4 (33.3%)	4 (33.3%)	3 (25%)		17.5.		2 (50%)	1 (25%)	1 (25%)	
construct their own well-reasoned arguments	15.6.	1 (8.3%)	4 (33.4%)	6 (50%)	1 (8.3%)		17.6.		3 (75%)	1 (25%)		

Note: 1 = not competent, 2 = somewhat competent, 3 = uncertain, 4 = competent, 5 = highly competent

Students' answers to Critical Task 1

Table A9B: Numbers of correct answers per student and per statement

	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5	No. of correct answers / student
S1	**A**	A & **C**	D	B	D	1.5 / 5.0
S2	**A**	A & D	D	B	C	1.0 / 5.0
S3	**A**	A & D	**C**	A	D	2.0 / 5.0
S4	B	A & D	**C**	B	D	1.0 / 5.0
S5	B	A & **C**	**C**	C	C	1.5 / 5.0
S6	B	A & **B**	D	B	**A**	1.5 / 5.0
S7	B	A & D	**C**	C	C	1.0 / 5.0
S8	C	A & D	D	B	B	0.0 / 5.0
S9	**A**	**B** & D	**C**	A	**A**	3.5 / 5.0
S10	**A**	A & **C**	A	**D**	**A**	3.5 / 5.0
S11	**A**	A	**C**	**D**	C	3.0 / 5.0
S12	C	A & D	**C**	B	D	1.0 / 5.0
No. of correct answers / statement	6 / 12	0 / 12	7 / 12	2 / 12	3 / 12	

Academic writing scores frequency distribution

Table A9C.1.1: Analytic scores given by T1

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task				1	11	12
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	5	3	1	3		12
3. look at arguments from different perspectives	8	1	1	2		12
4. manages all aspects of cohesion well	2	5	1	4		12
5. sequences information and ideas logically	3	3		5	1	12
6. skilfully manages paragraphing		2		9	1	12
7. constructs well-reasoned arguments	2	6	1	3		12
Total	20	20	4	27	13	84

Table A9C.1.2: Holistic scores given by T1

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
	1	4	2	3			12

Table A9C.2.1: Analytic scores given by T2

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task			2	10		12
2. presents a fully developed position			7	5		12

Dimension The essay …	Not competent	Somewhat competent	Uncertain	Competent	Highly competent	Total
in answer to the question with relevant, fully extended and well supported ideas						
3. look at arguments from different perspectives			8	4		12
4. manages all aspects of cohesion well		1	4	7		12
5. sequences information and ideas logically		2	8	2		12
6. skilfully manages paragraphing			4	8		12
7. constructs well-reasoned arguments			6	6		12
Total	0	3	39	42	0	84

Table A9C.2.2: Holistic scores given by T2

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
			6	6			12

Table A9C.3.1: Analytic scores given by T3

Dimension The essay …	Not competent	Somewhat competent	Uncertain	Competent	Highly competent	Total
1. fully addresses all parts of the task		1		11		12
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas		1		10	1	12
3. look at arguments from different perspectives		4		6	2	12
4. manages all aspects of cohesion well		5		7		12
5. sequences information and ideas logically		1		10	1	12

Dimension	Not competent	Somewhat competent	Uncertain	Competent	Highly competent	Total
6. skilfully manages paragraphing		1		11		12
7. constructs well-reasoned arguments		1		9	2	12
Total	0	14	0	64	6	84

Table A9C.3.2: Holistic scores given by T3

Very poor	1	2	3	4	5	Excellent	Total
			1	11			12

Table A9C.4.1: Analytic scores given by T4

Dimension The essay …	Not competent		Somewhat competent	Uncertain	Competent	Highly competent	Total
1. fully addresses all parts of the task	1	1*	7	1	2		12
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	2	1	6	1	2		12
3. look at arguments from different perspectives	1	2	6	1	2		12
4. manages all aspects of cohesion well	2	1	7		2		12
5. sequences information and ideas logically	1	2	4	2	3		12
6. skilfully manages paragraphing			5	2	5		12
7. constructs well-reasoned arguments	2	2	5	1	2		12
Total	9	9	40	8	18	0	84

Table A9C.4.2: Holistic scores given by T4

Very poor	1	2	3	4	5	Excellent	Total
	1*	2	6	1*	2			12

Note: * T4 chose to assign a score between the two levels.

Scores given by different teachers to each student's essay

Table A9D.1.1: Analytic scores given to S1's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task		1		2	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	1	1	1	1		4
3. look at arguments from different perspectives	1	1	1	1		4
4. manages all aspects of cohesion well	2		1	1		4
5. sequences information and ideas logically	2	1		1		4
6. skilfully manages paragraphing			1	3		4
7. constructs well-reasoned arguments	1	1	1	1		4
Total	7	5	5	10	1	28

Table A9D.1.2: Holistic scores given to S1's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
		1	2	1			4

Table A9D.2.1: Analytic scores given to S2's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task				3	1	4

Dimension The essay …	Not competent	Somewhat competent	Uncertain	Competent	Highly competent	Total
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas				4		4
3. look at arguments from different perspectives		1	1	2		4
4. manages all aspects of cohesion well		1		3		4
5. sequences information and ideas logically				4		4
6. skilfully manages paragraphing				4		4
7. constructs well-reasoned arguments				4		4
Total	0	2	1	24	1	28

Table A9D.2.2: Holistic scores given to S2's essay

Very poor	1	2	3	4	5	Excellent	Total
				4			4

Table A9D.3.1: Analytic scores given to S3's essay

Dimension The essay …	Not competent		Somewhat competent	Uncertain	Competent	Highly competent	Total
1. fully addresses all parts of the task			2		1	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas			2	1	1		4
3. look at arguments from different perspectives			1		3		4
4. manages all aspects of cohesion well			2	1	1		4
5. sequences information and ideas logically			1	1	2		4

6. skilfully manages paragraphing			2	2			4
7. constructs well-reasoned arguments		1*	1		2		4
Total	0	1	11	5	10	1	28

Table A9D.3.2: Holistic scores given to S3's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
			3	1			4

Table A9D.4.1: Analytic scores given to S4's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task				3	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	1		1	2		4
3. look at arguments from different perspectives	1		1	2		4
4. manages all aspects of cohesion well		1		3		4
5. sequences information and ideas logically	1		1	2		4
6. skilfully manages paragraphing		1	1	2		4
7. constructs well-reasoned arguments	1		1	2		4
Total	4	2	5	16	1	28

Table A9D.4.2: Holistic scores given to S4's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
		1	1	2			4

Table A9D.5.1: Analytic scores given to S5's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task		1		3		4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas		1	2	1		4
3. look at arguments from different perspectives		1		3		4
4. manages all aspects of cohesion well		1	1	2		4
5. sequences information and ideas logically		1	1	1	1	4
6. skilfully manages paragraphing				4		4
7. constructs well-reasoned arguments		1	1	1	1	4
Total	0	6	5	15	2	28

Table A9D.5.2: Holistic scores given to S5's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
		1	1	2			4

Table A9D.6.1: Analytic scores given to S6's essay

Dimension The essay …	*Not competent*		*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task			1	1	1	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas		1*	1	1	1		4

Dimension The essay …							Total
3. look at arguments from different perspectives	1	1	1		1		4
4. manages all aspects of cohesion well		1		1	2		4
5. sequences information and ideas logically			1	1	2		4
6. skilfully manages paragraphing			1		3		4
7. constructs well-reasoned arguments		1	1	1	1		4
Total	1	4	6	5	11	1	28

Table A9D.6.2: Holistic scores given to S6's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
		2	1	1			4

Table A9D.7.1: Analytic scores given to S7's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task		1	1	1	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	1	1	1	1		4
3. look at arguments from different perspectives	1	1	1	1		4
4. manages all aspects of cohesion well		2	1	1		4
5. sequences information and ideas logically		1	2	1		4
6. skilfully manages paragraphing		1		3		4
7. constructs well-reasoned arguments	1	1	1	1		4
Total	3	8	7	9	1	28

Table A9D.7.2: Holistic scores given to S7's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
	1		2	1			4

Table A9D.8.1: Analytic scores given to S8's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task		1		2	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas		2	1	1		4
3. look at arguments from different perspectives	1	2	1			4
4. manages all aspects of cohesion well		4				4
5. sequences information and ideas logically		1	1	2		4
6. skilfully manages paragraphing			2	2		4
7. constructs well-reasoned arguments		2	1	1		4
Total	1	12	6	8	1	28

Table A9D.8.2: Holistic scores given to S8's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
			3	1			4

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Table A9D.9.1: Analytic scores given to S9's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task		1		2	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas		2		2		4
3. look at arguments from different perspectives	1	1	1		1	4
4. manages all aspects of cohesion well		2		2		4
5. sequences information and ideas logically		2	1	1		4
6. skilfully manages paragraphing		1		3		4
7. constructs well-reasoned arguments		2		1	1	4
Total	1	11	2	11	3	28

Table A9D.9.2: Holistic scores given to S9's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
			2	2			4

Table A9D.10.1: Analytic scores given to S10's essay

Dimension The essay …	*Not competent*		*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task	1				2	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	2				2		4
3. look at arguments from different perspectives	1	1*	1	1			4

Dimension							Total
4. manages all aspects of cohesion well			3		1		4
5. sequences information and ideas logically		1	2	1			4
6. skilfully manages paragraphing			1		3		4
7. constructs well-reasoned arguments			2		2		4
Total	4	2	9	2	10	1	28

Table A9D.10.2: Holistic scores given to S10's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
		2		2			4

Table A9D.11.1: Analytic scores given to S11's essay

Dimension The essay …	*Not competent*	*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task			1	2	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas			1	3		4
3. look at arguments from different perspectives		1	2	1		4
4. manages all aspects of cohesion well		2		2		4
5. sequences information and ideas logically			1	2	1	4
6. skilfully manages paragraphing				3	1	4
7. constructs well-reasoned arguments			1	3		
Total	0	3	6	16	3	28

Table A9D.11.2: Holistic scores given to S11's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
			1*	3			4

Table A9D.12.1: Analytic scores given to S12's essay

Dimension The essay …	*Not competent*		*Somewhat competent*	*Uncertain*	*Competent*	*Highly competent*	**Total**
1. fully addresses all parts of the task		1*			2	1	4
2. presents a fully developed position in answer to the question with relevant, fully extended and well supported ideas	2				1	1	4
3. look at arguments from different perspectives	2			1		1	4
4. manages all aspects of cohesion well	2				2		4
5. sequences information and ideas logically	1	1			2		4
6. skilfully manages paragraphing			1		3		4
7. constructs well-reasoned arguments	1		1	1	1		4
Total	8	2	2	2	11	3	28

Table A9D.12.2: Holistic scores given to S12's essay

Very poor	*1*	*2*	*3*	*4*	*5*	*Excellent*	Total
	1*	1		2			4

Appendix 10A

Teacher interview transcript

Interviewer (I): Today, I would like to ask you some questions about CT in English language teaching and learning. My first question is: What role do you think CT has in English language teaching and learning?

Teacher (T): I think it's very important because if you are teaching writing, for example, academic writing, then you need to show your students how to argue for something or how to arrange their ideas logically, and they need to know how to evaluate other people's ideas as well. So I think it's very important.

I: Now, let's talk about your specialized field of teaching. What role does CT have in your specialized field of teaching?

T: Last semester, I taught Semantics and also one course in Academic Writing. And so … so, what's the question again?

I: What role do you think CT has in your specialized field of teaching?

T: Yeah, I think it's clearer in the course of Academic Writing than in Semantics because there are a lot of theories in Semantics, but still I think in Semantics, because there are a lot of theories, and so the students may not agree with some of the points in the textbook or in the lecture, and so they can … they can raise their concern as well. So it's not just about Academic Writing, but I think it's also for theories because theories can be … sometimes it can be very subjective. And also because different books may talk about the same thing differently, and so the students may raise a lot of questions because they say so which one is correct. And … and so, that is when I think you should point out that it's very important to consider something in context, for example, and so they can look at that more critically, and not just believing in what the textbook says.

I: And when the students do not agree, and when they raise questions, what do you usually do?

T: Normally, I ask them to …. I point out some of the differences in the different approaches that the authors are taking, and so I just ask them "So, which one do you think is more

convincing?", and so, they will say, for example, "This one is more convincing because in our context, it's more like this," for example, "in EFL setting like this, it's not true for ESL setting", so they learn to be more critical, I think.

I: Do you think students in English Linguistics courses need good CT skills?

T: Ah … yes, I think so because that is normally for senior students, and so I think they need to develop CT skills, not so much for Introduction to Linguistics, for example, because at that level, the students are just being introduced of their major, and so perhaps not so much about … too much into theories, and so students are mainly introduced to some description of sounds or sentence structures, so it's not as much CT there. But at a high level, I think, in the fourth year, they need to develop that a bit more so even for exercises, for example, if it is Pragmatics, then, the students will have to … to … to think more critically to see which one is more acceptable.

I: Do you think that English Linguistics courses can help develop students' CT skills?

T: I think so, but it depends on how the teacher designs the activities or the exercises, for example, if it is … if the textbook provides some keys, some answer keys, then as a teacher, you should also raise some questions as well. For example, do you agree with this or do you think it's true, then the students … because at first, I think the students, they just think that everything is correct in the book, and so until you point out sometimes, and so they get used to that, and so they start to raise questions the next time when they see a problem or when they don't really agree with something.

I: So, how should the exercises or activities in English Linguistics classes be designed in order to develop students' CT skills?

T: I think it's more, not just one correct answer type of question, so it should be open, more open-ended questions, and so normally you should ask students, for example, not just, for example, true or false, but why true, why false. Or if they provide an answer, then "Why do you think this is the best answer?", for example. So I think if you keep asking why, then they have to think. It's not just giving yes or no, true or false.

I: So "why" question is more important than true or false?

T: Yeah, I think so.

I: May I ask you a little bit about your teaching experience? When you first started teaching English, how prepared did you feel to teach or promote CT in the classroom?

T: You mean when I first started teaching?

I: Yeah.

T: The first time when I first started teaching English, not Linguistics courses. It's a, I mean, it's mainly skills, four skills. So I could hardly remember, but I think at first, I didn't really pay as much attention to CT development, but later on, I think it is necessary to help the students develop that skill.

I: And how has that changed since?

T: I think the students … I think it's easier to convince the students because once they think, that is, they can … they can say what they think, and they can disagree with something. Normally, in my class, I encourage students to disagree with something, so they don't have to agree with everything. And so I think the students like that better. They have some … I mean they can raise their own voice. And I think the students like that better.

I: Yeah. What role does CT have in your daily lesson plan?

T: I think it's mainly in the design of the exercises or activities. So I will have to think more about results of differences between cultures and so try to … try to put some questions that are more like thinking provoking instead of just true or false. And so the students will have to think harder.

I: So you include those exercises in your daily lesson plan, too?

T: Yeah.

I: What role does CT have in your assessment of students' achievements?

T: Yeah, as I said, if I … because nowadays, you have to give the same exam paper to all the students, and so you may not be able to control that as much as we can. But, for example, for midterm tests, then normally I will try to put those questions in to assess the students' CT, for example, but that if I, instead of just asking true or false, I just ask the students to give a brief explanation why. So, I think, so, when I mark that question, then that would be more important than just true or false.

I: You mean in the …

T: Their reasoning.

I: Their reasoning. And how about the scores for that part?

T: For example, if that is one point, then half a point will be for true or false, and the other half a point will be for the reasons.

I: Yeah. What are the challenges you face in implementing CT in your classroom?

T: I think it can be a bit … yeah, it can be challenging for teachers sometimes because you cannot prepare everything. Because it depends on what the students say, and what the answers or the questions are. But I think if you … if you know enough about the field and about the theory, then you will be able to answer the questions.

I: Answer the questions?

T: The students' questions. Yeah. As what you encourage them to ask a lot of questions, then you have to be prepared to answer questions as well.

I: Yeah. Many people think that CT is a Western concept. Do you agree with them?

T: Yeah, I think so. But because we are teaching English Linguistics, so I think it's important to develop that or to introduce that kind of thinking or culture.

I: Do you think that CT is culturally appropriate for Vietnamese learners of English?

T: I think so. It's just that because they are used to accepting whatever people or the textbooks say or authors say. But I guess at this level, I mean at university level, they should be able to think more critically.

I: Do you think that CT is relevant to Vietnamese university students?

T: I think so. Yeah, if they need to be able to integrate into other cultures and … or they want to go overseas, then I think it's very important.

I: And do you think that Vietnamese culture prevents Vietnamese students from enjoying the benefits of CT instruction?

T: I think at university, because they are university students already, so once the teachers introduce that or make that kind of habit, then I don't think it's a problem for the students. The students will learn how to adapt to that.

I: And Vietnamese culture doesn't have any effect, I mean, on …?

T: It can. For some students, they still feel very reserved, but I guess after some time they will learn how to do it, and they will be willing to do it.

I: So what time … how long do you think is necessary for the students to adapt to CT?

T: Not sure, but I guess one semester.

I: One semester? Yeah. Do you think we should teach CT to the students?

T: Yeah, I think so, because actually I think we had a CT course before in our faculty.

I: But now it seems that we don't have it any more?

T: Yeah, I don't know the reason, but I think it's important.

I: How should we teach CT to the students?

T: I don't know, but I guess, because I didn't teach that course, but I think we should teach them about logic, the high order thinking skills. Yeah, I think we can design some activities to teach them how to do CT.

I: Do you think we should teach CT in a separate course or we should integrate CT into other courses?

T: I think integrating is ok, but it's just that the teacher will need to know how to do it. But if the students have a separate course, then they … they … you can make sure that all the students learn … learn about CT, and they can apply that in different courses. But if it is for … it is taught in different … or it's integrated into different courses, then you have to make sure that teachers of those courses, they know how to … how to teach CT.

I: How can we make sure that the teachers know how to teach CT?

T: I think they have to be trained, or it also depends on … I mean, whether they are willing to integrate CT skills into their courses as well.

I: If we have a CT course, how many courses do you think should be designed for the students … should be put into the programme for the students?

T: You mean, how many hours?

I: Yeah, how many hours?

T: I think, just one course is enough, I think.

I: Yeah. In the questionnaire, you said that … you stated that you strongly agree with the statement that it is necessary to include CT as one of the programme learning outcomes for our programme, for our BA programme. So why? Could you please tell me the reasons why you strongly agree with that?

T: I think if we don't put that as a learning outcome, then the teachers will not pay attention to that and will not emphasize the importance of CT. So, but if we put that as a learning outcome, then we can make sure the students will achieve that by the end of the course.

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I: But do you think that our faculty should do something to prepare for both the teachers and the students?

T: Yeah, I think perhaps some training for the teachers and for the students if they have one course, at least one course, then at least we can make sure that it can be one of the learning outcomes for the programme.

I: Yeah. My next question is: Do you think that graduates from our programme have well-developed CT skills for their future careers and their future studies?

T: I'm not sure because you know, we do not have that course any more, and we cannot be sure whether all the teachers put CT into their syllabus. We cannot guarantee that all the students have CT skills.

I: So, is there any difference between your perceptions of the students' CT skills and your evaluation of the students' CT skills through their essays?

T: Ok. No, I think that is what can be expected.

I: What can be expected? So, no difference between …?

T: Because I'm not so sure what year, I mean, the students are in?

I: The last year, senior year.

T: Senior? Ok. Yeah, I think that can be expected because as I said, you cannot be sure whether the students all developed that skill or not.

I: Many students think of going overseas to further their studies. Do you think that their CT skills are good enough for them to study overseas?

T: For some of them, I think yes because in my class, for example, some of the students are very critical, so … and … and so I think those can be ready for overseas study.

I: So, you mean 'some', it means about how many of them?

T: I think about one third of the students.

I: One third of the students in the class? And how about the others?

T: So, they are not as critical and so, even if you ask them like whether you agree or disagree, they sometimes just say: "Of course, this is from the textbook, so it has to be correct." But if they decide to study overseas, I don't think that is enough for them, even … I think … even for postgraduate studies here.

I: So, if we include CT as one of the learning outcomes for the BA programme, and then the number of the students who have good CT … level of CT skills is not very high, so what do you think we should do in order to help them reach the learning outcomes of the programme?

T: You mean in one course or in…?

I: I mean in general.

T: I think one of the things is if you put that into the assessment, then you have, you can make sure that the teacher will pay more attention to that. So, I think that will improve students' CT skills level, I think.

I: Yeah, so now, may I talk about the evaluation of the essays?

T: Yeah.

I: Could you please describe in detail your process of evaluating the students' CT ability through their essays? How did you evaluate the essays? And do you have any other comments on the evaluation of the essays, including the dimensions mentioned?

T: So, when I … before I evaluated an essay, then, first of all, I read it through … so to see what the students are trying to argue, and after that, I will look at each criterion and so, we'll look back at the essay to see … so, I think the first reading is just a general impression, and then I'll look at each criterion and then look back at the essay, and then decide which one is the most appropriate for that essay.

I: And do you have any other comments on the … I mean … on the criteria?

T: (…) the criteria, I think mainly focus on CT, and so not on other aspects of writing. For example, if I have to mark the writing, I mean, in a normal class, then, there will be other criteria as well, not just those criteria. So, for example, one student may have good CT skills, and so that means they got competence in most of the criteria in the evaluation form, but they may still make some mistakes in writing, in grammar, in vocabulary or spelling. So if … results if they got competence in this evaluation form, but they may get a lower mark if you put other criteria into the evaluation.

I: Do you think that I should add any other CT criteria into the evaluation form?

T: No, I just think that sometimes there can be some overlap between the criteria. So … and also for some essays, I think, it depends, or perhaps, it depends on how the students were taught essay writing in their previous course. For example, if they were taught whether they can argue, they can take one side only, or they need to have counter-arguments, for example, as well. So I

think in most of the essays that I looked at, I think there was a lack of counter-arguments. So I think that is also part of CT skills as well.

I: And you mentioned that some criteria overlap with each other?

T: A little bit, yeah. Not too much. I can still figure out which one is which, but I think there's still some overlap.

I: Could you please show me the overlap?

T: For example, well, we reason arguments, so I guess if normally they have number 2, then number 7 will be, I mean.

I: Number 2 and number 7? Yes.

T: So, that's why I present a fully developed position. So normally if they're fully developed, and that means they have all the supported ideas and they have very good reasoning. So, I think there can be some overlap here. If you need to really distinguish this, I think it's still possible to distinguish this.

I: Could you please give me general comments on the students' CT that is demonstrated through the essays?

T: Because students have different … I think that students have different problems, so some of them may have different perspectives, so they look at the problem from different perspectives. But then I don't know because they're lack of time or something, and they couldn't develop their arguments very well, I mean, to … for example, they didn't give enough examples or to convince the reader, or and some other students, as I said, they don't have counter-arguments. So, they only argue for one side, and so the readers may … may still think … so … why not the other.

I: But in general, do you think that they have good or not very good CT skills?

T: I think it's ok. It's somewhere in middle, or between 3 and 4.

I: between 3 and 4?

T: Yeah.

I: My last question is: Do you have anything to add about teaching CT skills?

T: You mean to the teaching?

I: Teaching or anything about CT in English language teaching and learning?

T: There should be a course on CT skills, but it should be taught early, not, for example, in the second year. Yeah, in the second year, I think it would be good because normally with the first two years, they learn about the skills, but from … even the second year, they have to learn Academic Writing already. And so, CT, I think, should be taught before that.

I: Before Academic Writing?

T: Yes, and other specialized courses.

I: So, it should be at the beginning of the second year?

T: Yeah.

I: Thank you very much for helping me with the interview.

I: Yeah. You're welcome.

Appendix 10B

Student interview transcript

Interviewer (I): Today, I would like to ask you some questions about CT in ELT.

Student (S): Yes.

I: My first question is: What role do you think CT has in English language learning?

S: For my own opinion, CT, it was further developed the student understanding of a language because when they have some CT, they approach to the issue from different, from different points of view. And they can have a broader picture of the issue. Yeah, for example, for example, when I study Functional Grammar, that's the first time I know about Functional Grammar, before that, I'm stay more focused on formal grammar. Yeah, and I think, at that time I thought that you know when you study grammar, you just have to focus, you just care about the forms and the words, but after I finish the course, and I have many questions, and even arguments with my professor about which one is better, functional grammar or formal grammar, which one is better, and after those arguments, I now … I feel more complete and I think both approaches have its own advantages and disadvantages.

I: What's your major?

S: My major is English Linguistics and Language Teaching.

I: What role does CT have in your specialized field of study, in your major?

S: Can you clarify?

I: What role does CT have in your specialized field of study, i.e., English Linguistics and Language Teaching?

S: So, CT keep me curious about my own major. You … know sometimes you cannot accept the thing that the teacher … you cannot fully satisfied with the thing your teacher told you. You have to further do more research, researches into the issue. Yeah, you have to read more books, you have to read more scientific researches. And then you come back your professor and you can ask him/her about his/her opinion. So that you can fully understand issue.

I: Yes. Do you think students in English Linguistics courses need good CT skills?

S: Definitely they need a better skill. And good skill in CT is very useful for their future career. For example, if you work at school, and you are in charge of teaching high school students,

usually you will have … usually you will follow the guidelines from the teaching, the heads of your teaching department, and everything should follow the procedures, but if you have CT, you can even debate with your boss, with your …, and you can give out more improvement to your teaching and even to your department, to your (…) school, with your CT.

I: But when you take English Linguistics courses, do you need good CT skills? Do you think that students need good CT skills when they learn English Linguistics courses?

S: As I told you, being critical will keep the student curious, and want to know more about the subjects. When they have an inquisitive mind, they can widen their knowledge, and they can develop themselves in language learning, not limit in the classroom but also at home or everywhere.

I: So, do you think that English Linguistics courses can help develop students' CT skills?

S: In my Faculty?

I: Yeah.

S: So, CT is just, you know, in recent years, some professors in my university, they began to use … to integrate CT into their teaching, but you know, traditional in Vietnam, students often not familiar with CT. And then they get exposed to the new approach, they quite confused. Yeah, and the teacher also come from Vietnamese university or Vietnamese high school, so they quite more familiar with the old approach. Although they try to apply it but they cannot. They cannot fully exploit the benefits of CT, so it seems until now, I feel still not very effective. Yeah.

I: Are you conscious of being a critical thinker when you listen, discuss in pairs/groups, read, write assignments, give oral presentations, etc.?

S: It could be said that I just partially apply CT. As I told you, I have the background as a Vietnamese student. Yeah, I now I try to whenever I discuss with my friends, I try to protect my own opinion, using specific evidence. Yeah. But, you know, in Vietnam culture, we try to avoid arguments, and we try to be in harmony with each other, and sometimes when the argument is so intense, I try to calm down and I, you know, I … I after that I did not continue to protect my own opinion, but I will find a common ground with my friends.

I: Can you please be more specific? Can you please talk about what you usually do when you write assignments?

S: What I usually do when I write an assignment? Firstly, I need some input for my writing. So I read, I usually read many materials on the Internet, many books, yeah. And after that, I will formulate my own ideas based on the materials I read, and so I will write down the general ideas. Yeah, and after that I get straight to writing, to my writing. So, from the ideas, I develop specific evidence or examples to support that idea. Usually I will develop, we have about 3 ideas in one assignment. And I will develop each in order.

I: And how about reading? Are you conscious of being a critical thinker when you read something, especially English Linguistics books?

S: You know, I'm very new in the field of Linguistics, so when I read books, usually I try to understand first, yeah, and at that time, I cannot, I, so, at this time, right now, I cannot give … I cannot have any question concerning: Is that theory suitable? Is that theory more logical? I just try to understand the basic ideas that the author tries to say, but I cannot judge, I cannot criticize whether he/she has a very good idea. I cannot do that. No.

I: But do you think that it's necessary for you?

S: Very necessary, but I need to read more. Yeah, I need to understand, I need to know more about opinions of different linguists in different schools before I can have my own stance. Yeah.

I: Do you think that you now have well-developed CT skills for your future career and your future studies?

S: So, at the moment, I cannot say with confidence that I am a critical thinker. My CT ability right now is just at, you know, very basic level, yeah, but I'm fully aware the importance of CT and I'm trying to practise it day by day, and hopefully in the next two or three years, I can master CT skill and apply it to my real life.

I: Are you going overseas for your studies?

S: Going overseas is one of my goals, yeah, not only to acquire new knowledge, but also to have a different ways of thinking. Yeah, you know, when you live in a … usually when you live in a Western country, you will get exposed to a new way, new approaches to knowledge and how you acquire knowledge and very different from Vietnam.

I: What kind of job are you going to do after you graduate from university?

S: I want to study more about Linguistics, and I want to, in the future, I want to teach about Linguistics, yeah, for Vietnamese students.

I: Do you think that you now have well-developed CT skills to teach Linguistics to Vietnamese students?

S: Not yet. Not yet. As I told you, I cannot, at the moment, I'm still strongly influenced by Vietnamese practice of learning and teaching. I have never been overseas. I've never been in Western culture where they really worship CT, so basically I just get the concept, but I cannot, I don't know what it is truly … what it truly means.

I: You said that you are very well aware of the need for the development of CT. So, when did you start being aware of the need for the development of CT skills?

S: Actually, when I was at high school, I didn't have any idea about CT, but when I took, when I prepare to take the National Exam for the gifted students, I, you know, they require a very high level of English and when I learn, when I prepare for this exam, I read about CT because it's a topic, one of the topics in my writing, and after that I read some materials online concerning CT so that I can have a good writing for the topic.

I: What was the exam?

S: The National Exam for Gifted Students.

I: At high school?

S: Yes, at high school level … So each year, the Ministry of Education will organize an exam for high school students, very good high school students, usually with different subjects. For me, I took English, I took English, yeah, and very difficult, and at that time, I began to know about CT, and after that, I read more about it. At that time, just because I want to finish my writing assignment. Yeah, but when I read about CT, I felt very interested and I have some further research into it. But still very limited, you know. Sometimes, you just get the idea but you don't know how to apply it.

I: I know that you have been overseas, right?

S: Yes, just for a couple of weeks.

I: Can you please tell me about your trip overseas and the benefits of CT in that trip?

S: I participated in an exchange program for students in the Southeast Asia. When we gathered together, we had to discuss about the issues that our countries have to face, and very familiar topic like: How can you improve your education in your country? Or how can you help to prevent pollution? When we sat together and discussed about the issue, students from … I noticed that Vietnamese students they have lower ability in terms of expressing their own ideas.

Yeah. They … and … they feel very, you know, for myself, myself I was very insecure and I was very reluctant to express my ideas, but some students from Singapore or from Malaysia or Indonesia, they are very confident, and they can effectively and thoroughly show their opinions in front of other students. So for my own observation, there's a big gap between Vietnamese students and foreign students.

I: Many people think that CT is a Western concept. Do you think that CT is culturally appropriate for Vietnamese learners of English?

S: So, CT could be, you know, the concept that first appeared in Western countries, but it doesn't mean that you can only apply it to Western culture because from my own opinion, all humans are the same. We have the same brain, we have the same ability to perceive, so basically we can get all of the concepts. Yeah.

I: Do you think that CT is relevant to Vietnamese university students?

S: Irrelevant?

I: Relevant, relevant to Vietnamese university students?

S: What do you mean when you say "relevant"?

I: It's appropriate or suitable to Vietnamese students at university level.

S: Yes, it could be said that it's very difficult for university students. If you wait until universities and you begin to apply CT, I think, they cannot adapt to that quickly, and it takes time. It would be better if you integrate CT at primary schools. Then when they grow up with CT, they can … at university … they can .. they will be ok with that.

I: You seemed to say that Vietnamese culture prevents Vietnamese students from enjoying the benefits of CT instruction?

S: Yes. As I told you, in Vietnam, Vietnamese culture, arguments or conflicts should be avoided. So in the relationship between two people, if we just keep arguing, we cannot maintain the relationship. Yeah. And so it could result in two people they cannot talk to each other. So, in Vietnam, we try to avoid conflicts or arguments. We try to find common ground, and then we not to argue. Yeah. So sometimes you dip down, you feel you do not agree with that, but you suppress yourself, not to argue with that person, although feel that's very wrong. And in Vietnam, we have … also in Vietnam, we really respect people … senior people. So if you are older, if you talk to person who is older, or have higher position, you should always show that

you are, you should always kind of be quiet when you listen to his or her opinions, and if you kind of argue with that person we consider as very disrespectful.

I: How do you think that CT can develop in such a culture?

S: Very difficult, yeah. Very difficult to apply in Vietnam, but it is not impossible. Right now, in Vietnam, we begin to be open to Western culture, and in education, they also have some improvement at, since the primary education. So, hopefully in the next 50 years, Vietnam can change that culture. Yeah.

I: Why do think of the number of 50, 50 years?

S: Vietnamese culture is quite slow to change, and that is one characteristic of our culture here. So 50 years is good enough for a change. Things is different in Western, they are very fast. They can timely respond to any change.

I: Now, let's look at the CT tasks. CT Task 1 first. Can you please explain in detail how you can identify reasoning errors in the false climate claims in CT Task 1?

S: So, number 1: "There is no empirical evidence that humans are causing global warming". So usually, maybe right now, scientists they cannot, they could not find any evidence to show that humans cause global warming. It doesn't mean that humans are innocent of this. For example, A killed B. But A tried to cover all of the evidence, and the policeman could not find any. So the fact that A killed B is true, but the police, they cannot prove that. It's true, and the thing that the police may cannot prove A is the murderer doesn't mean that he is not a murderer. Yeah.

I: That's interesting. Ok. How about the next one?

S: "Antarctic sea ice is on the increase and casts doubt on global warming". So in order to say that global warming is very serious, and needs some solution, we have to look at some evidence like the sea ice, the level of sea ice, or the number of extinct species that cannot adapt to global warming. So there's many factors. So here, they just base on one fact that Antarctica sea ice is on the increase. It's just a small factor, and then they come to a very big … they will come to conclusion that we should be doubtful about global warming. So, there's not enough evidence to come to that conclusion.

I: Number 3, please.

S: "CO_2 is not a problem because it's a colorless, invisible gas". So, at first glance, the features of being colorless and invisible kind of are very harmless, it seems to us that's very harmless. But it just kind of a hook, I think that to attract us from the real thing is CO_2 is a problem. Yeah.

They try to avoid, they try to avoid the real harms of CO2 like the greenhouse effects, like global warming, yeah, the bad effect of CO2. But the statement tries to give us something very harmless to distract the readers from the real fact.

"Species can adapt to climate change." So, for this one, this statement ignores the evidence, the real evidence. So I read many articles about global warming, and the articles said that not all species can adapt to climate change. Yeah. And the articles also show some, many species they cannot adapt and they go, they go extinct. So I think this one is just a personal … personal … personal opinion, and it ignores all of the evidence.

"Polar bear numbers have increased so they're in no danger from global warming." So, the fact that there's an increase in the population of polar bears does not reflect that they're not in danger of global warming. Maybe right now, they still can adapt to the temperature, but cannot make sure that in the future they can do that. Yeah, maybe in the future, the temperature can go up even higher and the polar bear cannot survive. So, it just can, maybe at present, it's still ok with the temperature, but cannot be sure for the future.

I: Is that all for CT Task 1?

S: Yes.

I: Can you please say a few words about how you developed the essay in CT Task 2?

S: A few words?

I: How did you develop the ideas in CT Task 2?

S: So, for CT Task 2, you have to pick a side. They give you two different, two opposite opinions, and you have to pick one side. So, firstly, I will pick the side that I support. Yeah, and after I know which side I belong to, I develop, I write down three general ideas to support my opinion. And after that I will, for each opinion, I will have a paragraph. So, in total, for the main part, I have three paragraphs with my three general ideas. For each paragraph, I use three or four sentences to support the topic sentence. Yeah, and after that I will … I have a summary, yeah, and I can form my opinion again.

I: Ok. Thank you very much. Do you have anything else to add about CT skills?

S: So, for me, CT is just like you … when you … when your teacher, when your teacher try to tell you something, at first you should be doubtful about that, yeah, and you will try to find the thing that could be wrong in the professor's way of reasoning, and then you can question your

professor until you have a satisfactory answer, until you can have a common ground on that. Is that CT? (laughing)

I: Yeah. Thank you very much.