

**THE IMPLEMENTATION OF CRITICAL THINKING AS EFL  
PEDAGOGY: CHALLENGES AND OPPORTUNITIES**

By

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## **Author's declaration**

I certify that, to best to my knowledge, all the material in this thesis represents my own work and that no material is included which has been submitted for any other award or qualification.

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**Date: 11-11-2013**

## ABSTRACT

The introduction of critical thinking into education has recently become a global aim. The implementation of critical thinking as language pedagogy in the field of English as a Foreign Language (hereafter EFL) has started recently, and it consequently requires further investigation. Despite Atkinson's (1997) claims that critical thinking is a Western concept and could not be applied for foreign language education in non-Western contexts, findings from research reveal that critical thinking pedagogies have been effective for developing language learning in non-Western contexts. Despite this evidence of success in implementing critical thinking as one element of EFL pedagogy, the number of existing studies is limited, and most of these studies have focused on the development of learners' reading and writing skills.

The present study is a naturalistic inquiry that examines the processes of implementing a critical thinking pedagogy for developing the quality of classroom dialogue. The specific focus is on whether this pedagogy increases/decreases learners' involvement in high quality talk, characterised by the complex use of language and the application of Higher Order Thinking Skills (HOTS).

The merits of and challenges to applying this pedagogy for developing the quality of dialogue were identified through regular interviews with participants, audio recordings of classroom talk, observational field notes, pre- and post-tests for measuring language complexity and questionnaires. The study was carried out over 12 weeks at a language institute run by a private university in Saudi Arabia. Participants were an EFL teacher and 18 high school graduates taking a compulsory language course at this institute before starting their undergraduate degrees.

The findings suggest that this pedagogy was more challenging for the teacher than for the learners, and this was due to the effects of power relations found in the Saudi educational system. In Saudi universities, educational policies, plans and decisions are limited to the Council of HE and the MOHE. With regard to university

governance at the internal level, decisions are mainly made by male authorities who govern both male and female universities. Teachers cannot implement classroom interventions without authorities' permission. This indicates that power is not shared equally between university authorities on one side and their staff and students on the other side, more specifically female staff and students. The teacher's feeling of powerlessness in this study has led to unsatisfactory outcomes. Her classroom practice was affected by her inability to have an access to power. This was more evident towards the end of the study, when classroom talk had regressed from dialogue to a more traditional Initiative/Response/ Feedback (IRF) exchange structure. The teacher dominated talk to minimise opportunities for criticising social issues or talking about issues that were not in tune with the students' culture. Although the teacher's use of language and interaction did seem to have some negative effects on the development of learners' language complexity in dialogue, there were some examples where the thinking lessons provided learners with opportunities for thinking and learning through dialogue, more specifically when using mysteries. The learners valued these opportunities to think and seemed to be tolerant of ambiguity.

The main contribution of this study is a framework for infusing critical thinking pedagogy across courses in EFL skills that are taught to post-secondary school learners in Saudi Arabia. The framework is informed by Burden and Williams' (1996) SPARE model, Moore's Transdisciplinarity framework (2011) and my own reflections on the context. Another contribution is that the study brings together two language learning theories: the socio-cultural theory and the critical language awareness theory. In other words, the study explains that learners' cognitive and metacognitive skills, highlighted in the critical language awareness theory, plays a significant role in engaging learners in successful interaction, through creating participation opportunities based on the notion of critical thinking. This point is evident in participants' discussions of Turkish Series and Mystery 4 in Chapter 6, which reflected high level of interaction and criticality employed by learners. The study is likely to be of benefit to teachers, researchers and policy makers in the Saudi context and other contexts that are concerned with the application of critical thinking for developing language teaching and learning.

## DEDICATION

*To my lovely family*

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## **List of abbreviations**

EFL	English as a Foreign Language
EAP	English for Academic Purpose
HOTS	Higher Order Thinking Skills
NCAAA	National Committee of Academic Assessment and Accreditation
CA	Conversation Analysis
IRF	Initiative/Response/Feedback
L1	First language
MOHE	Ministry of Higher Education
NAZAHA	National Anti-Corruption Commission

## CHAPTER 1: INTRODUCTION

### MOTIVATION AND PURPOSES OF THE STUDY

#### 1.1 Introduction to research focus

Teaching and learning centred on critical thinking pedagogies constitute one of the main aims of education (Marin and Halpern, 2011). Atkinson (1997) claims that the critical thinking pedagogy is appropriate only for particular disciplines, and it is only applicable in Western contexts where critical thinking is a cultural norm. He also excludes foreign languages from the disciplines that can benefit from the critical thinking pedagogy. However, findings from research into EFL contexts reveal that this pedagogy has been effective in improving learners' language skills in non-Western contexts (e.g., Liaw, 2007; Chen, 2010; Turuk, 2010; Mehrdad *et al.*, 2012; Hashemi and Ghanizadeh, 2012). Despite the evidence of success in implementing critical thinking in EFL learning in non-Western contexts, however, some existing limitations need to be considered. One limitation is that most studies on infusing critical thinking focus on developing EFL writing and reading skills, and there has been limited focus on the teaching and development of speaking skill (e.g., Benesch, 1999; Chen, 2010; Li, 2011).

Another limitation involves the currently unidentified status of critical thinking in EFL language approaches and methodologies. The critical thinking approach is not mentioned as a well-established approach to language learning in publications on approaches to language teaching and learning (e.g., Richards and Rodgers, 2001; Hinkel, 2011), although it is accepted as a valid teaching and learning approach in other disciplines, such as science (Ayde and Shayer, 1994). The communicative approach to foreign language teaching and learning, which focuses primarily on meaningful communication, has been acknowledged as a dominant approach to EFL teaching and learning since the 1970s (Littlewood, 2011). I will explain here how the critical thinking pedagogy fits into the communicative approach.

Research that has focused on the communicative approach to language teaching and learning has paid considerable attention to classroom interaction through examining teacher-learner and learner-learner talk. The analysis of interaction is concerned with how interlocutors negotiate meaning (e.g., through confirmation checks and clarification requests) and apply communicative strategies (e.g., through miming and using the mother tongue) to maintain the flow of talk and avoid miscommunication (Ellis, 2003).

Another interesting dimension to understanding interaction is the examination of the quality of learners' input. Seliger (1983) found a correlation between turn-taking and language acquisition. According to Seliger (*ibid.*), learners who initiate and sustain their turns using high level input are more successful in language learning than those who produce low level input owing to their reluctance to take turns in the interaction. It should be noted here that Van Lier (2008) and Waring (2011) consider the initiation and extension of turns as learning opportunities. Seliger's finding gives rise to an important question: how can we encourage learners to take turns and produce high input in order to achieve successful learning? Seliger's finding might be seen to suggest that in order for this to take place (i.e., the initiating of turns and sustaining of turns by producing high level input), interaction must take the form of an authentic dialogue. Yeoman's (1996) definition of what constitutes authentic dialogue in foreign language classrooms is one that reflects relevance to learners' lives and affects. Yeoman's interpretation is drawn from Freire's (1972, cited in Canagarajah, 2005) critical thinking pedagogy, which aims at empowering learners through providing them with space to reveal their views about the world around them.

From the findings of the researchers discussed above, it is evident that 'authentic dialogue' does not mean simple discussions where learners share ideas and pass on information; it requires learners to express themselves on topics of emotional

relevance to them. To engage learners in such dialogue, they need to acquire the skills of critical thinking and the ability to use these skills in dialogue. An examination of research into classroom interaction reveals that only a few studies have placed emphasis on applying critical thinking skills, where learners analyse, synthesise and evaluate ideas, which in turn could improve the quality of talk (e.g., Benesch, 1999; Dantas-Whitney, 2002; Chen, 2010; Li, 2011). This paucity of research into quality of talk in relation to critical thinking is what inspired this study. It is worth pointing out here that the identification of critical thinking as a feature of dialogue is based on the work of educationalists who have studied classroom interaction in the context of first language acquisition.

In the field of education, several studies have highlighted the role of natural dialogue in developing learning in first language settings, giving 'dialogue' different names, as in Mercer's (2000) exploratory talk and Lipman's (1981) philosophy for children. Alexander (2005 and 2006) suggests the concept of dialogic teaching, which emphasises the role of teachers in facilitating dialogue through questioning, building on learners' ideas and encouraging them to build on one another's ideas. According to Alexander (*ibid.*) and other educationalists, mentioned above, engagement in classroom dialogue requires learners to link ideas, create meaning, pose questions and judge what they hear from others. In order for such engagement in authentic dialogue to take place, learners are required to use their Higher Order Thinking Skills (hereafter HOTS), namely, analysis, synthesis and evaluation, based on Bloom's (1956) taxonomy. It seems that the concept of natural dialogue that emphasises critical thinking skills goes hand in hand with the main purpose of the communicative approach to EFL learning, which is to produce meaningful communication. Therefore, it could be said that critical thinking is embedded within the communicative approach and is more of a language learning methodology than an approach.

The discussion above suggests that EFL classroom dialogue should engage learners in positive participation and provide them with both learning and thinking



opportunities. The notions of interaction and thinking are based on Vygotsky's (1978) socio-cultural theory, which views learning as processes of social interaction that occur between a child and others, when the child encounters a task that is slightly higher than his current level. Vygotsky believes that thinking affects the way an individual understands his social world, and this clearly highlights the link between an individual's thinking and social interaction.

In order for learners to participate in dialogue, they need to be willing to engage in the complex use of language. Language complexity as defined by Ellis and Barkhuizen (2005: 139) is “the extent to which learners produce elaborated language”. This means that learners should take the risk of participating using challenging language to extend their turns and ideas. In addition, arguments can occur in EFL dialogue, and learners need to learn how to express their agreement or disagreement in a polite way, through using pragma-linguistic markers (Nemeth and Kormos, 2001). However, further research is needed to examine how pragmatic competence, as in the appropriate use of argumentative markers, could be achieved in dialogue that is based on critical thinking. The examination of learners' language complexity including extended turns, ideas and pragma-linguistic markers is one of the aims of this study.

A third limitation is the shortage of in-depth investigations of the processes of implementing critical thinking pedagogy in EFL classrooms. Most of the existing studies have adopted the experimental design, in which experimental and control groups are compared according to particular variables. Examining how the processes of implementation could be modified and how implementation frameworks could be drawn from such processes would benefit the language classroom, and this is another aim of this study.

When studying classroom dialogue in order to gain deeper insights into the implementation of critical thinking pedagogy, it is worth investigating how this pedagogy could be used in a way that would facilitate not only participation but also the creation of positive attitudes among learners. Studies should take into consideration learners' attitudes and how their attitudes affect their willingness to participate in critical thinking dialogue, such as the relevance of topics to learners' lives, learners' relationships with the teacher and the context's readiness for applying critical thinking skills, and how these issues can obstruct or facilitate learning, points which have been considered in the present study.

## **1.2 Development of research ideas**

After beginning my MA studies at Newcastle University in the UK in 2007, I became interested in reading about EFL teaching approaches and methodologies, with the aim of bringing about a change in my own context, Saudi Arabia, when I return. I came across critical thinking in EFL in one of the modules; at that time this was a new area of study, as a debate was going on over the practicality of applying critical thinking in the EFL classroom. Atkinson's (1997) argument against applying critical thinking in foreign language classrooms increased my curiosity about how critical thinking might work in an EFL classroom, since it does not clash with the notion of meaningful communication that underpins the communicative approach. In addition, as mentioned in section 1.1 above, most studies had obtained positive results when learning and teaching had been designed around the concept of critical thinking. These positive findings seemed interesting to me, because opponents of applying critical thinking in EFL contexts rely on their own opinions or visions, while proponents of critical thinking rely on scientific evidence. However, the majority of these studies did not shed the light on the challenges of the application of critical thinking.

I started to search in my context to see how critical thinking is applied in the Saudi higher education sector. The National Commission for Assessment and Academic Accreditation (NCAAA), which is concerned with the development of higher education in Saudi, has emphasised the inclusion of critical thinking in higher educational degrees. However, I could not locate any guidance on including critical thinking on the NCAAA website. After carrying out more searches, more particularly with language institutes attached to Saudi universities, I found that critical thinking is highlighted in the objectives of these institutes. At most Saudi universities, students must pass a one-year compulsory English programme before pursuing their undergraduate studies in English. However, I could not locate any publication produced by any language institute in Saudi on the implementation of critical thinking for the purpose of developing classroom talk, language complexity and positive attitudes among learners.

I was interested in one particular language institute, Almanara institute, which is known for the support it has given to visiting researchers. According to their website, critical thinking was confined to writing and reading skills only. For this reason, I contacted them to investigate how critical thinking was viewed by members of the institute staff, with the intention of then designing a study based on the results of this investigation to compensate for what appeared to be missing (i.e., including critical thinking in the objectives of listening and speaking courses). The pilot study revealed that the institute does not provide teachers with guidance on how to implement critical thinking, and learners reported their need for discussion sessions to practise speaking, instead of relying on the textbooks that do not give them enough speaking opportunities (for more details on the context and pilot study, see Chapters 3 and 4). My examination of the understanding of critical thinking of people working within the context, and of the learners' need for improving their speaking skills, allowed me to devise my research questions.

### 1.3 Research questions

Critical thinking is a broad concept and it is difficult to investigate all aspects of this concept. The key components of this project are attitudes, quality of dialogue based on HOTS, language complexity and transferability of HOTS to other classes.

Thesis question:

- To what extent could critical thinking as a language pedagogy be applicable at Almanara language institute?

This question was divided into the four main questions below:

1. What are the attitudes of the students and their teacher regarding the implementation of the critical thinking pedagogy?
  - a. What are the students' attitudes towards the implementation of the critical thinking pedagogy?
  - b. What are the teacher's attitudes towards the implementation of the critical thinking pedagogy?
2. To what extent could this pedagogy raise/lower the quality of classroom dialogue?
  - a. What are the types and frequencies of teacher's utterance in dialogue?

- b. What are the types and frequencies of students' utterance in dialogue?
  - c. To what extent could critical thinking lessons take classroom talk beyond the traditional IRF sequence?
3. What are the effects of the critical thinking lessons on learners' language complexity in the pre- and post-tests?
- a. What are the results regarding the Mean Turn Length (MTL) in the pre- and post-tests?
  - b. What are the types and frequencies of utterances devoted to developing the quality of dialogue in the pre- and post-tests?
  - c. What are the frequencies of HOTS in the pre- and post-tests?
  - d. What are the frequencies of pragma-linguistic markers in the pre- and post-tests?
4. What evidence of transfer of critical thinking to other lessons is there?

Each research question is addressed in a separate chapter. Question one is addressed in Chapter 5, which deals with participants' attitudes based on data obtained from regular interviews, questionnaires and field notes of observations. Question 2 is addressed in Chapter 6, with each of the sub-questions being dealt with in a separate sub-section. Questions 3 and 4 are addressed in Chapters 7 and 8 respectively.

#### 1.4 Thesis structure and chapter outlines

This section presents a summary of the contents of each chapter in this thesis, starting with the literature review (Chapter 2).

*Chapter 2:* This chapter contains a review of the relevant body of literature. It starts with definitions of critical thinking and how it fits into an EFL classroom, taking into account studies conducted in this area and existing limitations. Following this, a definition of dialogue is provided, and the characteristics of dialogue are identified in relation to educational research. The discussion then moves to relate dialogue to the EFL context, taking into account the theories that underpin this project. The review sheds light on the role of affective engagement (i.e., attitudes) in language learning. The issue of transfer of critical thinking is discussed. The final section of the review highlights the limitations of research into the application of critical thinking in an EFL context and sets out the rationale for this project.

*Chapter 3:* This chapter provides readers with an overview of the study context – Saudi Arabia - in relation to the concept of critical thinking. Firstly, it addresses the meaning of critical thinking in Islam, since Saudi is an Islamic country where educational aims are closely linked to religion. Secondly, it reveals the status of critical thinking in higher education aims. Finally, a description of the language institute where the study was carried out is provided, based on my observations during the pilot study and final study.

*Chapter 4:* This chapter clarifies the epistemology and ontology underpinning this project. The research methodology and methods adopted for this study are explained. The chapter provides descriptions of methods used, sampling procedures and a discussion of ethical issues. It is also pointed out how the methods of data analysis changed over time, and the reasons for these changes.

*Chapter 5:* This is the first of the four results chapters. It deals with the results obtained to answer the first research question, concerning the attitudes of teacher and learners towards using critical thinking in the EFL classroom. The chapter first presents the results relating to the learners and then moves on to the responses obtained from the teacher. The results obtained from regular interviews with the participants are validated by integrating them with the data obtained from the questionnaires and from the observation field notes, which are also included to increase the objectivity of the findings.

*Chapter 6:* This chapter addresses the second research question, concerning the quality of classroom dialogue. Since this main question is divided into three sub-questions, the chapter is divided into three sub-sections. Each sub-section addresses one of the sub-questions developed from the second research question. The first two sub-sections (Sections 6.2 and 6.3) present a quantitative analysis of the frequencies and types of teacher and learner utterances in dialogue that took place throughout the study, that was divided into two phases, as described in Chapter 4 (methodology). The last sub-section contains a qualitative analysis of classroom talk informed by Conversation Analysis methodology (CA). The analysis focuses on how the pattern of interaction deviates from the classical Initiative/Response/Feedback (IRF) sequence, and on the extent to which classroom talk might allow thinking and learning opportunities to take place.

*Chapter 7:* The results relating to the third research question concerning the development of learners' language complexity are presented in this chapter. These results were obtained from pre- and post- tests that took place before and after carrying out the project. Different tests for measuring language complexity were employed in this study: measuring the Mean Turns Length (MTL), types and frequencies of ideas and types and frequencies of pragma-linguistic markers. Since the study is about critical thinking, levels of thinking in the pre- and post-tests were identified based on Bloom's taxonomy of HOTS, and their frequencies were compared.

*Chapter 8:* This is the last of the results chapters. It addresses the last research question, concerning identifying evidence for the transfer of critical thinking skills (i.e., HOTS) that occur in classroom talk to other classes involving the same learners and the same teacher, or the same learners and other teachers.

*Chapter 9:* This chapter contains a discussion of the findings in which all the results are connected and interpreted. It explains why some aspects of the project were considered beneficial to participants. Also, it explains why the project was seen as a challenge by participants, taking into consideration the related literature and the culture of the context. Finally, a proposed framework for implementing critical thinking in language institutes is given. The framework is designed through combining two existing frameworks with my reflections on this experience. Although the frameworks were not specifically designed for an EFL context, I found them applicable in and adaptable for this context.



*Chapter 10:* This is the concluding chapter that provides a summary of the research focus and findings, along with a discussion of their contribution to the wider context. The limitations of the present study are stated. Finally, recommendations for future research are made at the end of the chapter.

This chapter has provided an introduction to the research focus and research questions, and the organisation of this thesis has been presented. The following chapter (Chapter 2) presents a review of the relevant literature.

## **CHAPTER 2: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter contains a review of the literature on applying critical thinking as EFL pedagogy. It starts with a brief history of critical thinking as an approach for teaching and learning. The literature on the implementation of critical thinking in foreign language classrooms is then examined, and attention is drawn to some of the limitations of the existing literature. The issue of the quality of EFL classroom talk and learners' willingness to communicate in classroom talk is also discussed and related to critical thinking. The theory that underpins this study is highlighted. Finally, a brief summary of the chapter is provided.

### **2.2 Critical thinking in teaching and learning**

The concept of critical thinking has been widely emphasised in the field of education and it underpins various educational interventions that have been concerned with the development of cognitive skills and curriculum. Various definitions of critical thinking have been proposed. Educators and psychologists have been interested in understanding the cognitive domain of human being and identifying the intellectual skills that one can perform while thinking. First efforts of identifying the nature of cognitive skills go back to Bloom (1956, cited in Bender, 2003). Bloom classified cognitive skills into six levels of thinking and his classification is known as Bloom's taxonomy. These levels of thinking are: knowledge, comprehension, application, analysis, synthesis and evaluation. These thinking levels vary in their complexity. The lowest cognitive level is recalling information, and the second lower level is understanding the meaning of facts. The ability to apply acquired knowledge is known as application, which is the third lower level of thinking. Following the application phase, knowledge is analysed into parts in order to understand the relationship between these parts, and this analysis skill is considered as a higher level of thinking. Synthesis is another higher cognitive level which demonstrates the creation new meaning. Evaluation is the highest cognitive level that is manifested in judgments and is based on defined criteria (Bender, 2003). These higher levels of thinking have been referred to as HOTS in the literature.

Other scholars have identified more intellectual skills that an individual can perform, and have referred to HOTS as critical thinking. For instance, Ennis (1996: 166) defines critical thinking as ‘reasonable reflective thinking’. More specifically, he relates critical thinking to particular skills such as reflection, inferring, reasoning, evaluating and the like. According to Ennis, these skills can be learned independently and transferred to various domains, without associating them with any particular disciplines. Similarly, Paul (1982) emphasises the skills domain. He views a critical thinker as someone who has a deep knowledge of himself and can understand the world holistically. Siegel (1990) provides a definition that combines both the skills and the disposition domains. According to Siegel, critical thinking is a ‘reason assessment component’ and a ‘critical attitude component’ (Siegel, 1990:84).

The above definitions emphasise the skill of reasoning in the skills domain; however, other definitions identify additional skills. Critical thinking can be involved in making decisions (Dawes, 1988), solving problems (Mayer, 1992), in cognitive processes (Rabinowitz, 1993) or in argument analysis (Kahane, 1997). Halpern (1999) examines all the previous definitions and provides a broader definition that includes all previously identified components of critical thinking, as follows:

Critical thinking refers to the use of cognitive skills or strategies that increase the probability of a desirable outcome. Critical thinking is purposeful, reasoned, and goal-directed. It is the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions. Critical thinkers use these skills appropriately, without prompting, and usually with conscious intent, in a variety of settings. That is, they are predisposed to think critically. When we think critically, we are evaluating the outcomes of our thought processes—how good a decision is or how well a problem is solved. (Halpern, 1999: 70)

As appears in this definition, Halpern includes thinking skills and dispositions as the two components of thinking.

Educational interventions have also employed the concept of critical thinking. Among the many effective educational interventions are Lipman’s Philosophy for Children (1981) and Adey and Shayer’s (1994) Cognitive Acceleration through Science Education programme (CASE). The participants in these studies were

usually children. Educationalists and researchers highlighted the need for incorporating critical thinking across schools and all subjects for effective learning (McGuinness, 1999; Teaching and Learning Research Programme, 2006). Moseley *et al.* (2004) called for an investigation of the use of thinking skills interventions with post-16 learners who have not received sufficient attention.

The basis for several thinking interventions seems to have been Frier's critical thinking pedagogy, which emerged in the 1970s. His pedagogy represents a revolution against traditional education, which he referred to as 'banking education'. The pedagogy aims at raising learners' consciousness, so that they can empower themselves and take part in changing the world around them through dialogue. (Canagarajah, 2005). Dialogue among learners and teachers is the key towards empowering learners in educational institutions through providing them with space to express their feelings and fears (Friere, *ibid.*; Wachob, 2009).

Evaluating critical thinking can be complex. Bloom's taxonomy, which classifies cognitive skills into lower and higher levels of thinking, has been identified as one of the most dominant taxonomies used by educators for evaluating critical thinking in the classroom (e.g., Bissell and Lemons, 2006; Brookhart, 2010). The taxonomy classifies cognitive skills into lower and higher levels of thinking. The lower skills are knowledge, comprehension and application, while higher skills are analysis, synthesis and evaluation]. Due to the broad skills included in critical thinking, it is impossible for researchers to focus on all of them. I chose to adapt Bloom's taxonomy for my analysis. Although Bloom's taxonomy deals with limited HOTS and does not include all cognitive skills, I have found this framework more applicable to the types of skills that form the focus of my study (i.e. evaluation skills that emerged in classroom dialogue). The application of this framework has been straightforward as will be seen in Chapter 4.

The above outline of the application of critical thinking in the field of education generally leads into the following discussion of how it can be applied in EFL classrooms.

### 2.3 Critical thinking in EFL classroom

In Europe, some researchers and educational bodies have incorporated critical thinking into foreign language classrooms. For instance, in UK schools, the National Curriculum NC (DfEE, 1999) introduced thinking skills into Modern Foreign Language classrooms (MFL), and it was found that teaching students to think can help them to communicate in the new language, to produce various types of spoken and written language and to demonstrate creativity in using the foreign language. In addition, it has been found that thinking skills can facilitate language learning, as in the case of drawing inferences from unfamiliar language items and reflecting on links between languages (DfEE, 1999; Lin and Mackay, 2004). Such incorporation of thinking skills could develop learners' awareness of their progress and develop language autonomy (Lin and Mackay, *ibid*). Another example is a study by Allen (2004). The study investigated the engagement of US university students who were learning French as a foreign language in writing portfolios where they examined French cultural stereotypes. Findings revealed that the students appreciated writing portfolios which made them more aware of their metacognitive processes. There are many examples of such studies, but owing to the word limit of this thesis, I mentioned two examples to explain how the concept of critical thinking has been applied in both school education and higher education.

Having said that the critical pedagogy is based on the notion of learners' empowerment, learners need to feel empowered in the classroom to speak freely about their learning experiences (Norton, 2005). This includes involving learners in the decision-making of their language curricula and assessment, which is an essential key to success. Adding to this, teachers training programmes should enable teachers to realise the merits of criticality in the language classroom to facilitate their learners' empowerment. Norton (2005: 12) defines criticality as "incorporating explicit social critique into pedagogy and research, seeking to scrutinise and

transform inequitable social conditions and peoples' understanding of them". This definition indicates that language teacher's practice should bring equal power relations in the classroom (Norton, 2005) . Norton (*ibid.*) stresses that this pedagogy requires teachers to be motivated towards its application, as this will lead to successful implementation. However, this might be a challenging task for teachers who are powerless due to bureaucracy found in their contexts. This might raise the question of whether this pedagogy might succeed in contexts that lack equality in terms of power distribution.

The discussion now will focus on the application of critical thinking skills in non-Western contexts where English is taught as a foreign language. Atkinson (1997) claims that critical thinking is applied in particular subjects in Western contexts, where critical thinking is a social practice. He excludes the teaching of EFL in non-Western contexts from those subjects that might benefit from the critical thinking approach, his reason being that critical thinking is culture specific. Davidson (1998) refutes Atkinson's claim by stating that critical thinking could be found in any culture or context, but it is the degree to which this concept is applied that varies. Therefore, critical thinking should not be related to a particular culture (*ibid.*). This debate seems to be the start of relating critical thinking in non-Western contexts to EFL teaching and learning. Many linguists and language educators have examined the effects of critical thinking interventions on EFL teaching and learning. Most Studies started early 2000's, and the majority of existing studies were published between 2010 and 2012, as shown in Appendix A. Most of these studies have obtained positive findings from applying critical thinking in EFL classrooms. I have conducted systemic review of literature on implementing critical thinking in EFL classrooms. I used varieties of sources to access published studies. The following journals were included in the search:

TESOL Quarterly, ELT (English Language Teaching), Annual Review of Applied Linguistics, Foreign Language Annal, The Modern Language Journal, Language Teaching Research, International Journal of Applied Linguistics, Asian EFL,

TESOL Journal and Thinking skills and creativity.

Adding to these journals, databases were used such as Proquest which includes ERIC, Australian index, and British index. For conference proceedings, Procedia Journal was included. Also, DART was considered for European theses and e-thos for UK theses. Google scholar engine was employed for more results. The search focused only on studies carried out between 1990 and 2013; the reason for limiting the search to these years is that most key references on critical thinking emerged in the 1990s. The table in Appendix A summarises studies concerning critical thinking in foreign language classrooms and classifies them according to the methodology employed.

The table includes three types of study that have investigated critical thinking in foreign language classrooms. The first type adopted the experimental design, where pre- and post-tests were used to measure the effects of the interventions. Some of these studies included control groups for comparison, while others excluded such groups and applied the tests with the intervention groups only. The second type of these studies adopted the case study design, more specifically the single case study design. According to Nunan (1992), this type of case study design combines features of both the experimental and case study designs. The experimental feature is the implementation of interventions, while the absence of a control group and the in-depth investigation of interventions are the features it has in common with the case study design (see Chapter 4, sub-section 4.2.2, for more details on these two designs). A third type of study adopted the descriptive case study design, in which the critical thinking skills and dispositions possessed by learners are described and which do not involve the implementation of interventions.

The table shows that most studies have focused on introducing critical thinking for the purpose of developing writing and reading, either through carrying out classroom experimentation or as single case studies. These studies identified evidence of learning through employing pre- and post-tests or through analysing learners'

learning portfolios or on-line posts over the period of the study. The majority of these studies have highlighted the positive outcomes of the interventions. Studies that have thoroughly investigated the actual processes of the implementation and identified challenges and limitations associated with applying critical thinking, which could have brought more issues to the fore, are scarce. Although critical thinking might yield positive outcomes in non-Western contexts, it is possible to encounter difficulties during its implementation, which might lead to negative results. This is more likely to happen in contexts where power is not shared equally between educational authorities and other stakeholders, such as staff, students, parents and general communities. This study investigated the challenges of the critical pedagogy when applied in an educational context that follows a bureaucratic system and is characterised by gender inequality in terms of decision-making. More details about the obstacles of applying the critical thinking pedagogy in this study will be discussed in Chapter 9.

The literature also reveals that there are still unexplored areas involving the incorporation of critical thinking into the EFL classroom. For instance, only a small number of studies have examined the effects of critical thinking as a language pedagogy on the quality of classroom dialogue (Benesch, 1999; Fairley, 2009; Li, 2011), a limitation which provided one of the rationales and the purpose for this study.

The limitations revealed in the literature lead to the following questions: What obstacles might arise during the implementation of critical thinking for learners? How flexible would the critical thinking pedagogy be for language teachers? Is the critical thinking pedagogy more appropriate for teaching and learning some language skills than others? The first two of these questions provided another rationale for this study. I will now explain how the critical thinking pedagogy fits into the communicative approach in EFL contexts.



### *2.3.1 The link between critical thinking and the communicative approach*

In the 1980s the communicative approach to language teaching and learning was implemented in preference to other approaches. This approach goes back to the theory of communicative competence developed by Hymes (1972, cited in Richards and Rodgers, 2011), which refers to both knowledge and ability in using language. It prioritises the conveying of meaning through communication and puts less emphasis on producing correct grammatical structures (Littlewood, 2011).

The aim of this approach is to facilitate language teaching and learning through natural communication (Littlewood, 2011). Researchers have identified the principal features of authentic communication, which is characterised by the negotiation of meaning, in which speakers check for confirmation and request clarification (Nunan, 1987; Seedhouse 2004; Walsh, 2011). Encouraging authentic communication in EFL classrooms could provide learners with opportunities to learn the new language, not only through the negotiation of meaning (Walsh, 2002), but also through initiating turns (Van Lier, 2008; Waring, 2011). The issue of learning opportunities will be extended in Sub-section 2.3.4.

Further studies identified the interaction patterns in natural classroom communication. These studies called for a move away from the traditional sequence known as Initiative/Response/ Feedback (hereafter IRF), which had previously dominated classroom interaction (Pinkevičienė, 2011; Li, 2011). In this pattern the teacher initiates a question, a student responds and the teacher gives feedback in the form of either a positive or a negative evaluation. In natural communication, interaction should move away from this restrictive pattern. Luk (2004) observed the patterns found in natural communication in a language classroom and found that learners made most of the initiative moves. This suggests that authentic classroom interaction should take the form of a dialogue in order for successful participation and learning to be achieved (Pinkevičienė, 2011). Before examining more deeply the link between critical thinking and the communicative approach, I will first clarify the meaning of dialogue and its characteristics on the basis of the work of key

educationalists (e.g., Alexander, 2006; Myhill, 2006; Brown and Kennedy, 2011). These definitions of dialogue will then be related to the EFL context.

### *2.3.2 Dialogue in the classroom*

The word dialogue is derived from the Greek word *dialogos*, in which *dia* means ‘through’ and *logos* means ‘the word’ (Bohm, 2004). In the field of education, the concept of dialogue and its application in classrooms for the purpose of effective learning have been highlighted. Bakhtin (1986) views dialogue as the social communication of meaning in order to understand one self and others. Alexander (2005 and 2006) builds on Bakhtin’s ideas and highlights the advantages of using dialogue in learning. For instance, dialogue provides learners with opportunities to reveal their communicative competence and learn the power of questioning and explanation. Regarding the features of effective dialogue, Alexander (*ibid.*) states that effective dialogue is characterised by the teacher’s building on learners’ responses, rather than providing a mere evaluation of their responses, and by the merging of social and learning talk. In dialogue, learners cooperate rather than compete with one another. The fact that authentic dialogue possesses these characteristics means it is likely that learning will occur when it is encouraged in the classroom. In order to achieve the objectives of effective learning, Alexander proposed a method known as dialogic teaching, which highlights the role of the teacher in facilitating talk. Alexander (*ibid.*) highlights the importance of teachers’ challenging questions (e.g., what, why and how) in dialogic teaching. The aim of these questions is to empower learners and involve them in active inquiries. This idea by Alexander draws on Mercer’s (2000) notion of exploratory talk where learners are encouraged to use their reasoning skills to arrive at conclusions (i.e., through teachers’ elicitations’ strategies).

Brown and Kennedy (2011) build on Alexander’s concept of dialogue by suggesting a model that represents effective dialogue, through an examination of the quality of dialogic teaching and learners’ involvement in dialogue. They have identified features of teacher’s talk that occur in dialogic teaching such as building on learners’ talk and making conversational links (i.e., linking students’ input, passing ideas from

one student to another, and passing ideas from one student to the whole class). These types of talk by the teacher go beyond the mere evaluation of learners' ideas. The teacher engages in these types of talk to facilitate and maintain the flow of talk. Similarly, these researchers have identified types of student talk that occur in dialogue, such as initiating an idea by a learner, building on the teacher's idea, building on their own idea with the teacher and building on another learner's idea. The identification of these types of utterance has revealed that learners do not simply provide expected responses to the teacher's questions. In order to engage learners and teachers in effective dialogue, cognitively challenging tasks should be presented in the classroom (Alexander, 2005). Schwarz *et al.* (2004) identify critical thinking dialogue as the type of talk that reveals the interlocutors' commitment to accommodating different views.

In studies in the EFL context, there has been an increasing emphasis on promoting classroom dialogue (Nemeth and Kormos, 2001; Fairley, 2009; Pinkevičienė, 2011; Li, 2011). These studies have focused specifically on how critical thinking activities can encourage the application of HOTS and thus increase learning opportunities and participation in class discussions. The findings from these studies suggest that meaningful communication is not only about exchanging simple messages. Introducing dialogue to any class can be challenging (Dillon, 1988). It seems to be more challenging in an EFL classroom because learners are required to engage in sequences of active talk in order to build and initiate dialogue using a foreign language. Given the inherent difficulty of doing this, it is unsurprising that such sequences rarely occur in a foreign language classroom (Luk, 2004). It seems possible that critical thinking pedagogy would work for learners who have reached a level that enables them to communicate in the foreign language. However, even learners who have not reached such a level can employ peer scaffolding and their first language (L1) to overcome such problems. Teachers should allow L1 in the communicative classroom to facilitate communication (Raschka *et al.*, 2009).

### 2.3.3 Language complexity and pragmatic development

Learners' involvement in dialogue requires them to engage in the complex use of language. Ellis and Barkhuizen (2005) identified learners' language complexity as their taking of risks in order to extend their turns. Complexity is not limited to the length of turns. There are five measures of complexity: interactional (measured by calculating the length of turns per individuals); propositional (measured by coding ideas as units of analysis); functional (in which the functions of words are used as the units of analysis); grammatical (which can be measured by the total number of clauses divided by the total number of AS units), and lexical (which measures the total number of words of a particular type divided by the total number of words in the written text) (*ibid.*). In this study, I adopted the interactional, functional and propositional measures identified by Ellis and Barkhuizen (*ibid.*), for reasons that are explained in Chapter 4.

In order for learners to extend their ideas and evaluate others' ideas in dialogue, they need to use particular linguistic markers, such as agreement or disagreement markers and opinion expression phrases (Nemeth and Kormos, 2001) that can help them to convey their ideas clearly and make their talk meaningful and coherent at the same time. These markers which have particular functions are known as pragma-linguistic markers (*ibid.*). I will explain here the meaning of pragmatics and how it fits in EFL dialogue. Pragmatics is defined by Crystal (1997: 301) as "the study of language from the point of view of users, especially of the choices they make, the constraints they encounter in using language in social interaction and the effects their use of language has on other participants in the act of communication." Pragmatics focuses on how communicative actions are used by language users, such as in making requests, apologies and complaints (Rose and Kasper, 2001). It is an aspect of communicative competence which refers to the ideal use of language by its speakers (*ibid.*).

Therefore, involving learners in dialogue might develop their pragmatic competence when modeling is provided. Training learners for using pragma-linguistic markers

can help them to create native-like talk and can facilitate their communication with native speakers.

It seems that it would be helpful to involve the pragmatic aspect of learners' language when examining their use of complex language. In a study conducted in 2001, Bardovi-Harlig found that there is a relationship between the length of turns, which is an aspect of language complexity, and pragmatic development. Also, learning pragmatics could be facilitated if taught through authentic audio-visual input (Alcon, 2005; Takahashi, 2001). It should be noted here that there are limitations associated with the concept of pragmatics. Firstly, it is difficult to develop pragmatics among learners of English as a foreign language (Washburn, 2001; Grant and Starks, 2001; Alcon, 2005; Martinez-Flor, 2007). Secondly, there is no standardised test for measuring learners' pragmatic ability, and the design of tests is left open to researchers (Soler and Martinez-Flor, 2008).

The discussion mentioned in this section indicates that critical thinking is a methodology that draws on the aims of the communicative approach, which prioritises meaningful communication and is based on the application of HOTS (i.e., analysis, synthesis and evaluation) for developing the quality of classroom talk. According to publications on EFL teaching and learning approaches, critical thinking is not recognised as a stand-alone approach (see, for example, Richards and Rogers, 2003; Hinkel, 2011). Therefore, critical thinking could be defined as a pedagogy that is shaped by the context of the application (Alexander, 2005). The fact that recent studies have found that critical thinking can promote EFL teaching and learning means that this pedagogy could become an independent EFL approach in the future, in a similar way to the task-based approach, which emerged as a form of the communicative approach and has now become an independent approach. Now I will discuss in-depth how complexity can create space for learning and thinking.

### *2.3.4 Language complexity and opportunities for thinking and learning in*

#### *classroom talk*

This study is concerned with learners' engagement in classroom dialogue that is characterised by the complex use of the language, a feature which requires learners to exploit learning opportunities and apply HOTS, and with the identification of the teacher's strategies for creating such opportunities. As already explained in subsection (2.3.1), Walsh (2002) defined learning opportunities as opportunities for meaning negotiation. Van Lier (2008) and Waring (2011) extend the notion of learning opportunities to include learners' initiatives (i.e., initiating a sequence, volunteering a response and exploiting an assigned turn).

Waring's (*ibid.*) understanding of initiatives and exploiting turns is similar to Brown and Kennedy's (*ibid.*) features of meaningful dialogue, where learners build on their own and others' ideas. These features of dialogue seek the attainment of knowledge. In the current study learning opportunities were examined through combining Van Lier's (*ibid.*), Walsh's (*ibid.*), Waring's (*ibid.*) and Brown and Kelley's (*ibid.*) interpretations of what might constitute learning opportunities that would lead to knowledge construction (Mercer, 2000).

A few researchers highlight the importance of thinking in developing the quality of talk (Li, 2011). Learners need to be given opportunities to think about what they hear and what they say through applying HOTS. Such opportunities could develop positive attitudes on the part of learners towards the role of critical thinking in their learning. For instance, tolerance of ambiguity is an aspect of critical thinking that thinking activities try to reinforce in learners. It refers to learners' feelings of comfort in ambiguous contexts, such as a context in which figurative thinking is required. Tolerant learners are more successful in language learning (Norton, 1975; Littlemore and Low, 2006).

## 2.4 Willingness to communicate in the EFL classroom

Willingness to communicate refers to learners' readiness to enter into discourse with a specific person at a specific time. It depends on various variables, such as the interlocutor's personality, context, topics, tasks, anxiety and a host of other variables. However, willingness to communicate in L1 does not necessarily imply willingness to communicate in L2 (MacIntyre *et al.*, 1998: 547). EFL researchers have identified factors that might affect learners' willingness to participate in class talk, such as types of activities, learners' levels (beginners or advanced), cultural constraints and familiarity of topics and their relevance to learners' lives (see Wintergerst, 1994; Mora, 1995; Staib, 2003; Kang, 2005; James, 2006). Also, some studies have found that learners' willingness might increase in whole class discussions (Cao and Philip, 2006; Leger and Storch, 2009). Nazari and Allahyar (2012) identify teachers' role in talk as another factor that can increase learners' willingness to participate, such as providing students with appropriate waiting time and asking referential questions that promote HOTS.

Another important factor that affects learners' willingness is their attitudes towards learning (Cao and Philip, 2006). Attitudes are "an evaluative integration of cognition and affects experienced in relation to an object. Attitudes are the evaluative judgement that integrates and summarises these cognitive/affective reactions" (Crano and Prislin, 2006: 347). According to this definition, attitudes include thoughts or beliefs. A further clarification of the differences between the two concepts beliefs and attitudes is pointed out by Edwards (1994). Belief is a component of attitudes, and it refers to the respondent's cognitive domain. On the other hand, attitudes refer to respondents' dispositions of likes or dislike that shape respondents' thoughts, feelings and behaviour (*ibid.*). Learners' attitudes towards a particular language can affect the decline or spread of this language (Edwards, 1995). For instance, learners might like to learn languages that have a prestigious status or political power, such as English which had spread in English colonies. However, learners' attitudes might differ from their beliefs. For instance, low achieving EFL learners might believe that English is an important language, but they hold negative attitudes towards learning EFL due to its complexity for them. Attitudes are measured by quantitative measures

(e.g., Likert scales), self-reports, which include feelings or beliefs and observation of behaviour (Oskamp, 1977).

The effect of contexts on learners' willingness has been a matter of debate. It has been generalised that Asian learners avoid communication in L2 (Liu and Littlewood, 1997). However, positive findings from research and educationalists' observations have proved that this concept about Asian learners or learners from any other contexts, like the Middle East, is no more than a stereotype (see Liu and Littlewood, 1997; Kumaravadivelu, 2003; Al-Murshed, 2010).

Yeoman (1996) contributes to the discussion on how to increase learners' willingness to talk by emphasising the need to empower learners, so that they will become involved in meaningful learning. This view supports Peirce's (1989) claim, which states that politics and society should be empowered first if we want to empower learners. Yeoman (*ibid.*) adds that empowerment could change the teacher-student relationship and dialogue would become more authentic. This idea accords with the aim of the communicative approach.

Yeoman's interpretation of authentic dialogue thus goes beyond the sole relevance of talk to learners' needs and interests. It is broader than this as it addresses the issue of power that reflects the learners' relationship with the world around them. Yeoman's interpretation is drawn from Freire's critical pedagogy (see Section 2.2 above). In the field of EFL, some researchers have realised the need for empowering learners in the language classroom through providing them with opportunities to take part in decisions regarding textbooks, assessment and other aspects that might affect their learning, and such considerations can help learners to become independent (Moreno-Lopez, 2005). It is also important to make learners aware that achieving high marks is not the ultimate goal of learning, and it is the quality of their learning that matters (Lamey, 2009). The point I am making in this discussion is that empowering learners might facilitate their willingness to communicate in critical thinking dialogue. The outcome of empowerment is facilitating the transfer of critical thinking skills. The concept of transfer is further explained in the section below.



## 2.5 Transfer of critical thinking skills

Haskell begins his book *The Transfer of Learning* with a definition of the word *transfer*. “Transfer of learning is our use of past learning when learning something new and the application of that learning to both similar and new situations...Transfer of learning...is the very foundation of learning, thinking and problem solving” (2001: xiii ).Marin and Halpern (2011) highlight the importance of transfer as a key component of the critical thinking approach and identify transfer as the ultimate goal of this approach as used in education. For Marin and Halpern (*ibid.*), the transfer of thinking skills relies mainly on the explicit teaching of these skills. Billing (2007) examines in details the conditions that should be met to achieve transfer, more particularly the transfer of problem solving skills. One of the conditions for enhancing transfer is learning principles and concepts should receive more emphasis than learning facts. Self-monitoring can enhance the learning of concepts. Another condition is for learning to take the form of cooperation among all members of the class, including the teacher, accompanied by the teacher’s feedback. Also, providing learners with training examples can increase transfer opportunities, particularly when accompanied by reflection. Adding to Billing’s (*ibid.*) conditions, Staib (2003) and James (2006) point out the importance of discussing topics relevant to learners’ lives when transfer is the aim of teaching.

Transfer can be of two types: ‘near’ (e.g., within the same type of problem in the same subject domain) or ‘far’ (e.g., between domains). Another classification is related to the processes of transfer: ‘low road’ transfer, which results from extensive practice, and ‘high road’ transfer, which results from learners’ understanding of a concept (Perkins and Salomon 1987: 290).

Carraher and Schliemann (2002) claim that transfer has failed in many studies because identifying evidence of transfer is not a straightforward process. However, a few studies have identified such evidence (e.g., Resnick and Collins 1994). Wade and Reynolds (1989) believe that transfer does not occur when metacognition is excluded. This indicates that transfer should not be rejected as a component of the

critical thinking approach, nor should it be excluded from studies that investigate this approach.

It should be noted that teaching metacognitive skills, which is a requirement for transfer to occur, can be challenging, although some studies have succeeded in introducing metacognition (e.g., Volet, 1991; McCrindle and Christensen, 1995). This task seems to be more challenging in contexts where reflection is excluded from educational policies and curriculum, as might be the case in Saudi Arabia (Alabdelwahab, 2002).

The sections above are discussions of the main issues in EFL dialogue and willingness to contribute to classroom talk, in relation to the concept of critical thinking. I will now shed the light on the theory that underpins the current study.

## **2.6 Language learning: socio-cultural theory**

The two words ‘language’ and ‘learning’ have broad implications. Seedhouse (2010) suggests that any study on language acquisition or learning should clearly define these two words in order to clarify which aspects of language and learning the study is examining. According to Cook (2010), language can refer to various concepts: language as a species-specific system, language as a set of abstract ideas, language as a unit of sentences, language as the shared practice of a community, language as cognitive knowledge and language as action. The last meaning is relevant to the scope of this study. The meaning of language as action refers to individuals’ competence in communicating with native or non-native communities. Therefore, this definition of language includes both language as a community practice and language as a set of sentences (Cook, 2010). This view of language seems to be underpinned by socio-cultural theory.

Socio-cultural theory originated with Vygotsky (1896-1934). Vygotsky (1978) defines learning as the creation of meaning through social interaction. This theory emphasises the cooperation between the teacher and the learners and the cooperation among the learners themselves in constructing meaningful learning (Williams and

Burden, 1997). Vygotsky's main contribution was the notion of the Zone of Proximal Development (ZPD), which refers to the learner's ability to perform higher mental functions with the assistance of others (*ibid.*). Socio-cultural theory has been widely used by second language researchers because it provides "a psycholinguistic explanation of the socio-cultural circumstances and processes through which pedagogy can foster learning that leads to language development" (Nassaji and Cumming, 2000: 97).

According to Nassaji and Cumming's (*ibid.*) definition, socio-cultural theory explains the processes of language learning. The meaning of learning, according to this theory, is therefore different from the meaning provided by cognitive theories, which view learning as a product and seek to identify evidence of language acquisition (Seedhouse, 2010). Sfar (1998) defines these two perspectives on examining learning as 'learning metaphors' and states that separating the two views can be difficult. Ellis (2010), who has a similar view to Sfar, claims that it is not possible to separate acquisition from learning, since according to him, "Interaction constitutes the site where acquisition either arises or is initiated, and that, by Interaction, I have meant 'social interaction'...acquisition entails social interaction. However, acquisition is not dependent on social interaction." (Ellis, 2010: 50)

The above definition by Ellis suggests that interaction can facilitate acquisition. In addition, since socio-cultural theory is concerned with examining learning processes, changes or development in learning can be identified. This indicates that acquisition and process are not separable concepts. Seliger (1983) found that there is a relationship between interaction and language acquisition. In other words, high quality interaction leads to language acquisition. In order to combine these concepts, Ellis (*ibid.*) suggests adapting sociocognitive theory, which includes both acquisition and process.

Since this study examines changes in the quality of classroom dialogue taking place while implementing the critical thinking pedagogy, I adopted socio-cultural theory to develop my understanding of this pedagogy by examining how interlocutors interact with one another to communicate particular views and verbalise their thinking,

taking the context into consideration, and by examining how the processes of learning might facilitate acquisition.

I have explained above what is meant by learning, as the term is used in this study, from a socio-linguistic perspective (i.e., learning as a process). The focus now is turned on what might be considered to be a 'learning opportunity'. Kumaravadivelu (1994) encourages teachers and educators to provide learners with more learning opportunities.

It is customary to distinguish teaching acts from learning acts, to view teaching as an activity that creates learning opportunities and learning as an activity that utilises those opportunities. If we, as we must, treat classroom activity as a social event jointly constructed by teachers and learners (Breen, 1985) then teachers ought to be both creators of learning opportunities and utilisers of learning opportunities created by learners. (Kumaravadivelu, 1994:33)

The types of learning opportunity seem to vary from one discipline to another. In the field of EFL classroom interaction, researchers have discussed how learning opportunities can be created. For instance, Walsh (2002) recognises the negotiation of meaning as a learning opportunity. Waring (2011) identifies taking the initiative as an opportunity (see sub-section 2.3.4 of this chapter). Spolsky (1989) mentions conditions that can develop language learning, and some of these conditions include opportunities for analysing the new language. The learning opportunities identified by these researchers require learners to apply their cognitive skills in order to participate. This indicates a close link between participation and thinking. Creating learning opportunities that encourage learners to apply their HOTS might increase their participation in the learning process and develop the quality of their learning.

Although socio-cultural theory has been applied widely in EFL research, it has received criticism. One of the criticisms is that the theory does not allow for explaining the processes of internalising knowledge (i.e., the cognitive processes), and that it can only measure lexical and grammatical features (Mitchell and Myles, 2004). Also, it is difficult to observe learning or claim that learning takes place

during talk, and the reason for this is that most studies have examined learning processes rather than acquisition (*ibid.*). However, it is argued that evidence of learning could be identified in social interaction through tracking the changes in interaction patterns or learners' abilities to mediate talk (Ohta, 2010). In this study, evidence of learning was identified through examining changes in the quality of classroom talk, from qualitative and quantitative standpoints (i.e., by identifying interactional patterns that deviated from the traditional IRF pattern and by identifying learning opportunities that occurred, as reflected in particular types of interlocutors' utterance that fit under the category of dialogic talk).

## 2.7 Summary

In this chapter a review of the relevant literature on critical thinking and dialogue in the EFL classroom has been presented. The status of critical thinking in the field of EFL has been described. Studies conducted in the EFL context have also been discussed, and various limitations in the available literature have been highlighted. The issue of developing high quality EFL classroom talk and willingness to participate in such talk were targeted. The review also included a discussion of the theories that underpins the current study. In the following chapter, an overview of the study context is provided.

## **CHAPTER 3: OVERVIEW OF THE STUDY CONTEXT**

### **3.1 Introduction**

This chapter sheds light on the context of this study - Saudi Arabia. First, the chapter explores the meaning of critical thinking in Islam, which underpins education and society in the Kingdom. Before going deeper into the status of critical thinking in higher education in the country, a brief review of the history of Saudi Arabia is presented. The aims related to critical thinking in the higher education sector in Saudi are identified and problems associated with implementing this concept are highlighted. In the last section of the chapter the English language institute where the study was conducted is described. The status of critical thinking in this institute and the extent to which it was interwoven in language courses are examined. I observed the context during both the pilot study and the final study in order to be able to present a comprehensive picture of the context: the administration, teachers and learners, with the aim of helping readers to understand why implementing critical thinking would be challenging.

### **3.2 Are critical thinking and creativity absent from Islam?**

A reader from a non-Islamic background might think that critical and creative thinking would be alien concepts in Islamic countries. Some might think that religion could stand as a barrier to this type of thinking. At one of the conferences where I presented my project, a member of the audience asked: “Why did you choose to examine critical thinking in your country, which is religious? Why did you not try something else?” The purpose of this section is to demonstrate that the concepts of critical and creative thinking do exist in Islam, and to rectify misconceptions about Islam in relation to critical and creative thinking. During periods when Islam was flourishing, it did in fact open doors to critical thinking and creativity, and claims that this type of thinking is limited to Western contexts are grossly exaggerated. The following discussion explores how critical and creative thinking are viewed in Islam and Islamic culture.

One has only to read the verses of the Quran or the Islamic instructions that are based on the Prophet's sayings to see that they encourage both critical and creative thinking. Alkharasneh and Saleh (2010) argue that in His words to them, Allah (God) encourages people to use their creative thinking. These authors (*ibid.*) classify the methodologies by means of which the Quran tries to promote creative thinking. Owing to limitations of space, I will only briefly mention some of these methodologies. One method of encouraging creativity is travelling. "Say: Travel through the earth and see how Allah did originate creation; so will Allah produce a later creation, for Allah has power over all things" (Quran 29: 30). The word 'travel' here bears two meanings: literal (going around the world) and symbolic (thinking and imagining) (Alkharasneh and Saleh, 2010). The verse means that Allah wants people to think deeply in order to recognise His power. Another methodology is seeing. "Do they not look at the camels, how they are made? And at the sky, how it is raised high? And at the mountains, how they are fixed firm? And at the earth, how it is spread out? Therefore do thou remind for thou art one to remind." (Quran 88: 17-21). This verse describes reflection on Allah's creation, which demonstrates His existence and power. I would add that recognising Allah's existence by examining evidence of His power requires analysis, synthesis and reflection, which are features of critical thinking. The concept of reflection (*yatafakkaroun*, or 'thought' as in the following quotation), which is another methodology, is clearly referred to in the Quran (*ibid.*). "It is He Who sends down rain from the sky: from it ye drink, and out of it (grows) the vegetation in which ye feed your cattle. With it He produces for you corn, olives, date-palms, grapes, and every kind of fruit, verily in this is a sign for those who give thought" (Quran 16:10- 11). This is a message to people to use their reflective skills to recognise Allah's existence.

Islam has been open to applying notions based on critical and creative thinking. Muslim scholars have been allowed to practise *ijtihad*. *Ijtihad* refers to the finding of creative solutions by Muslim scholars to any kind of problem an Islamic society might face as a result of social and economic changes (Alkharasneh and Sale, 2010; Manji, 2009). The initiation of new solutions requires the analysis of solutions

currently operating, which again involves critical thinking. However, in recent years the practice of *ijtihad* has been limited to particular scholars, as religious authorities think that it might lead to differences of opinion and might break the unity of Muslims (*ibid.*).

Critical thinking and creativity were evident in all aspects of the life of Muslims during the heyday of Islam. Another demonstration of the way in which Islam encourages creativity may thus be seen in the development of the Islamic world during the early years when Islam was flourishing. The Islamic empires: the Abbasid (750-945 AD), Andalusian (756-1492 AD), Ottoman (1453-1922) and Persian (224-1979 AD) empires, developed remarkable civilisations over the centuries, although the Persian civilisation had begun before the spread of Islam. During these periods, all aspects of life: art, education, architecture and scientific and medical inventions, were flourishing (Morgan, 2007).

The first word that the Prophet Mohammed (peace be upon him) received from Allah was “Read” (Quran 96: 1-3). During the Prophet’s time many people were illiterate and they started to learn to read and write in order to study the Quran. During the Abbasid empire, Muslims found Greek philosophy appealing and they translated Aristotle and Plato’s work into Arabic. Also, the writing of fiction became popular and stories such as *The Thousand and One Nights* were translated from Arabic into other languages (*ibid.*). The first universities in the Islamic world: *Dar Alhekmah* in Bagdad and *Alqairawan* in what is now known as Morocco (*ibid.*), were also built at this time.

Muslim scientists have contributed to the development of medicine and science. For instance, the supply of blood to the heart through vessels was first explained by Al-Nafis (1213-1288 AD). The 200 publications on chemistry by Jabir ibn Haiyan (721-815 AD) enriched this field. Al-Kindi (801-873AD) continued ibn Hayan’s work and contributed additional works on the creation of perfumes and aromatic oils.



However, the influence of Islam started to decline after the fall of the Ottoman empire. Various parts of the empire declared their independence. Wars broke out between countries and this had a negative influence on the level of education in most parts of the Islamic world. It could be said that wars, economic decline, politics and a lack of freedom all led to the decline of creativity in Islamic countries.

In summary, the points made above indicate that in every culture, whether Western or non-Western, one can find aspects of creativity and critical thinking, and that these concepts are not to be associated with any particular race or ethnicity. The next section introduces critical thinking in the Saudi higher education sector.

### **3.3 Critical thinking in Higher Education in Saudi Arabia**

#### *3.3.1 Brief history of Saudi*

In 1932 King Abdul-Aziz ibn Saud unified most parts of the Arabian Peninsula into one country under the name Saudi Arabia. It is located between Iraq and Jordan in the north and Yemen in the south. Saudi's eastern borders are Kuwait, Bahrain, Emirates, Qatar and Oman, and it overlooks the Red sea on the west. The country has maintained a Religious status over many centuries as it was the birth land of Islam. It has been known as the land of the two holy mosques. Millions of Muslims visit Saudi every year to perform the Hajj, a religious event. Such status requires the country to provide an ideal model for all Muslim countries in terms of following Islamic instructions and unifying Muslims. Since peace is the main message of Islam, Saudi's priority is to have a peaceful relationship with Muslim and non-Muslim countries. The country's efforts towards creating a positive image about itself is known as 'soft power' (Gallarotti and Al Filali, 2013). The other type of power that Saudi maintains, as claimed by Gallarotti and Al Filali (ibid.), is 'hard power' which refers to the production and exportation of oil (ibid.). Saudi is one of the world largest oil producing countries and this power has put Saudi among the OPEC (i.e., The Organization of the Petroleum Exporting Countries) and the 20G countries (i.e., a group of finance ministers from 20 countries that have developed economic strength). This part reveals that Saudi enjoys power at the international level.

Speaking of power at the national level, I will overview the social structure and life in the Saudi society, followed by the identification of the three sources of power. The population in Saudi, according to 2013 estimate, is 26 millions and approximately 5 millions are non-nationals (CIA, 2013). Saudi is a multicultural society where citizens have come from various ethnic groups (e.g., Arabs, Asians and Africans). Saudi has been the destination of immigrants from many parts of the world, such as china, Turkistan, Pakistan, India and Nigeria, who came to the country in the past as workers or refugees. They settled in Saudi and influenced the society with their customs, food and clothes, and they participated in the development of the country.

Saudi is a country of economic strength, as stated above, and significant efforts have been paid towards modernisation, including the introduction of technology and social networks. Citizens have access to most social networks like twitter, facebook, and can watch TV channels from all over the world. The availability of such social networks and media has enabled Saudi citizens to be in tune with the world around them. Adding to this, there is a space for criticising authorities through the media; however, criticism should not offend religion or the King. One example of such criticism opportunities is a daily TV show called '8' which is broadcast at 8:00 pm. The aim of this show is revealing corruption in the society through interviewing citizens and authorities to discuss these issues with them. A related show to this thesis is a TV show called 'Reflection'. It brings examples of modernisation in European countries and Japan to increase Saudi citizens' awareness of how reflection leads to modernisation and encourage them to make a serious move towards developing their country. The show name is derived from the Arabic word 'yatafakkaroun' which is translated into the English word 'thought' in the Quranic verse "this is a sign for those who give thought" (Quran 16:10- 11), a point discussed previously in Section 3.2. The show does not address Saudis only, but it is directed to all Arabs.

I will discuss now the three sources of power in the country and how decisions are made. According to Islam, no one person can take all power and that Muslims should collaborate to come up with decisions that benefit the Muslim society. “Those who hearken to their Lord, and establish regular prayer; who (conduct) their affairs by mutual consultation” (Quran: 38). This notion of consultation or shura, the Arabic word, in Islam reveals democracy. Based on this Islamic instruction, Saudi Arabia has established Majlis Alshura in 1927, which is a council of consultation consisting now of 150 members.

This council represents the legislative body that governs the country. The main task of the council is to establish the country’s policies and discuss and revise plans for economic and social development in the country in accordance with Islamic legislations. Another powerful entity that regulates the country is the judicial body, as represented in courts. The responsibility of this authoritative entity is to administer justice according to Islamic regulations, and it is ruled by judges. The executive body ensures the execution of policies and laws issued by the legislative and judicial authorities. This structure shows that power in Saudi Arabia is distributed and shared among the three branches: legislative, judicial and executive. The distribution and share of power among Muslims is drawn on Islamic basis, because Islam encourages democracy, as explained previously. Another effort for spreading justice in the country has been made by His Majesty, King Abdullah Al-Saud. The King keeps his doors open to his people to listen to their complaints. This concept of the open doors has been originated in the early days of Islam by Prophet Muhammed (peace be upon him).

However, despite this openness, there are barriers to the equal distribution of power. Concerns have been raised regarding some departments run and supervised by the executive branch, and corruption has been identified as the main threat to the country’s development. For instance, many projects have been delayed for unclear reasons and a leaked list of bribes appeared on the media. For this purpose, the King has given his permission and support to establish the National Anti-Corruption Commission (Nazaha) to investigate corruption in the country. The issue of

corruption is discussed openly in the country as discussed above. The main problem that encounters Nazaha is that some departments resist to cooperate with Nazaha regarding the revelation of corruptions.

The educational system in Saudi, which is related to the focus of this study, keeps hold of bureaucratic power that has negatively affected the level of education and the development of many educational projects (Althumairi, 2013; Smith and Aboummah, 2013). The Saudi education is characterised as traditional and is based on memorisation of textbooks (Al-Seghayer, 2013). The result of such education is the lack of self-criticism in the Saudi society (*ibid.*). The next sub-section (3.3.2) discusses the issues of bureaucracy and the unequal access to power in Saudi HE.

### *3.3.2 Higher education system in Saudi*

I will discuss the hierarchal structure of HE to understand how decisions are made. The Council of Higher Education is the highest authority in Saudi higher education. The duty of this council is to dictate educational policy, admission rules and the establishment of new HE institutes. The council is chaired by the King. The Ministers of HE, Education, Civil Service, Finance, Social Affairs are all members of the council. The MOHE represents the second level of governance, and its role is to ensure the execution of all policies and decisions made by the Council of Higher Education. The MOHE supervises the By-Laws of the Saudi Council of Higher Education and Universities, which is the third level of governance that regulates all Saudi universities. Each university is run and supervised by a University Council on daily basis. The University President, Vice President, Deans are members of the University Council. The council governs the university at the internal levels, such as staff appointment, scholarship approval, assigning curricula and the establishment of new departments. The quality of teaching and learning is assessed by the Scientific Council and academic staff are members of this council. The Department Council comes at the end of the hierarchal structure and it is in charge of issues directly related to staff, students, modules and exams. The Department Council cannot make

any decisions, but they can submit their recommendations to the University Council for approval. University presidents have limited authority and their recommendations must be approved by the MOHE. Private HE institutes are not different from government institutes in their structure and they are supervised by the MOHE, and nominated HE members from government universities take part in supervising and assessing private HE institutes. This hierarchal structure in both government and private HE institutes shows that decisions are limited to particular authorities and university staff and students are not involved in decision-making (Al-Eisa and Smith, 2013). This high level of dominance has led to unsatisfactory outcomes regarding the advancement of Saudi universities. It should be noted that bureaucracy in HE is evident at HE institutes around the world (Mok, 2002), and it is not to be associated only to Saudi HE.

Gender inequality seems to be another cause of bureaucracy in HE. The Ministry of Education was first established in 1926 for males. Women education started later in 1959 when public female schools opened, as female education was not a priority for many families. The main concern of families at that time was preparing their daughters for marriage life through teaching them the skills of cooking and sewing for becoming good housewives. However, this does not undermine the role of housewives in the society. In 1961, King Saud University for females was opened. The number of female enrolment was low and there were only 7 females at the university in 1975 (Smith and Abouammoh, 2013). According to 2011 statistics, there were 700,000 females at different Saudi universities and they constitute 60% of the total students' population in Saudi HE (*ibid.*). Since female education started late in the kingdom, all decisions regarding female education in HE have been made by male authorities. Female departments are run by female vice presidents who are responsible for monitoring students and evaluating staff performance. Female authorities have limited power and cannot make decisions without obtaining permission from male authorities in university councils. Female authorities in HE should be given more power for making decisions as they are closer to female staff and students than their male counterparts and might be more aware of female needs in HE.

The HE authorities in Saudi Arabia have recently become aware of the drawback of bureaucracy, and the HE sector has been going through an academic revolution since the Shanghai 2007 Academic Ranking of World Universities. The ranking put Saudi universities in position 2998 in a list consisting of 3000 universities. This low rating of Saudi universities upset both educators and citizens. Many newspaper articles have been written criticising HE authorities for the unclear explanations regarding the low educational level at Saudi universities. The criticism is based on the fact that a rich country like Saudi Arabia should be able to provide the best education and best universities in the world. This sharp criticism has led to the emergence of major plans for future development in both the school education and higher education sectors. The MOHE has adopted the quality assurance (QA) criteria followed by many high-ranking universities in the world for evaluating both governmental and private post-secondary school institutions according to international criteria, and combined them with other requirements specific to the Saudi context. For this purpose, the MOHE has established the National Commission for Assessment and Academic Accreditation (NCAAA). The role of this commission goes beyond evaluating HE institutions to providing these institutions with standards that will lead to satisfactory academic achievement. The commission has introduced quality centres or units into HE institutions to ensure that these institutions work in accordance with quality and accreditation criteria. HE institutions that do not meet these criteria will be closed. This decision has motivated educational authorities and academics to put more efforts into their academic fields. (For more information on the NCAAA, see <http://www.ncaaa.org.sa>).

The MOHE has also been providing universities with other types of support that should be acknowledged here. For example, it has introduced the *Afaq* project for the academic development of the HE sector. In addition, when he came to the throne in 2005, King Abdullah launched his scholarship programme, which allowed thousands of Saudi citizens to study abroad for both undergraduate and postgraduate degrees in a variety of fields. Thousands of citizens have joined his programme and there are now 143,000 Saudi students studying abroad in 46 different countries (“Deputy

Minister of Education: 143 thousand Saudi students studying abroad in more than 26 Countries,” 2012). The King has instructed that \$3.26 billion be invested in male and female educational projects in 2012 (“Saudi Arabia’s investment in education largest in the Gulf,” 2012). Females’ learning opportunities in HE institutes have been equal to men and started before the launch of the scholarship programmes. Saudi females have proved that they are capable of taking on challenging tasks and participating in the development of their society. Several female Saudi scientists have made remarkable contributions to international research in science, such as Howaida Algethami, Hayat Sendi, Soraya Al Turki and others.

Since 2005 the number of universities has risen from 8 to 30. The Council of Higher Education has set out its plan for moving from centralised universities to autonomous ones. In 2011, King Saud University, which was the first Saudi university, adopted a stakeholder framework of governance (i.e., including staff, students and general communities in the university governance (Al-Eisa and Smith, 2013). HE authorities have become aware of gender inequality in universities. For this reason, Princess Johara Bent Fahad Al-Saud was appointed as the Director of Princess Noura Bent Abdul Rahman Al-Saud in 2007, and she was the first Saudi female to hold such a high position in HE. A few female university directors have joined the list, such as Dr Haifa Jamal-Alail the Director of Effat University.

The future of higher education in Saudi seems promising; however, it is difficult for changes to take place in a short period of time and there are various challenges that need to be overcome. Although university independence of MOHE direct control forms the new plan of HE councils, the bureaucratic structure still exists and dominates HE institutes. This high level of control has led to the unsatisfactory implementation of critical thinking pedagogy in this study. The institute in this study was a private one. It explicitly encourages the level of criticality among learners, as will be seen in the following sub-section (3.3.3). It should be noted that some of private institute members are members of government universities that have been characterised as being centralised and traditional in terms of governance, teaching

and research. Therefore, changing their approach seems to be difficult (Al-Dali *et al.*, 2013). Also, the number of female board members in private institutes is less than the number of males which might again leave decision-making dominant by men. The participant teacher was not enthusiastic towards discussing some social topics in her classroom because she was aware of her limited role in choosing teaching materials and that she had to teach what authorities have assigned to her. The teacher's hesitation towards applying the critical pedagogy seems to be due to the unequal power relations between the teacher and her context. In order to advance HE and achieve a world-class ranking, female authorities, lecturers and students should participate more freely in decision-making and the dominance of male authorities should be minimised.

The emergence of the current developmental programmes has coincided with the publication of several studies that have attempted to draw the attention of the authorities to various shortcomings in higher education. One newspaper article (Althaqafi, 2011) reported findings from a study that pointed to the unsatisfactory level of HE graduates in the work field. The study mentioned that most graduates lack problem solving skills, critical thinking skills and creativity, and that these weaknesses are related to traditional teaching methods that rely heavily on memorisation and spoon-feeding techniques. These shortcomings have placed high demands on universities to meet QA standards.

In following QA standards, it seems that Saudi universities have entered an era of competition in terms of raising learners' levels and providing them with lifelong learning skills. According to NCAAA standards for HE institutions and programmes, learning outcomes should focus on promoting learners' critical thinking skills and creativity. In the Saudi educational system, in which traditional teaching methods have long been dominant, the application of the critical thinking approach in teaching and learning might face challenges. There does not at present appear to be any clear guidance as to how to introduce critical thinking into HE institutions or how to build a culture of critical thinking. The NCAAA has published online



guidelines regarding the types of cognitive skill that learners should be able to demonstrate as outcomes; however, I could not locate any guidance on how to introduce critical thinking for the purpose of enhancing teaching and learning. It should be noted that high school graduates have been used to traditional teaching. Thus, there is a discrepancy between the type of teaching high school graduates received at school and the type of teaching they get when they enter post-secondary institutions. The existence of this discrepancy has been acknowledged by the MOHE, and workshops for developing the skills of high school graduates are held to prepare them for pursuing their education in HE institutions (Alhamzani, 2012).

Introducing critical thinking in post-secondary institutions could be challenging for academics too. The NCAAA has introduced guidelines for the pre-service teachers programme on applying critical thinking in their future teaching. This gives rise to the following questions: are the academics who teach these pre-service teachers familiar with the application of critical thinking? Are other academics who graduated a long time ago familiar with the application of critical thinking in their various fields? Academics might be in need of training workshops on how to apply critical thinking in their teaching, especially in a context like the Saudi context, where linking critical thinking to teaching and learning is a newly emerging concept. Such workshops could provide academics with opportunities to build their own critical thinking communities, where they share experiences and opinions for ongoing professional development.

Abalkhail (2004) conducted a study among pre-service teachers in psychology and concluded that pedagogies that include the teaching of thinking skills can lead to effective learning. The study makes recommendations regarding the future integration of thinking skills into academic fields. The findings of Abalkhail's study could help the NCAAA to set out guidelines on how critical thinking should be implemented in the Saudi educational context.

A point that is directly related to my study concerns the infusion of critical thinking in post-secondary language institutes. English is the language of instruction at most Saudi universities. These universities require high school graduates to attend a one-year compulsory programme usually called an “English Language Preparatory Programme”. They cannot join undergraduate degree courses unless they pass this year. These programmes offer two main English language courses: General English (GE) and English for Academic Purposes (EAP), which are divided into various levels to meet students’ language requirements. Student enrolment on these courses is based on their TOEFL scores, which means that they do not necessarily have to go through all the levels of the programme. Some students spend only one year, while others might need more than a year, depending on their progress. These institutes have also introduced some advanced English courses, such as argumentative writing, critical reading and debates or arguments (for speaking skill). These courses require learners to be critical thinkers in the new language they are learning. These programmes put critical thinking at the heart of their objectives. This indicates that the institutes start familiarising students with the notion of critical thinking in preparation for taking up their undergraduate studies. Language institute directors and teachers are therefore faced with a real challenge. Learners have been used to traditional teaching in schools, while university lecturers expect undergraduates to be competent at using English to demonstrate their critical thinking skills in discussions, assignments and presentations. The challenge lies in the tasks that language institutes need to undertake: emphasising critical thinking skills and developing language skills. On their websites, most language institutes clearly refer to the development of critical thinking and creativity among learners as a learning outcome, in accordance with NCAAA standards. However, it is worth investigating whether these institutes follow particular guidelines on how to infuse critical thinking into language learning and how they prepare teachers and learners to understand and apply this concept.

### *3.3.3 Critical thinking at Almanara language institute*

Almanara University is one of the new private universities in Saudi Arabia. It was established in the early 2000s. Like most Saudi universities, it offers various degrees in humanities and sciences. The competition among private Saudi institutions has been increasing, and this has resulted in the establishment of more new private institutions. Like other universities in the country, this university is supervised and controlled by the Council of Higher Education, as explained above. Almanara University states its educational aim as being to provide learners with a high-level education that meets international standards and at the same time maintains the Islamic identities of those learners. The aims and objectives of various undergraduate programmes highlight the notion of critical thinking (i.e., promoting learners' cognitive skills: for instance, problem solving, analysis, synthesis and evaluation, and creativity). Despite the emphasis of critical thinking by this university, I could not locate any guidance for incorporating this concept into its programmes, a point that will be discussed later in this section.

One of the main units at this university is the English language institute. It provides high school graduates with the English courses they need in order to pursue their academic studies in English successfully. The institute provides various levels of English courses, both GE and EAP, from beginner to intermediate. As with other language programmes, the language institute highlights the focus on promoting learners' cognitive skills as one of the institute's objectives. For this purpose, the institute offers Argumentative Writing and Critical Reading for intermediate and advanced level learners who are in their last semester of this compulsory year. It is claimed that these courses will bring learners' literacy skills to a higher level before they start their academic degrees. My interest lay first in investigating how critical thinking pedagogy is perceived in this language institute and then in deciding what could be added to the design of my intervention to develop the application of the concept of critical thinking to language teaching and learning further.

I chose to focus on learners in their last semester of the English language programme. One reason for this was that these students had been introduced to critical thinking through two main courses: Argumentative Writing and Critical Reading; another reason for choosing them was their ability to communicate in English or in classroom discussion. Argumentative Writing involves teaching students how to write longer essays, and how to compare and contrast essays and research reports. In the Critical Reading course, students look at applying thinking skills (i.e., analysis, synthesis and evaluation) to a text they read, and they also compare and contrast types of text and read book reviews. In the listening and speaking course, learners are expected to master presentation skills and engage in discussions.

I consulted the university website to find out more about how this institute implements critical thinking, but I could not locate any information. Therefore, I moved on to the next step, which was to ask the university dean for permission to conduct a pilot study that would enable me to draw a portrait of the institute and its views on the application of the concept of critical thinking in an EFL classroom, and then build the final study design on the available information.

### *Pilot study*

I conducted the pilot study in the second semester of 2010 to explore the context and decide on what actions to take in the research design. The university dean kindly expressed her willingness to support the study. She encouraged the staff to provide me with any help I needed and to facilitate the conducting of this study. After obtaining permission from the dean for the pilot study, I started to seek the consent of the staff at the language institute. The first person I met at the institute was the director. She held a PhD in linguistics. The director was also happy to help. She introduced me to the teaching staff during a tea break. There were 17 language teachers who had taught post-secondary students at the institute and also undergraduates who needed additional courses to improve their English.

I requested from the director any written information, documents or guidelines that described the understanding and application of critical thinking. She said that critical thinking was embedded in the institute's methodology and that they did not have clear established guidance on its implementation. I visited the research centre at Almanara University to find out whether there was any general guidance on implementing critical thinking in teaching and learning, but was unable to locate any such information. It seemed that critical thinking had been left open to staff interpretation. It is a challenging task for universities to identify the scope and methods of applying critical thinking, since NCAAA has overlooked this issue. We should bear in mind that most students who join HE institutes are graduates of schools that have been following traditional teaching methodologies, which rely heavily on memorisation (Al-Seghayer, 2013). Therefore, introducing critical thinking in HE institutes requires high quality training for both staff and students.

I spent one month at the institute (May 2010). The director kindly allowed me to share her office (there being no room for me in the staff room), so I could get a closer view of how things worked at the institute. The director's office was a busy place, always crowded with staff and students who had queries about courses, exams and other issues or problems. I had the opportunity to talk to students at different levels and to some of the staff. I also had opportunities to examine the plans and aims of the various courses. With regard to the institute's application of critical thinking, the director explained that critical thinking is infused into reading and writing courses for final semester students. When asked about how they applied this pedagogy, the director mentioned that they followed reading and writing textbooks that are aimed at developing the cognitive objectives stated above. She added that the institute did not provide teachers with any kind of guidance on applying critical thinking pedagogy, nor did it organise continuous training workshops on critical thinking for teachers.

In 2009, the university hosted a training workshop on introducing critical thinking in HE, and this workshop was open to all members of staff from all faculties, including

staff and language teachers from the language institute. However, it appeared from my observations that the staff at the language institute were not collaborating to develop their own critical thinking pedagogy, nor to build a critical thinking culture; they did not have meetings/blogs where they discussed how to apply critical thinking in the institute, but worked in isolation from one another. The focus on critical thinking seemed to be confined to writing and reading courses, based on textbooks, with implementation left to be decided according to the individual teachers' views, experience and interpretations. Some of the reading and writing teachers told me that they followed the activities in the textbook to achieve the cognitive skills objectives. When they were asked about their understanding of critical thinking, their answers did not go beyond the objectives of the courses (i.e., using analysis skills for comparing and contrasting language items and using argumentative skills in writing). When I asked them how they implemented this pedagogy in their classrooms, they just described the activities in the textbooks. With regard to the listening and speaking course, the objectives were to develop learners' ability to communicate in discussions and to promote presentation skills. The fact that critical thinking was linked solely to reading and writing courses suggested that the institute focused more on literacy than on oral skills, though they were taught over an equal number of hours (four hours per week). It also implied that the staff of the institute believe that critical thinking is skill-specific (that is, specific to reading and writing skills).

I talked to some students who were in their last semester at this institute about their concerns and needs. Most of the students agreed that they had limited opportunities for classroom discussions, even in their listening and speaking course. They said that discussion sessions should be inserted into the timetable. I had a look at the courses these students were taking, and they were Listening and Speaking, Vocabulary, Argumentative Writing and Critical Reading. In addition, there were a few preparatory courses related to their chosen undergraduate subjects. On undergraduate degree courses students are expected to demonstrate their communicative competence in discussions with lecturers in English. Also, students are required to use their critical thinking skills: more specifically, analysis, synthesis and evaluation,

for meaningful learning. These points highlight the need for critical thinking in EFL preparatory programmes.

At the end of the pilot study, university staff and language institute staff were invited to attend my presentation on critical thinking to share our views on this concept. There were about 15 attendees. One member of staff who was a professor in linguistics stated that the term critical thinking is broad and there are many definitions, so that according to her the concept and its aims are confusing, and this might lead to difficulty in its application.

I was interested in designing an intervention that could meet the learners' need for discussion sessions and that at the same time could facilitate the introduction and achievement of the university's aims concerning the development of learners' critical thinking skills. The specific aim of my project was to infuse critical thinking into the speaking classroom in order to enhance the quality of the students' talk and build positive attitudes towards this pedagogy among learners and teachers.

### **3.4 Summary**

In this chapter, I set out the scene of this study. I identified the status of critical thinking in Islam which is the base of educational aims in Saudi. Then, I provided information on the higher education field in Saudi and how the concept of critical thinking fits in educational goals. Finally, I described the site where the study was conducted.

In the following chapter the methodology used in conducting this research is discussed. The development of the research design based on the pilot study, and the processes of data collection and analysis are described.

## CHAPTER 4: METHODOLOGY

### 4.1 Introduction

This chapter presents the rationale for adopting the research methodology employed in this study. In the first section (4.2) the theoretical aspect - the epistemology and ontology of the research methodology – is discussed, while the subsequent section (4.3) addresses the practical conducting of the research. There is an inevitable overlap between the content of the two sections owing to the fact that my understanding of the theoretical paradigms developed throughout the planning phase. Thus, in Section 4.2 an explanation is given for adopting the post-positivist paradigm and the naturalistic inquiry approach, and reasons are given for why other methodological approaches were deemed to be inappropriate for this study. The account of the conducting of the research contained in Section 4.3 includes planning the research design, the pilot study, preparing the data collection methods for the final study, sampling and the procedures used in conducting the final study. A discussion of the data analysis process and of the challenges I confronted in implementing the methodology follows (Section 4.4). Issues of validity and reliability and ethical considerations are also highlighted (Sections 4.5 and 4.6). Finally, a concluding summary ends the chapter.

### 4.2 Epistemology and ontology of knowledge construction

#### 4.2.1 *Carrying out naturalistic inquiry*

This study is a naturalistic inquiry, the aim of which was to explore the applicability of critical thinking pedagogy with post-secondary school learners in an EFL classroom, through tracking the quality of classroom dialogue and participants' attitudes throughout the study. The naturalistic inquiry approach provides a valuable understanding of real learning contexts under natural life circumstances by focusing more on the qualitative and less on the quantitative aspects of an incident. Unlike experimental research that limits its focus to examining certain variables, naturalistic inquiry research allows new and unexpected themes to emerge, as it does not narrow



down the scope of an incident under exploration (Lincoln and Guba, 1985; Erlandson *et al.*, 1993).

The naturalistic inquiry approach was deemed suitable for this research, since the aim was to investigate a real-life classroom in order to understand individual experiences with meaningful learning. Naturalistic inquiry, also known as the constructivist paradigm (Erlandson *et al.*, 1993), was fully described by Lincoln and Guba (1985). This paradigm emerged as an alternative to the traditional positivist paradigm, which claims that truth is positive and which over-emphasises the importance of generalisation by its adoption of a quantitative approach (Creswell, 2009). According to the naturalistic paradigm, knowledge is a combination of 'multiple realities' (Erlandson *et al.*, 1993, p. 11). To obtain the full knowledge picture, these realities should be seen as different aspects of a whole. These realities are constructed and shaped by individuals' experiences, and herein lies the depth of the knowledge that can be obtained by implementing this paradigm. The paradigm has opened the door to the investigation of human experiences in a natural setting, rather than in a laboratory or controlled setting (Guba, 1981, as cited in Erlandson *et al.*, 1993, p.16). In other words, truth in the naturalistic or constructivist paradigm is not limited to numbers that will make generalisations possible. Although the qualitative approach is preferred to the quantitative approach in naturalistic investigation, this approach does not reject the idea of combining the quantitative and qualitative approaches (Erlandson *et al.*, 1993). Erlandson *et al.* (*ibid.*) claim that qualitative and quantitative measures can be combined in naturalistic research and state that this combination depends on the study purpose. Their claim is supported by examples from research (Kerlinger, 1973; Bifano, 1987, as cited in Erlandson *et al.*, 1993).

Since the main focus of the naturalistic paradigm is on investigating individual experiences in natural situations, generalisation is not the aim of this approach. Unlike in the positivist approach, it is difficult to generalise the findings obtained from naturalistic inquiry because they refer to individuals, and it is difficult to find identical experiences occurring among individuals (Lincoln and Guba, 1985; Erlandson *et al.*, 1993). The issue of generalisation will be discussed in full in subsections 4.2.2 and 4.5.2.

One of the main features that distinguish naturalistic research from other traditional types of research is the fact that the design of any piece of naturalistic research is tentative (*ibid.*). Unlike a traditional researcher, who starts his research with clear methods in mind and knows when to use them, the naturalistic researcher starts with preliminary methods. This is because the naturalistic researcher does not build his inquiry on a hypothesis and cannot make predictions about the issue under investigation. As the naturalistic study progresses, new issues constantly emerge, and this influences decisions on what other methods and modifications should be included in the inquiry (*ibid.*). From theoretical perspectives, naturalistic inquiries fit within the constructivist paradigm. The relationship between the inquirer and the object of inquiry is mutual (Hatch, 2002). This means that the two sides continually inform each other, and this can lead to flexible inquiries where new issues can emerge. Further explanation of how I made a final decision regarding the adoption of a naturalistic inquiry approach in designing this study is provided in Section 4.3.

Since the naturalistic inquiry paradigm is concerned with in-depth understanding of a phenomenon, the case study research seems to be an appropriate design. The subsection below will discuss in more details the case study research.

#### 4.2.2 Case study and knowledge construction

The case study is a common research design in social science research, and particularly in EFL research. Yin (2009) defines a case study as an approach designed to investigate a particular phenomenon occurring in a natural setting through the collection of evidence from various sources. There are various types of case study research which have different purposes. These include studies that describe, explore or explain phenomena, studies that might employ quantitative methods, qualitative methods or mixed-methods (Yin, 2009: 19).

A case study design requires a theory to start from and this reveals the merits of conducting case studies as they can play a significant role in understanding, confirming, refuting or extending theories (Eckstein, 1975; Mitchell, 1983; Stake, 1995). This indicates that case study researchers view knowledge as an in-depth understanding of social processes and it is not limited to generalisation of findings (*ibid.*), a point which will be discussed in more details later in this section. Stake (1995) agrees with Eckstein (1975) and Mitchell (1983) on this point and claims that case study research is meant for maximising learning opportunities to understand particular incidents. This view of knowledge leads to the issue of sampling in case study design. According to Stake (*ibid.*), a case study researcher is interested in either studying particular individuals (intrinsic case study) or studying an instrument (instrumental case study), such as an evaluation rubric. Depending on the aim of the case study, the researcher can choose either a unique sample to build an understanding of a unique incident or a typical sample to understand a real life incident (*ibid.*). Generalisation of findings to population is not the aim of case study research; therefore, representative sampling is not employed in this type of research. In other words, statistical inference, based on random sampling, is not the focus of case study research. It is logical inference drawn from findings, based on the truthful analysis and presentation of the case, that can make the findings transferable to other similar situations (Mitchell, 1983). More details on the truthfulness of case study will be presented in Section 4.5. It should be noted that the context should be taken

into consideration when studying typical cases, and the reason is that each context has its own significance on research findings, which makes generalisation a hard task (Mitchell, 1983). Stake (1995) adds that the choice of a case depends on the accessibility and willingness of the chosen context to collaborate with the researcher.

Having stated that case study research could be intrinsic or instrumental (Stake, 1995), this study is instrumental, since it evaluates a classroom intervention. To be more specific about the type of this case study, this study may be described as a single case research study. Single case research is an alternative design used for evaluating classroom interventions (Nunan, 1992). Nunan (*ibid.*) suggests two types of research that can be used to investigate the effects of interventions in linguistics: experimental and single case research. Experimental studies can also be of various types. Some studies examine particular variables and include experimental and control groups so that the change made by the intervention can be measured by comparing results obtained from pre- and post-tests. This type of experiment is known as 'true' experiment (*ibid.*). Another type of experimental studies does not involve the use of a control group and focuses solely on the intervention group; the effectiveness of the intervention is measured through applying pre- and post-tests with this group. This type of experimental study is called 'pre-experiment' (*ibid.*). The purpose behind experimental design is the generalisation of findings.

Another research design used to introduce and evaluate linguistic interventions is the single case research design. According to Nunan (*ibid.*), this type of research shares features with both experimental and case study designs. In its implementation of an intervention it is similar to the experimental design, while its focus on one subject or a group of subjects without using a control group makes it similar to case study research (*ibid.*). A researcher can measure any changes that occur as a result of an intervention implemented in a single case study at two or more points. It seems that the single research design could provide more in-depth understanding of interventions that occur in natural settings. It should be noted that Nunan (*ibid.*) classifies this type of design as a case study, while Kazdin (1982) classifies it as a

pre-experimental design. However, both researchers agree that it is a design in which the effects of an intervention are investigated in a different manner from that involved in the true experimental design. One of the criticisms that this design has received is that the internal validity is questionable, because it is difficult to claim that any change that takes place is related to the intervention (Kazdin, 1982). However, I would argue that if such a design is underpinned by the naturalistic inquiry paradigm, as in the case of Burden and Williams' study (1996), the risk to internal validity will be low. The reason for this is that internal validity or credibility, as it is called in naturalistic inquiry, could be enhanced through the researcher's prolonged engagement with the context of the study and his or her persistent observations (Erlandson *et al.*, 1993). In addition, Kazdin (*ibid.*) states that although most of the time pre-experimental case studies do not produce a sufficient understanding of an intervention, there are exceptions to this rule. An adequate understanding can be obtained if baseline data are collected before starting the intervention and if this is followed by continuous observations on the part of the researcher to identify any changes that might take place during the course of the study (*ibid.*). A detailed discussion of ways of enhancing the credibility of a naturalistic inquiry is presented in Section 4.5.

The single case study approach was first applied in the fields of education and psychology to measure changes in children's behavior, and was later used in some linguistics research (Nunan, *ibid.*). In order to demonstrate how single case research could be of benefit to applied linguistics, Nunan (*ibid.*) mentions the example of a study by Schmidt (1983) who observed a Japanese learner of English over three years of being intensively exposed to the target language and its culture. It was concluded that there is no relationship between accumulated culture and grammatical development. The fact that this case study, as stated by Nunan (*ibid.*), falsified an established hypothesis lends weight to the value of conducting case studies. Also, it offers a new window into studying linguistic interventions.

Burden and Williams (1996) have a similar view to Nunan (1992) regarding the evaluation of foreign language interventions. Burden and Williams (*ibid.*) recommend employing an open inquiry for designing and evaluating intervention projects that concern foreign language learning. Their argument is that this type of inquiry allows researchers to monitor and change the processes of their implementations that are taking place in a natural setting in order to achieve productive learning outcomes. Burden and Williams (*ibid.*) have designed a cyclical framework for implementing and evaluating language interventions in a primary school. This framework is known as the SPARE model. It was applied with four classes of grades 2, 4 and 6. The aim of this framework was to employ evaluation as an informative procedure for planning a new cycle of the study. The idea of this type of study seems to be in tune with the aim of naturalistic inquiry, which provides a space for new themes to emerge, through employing observations and considering participants' views. The same framework was applied by Burden and Nichols (2000) to evaluate thinking skills interventions in schools.

While searching for more studies that have adopted the single case study design for investigating classroom interventions, I came across a PhD study by Lin (2007). This study was underpinned by the naturalistic inquiry paradigm, and it was similar to Burden and Williams' (1996) design in having the focus on the processes of implementing the intervention. The intervention consisted of introducing communicative strategies into one EFL classroom over a period of 10 weeks. The study was divided into two phases. Each phase lasted for 5 weeks, and data were collected through regular interviews and observations. The language intervention was examined from a qualitative standpoint. There are a few other studies that have adopted the single case research design to examine the effects of critical thinking interventions in EFL classroom. These studies investigated changes that occurred in learning during the conducting of critical thinking interventions through natural inquiries, for instance by examining learning portfolios or on-line posts (see Table

2.1 in Chapter 2 for examples of single case research). The above discussion of research design has indicated that a case study design is an appropriate design for examining and evaluating classroom interventions, and thus this was the design adopted for the current study.

The exclusion of the experimental design, which is based on the representativeness of samples, should not, however, have weakened the current project, since the study obtained rich findings regarding some of the challenges that accompanied the implementation of the intervention. Such findings would not have emerged if the focus had been limited to examining particular variables. It was indeed my own views concerning knowledge construction, based on existing evidence in the literature, and concerning context specificity that ultimately shaped my research design. The following paragraphs include some examples of criticisms of experimental studies to provide further justification for adopting the single case study design in the current research.

### *Criticism of experimental studies*

In experimental studies, matching control and experimental groups are chosen. Therefore participants are selected according to certain criteria, and this is difficult to do in real settings (Robson, 2011). With regard to the practicality of creating homogeneous groups in real classrooms, the following questions may be asked: Does experimentation represent real life? If so, to what extent is it possible to create matching groups? In real classrooms, it is difficult to find homogeneous groups for experimental research.

According to Robson (*ibid.*), it is difficult to decide on a matching variable by which the effectiveness of an intervention may be judged. In experimental studies there is a risk of limiting the scope to identifying similarities among the subjects in control and experimental groups and of overlooking the differences among them. In *Psychology for Language Teachers*, Williams and Burden (1997) mention that, although the

construct validity of quantitative measures is high in experimentation, the traits they measure might not exist (*ibid.*). Adding to this, testing measures cannot explain percentages that are below or above the mean (*ibid.*). They suggest the social constructivist model, which is based on the notion of interaction and mediation, as an alternative approach to understanding the learning process. In this model, priority is given to understanding the processes of learning rather than to identifying variables. This suggestion by Williams and Burden gives rise to the use of case study as an alternative design for studying classroom learning. There are still some misconceptions that surround the case study research. These misconceptions will be addressed in the paragraphs below.

### *Misconceptions about case study research*

Case study research has also been subject to criticism, and five misunderstandings of this method are summarised by Flyvbjerg (2004), as follows:

1. General knowledge which is case-independent is more useful than practical knowledge which is context-dependent.
2. Individual case studies do not allow generalisation; therefore, the case study cannot contribute to scientific knowledge.
3. The utility of the case study appears in the first step of the research process when hypotheses are generated. For hypotheses testing and theory building, other methods are recommended.
4. In a case study, the researcher's bias affects research verification.
5. Developing general theories and propositions, based on case studies, is often difficult.



These misconceptions centre on three issues: theory, reliability and validity. Flyvbjerg (*ibid.*) refuted these five claims concerning the case study, and his refutations are discussed in the following paragraphs.

Regarding the first claim, that general knowledge is preferable to practical knowledge, Flyvbjerg (*ibid.*) states that research on human learning focuses on learners' development from beginners to experts. Also, studies in the domain of human affairs reveal that only context-dependent knowledge exists. Thus, experience and context-dependent knowledge form the core components of an expert's activity. In addition, in social sciences, there is no predictive context-independent theory. From an educational practitioner's perspective, Flyvbjerg recommends that teachers engage learners in practical experience. From a research perspective, he states that the case study has two advantages: it is close to real-life situations and it is a valuable opportunity for researchers to improve their ability to carry out high quality research. It is relevant here to mention that, in accordance with Flyvbjerg's claim, some of the theories that have dominated the field of education, such as the Vygotskian theory, have been drawn from case studies.

An over-emphasis on the importance of generalisation is another misconception that Flyvbjerg (*ibid.*) addresses. According to Flyvbjerg, generalisation is not the only way to obtain knowledge, as confirmed by Kuhn (2005). In other words, knowledge that cannot be generalised should not be rejected. Case study researchers like Mitchell (1983), Stake (1995) and Yin (2009) agree that the main purpose of this type of research producing more explanations of incidents or individuals rather than drawing providing statistical inferences. The reason for this is that case studies are descriptive and thus can produce more explanations than statistical findings, although this does not undermine the value of quantitative research. In summary, one may conclude that the problem under investigation influences the researcher's choice of research approach. Williams (2000) has a similar view to Flyvbjerg.

Williams (*ibid.*) states that generalisation from case studies is possible when the findings are compared to those of other case studies undertaken by other researchers.

With regard to misconception three, that the results of a case study cannot be used to test a hypothesis, this is related to the previous misconception concerning generalisation. Flyvbjerg (*ibid.*) believes that findings from a case study can be used to test a hypothesis and therefore to generate a theory, if the sampling is based on extreme cases. This will help to test a hypothesis on various individuals who are different from each other.

Researcher's bias has been viewed as another threat to the trustworthiness of research findings in a case study, if the researcher's aim is to verify existing knowledge. Flyvbjerg (*ibid.*) has a different opinion. He does not deny the possibility of bias in case study research, but he thinks, based on existing research, that case study researchers are more inclined to falsify data in order to refute a hypothesis than in order to verify one. I would add that bias can be minimised when triangulation is applied. Triangulation is defined as the combining of two or more methodological approaches, data sources, analytical methods, investigators or theoretical standpoints in a single study, to see whether all sources lead to the same finding. The resulting types of triangulation are methodological triangulation, data triangulation, analytical triangulation, investigator triangulation and theoretical triangulation (Denzin, 1970; Kimchi, Polivka and Stevenson, 1991). Applying more than one type of triangulation is known as multiple triangulation (Denzin, 1970; Polit and Hungler, 1995; Woods and Catanzaro, 1988).

Finally, in his reply to the claim that it is difficult to draw propositions from case studies, Flyvbjerg explains that it is not always necessary to make such propositions. He states that a case study can contribute to theories if hypotheses are tested as explained in his refutation of the third misconception.

The above argument in favour of case study research might free researchers from their fears regarding any of the misconceptions associated with case studies. The aim of this project was to investigate the barriers to and merits of applying critical thinking pedagogy in an EFL context, based on participants' experiences. The case study was found to be an appropriate approach for this purpose, since a well-planned case study would lead to the obtaining of thick data, which in turn would provide a clear understanding of participants' experiences with a new pedagogy.

Regarding the issue of generalisation, the findings of this study could be used for making generalisations if they were compared to the findings of other case studies in the field of applying the critical thinking approach in EFL classrooms, as suggested by Williams (2000) and Flyvbjerg (2004). Moreover, the study could achieve naturalistic generalisation, which deals with the different experiences of different individuals in a natural classroom setting.

In order to ensure research objectivity, I employed both analytical triangulation (for instance, when analysing the quality of dialogue I applied both qualitative and quantitative methods of data analysis) and data triangulation (for instance, in the methods used to collect data on participants' attitudes).

Having discussed the research paradigm on which this study was based, I turn now to the practical part of the research, which involved the processes of laying out an appropriate design and the actual carrying out of this study.

### **4.3 Research design and processes**

#### ***4.3.1 Development of research design***

In this study, the research design is based on the socio-cultural theory which emphasises learning through social interaction. My primary aim was to investigate and develop the implementation of the critical pedagogy in a context that has explicitly put critical thinking as one of its main objectives.

The following paragraphs explain how I came up with the decision of carrying out a case study.

The initial attempt was to carry out an experimental study and blend the positivist and post-positivist approaches (mixed-approach methodology). Two groups of learners were sought (i.e., experimental and non-experimental groups) to measure the effects of the critical thinking intervention on learners' attitudes, quality of classroom talk and language complexity as key themes for examination. The reason for adopting a mixed-approach methodology was that I believe in the merits of combining quantitative and qualitative methodologies for studying interventions, as they are complementary. I contacted various language institutes in Saudi Arabia regarding the possibility of conducting a study over one year. Before selecting a particular site for my study, I had to put down my selection criteria. According to Yin (2009), sampling in a case study consists of two stages: screening the context before choosing candidates and then limiting the number of possible candidates through setting out criteria. It should be noted here that language institutes either at private or government universities in Saudi Arabia share educational goals and follow the same criteria for teacher hiring and student admission. Students who join private or government language institutes are graduates of private and public schools and are of mixed abilities. This indicates that research findings from one language institute could be generalised to other institutes. While examining the objectives of Saudi universities, I found that they differ in the degree of their emphasis on critical thinking. Some universities limit the incorporation of critical thinking to their undergraduate programmes, while others incorporate critical thinking into their language courses provided by their language institutes. Therefore, the university familiarity with the concept of critical thinking and the incorporation of critical thinking into its language institute was my criteria for selecting a site. I narrowed down my list of possible institutes to those institutes that have clearly emphasised critical thinking in their language courses and Almanara Language Institute was on the list. Since the accessibility and friendliness of the context is of highly importance to the case study researcher for the success of his study (Stake, 1995), I chose

Almanara institute because it was the first institute that responded to my proposal within a short time. Another university responded a month later, but I preferred to do my project at Almanara because their immediate response helped me to save my time and start preparing for my pilot study.

Obtaining an approval from a context was not straightforward due to the nature of my project. The research methods I initially planned to adopt were regular interviews with participants, classroom observations and pre- and post-test measures. Also, I was interested in including more than one teacher in some professional training by introducing them to critical thinking pedagogy. This proposal was rejected owing to the long period of time assigned for the intervention, which might cause teachers to fall behind in following the assigned textbooks. Almanara University, which is known for its willingness to support visiting researchers, was the first site that welcomed my research, as explained previously. All Saudi universities follow the same educational policies and are all supervised by the MOHE, a point stated earlier in this section. Based on this fact, the study outcomes could be replicable if the study is conducted in another site. The dean gave her initial approval for the conducting of a pilot study at the language institute for one academic term only (term 2 of 2010). The aim of the pilot study was to get a general sense of the context and the applicability of critical thinking, by performing some thinking activities that could then be re-used in the final study. For a more detailed description of this context and the staff's understanding of critical thinking during the pilot study, see Chapter 3.

From my visit during the period of the pilot study (April-May 2010), I found that, in accordance with institute policy, learners of a similar level of achievement were grouped into one class. Class A was for high achieving learners, class B for average learners, and class C for weak learners and repeaters of the programme. It was not possible to find a matching group for use in this case. Although the idea of dividing students into mixed groups was negotiated with the institute, it was rejected because

it was not in tune with the institute's policy to group similar level learners in one classroom.

The first thing I did after obtaining the initial approval of the dean was to present the aim of my project to all members of staff at a small meeting at the institute. This was in order to let them know why I would be joining them for one month (i.e., the length of the pilot study) and also to inform them that I wanted to try some thinking tasks with the learners and that I needed the teachers to participate. I was looking for teachers who were teaching students who could already communicate in English. I chose students whose English was at a higher level to ensure that they would be able to take part in classroom dialogue. There were three teachers teaching students in their final course at the institute. After the presentation, I asked interested teachers to write their names on a list. Only one of these teachers showed her willingness to participate and the others rejected the idea of being audio recorded. This teacher was teaching only one class. It was arranged with the authorities that I could give the other groups thinking lessons for a few hours and talk to them about their learning.

I introduced myself to the students in the three classrooms and explained the principle of ethical consent to them. All the learners were interested in taking part in the study and signed the consent form. A baseline questionnaire was piloted to collect data. Most of the learners stated that they needed more discussion opportunities, because the lessons based on the textbook did not give them the opportunity to practise speaking. Then we started the lessons, which included mysteries, discussions on various topics and image reading. The students were active participants and most of them liked the mysteries best, and these generated active talk in the classroom. The students were friendly, asking the researcher about recommended books for learning English and about studying for postgraduate degrees in the UK. The atmosphere was positive during the pilot study.

After the pilot study, I tried to find teachers to participate in the final study, which was supposed to take place between September and December 2010. There was some reluctance among the teachers to take part in this study, although the principle of ethical consent was explained to them. They attributed this reluctance to the overload of teaching hours they usually had. It seemed to me that these teachers thought the project was going to be an evaluation of their teaching, because they asked questions like ‘Who is going to listen to the classroom recordings and interviews? I assured them of the confidential nature of their participation and of the fact that the data would not be shared with the authorities in charge of the language institute. However, the teachers remained silent and the authorities asked me for further time to study the proposal to make a decision regarding final approval. The authorities also explained that they were constantly changing the teachers’ timetables, which meant that teachers who were teaching final semester students this year might not be teaching them next year, and so it was too early to contact the teachers regarding their participation the following year. I returned to the UK burdened with concerns about the possibility and flexibility of doing this study.

The above difficulties in respect of finding matching groups and the reluctance of the teachers put me in a state of confusion regarding the design of my study. I realised that, owing to their reluctance, it would be difficult to include more than one teacher in the study. I therefore had to find an alternative design for the project. I did further reading in order to find a way of modifying the design of the study. During the course of this reading, I came across works by Burden and Williams (1996) and Burden and Nichols (2000), which propose the qualitative approach as an alternative approach to the positivist stance for understanding the effect of classroom interventions. Burden and Williams (1996) and Burden and Nichols (2000) suggest following the SPARE model, which has a spiral framework, as for evaluative studies in natural settings (see Section 4.3).

Dissatisfaction with such traditional approaches to evaluation led Parlett and others to suggest an alternative, which they termed 'illuminative' evaluation (Parlett, 1981). As its title suggests, the aim of this form of evaluation is to illuminate or shed light on issues of importance to implementation and decision-making, as they emerge. The evaluator is thus viewed as an *interpreter* of complex systems rather than merely someone who measures specific outcomes by trying to hold other variables constants. (Burden and Williams, 1996: 51)

I adapted the SPARE model framework for evaluating the implementation of the critical thinking pedagogy in one classroom. It seemed to me that this framework would be appropriate for in-depth investigations and it was also flexible enough to allow for the combining of qualitative and quantitative methods for analysing results. Full details of how the different stages of this framework were applied in this project are given in sub-section 4.3.5.

Another reason for choosing the SPARE model was that it fitted into the time available for carrying out this study. Nunan (1992) suggests that a single case study consists of 4 phases known as ABAB, a process that aims to study performances under different conditions. The first phase A starts with identifying the behaviour that needs to be treated through observations. In the second phase, the intervention is applied, followed by withdrawal of the treatment in the next phase to measure the continuity of the effects. Finally, the intervention is applied again. This process sounds more appropriate for clinical research, which is about behaviour (Nunan, *ibid.*). Adopting the ABAB process for the current study would require a longer time for application. However, following the SPARE model for this study would be more appropriate for the time frame assigned for the data collection. Each SPARE cycle is called a phase, so I had two phases in the final study: phase1 and phase 2.



After changing the design of the study from experiment to a single case study, the new proposal was sent to some language institutes at Saudi universities the language institutes that were on the list of institutes that emphasise the infusion of critical thinking into their courses. I received the first response again from Almanara institute. However, the approval came late in October 2010 from the authorities at Almanara University where I carried out the pilot study. They gave me permission to conduct my study in the second term of 2011, which caused a delay in the data collection. Following their approval, I had to devise the research questions and plan the data collection methods to fit in with the time frame assigned for the data collection.

#### *4.3.2 Research questions*

The primary focus of this study was on investigating the extent to which critical thinking pedagogy is applicable in an EFL context. The study sought to investigate participants' attitudes towards this pedagogy, the quality of their talk, the development of learners' language complexity and the issue of the transferability of thinking skills. The following research questions were thus devised:

Thesis question:

- To what extent could critical thinking as language pedagogy be applicable at Almanara language institute?
1. What are the attitudes of the students and their teacher towards the implementation of the critical thinking pedagogy?
    - a. What are the students' attitudes towards the implementation of the critical thinking pedagogy?
    - b. What are the teacher's attitudes towards the implementation of the critical thinking pedagogy?

2. To what extent does this pedagogy raise/lower the quality of classroom

dialogue?

a. What are the types and frequencies of the teacher's utterance in dialogue in the

two phases of the study?

b. What are the types and frequencies of the students' utterance in dialogue in the

two phases?

c. To what extent could critical thinking lessons take classroom talk beyond the

traditional IRF sequence?

3. What are the effects of the critical thinking lessons on learners' language

complexity?

a. What are the results regarding the Mean Turn Length (MTL) in the pre- and

post-tests?

b. What are the types and frequencies of utterances devoted to developing the

quality of dialogue in the pre- and post-tests?

c. What are the frequencies of HOTS in the pre- and post-tests?

d. What are the types and frequencies of pragma-linguistic markers in the pre-

and post- tests?

4. What evidence of transfer of critical thinking is there in other lessons?

The table below contains a summary of the methods used to answer each question.

Table 4.1 Research questions and methods

RESEARCH QUESTIONS	METHODS OF DATA COLLECTION
1. What are the attitudes of the students and their teacher towards the implementation of the critical thinking pedagogy?	Pre- and post- semi-structured interviews, informal interviews, focus group in week 6, observational field notes and final questionnaire
2. To what extent could this pedagogy raise/lower the quality of classroom dialogue?	Audio-recording of classroom talk and taking of observational field notes
3. What are the effects of the critical thinking lessons on learners' language complexity?	Pre- and post- audio-recorded speaking tests
4. What evidence of transferability of critical thinking is there in other lessons?	Audio-recording and taking of observational field notes

The following sub-section explains why the above methods were selected and how they were designed.

### *4.3.3 Methods of data collection*

The new design of this project was a single case study that would examine a group of learners and their teacher. As described above, the research design adopted the

naturalistic inquiry approach, in accordance with the views of Burden and Williams(1996) and Burden and Nichols (2000). In order to give a deeper understanding of the intervention, a combination of both qualitative and quantitative methods was employed for the purposes of data collection and analysis. Data were collected through regular interviews with participants, observation of classroom interaction that included taking field notes and making audio recordings of classroom dialogue, pre- and post- speaking tests to measure learners' language complexity before and after the intervention, and baseline and final questionnaires. In the following paragraphs, I will discuss each method in terms of why and how it was applied. The limitations of these methods are also highlighted.

### *Interviews*

Since one of the aims of the study was to help learners to express their views and experiences of learning, I decided to conduct semi-structured interviews. The interviews were held with five learners before, during and after introducing the intervention. Such interviews allow a researcher to prepare questions in advance and provide him or her with some flexibility to expand on respondents' answers (Robson, 2011) (see Appendices B, C and D).

The pre- and post-intervention interviews were with single students, while the interviews in the middle of the project took the form of a focus group with 10 learners. The pre-project interviews included questions on background, views and feelings. The interviews held during and post-intervention included questions on views and feelings (see Erlandson *et al.*, 1993). Some informal short interviews were also held following some of the lessons to obtain participants' reflections. In order to encourage learners to talk about their learning using the new approach, task-based interviews were used for the last interviews. Task-based interviews were first used with children by Piaget for clinical investigations (Diamond, 1999). The aim of such interviews is to help participants to express their views. The interviews for the

current study were conducted in Arabic and were audio-recorded. I jotted down main points in a diary during the interviews.

Tension may arise in interviews because they take place face-to-face and are dialogic. Participants might find it embarrassing to talk to a person they do not know about their concerns, opinions and feelings. In order to make the participants in this study feel at ease, I explained research ethics to them before beginning each interview. For example, I told them that they did not have to mention their names in the interviews and that they had the right to skip questions they did not like and to withdraw at any time. To ensure that confidentiality was maintained, the interviews were conducted in an office where only the participants and I were present. I would close the door, so that the participants would know that nobody could hear what they said.

One limitation I experienced with these interviews was in respect of one shy interviewee who gave short answers and did not make any effort to elaborate on her responses. In such cases involving shy people, it is important when exploring learning to include methods other than direct interviews, such as questionnaires, to elicit more responses.

### *Questionnaire*

Before the start of the project, baseline data were needed to understand the participants' background, level of English, causes of anxiety in the speaking classroom, attitudes to classroom dialogue, willingness to think critically and expectations in the new academic term, particularly in the speaking classroom. As mentioned above, a baseline questionnaire was designed and piloted during the pilot study visit. I modified the questionnaire before conducting the final study. It was administered to the students in Arabic before the start of the project, after introducing them to the study aims (see Appendix E). The questions included closed

and open-ended questions. Each closed question was followed by a space for further explanations. The questions were taken from a variety of sources and questionnaires: for instance, Facione and Facione's (1992) rubrics for critical thinking dispositions and Howritz *et al.*'s (1986) Language Classroom Anxiety Scale (FLCAS). At the end of the project, the final questionnaires were given to the students in order to elicit responses from the whole class regarding the intervention. I thought that they might feel more comfortable writing down their opinions than talking about them, especially the shy participants. The final questionnaire was helpful for including all the students in the class as it was an evaluation of their experience of critical thinking lessons (see Appendix F).

### *Observation*

Although interviews are significant methods in naturalistic inquiry research, they do not shed light on day-to-day activities or experiences (Erlandson *et al.*, 1993). This gives rise to a need for using classroom observations. Naturalistic inquiry research has identified the relationship between interview and observation as an interactive relationship: interviews lead observations, and observations, in turn, are used as probes for interviews (*ibid.*).

Ennis (1996) claims that assessing performance in 'life-like' situations is a recommended method for assessing dispositions. Observation is meant to capture aspects of students' verbalised thinking that might reveal their critical thinking dispositions. Although it was not the intention in this study to go deeply into examining dispositions, which would have required more time in order to apply frameworks and analytical measures, it was thought that observation might identify attitudes as reflected in the performance of participants. The results relating to attitudes obtained by means of observation were compared to the results generated by using other tools (i.e., interviews and questionnaire) to achieve triangulation. This study used two types of observation: participant observation (a qualitative style) and ad hoc observation (a quantitative style) (Robson, 2011).

In the participant observation I used field notes as tools, while the ad hoc observation relied on coding classroom talk. The reasons why each observational type was chosen and how it was applied are explained below.

#### *Participant observation: field notes*

The fact that video recording was impossible (for reasons that are explained in subsection 4.3.3) led me to think of using field notes to complement the job being done by the audio recorders. To identify critical incidents and emerging themes, I wrote down my ideas using pen and paper. The notes are descriptions of incidents that happened in the class during the lessons. Interpretations were made later after interviewing participants and sharing the incidents with colleagues. The concern in this type of observation is that reactivity, which is the influence that the observer might have on participants, may occur (Robson, 2011). Participants might not feel comfortable with someone watching and recording them. One of the strategies I used to reduce the effect of my presence was to introduce myself and the project aims to the participants before the start of the project. Also, I explained research ethics to them, so they knew that their participation was anonymous. When the project started, I would have lunch in the university restaurant in order to socialise with students and teachers. Some of the student participants introduced me to their friends from other classes, or to relatives who were studying at the university. The context became familiar with my presence as a visiting researcher.

#### *Critical-incident technique*

The aim of this technique is to record significant incidents occurring in the context. Erlandson *et al.* (1993: 103) identify a critical incident as a specific incident taking place in a context that reflects critically on the operation of this context. These incidents are recorded on cards, specifying time, people and place. The observer should record these incidents in descriptive, rather than judgmental terms.

Inferences from these events should be made by outsiders who are not members of the organisation, and these inferences can be discussed further with members of the organisation (*ibid.*). It is also advantageous to include participants in the interpretation of critical incidents and in reflecting on experiences, which has the additional effect of minimising the researcher's bias. The disadvantage here, however, is that interpretations might not be reported accurately by participants and that fallacies might occur (Schwartz, 1999). This technique was used with teachers in education by Tripp (1993), with the teachers being asked to reflect on their experiences. The use of this technique is not confined to observed events, and it may be used in interviews as well. The researcher can identify critical incidents from interview notes or while conducting interviews (Erlandson *et al.*, 1993).

In this research, I noted down descriptions of incidents where the teacher tried to close down critical thinking opportunities (e.g., when learners started to evaluate an issue related to society). Then I shared and discussed the descriptions with colleagues from my school in Newcastle to avoid any bias in my interpretations. I did not share these incidents with anybody from the language institute because I had assured the participants that classroom data would not be discussed with the authorities or with institute members. Also, in some cases, I sought participants' interpretations of particular incidents.

#### *Ad hoc observation*

According to Sapsford and Jupp (1996), structured observation can be of different types. Incidents can be observed at set time intervals, or they can be recorded whenever they occur. I chose the ad hoc observation method. This means that talk was audio-recorded and observation checklists were created later (Wallace, 1998). Systematic observation, observing learners over certain periods, was avoided in this study because it is more likely to miss recording events that occur outside observation periods (*ibid.*).



Using ad hoc observation gave me enough time to be able to concentrate on observing the classroom, identifying speakers and noting main points without having to worry about filling in the checklists. If particular codes for the checklist are predicted early, before the observation starts, as in systematic observation, they might not reflect the collected data. Thus, creating checklists after collecting audio recordings would allow me flexibility in deciding on coding and enable me to modify the codes according to the obtained data. This point is discussed further in sub-section 4.4.2. For creating the checklists, I adapted Brown and Kennedy's (2011) categories which code utterances into different types (see Appendix G). In short, combining structured observation and field notes for observing classroom talk can lead to the obtaining of rich data, because the quantitative aspect shows the frequencies of particular features, while these features are better understood when descriptive notes are taken and audio-recorded dialogues are transcribed.

### *Audio-recording*

When I first accessed the setting, I contacted the authorities and students about the possibility of video recording the lessons. The idea was rejected because there were some conservative students who did not want to expose their faces, but it would have been neither practical nor comfortable for them to keep their veils on in the classroom. The other option was to audio-record class discussions and interviews. Recording was helpful in that it enabled me to examine the data later, after collection, to design checklists and complete my notes. It seems to me that audio-recording is less intrusive than video recording.

I recorded most of the interviews and 12 whole-class discussions. Four high quality audio-recorders were placed in various parts of the classroom to ensure high quality recording. The recordings were later transcribed. The main drawback I experienced with this method was that the transcription was very time-consuming. I had to play the recording of each lesson several times to produce accurate transcripts using CA conventions (see Appendix H). However, there were still some unidentifiable words.

To identify speakers I wrote down the initial letter of their names and the first few words they said during the observation. Overlaps were unavoidable and there were unidentified turns which I marked with a question mark (?) before a sentence/phrase to indicate that the speaker could not be identified. Identifying speakers can also be problematic in video recording if the camera is placed in a position that does not show all students (see Appendices I for all the activities and Appendix J for an example of a lesson transcript).

### *Speaking tests as measures*

One of the aims of this study was to measure the effects of critical thinking lessons on the development of the learners' language complexity. Complexity refers to learners' willingness to take risks in talk (Skehan, 2001; Ellis and Barkhuizen, 2005). In this study, I excluded the application of fluency and accuracy measures for two reasons. Firstly, although fluency measures are designed specifically to measure learners' ability to communicate, in order to apply them, the learners' speech must include only small amounts of hesitation and pausing. It was thus not possible to apply them in this study, partly because the participants were only at intermediate level, and also because in many of the lessons the teacher frequently interrupted and controlled their turns. Secondly, accuracy measures are mainly concerned with grammar, and in this study meaning was prioritised over form. As mentioned in the literature review (see Chapter 2), there are five measures of complexity: interactional, propositional, functional, grammatical and lexical. In order to answer the above research question, I chose to apply interactional measures (i.e., measuring the frequency and length of turns among participants), propositional measures (i.e., measuring the frequencies of particular idea units), functional measures (i.e., analysing the functions of particular utterances associated with HOTS and the functions of pragma-linguistic markers in dialogue).

The measurement of interactional complexity, as pointed out by Ellis and Barkhuizen (2005), is not limited to measuring the number of turns taken by

individuals, because individuals can take many turns but might only produce short utterances. Ellis and Barkhuizen (*ibid.*) therefore suggest that this measurement should also include the length of these turns, known as the Mean Turn Length (MTL), as implemented by Duff (1986). This entails dividing the total number of words uttered by the total number of turns taken by each individual learner.

In order to measure propositional complexity, I created my own checklists (see Appendix K), in which I coded ideas into types that reflected the quality of dialogue found in the tests. These checklists were informed by Brown and Kennedy's (2011) framework of quality of dialogue. In order to measure functional complexity, I chose to identify the functions of the learners' utterances in relation to thinking levels, based on Bloom's taxonomy (1956). The reason for examining the levels of thinking is that high quality talk is characterised by higher levels of thinking (Li, 2011).

In addition, I identified the functions and measured the frequency of use of pragma-linguistic markers (i.e., argumentative markers) in both tests, based on a study conducted by Nemeth and Kormos (2000). It should be noted that there is no standardised measures for measuring pragmatics in linguistics (Yamashita, 2008). With regard to the types of activities in both tests, I chose mysteries (Leat, 2001) and topic discussions for the tests.

Eight learners were involved in the pre- and post-tests and they were divided into two groups (four students in each group). The tests were conducted in a small meeting room and only the students attended. I stayed outside the room to give them an opportunity to speak freely. I left the door open so they could call me when they needed help. They were given two tasks to do (see Appendix L for activities and Appendix M for a transcription example). The same tasks were used for both tests. The learners were asked to do the tasks within a set time and they could not go beyond the time limit. Some conversations were longer than others, so I decided to

analyse the first eight minutes of each task which was the minimum length recorded among all groups. The tests were all audio-recorded using digital recorders.

#### *4.3.4 Sampling*

This study is a naturalistic inquiry, which means the aim was not to generalise from the population, as in the case of fixed design studies (Lincoln and Guba, 1985; Robson, 2011). Rather, the focus was on understanding individual experience in a natural setting. Purposive sampling is an appropriate sampling method for accomplishing this aim (*ibid.*). This method relies on the idea of saturation (Robson, 2011), which means that a researcher continues to interview different interviewees seeking salient issues and differences. When repetition of experiences starts to occur, the researcher should stop the interviews (*ibid.*). In this case study, I started by distributing the demographic questionnaire to all 18 students in the class. The responses to the questionnaires revealed that most of the students had similar problems, but there were differences as well. Starting immediately with interviews would take a longer time and delay the conducting of the study. As a next step, I interviewed 10 students who had shown some differences in their responses to the questionnaire. For instance, there were students who liked participating in whole-class discussion and described themselves as confident, while some mentioned that they did not like whole-class discussion because of their shyness. During the interview, one student mentioned that she did not like whole-class discussion because it usually tends to be chaotic and the teacher can lose control over the discussion. There was also some disagreement among the learners concerning their preferred types of speaking activity. For instance, one of the students mentioned that politics should be discussed in the classroom, especially the Arab Spring. I then limited the selection to five key informants who to some extent gave different responses in their interviews.

Since this study is a case study and required participants to attend lessons regularly, I consulted the students' attendance records for the first term, and out of the ten

interviewees I selected the five with the highest attendance records. Although the study relied on five key informants, all 18 students were taken into consideration in order to obtain a full understanding. This was because I thought that individuals of a similar experience should not be excluded from the investigation as there could be slight differences in their personal traits and attitudes which might add to the results of the study. In other words, even if learners had a similar experience, they might change over time during the intervention and might end up with different views by the end of the intervention.

### *Participants' profiles*

In this section the baseline data for all learners, obtained from the questionnaire, are first presented; then additional information about the five key informants is provided.

Table 4.2 Background information

Age	No of students
18	7
19	10
20	1
High school	
Public	7
Private	11
Major	
Computing Science	2
Engineering	4
Psychology	1
Architecture	4
Business	3
English Translation	2
Accounting	1

Marketing	1
Parent/Parents speaking English	
Yes	16
No	2
Years spent learning English in schools	
12 Yrs	11
11 Yrs	1
9 Yrs	1
7 Yrs	1
6 Yrs	4
More spoken language: Arabic or English	
Arabic	14
English	0
Equally spoken	4

The total average score of each student in the previous term was above 85.

Table 4.3 Speaking activities

Types of preferred activities	Number of students
Role play	10
Classroom Discussions	6
Presenting a topic	2

### Attitudes towards classroom dialogue

The students were asked if they liked participating in classroom dialogue where they express their opinions and evaluate others' opinions. 12 students answered 'yes', 2 answered 'no' and 4 were undecided.

Regarding the skills required for dialogue, the learners were asked to rank their abilities to construct simple sentences on a scale of 1 to 10, where 1 indicated not satisfied at all and 10 indicated very satisfied. 3 students ranked themselves below 5: 1, 2 and 4 respectively. 8 students ranked themselves between 5 and 9, and 7 students were very satisfied, ranking themselves 10.

With regard to their abilities to engage in discussions that require long answers, 6 students gave themselves scores under 5, and 13 ranked themselves between 5 and 9. Moving on to their ability to express themselves in classroom discussions, 3 students were not satisfied, as their ratings were below 5, and 14 students rated themselves between 5 and 9. Only one student gave herself 10. Speaking of their abilities to participate in dialogue that requires self-expression and evaluation, the rankings of 10 of the students were below 5, and 8 students were 5 or above.

The anxiety scale showed that 4 students thought they lacked self-confidence, 12 felt nervous when the teacher nominated them to answer, and 8 students did not feel confident if they did not prepare for the lesson in advance. 4 students would feel embarrassed in front of classmates if they made a language mistake. 11 students said they would feel anxious if they did not know the answer to the teacher's question. 8 students did not like to challenge others' opinions. 5 students said they lacked analytical and evaluation skills.

Table 4.4 Attitudes to critical thinking

<b>1. It is important to show respect for opposing opinions</b>	<b>Number of students</b>
Strongly agree-agree	17
Not sure	1
Strongly disagree-disagree	0
<b>2. It is important to consider alternative views before making a final decision</b>	
Strongly agree-agree	15
Not sure	2
Strongly disagree-disagree	1
<b>3. It is important to make a convincing argument</b>	
Strongly agree-agree	12 students
Not sure	4
Strongly disagree-disagree	2

Most students mentioned that they needed more discussion sessions for practising speaking. With regard to reflecting on learning, the students were not asked to reflect on their learning using reflection tools such as journals or portfolios as they were not sure if they could do it.



I will now introduce the five key informants, in Table 4.5 below, based on information gathered from the baseline questionnaire and individual interviews. Random letters in their names are used as abbreviations.

**Table 4.5 Key informants' profiles**

Student	Age	Type of high school	Years spent learning English	University major	Ranking of speaking skills	Preferred speaking activities	Speaking difficulties	Student's needs for developing speaking skills
Sn	18	Public	11	Computer Science Department	4 out of 10	Activities based on whole class discussions	Full self-expression through constructing long sentences	More time to be made available for discussions at the institute
Lu	19	Private	12	Engineering	5 out of 10	Small group activities	The Lack of motivation to participate in boring topics	Developing argumentation skills/ discussing political topics
MI	19	Public	12	Psychology	6 out of 10	Simple class discussions that do not require challenging others' views, pronunciation activities	Fear of making mistakes while speaking and the lack of argumentative skills	Introducing more discussion sessions into the preparatory year programme
Mr	18	Private	12	Architecture	4 out of 10	Small group talk	Shyness of practising the new language in front of classmates, the lack of analysis and evaluation skills	More discussion sessions, changing her shy personality
Sw	18	Public	9	Computer Science	4 out of 10	Small group activities	Shyness, more specifically when giving presentations	More discussion sessions, learning more vocabulary, constructing correct questions

The five key informants, as seen in the table above, had in common an anxiety about speaking English, and their anxiety causes seemed to vary from one student to another. There were also variations in their attitudes towards classroom dialogue. Sn liked to participate in whole-class discussions because this gives her opportunities to see how others think. Other participants preferred small group talk to whole-class talk. All of them suggested introducing discussion sessions to improve their speaking skill. With regard to suggested topics for discussion, Lu was more interested in politics than the others, who thought such topics were boring.

It should be mentioned that, during my observations of classroom interaction, Sn and Lu were active participants. There were instances where they initiated talk and built on others' opinions, as will be seen in Chapter 6. This indicates that when learners are asked to evaluate themselves they might undervalue their own skills. The purpose of including their evaluations in the questionnaire was thus simply to explore how satisfied they were with their progress in language learning, particularly in acquiring speaking skill.

### *Teacher's profile*

I allocated the name 'Amina' to the teacher who participated in this study, so that her real identity would remain anonymous. This Asian teacher has a master's degree in English Language and Literature. She has been teaching English for more than 20 years, and has spent all these years in Saudi Arabia. She has been teaching at the language institute for five years.

She is used to teaching various language courses (e.g., listening, speaking, reading and writing). She said that the students who join the institute as language learners need more intensive English courses, since most of them are graduates of high schools where Arabic is the medium of instruction. They should be given more intensive speaking and writing courses when they join the institute. For undergraduate degrees at Almanara university, learners are required to master

English in order to be able to continue with their studies. The role of the institute is to develop learners' proficiency and help them to pass the TOEFL with a minimum of 500 marks. Amina uses the communicative approach in her teaching because it teaches students how to communicate both inside and outside the classroom. She said that she is familiar with the critical thinking approach because in the last 2 years they had started to follow a textbook that emphasises critical thinking in reading and writing. She gave an example from the reading textbook. The book used questioning as a thinking strategy, including questions that have no right or wrong answer. The answer depends on the learners' opinions. Regarding teaching listening and speaking, she used to teach this course two or three years ago. She followed a book which focused on note taking and completing closed texts. There was no emphasis on critical thinking in speaking according to her. The book she was going to teach for the first time during the final study in the lessons based on a textbook put more emphasis on critical thinking. She thinks that critical thinking should be taught, and the main skills that she wants to focus on are making inferences, agreement and disagreement supported with the right transitions. She thinks debates are helpful for encouraging the use of thinking skills. In her opinion, debates would be more effective if accompanied by pictures or videos. She would like to use Web quest in the future to develop her learners' thinking skills. It helps students to search for information on a topic and to write a report about it. She thinks that teaching argumentation could be challenging for teachers and she uses discussion as a strategy to arouse interest in the class if students start to feel bored.

With regard to the class chosen to participate in the study, she thought it would be challenging for them to use argumentation skills because they need to be able to communicate well. She thinks that current students fall short of a satisfactory level in constructing arguments, but they might have the potential to acquire it. She stated that these students had not used critical thinking in speaking classes before. There had been no emphasis on constructing arguments, so it might be challenging for them. Lack of vocabulary is the main barrier to constructing arguments. Her solution

to this problem was to discuss real-life topics the students were already familiar with from previous courses.

The teacher was asked if she had been provided with a teacher's guide on how to teach this course (Listening and Speaking), and she explained that they do not receive any guides on teaching skills, and that this is left to the individual teacher's experience and views on teaching (See Appendix N for the full interview with the teacher).

#### *4.3.5 Data collection procedures in the final study*

I started to conduct the final study in February 2011 after receiving approval from the university. I got permission from the language institute authorities to attend during the registration week to remind teachers about my project and find out who was interested in participating. Although it was a busy week, I managed to meet the teachers for a short coffee break, and one of them immediately expressed her willingness to participate in the study. The next step was to meet the students the following week to introduce myself and obtain their consent to take part in the study. I entered the classroom with the teacher, Amina. All the students were interested in participating and signed the consent form. They were no different from the pilot study students. I found them easy to approach and they started asking questions like how did I get a scholarship and what was it like to do postgraduate studies in the UK. At the end of the first meeting, the students kindly assured me that they would do their best to cooperate with me because, in their words, they were proud to see a Saudi woman who could be a role model for their academic success. It was a relief to hear this from the students, who were more willing to participate than some of the teachers, who were suspicious about the study. In the following paragraphs I will describe what happened in the different phases of this study, following the SPARE model.

### *Phase one*

Before introducing the critical thinking lessons into the speaking classroom, the learners were asked to provide background information about their experiences of learning English and practising speaking in the classroom. For this purpose, questionnaires were administered to all student participants. Then, I started to interview the students and included those who appeared to have different answers in their questionnaires. I ended up with 10 interviewees out of the 18 students. Prior to the start of the thinking lessons, the teacher received three introductory sessions on critical thinking designed and introduced by myself (see Appendix O). The aim was to broaden the teacher's understanding of the meaning and components of critical thinking. Examples of activities and from research were discussed with the teacher. She was given the book *Thinking Skills Through MFL* by Lin and MacKay (2004), that included detailed explanations of how to conduct critical thinking lessons in a foreign language classroom. The teacher was free to choose between using these activities and designing her own. She asked me to prepare the mysteries owing to the large number of activities she was engaged in at the institute. I discussed with the teacher the results from the baseline data (see sub-section 4.3.4), to help her think of activities that could improve the quality of classroom talk among the learners, and so that she could take into account their suggestions concerning the types of activity they wanted to do. We thought that providing learners with lists of argumentation markers and simple phrases would help them to convey their ideas and to indicate agreement or disagreement, and therefore develop their pragmatic skills. I suggested a variety of sources. The teacher had been teaching for over 20 years and she had more experience than I did. In order to allow her long experience to shape the implementation of the intervention, I did not interfere with her decisions during the study, since I thought this would produce better results. Also, I wanted to adhere to the naturalistic inquiry approach where incidents are investigated in a natural setting. Before starting the first thinking lesson, I introduced the learners to the meaning of

critical thinking and to what a critical thinking dialogue looks like (see Appendix P). The reason for doing this was that, according to the baseline data, some learners associated argumentation with criticism, so it was important to correct such misunderstandings regarding critical thinking and introduce examples of critical thinking dialogue.

Six critical thinking lessons were given to the learners during the first six weeks: two involving topic discussions, two involving mysteries and two involving image reading. Before starting each lesson, the teacher modeled argumentation with the learners through presenting a dialogue and asking them to role play the dialogue. They then had to underline the pragma-linguistic markers. I sat at the back of the classroom, having placed four recorders in different places in order to obtain accurate recordings. I observed the class and made shorthand notes. When I observed an interesting incident, I asked for interpretations from the participants. After the lesson had ended I followed the students out of the classroom with one of the audio recorders left turned on in order to obtain their comments. I did the same with the teacher: she was interviewed informally to elicit her views. At the end of the six lessons, a focus group was conducted to identify the merits and challenges of these lessons as perceived by the learners. Following the SPARE model, the focus group represented the Evaluation phase (see Appendix C). I summarised the results of the focus group for the teacher and left her to make changes according to her own views and experience.

### *Phase two*

After the focus group, another SPARE cycle started. Six further lessons were introduced until the end of the semester: two topic discussions, two mysteries and two image readings. No modeling sessions were used during the second phase. I continued to take notes and observe the class, and to engage in informal chats with both the learners and the teacher. At the end of week six, I conducted final interviews with the teacher and students and distributed the questionnaire to all

students. During all 12 lessons, I kept my participation to a minimum and did not intervene in the conducting of the lessons.

#### *4.3.6 Problems encountered in conducting the study*

The conducting of these lessons was not straightforward. There were problems that could not be avoided. One of these was the fact that the lengths of the 12 lessons were not the same. This was the result of interruptions by either the institute secretary or the director to inform students about urgent meetings or exam schedules. In one of the lessons, the director spent 15 minutes talking to the students about meetings with the deans of schools at the university, telling them where each meeting would be held and how they should behave in front of the deans. Another problem, related to the teacher, involved the sensitivity of the third mystery topic. The mystery was about adultery, and she cut the discussion short because, as she explained to me after the class, discussing such a topic made her feel uncomfortable and it conflicted with the learners' religious beliefs. In some of the lessons, particularly towards the end of the project, the teacher gave the students quizzes in the time allowed for the thinking lessons as preparation for their final exams. Class cancellations were also a difficulty in this study. Twice the lessons were delayed until the following day because of urgent meetings at the university. Also, commuting daily to the university was not easy for me. The university was an hour away from where I was staying. These problems were unavoidable, but fortunately they did not have any obvious detrimental effect on the study.

In the following section the process of data analysis is described.

## 4.4 Data analysis

Having collected all the data, I started on the analysis. Analysing the data obtained from both the quantitative and the qualitative methods was extremely time consuming. The analysis of the data obtained from the qualitative and quantitative methods is described in the following two separate sub-sections.

### 4.4.1 Qualitative analysis

Thematic analysis was employed with the data obtained from the interviews, field notes, open-ended questions of the questionnaires and answers written in spaces following closed questions in the questionnaire.

The interview transcriptions and questionnaire answers were all in Arabic, the learners' mother tongue. Extracts and passages that referred to a single idea were identified, and this idea might be developed later into smaller themes or units (see Ellis and Barkhuizen, 2005; Robson, 2011 for details on thematic analysis). Final themes were then translated into English. Two dominant codes relevant to the main research question were identified: the merits and challenges of implementing critical thinking as a pedagogy to promote the quality of classroom dialogue, and building positive attitudes towards this pedagogy. After identifying merits and challenges, the codes were divided into smaller themes to fit under the two main codes (e.g., types of thinking strategy that could raise/lower the quality of dialogue). Some of these units were based on themes identified in the relevant literature. For example, the relevance of topics to learners' lives, which reflects the positive aspect of the pedagogy, was identified by Dantas-Whitney (2002), Fairley (2009) and Chen (2010), and tolerance of ambiguity was identified by Lin and Mackay (2004) (see Table 5.1). With regards to themes associated with the negative aspect of this



intervention, I developed two units related to the barriers of reflection: Fears of losing marks and seeing reflection as an unnecessary strategy (see Table 5.2). These units were developed through my interaction with the data. The reason of such coding emerged from the fact that challenges of the critical thinking pedagogies have been overlooked in available literature; thus, I had to create my own themes during the analysis. I kept visiting the data from time to time and listened to the audio recordings while reading the transcribed texts to help me make sense of the data. To accompany the presentation of the data in the results chapters, certain extracts from the participants' interviews or comments they made in the questionnaire were selected and translated into English. These extracts were then transcribed following the orthographic transcription method. Field notes were analysed in the same way. After interpreting observed descriptions by participants or colleagues, themes were identified and added as evidence to support the data obtained from the interviews, questionnaires and classroom dialogue.

The transcription of the 12 lessons, which formed part of the qualitative analysis of the audio-recorded classroom dialogue, was time-consuming. CA conventions were used to transcribe the classroom dialogue (see Appendix H). The analysis of dialogue was informed by CA methodology, which means that the analysis did not go deeper into CA features. The reason for using CA conventions here was that they lead to a more accurate understanding of classroom interaction and minimise the risk of bias, since things like interruptions and pauses are included. The specific focus in applying a qualitative method for analysing talk was on identifying in which way an interaction pattern was or was not different from an IRF sequence and examining examples of how thinking and learning opportunities were created or obstructed during talk. It should be noted, however, that transcription will never be an identical representation of the real talk that has taken place (Jenks, 2011). The reason is that researchers look for particular interaction details, and do not have time to add all details. Adding to this, it might be difficult to capture every single word produced by interlocutors, more particularly when overlaps occur.

#### 4.4.2 Quantitative analysis

The data obtained from the closed questions in the questionnaire, from the pre- and post-tests and from the observation checklists were analysed by means of quantitative methods. Starting with the questionnaires, responses to closed questions were inserted into SPSS software and the results were laid out in a descriptive manner.

For the pre and post-tests, the Mean Turn Length (MTL) was measured for each test. The mean value was calculated by taking the total number of words employed by each individual and dividing this by the number of turns she had (Ellis and Barkhuizen, 2005). The types and frequencies of pragma-linguistic markers, ideas communicated and thinking levels in both tests were also calculated. Results are presented in tables and graphs were created using Excel.

The quantitative analysis of the ad hoc observation was the most time-consuming task in this study. The initial aim was to use Nemeth and Kormos' (2001) framework for analysing quality of argument. However, the nature of the data I had obtained meant that this framework needed to be replaced. This was because I had found that in some lessons, the students were doing more than simply indicating agreement or disagreement with supporting reasons. For instance, some students initiated new ideas, which provoked activity in the classroom. Also, the teacher talk needed to be taken into consideration, and Nemeth and Kormos' (*ibid.*) framework does not include teacher talk. A more detailed framework that included both teacher and student talk needed to be found. I searched education and linguistics databases and came across Brown and Kennedy's (2011) framework. This framework examines the quality of classroom dialogue through identifying types and frequencies of teacher and student utterances. It codes utterances into various types (see Appendix G), and is thus more comprehensive than Nemeth and Kormos' (*ibid.*) framework. Although Brown and Kennedy's (2011) framework was designed for investigating the quality of child talk based on the philosophy inquiry approach, it was adaptable to my study

because it involves both the quality of talk and critical thinking. I developed some codes to fit my data (see Appendix K). After deciding on the framework, I started filling in the checklist through reading the transcriptions and listening at the same time to the recordings. The results were inserted into Excel to calculate frequencies.

To ensure the reliability of coding the quantitative data, I carried out an intra-rater reliability check four months after analysing the tests and observational checklists of all lessons. The agreement results of the pre- and post-tests were 87.5% for coding the levels of thinking and 94.28% for coding the types of utterances. With regard to the intra-rater check of the 12 lessons, the agreement levels were 91.94% for coding the utterances produced by the teacher and 87.95% for coding the utterances produced by learners (see Appendices Q and R).

The second step for enhancing the reliability of coding was conducting inter-rater reliability check for both the observation checklists and tests. The codes were discussed with two researchers. Results obtained from coding utterances found in 6 lessons by one researcher showed that the agreement levels were 95.90 % for coding the types of utterance produced by the teacher and 98.38% for coding the types of utterance produced by learners. With regard to the reliability check of the pre- and post-tests, agreement results obtained from the inter-rater check conducted by another researcher were 89.65% for coding the levels of thinking and 90% for coding the types of utterance (see Appendices S and T).

#### **4.5 Trustworthiness of this study**

The concept of trustworthiness is a core criterion by which a naturalistic study is judged (Lincoln and Guba, 1985). This concept refers to the truthfulness of knowledge, and the applicability, consistency and neutrality of the findings (*ibid.*). Lincoln and Guba (*ibid.*) use particular terms to represent each of these four criteria. They use the term ‘credibility’ for ‘truth value’, ‘transferability’ for applicability, ‘dependability’ for consistency and ‘confirmability’ for neutrality. With regard to the terms used in a conventional study, the term credibility replaces internal validity,

transferability replaces external validity, dependability replaces reliability and finally, confirmability replaces objectivity (*ibid.*). Naturalistic researchers have come up with these new terms to distinguish their flexible design studies from fixed design studies (Robson, 2011). I will briefly clarify how these terminologies are approached in conventional and naturalistic inquiry research based on Lincoln and Guba's (*ibid.*) explanation.

In a conventional study, validity, reliability and objectivity are sought through conventional techniques. For instance, internal validity is achieved through control and randomisation, while external validity is achieved through the generalisation of findings. Maintaining reliable results depends on employing correlation measures, while being objective requires intersubjective agreement. In a naturalistic study, credibility, transferability, dependability and confirmability are associated with specific techniques that establish the trustworthiness of a successful naturalistic inquiry, as explained by Lincoln and Guba (*ibid.*). The techniques required for achieving each of the four criteria are discussed below.

#### *4.5.1 Credibility*

Lincoln and Guba (*ibid.*) mention several techniques for establishing credibility. An essential technique is prolonged engagement, which means that the researcher needs to familiarise himself with the context under investigation over a long period. This allows the researcher to establish rapport with participants. In this study, I investigated the context, its policy, aims, views on critical thinking, members and participants thoroughly over two phases (i.e., in the pilot and final studies). While doing the pilot study, I started to understand the structure of the courses, the staff and the types of student who join the institute. At the end of the pilot study, I presented my research focus and aims to Almanara University; the attendees were members of the teaching staff from various departments at the university and members of the language institute. This presentation was an excellent opportunity for the staff and

me to get to know one another and discuss salient issues regarding the application of critical thinking at the university. During the final study, I had daily contact with the students. I would chat with the students informally, have lunch with them in the restaurant every day and share jokes.

The second technique used to achieve credibility is persistent observation, while the third is triangulation, which was explained in sub-section 4.2.2. I used various methods of data collection (i.e., regular interviews, classroom observation, audio-recording of classroom dialogue and final questionnaire) to achieve data triangulation. Audio-recorded data were analysed using qualitative and quantitative methods (analytical triangulation). Triangulation allowed me to look at themes from different angles and to understand the processes of the study.

To strengthen the credibility of findings further, a naturalistic researcher should seek the help of a peer for debriefing. This person should be an outsider professional who is willing to analyse, check and test findings. I discussed salient issues and transcripts with PhD colleagues of mine. Also, two raters were sought to check the quantitative analysis of the dialogue and pre- and post-tests. The most helpful and informative discussions and feedback took place at international conferences where I presented a few papers (see the List of Publications on page 250). ‘Member check’ was another technique I employed; this required me to go through the interview notes and summarise the main points to the participants at the end of the interviews. This was done in order to double check my understanding of the interviewees’ views.

#### 4.5.2 Transferability

Transferability replaces external validity in conventional studies. Lincoln and Guba (*ibid.*) claim that it seems impossible to achieve external validity in any research if the purpose is to generalise from the population. Their argument is that contexts and people change over time. Even people included in a naturalistic study can change. However, if the purpose is to identify similar characteristics in one context or other contexts, generalisations can be made. This means it is possible to generalise individual experience in a single context. Transferability can be achieved through the keeping of reflexive journals. It is recommended that a researcher keep a journal that reflects his experience with the investigation, and in which he indicates salient issues and decisions. I recorded my reflections on a regular basis in handwritten diaries and on poster-size mind maps. This was very helpful for identifying things that went right or wrong during the investigation and to record how decisions and methods were modified to take into account emerging issues. Another important technique is to provide readers with thick descriptions, as this helps readers to make judgments regarding the findings. To achieve a satisfactory level of description, a researcher must be fully aware of the context. It is recommended that quotations from interviews be added to the descriptions. I tried to avoid making subjective claims and to allow the learners and their teacher to describe their experiences with the intervention and how their views were shaped throughout the study. To add deeper meaning and a wider range of information, Lincoln and Guba (*ibid.*) highlight the role of purposive sampling in thick description.

The aim of purposive sampling as explained by Lincoln and Guba (*ibid.*) is to include a wide range of experiences. The participants in the current study had different views on classroom discussions. Some thought that whole-class discussions were very helpful while others preferred small group talk to whole classroom talk. In addition, the learners had different types of motivation to learn English. According to

the interviews, some were learning it in order to achieve academic success (intrinsic motivation), while others were learning it because they had liked the language since their childhood (extrinsic motivation). There were also some students who mentioned both types of motivation.

#### *4.5.3 Dependability (reliability)*

Dependability is concerned with consistency, as is reliability in conventional research. The difference lies in the techniques applied. In a traditional study, the reliability of standardised measures, such as tests, questionnaires and observation, needs to be checked and tested. In a naturalistic inquiry, the methods applied are mainly qualitative and non-standardised; therefore findings can be checked through what is called an audit trail (Robson, 2011). This means that a qualitative researcher reveals the processes of his study clearly and keeps different files for the various processes involved in carrying out the study, the changes that are made and notes or reflections. In the case of my study, I tried to keep a clear record of the changes I made to the design or to the analysis of data and supported these changes with reasons. I also reflected regularly on the study during the design, analysis and writing up phases, putting each phase in a separate file.

Another point is related to the reliability of transcriptions. In this research, recording the data allowed for accurate transcription and helped me to re-examine the data from time to time. Throughout the study, I became familiar with the voices of most of the students, which facilitated the identification of speakers in the recordings. This in turn helped me to identify turns in the written transcripts. I also used the abbreviations for the students' names and the first few words of their talk during the observations to identify them in the transcripts. The reader is reminded that producing identical version of the real classroom talk is not possible (Jenks, 2011). The reason is that a researcher is interested in particular interactional features and does not have time to include all details. Also, overlaps and background noise can make this mission impossible.

The learners were given the interviews and questionnaires in their mother tongue (i.e., Arabic) in order to obtain accurate accounts. However, I chose to write the original interviews and questionnaires first in English, since this was easier for me, and then I translated them into Arabic. To check the reliability of the translation, an independent translator was sought to translate the Arabic version into English. The language of the original and translated versions I made was simple and there were no major differences between my original and the translation produced by the translator, apart from some stylistic differences. Regarding the reliability of the quantitative findings, the inter-rater and intra-rater tests achieved this purpose.

#### **4.5.4 Confirmability**

This is related to the neutrality of findings. According to Lincoln and Guba (*ibid.*), research is considered neutral if all credibility, transferability and dependability techniques have been applied. I have already explained above how each of these criteria was met. I would like to add that achieving confirmability is not easy, as I had to visit the findings regularly for the purposes of comparison and carefully check how the above three criteria were being met.

#### **4.6 Ethical Issues**

The research ethics in this study follow the British Association for Applied Linguistics Recommendations on Good Practice and the British Educational Research Association Ethical Guidelines for Education available at:

[www.baal.org.uk/dox/goodpractice\\_stud.pdf](http://www.baal.org.uk/dox/goodpractice_stud.pdf)

<http://www.bera.ac.uk/publications/ethical-guidelines>

After obtaining approval from the Research Approval committee at Newcastle University, I obtained permission from Almanara University where the study was



conducted, and then obtained the participants' consent. I clearly explained the aims of the study, the questions, tools and the length of time it would take, and protected the participants' identities. Consent forms were administered to student participants and to the teacher and all the above issues were highlighted on the cover page (see Appendices U, V and W). Participants were informed that they had time to think about the participation and that they could bring the forms back at a later time, and told that they could withdraw from the study at any point. Their identities would be kept anonymous in the study, as I used abbreviations for their names: two letters from each student's name were used at random and the teacher's name was changed. The university and language institute were referred to as Almanara.

#### **4.7 Summary**

This chapter has provided a description of the methodology employed in this study. The approach to acquiring knowledge I adopted for this study was first discussed. Then the planning stage of the study was described. The processes involved in carrying out the study were explained in detail, followed by an account of the challenges encountered in the conducting of the study.

The approaches adopted to analyse the data were also described in this chapter. The issue of trustworthiness, the key criterion of research quality, was explained. Finally, ethical considerations were discussed. In the following four chapters the research results are presented in relation to the research questions.

## CHAPTER 5: RESULTS FOR RESEARCH QUESTION 1

### 5.1 Introduction and structure of the chapter

This chapter presents the results related to the first research question:

1. What are the attitudes of the students and their teacher towards the implementation of the critical thinking pedagogy?

I will start by presenting the results relating to the students' points of view and then move to discussing the teacher's view. The findings concerning the students' attitudes were derived from data obtained from informal interviews which took place after some of the lessons, from a focus group session conducted in the middle of the study period, from observation field notes, from the interviews conducted at the end of the study and from the final questionnaires (see Chapter 4 for more details on the procedures for implementing these methods and the methods of analysing the data). Although all 18 students were included in all aspects of the study, in order to obtain an in-depth understanding of the effects of the intervention, particular focus was placed on five key informants: these were Sn, Lu, Ml, Mr and Sw. I will first present the findings obtained throughout the period of the study by means of qualitative methods (i.e., regular and final interviews, field notes and the open-ended questions of the questionnaires). I will then present the quantitative results for all 18 students, obtained from the final questionnaire. The findings regarding the teacher's views are then presented; these were obtained from regular interviews with the teacher and observation field notes. A summary of the findings on attitudes is provided at the end of this chapter.

## 5.2 Learners' attitudes towards critical thinking lessons

### *5.2.1 Attitudes obtained from the qualitative data*

The study was divided into two phases. Each phase represented one cycle of Burden and Williams' (1996) SPARE model (see Chapter 4 for more details on this model). The length of each phase was 6 weeks. From the start of the project, I sought to elicit information on the participants' attitudes through regular informal chats, observation field notes, a focus group at the end of week 6, and the final interviews and questionnaires at the end of the project. In the following section, the participants' attitudes as revealed during phase 1 are first presented. These attitudes were examined with a view to modifying subsequent lessons on the basis of the information obtained. The results obtained from the examination of attitudes during phase 2 are then presented.

#### *Attitudes regarding the first 6 weeks of the project*

The students expressed positive and negative points regarding the implementation of the critical thinking lessons. Themes derived from short informal interviews, field notes and a focus group conducted with 10 students are presented in Tables 5.1 and 5.2 below.

Table 5.1 Positive aspects of the new pedagogy

Theme	Source	Example from the themes
Relevance of themes to learners' lives	Short interviews after some lessons, field notes	Watch them every day,
Tolerance of ambiguity	Field notes	e.g. Describing learners' performance in mysteries 1 and 2

Table 5.2 Negative aspects

Theme	Source	Examples from the themes
1. Barriers to reflection		
a. Fears of losing marks	Focus group	Penalised,
b. Unnecessary strategy	Short interview after one of the lessons	More helpful for the teacher

The first lesson in this project was a topic discussion about finding solutions to problems rather than simply complaining about them. During this discussion, the students gave short responses, although the teacher tried hard to extend their turns.

There were some learners who did not take part in the discussion at all (see extract 6.1 in Chapter 6). However, the students' involvement in class talk was totally different in the next topic discussion, 'Turkish Series'. There were opportunities for them to initiate and extend turns (see extract 6.2 in Chapter 6). Some students reported after the lesson that they enjoyed this discussion more than the first one because they like watching Turkish TV. This indicates that the second discussion was more relevant to their lives.

Mysteries were another type of activity used in this project. While doing mystery 1, many students appeared to be confused. It was difficult for them to come up with an answer to this mystery, since one part of the story was missing. Students MI, Mr, Sw and Rh related their limited interaction to the lack of evidence in the story (see extract 6.4 in Chapter 6). The students' attitudes towards mysteries were different in the second mystery, however. The students were able to think of alternatives and extended their participation.

Extract 5.1 below is taken from mystery 2, where the learners were discussing whether a child should stay with the mother or the father in the case of divorce.

Extract 5.1

```
460 Wi: If the children (.) stay with her urr their
461      mother should have- the mother have good job
462      (.) or have a have a urr::=
463 S?: Home
464 S?: House
465 Wi: = home and have er have urr (.) have time to
466      care about this children (.) and [er::]
```

```
467 T: >[And] let's say the mother did< no:t hav:e a
468      Lot of money but the (father) (?)
469 S:  (?)
470 Wi: The father give the money to give them the
471      >necessary< (needs)
         ((Talk continues))
```

480 Bs: In Saudi Arabia: I must er the man  
481 when divorce and have children must er:(.2) =  
482 S?: Support  
483 Bs: =give money  
484 T: (PAY) support money  
485 Bs: money  
486 Wi: **[NO IT'S NOT A RULE]**  
487 S?: **[NOT ALL OF THEM]**  
488 T: a:ccording to the Islamic laws you have to

This extract illustrates the active interaction taking place among the interlocutors. In this extract, Wi evaluates the circumstances which might determine with whom a child should stay in the case of his or her parents' divorce (lines 460 and 466). Bs takes a turn (line 480) in order to present evidence from their society, but Wi holds a different view from Bs (line 486). The fact that Wi resorts to using L1 appears to indicate her commitment to her viewpoint. As appears from the above data, the students' attitudes towards the critical thinking lessons depended on their familiarity with the topic and developed understanding of critical thinking, as in the mysteries.

After the sixth lesson, I carried out a focus group with 10 learners to evaluate their experience so far with the lessons. The evaluation was conducted in order to inform the teacher's plan of the subsequent lessons. One negative point associated with the learners' attitudes was related to the issue of their involvement in written assessments or oral reflections on their learning that took place at the end of some of the lessons, during the first week of the study. All the participant students agreed that their assessments and oral reflections in the debriefing phase at the end of the thinking lessons were unsatisfactory. They were hesitant about reflecting openly on the lessons in front of the teacher because they thought that this might have an adverse effect on their marks. I noticed that the students did not write any comments on the self-evaluation forms they were given after the first three lessons. Also, most of them chose high ratings for their level of satisfaction with their participation in these lessons, and they avoided giving any negative feedback or identifying any limitations associated with either the lessons or their learning. Similarly, in the oral reflection phase, the learners avoided participation in reflective dialogues. During the

focus group session, the learners revealed their reasons for not being reflective in the classroom. Below is a transcript of a dialogue showing the learners' opinions on self-assessment and oral reflection taken from the focus group session that was conducted.

Extract 5.2

R: Ok what about self-assessment at the end of the strategies or activities that have been introduced to you. Do you find them helpful? I mean the assessment sheets.

Ss: No

Sn: Assessment should be done after a few lessons but not after every lesson

Ne: It is helpful if authorities take it into consideration. We evaluate and they take action you know.

R: Yes sure we take it into consideration. We don't ignore it anyone agrees with Ne?

Ml: Written reflection is better than the oral one

sometimes.

R: So you prefer writing ok [M1] has a different opinion. She prefers written reflections ok. Sometimes the teacher conducts oral reflection

by asking questions like did you enjoy the lesson today? Was it difficult?

Ne: Of course we will tell her yes it was good.

R: So your answers were complimentary!

Ne: Teachers are subjective they can penalise us. We are afraid of saying the truth.

R: Ok does anyone agree with Ne?

Sn: Yes, true when you talk about negatives.

R: Do you think this might affect your marks?

Ss: Yes of course

Ne: She might punish us.



R: No, no everyone has a view, but in this project a student should express her opinions to develop the course. Each student can freely present her opinions and criticise things; otherwise we cannot develop the course. If the teacher is open-minded, she will accept different views.

Ne: Not all of them are open-minded.

The opinions expressed above revealed that the learners did not feel comfortable about participating in oral reflection because they did not want to upset the teacher, who might, in turn, penalise them for speaking the truth.

Below is a representative excerpt that illustrates the students' interaction in the debriefing phase during the first weeks. The excerpt is taken from a lesson on the Turkish television series. The class were discussing why these series are popular.

Extract 5.3

991 T: can see: (.) who<sup>↑</sup> do you think- did  
992 YOU enjot this activity: (.) what we  
993 did today: did [you like it?]  
994 Ss [Yes Yes]  
(The teacher summarises the main points)  
1005 T = ↓°yes° ↑yes Wi (.) tell me (.) what

1006 part of the activ:itydid you like  
 1007 mo:st  
 ((The teacher paraphrases her question  
 following the students' silence))  
 1019 T: O:kay: so she li:ked urr the picture  
 1020 (.) did you like the urr: pictures  
 1021 that we got for the .hh actors and  
 1022 actresses (.) >and th-the comparison?  
 1023 M1 The topic was interesting  
 1024 T: ↓The topic [was interes↑ting:]  
 1025 Ha [The subject yes]

The excerpt shows that the teacher's questions are more about evaluating the activity and the students' responses are short. No attempts are made by the learners to extend the talk and the reflection focuses on the positive aspects of the task.

The teacher was given some information on how to conduct thinking lessons before the start of the course. The teacher's understanding of the aim behind the debriefing phase developed throughout the study and she started to relate the lesson more to the learners' lives in order to increase their participation. Therefore, the students' responses in this phase changed slightly and they started to bring examples from their lives to discussion, instead of simply giving positive feedback about the tasks.

The excerpt below is taken from an image reading activity. The lesson was about analysing the emotions of airline passengers in a photo. The teacher then asked the learners about how they managed unexpected incidents that occurred in their own lives.

Extract 5.4

- 231 T: Okay let's: urr: (.) ↑girls does it ever happen to  
232 you like this everything is going ↓wrong on a  
233 certain day?
- 234 Ss Yes yes
- 235 T: [Yes why eh]
- 236 Sn: [Teacher all the time]
- 243 Sn: Some happen
- 244 Bs: Some hard work with university  
(Students continue giving examples)
- 252 T: (.) ↑what do you do: how do you:: [get o:ver  
253 this ↓problem?]
- 254 S?: (?)
- 255 Rf: >↑Just< ↓smi:le
- 256 T Just- >okay: v:ery good I li:ke thi:s suggestion  
.....
- 260 T: =°you know° it only takes ↑ni:ne muscles to  
261 ↓smile(.) whe:reas when you ↑frown it >takes  
262 thirty-six muscles< (.)

The interaction above shows how the teacher and learners shared simple examples from their lives and lead to the teacher's introducing factual information to the students in lines 260-262.

### *Attitudes during and after phase 2*

After the focus group, I continued interviewing the students after some lessons, taking notes during classroom interaction and administering final interviews and questionnaires. Themes that emerged from the qualitative data during this phase were categorised into two main themes: positive and negative attitudes. These themes are presented in Tables 5.3 and 5.4 below.

Table 5.3 Positive aspects of the critical thinking pedagogy

<b>Themes</b>	<b>Sources</b>	<b>Respondents</b>	<b>Examples from the themes</b>
1. Participation opportunities			
a. Relevance of topics to students' lives	Final interviews, questionnaire (open ended questions)	Lu, Sn, Rn, Ha	Related to our lives, See it on TV, can happen
b. Practising speaking	Final interviews	Lu, Sn, MI	Able to say something, speak
c. Self-confidence	Final interview,	MI	Overcome shyness,

	questionnaire		confidence
2. Opportunities for applying critical thinking in the classroom			
a. Imagination	Final interviews	Mr, Sw	Trigger imagination,
b. Self-expression	Field notes, final interview	Lu, Sn	Express my ideas, convince others
c. Openness to others' views	Final interviews,	Lu, Mr	Reveal how others think, another way of thinking
d. Considering alternatives	Final interview, open-ended question of the questionnaire	MI,	Think of a topic from different angles,
e. Tolerance of ambiguity	Final interview, final questionnaire	Sn, Mr	No one right answer, come up with hypotheses

### *Participation opportunities*

During the second phase, there were some lessons where learners exploited participation opportunities when topics were related to their lives. For instance, mystery 3 was about romance and the students were involved in the dialogue. However, the teacher stopped them from going further in the discussion (see extract 6.13 in Chapter 6). She explained to me later that the story was opposed to the learners' social and religious values, but the students had different views about discussing romance. For instance, Lu explained after the lesson that she found it interesting to discuss romance because they already watch it on TV.

“It is true that these stories are against our religion and culture, but in real life we hear about such stories... It is not wrong to discuss such topics because we already see them on TV as well. I liked the story because we came up with different scenarios” (Lu/ short interview after the lesson)

“It is interesting to know about different cultures. We need to know about different cultures, even those which are not in tune with ours. If the story does not reflect our society, it does not mean that it might not happen here.” (Ml/ short interview after the lesson)

The learners became more involved in talk when the discussion involved a problem related to their society and more closely linked to their lives. For example, mystery 4 was about domestic violence, and the students found it interesting. Extract 5.5 below shows an example of the students' engagement in talk. Some of the students talked about their personal stories of how they got married, despite their families' dislike of their husbands; the stories were different from the norms of arranged marriages in their society (lines 568-627). The teacher seemed to be interested in what they said, as she did not stop them sharing their stories with the class (line 566).

Extract 5.5

564 S?: She chose her husband  
565 Wi: >Yes I chose my: urr husband  
566 T: You chose your husband y:ou said I want this o:ne?  
567 Ss: ((laughters))  
568 Wi: We met before (.) urr he said to my parents I want  
569 er: your ↑daughter  
((...))  
626 Bs: My dad has announced° she doesn't urr like this  
627 Man

Final interviews and questionnaires were administered at the end of the project to identify learners' attitudes towards their whole experience with the critical thinking pedagogy. I will present now the results obtained from the last interviews and questionnaires.

In her first interview, Lu said that she did not like whole class discussions, because they could become chaotic and might not provide sufficient participation opportunities. However, in her last interview and questionnaire she had changed her views. She ranked topic discussion as the activity which encouraged her participation the most. The reason for this change in her view is presented in the transcript 5.6 below, taken from her last interview with me (R) at the end of the term:

Extract 5.6

R: Ok we did some activities like image reading here are the examples we had also mysteries you were given some information and then you had to come up with a conclusion or you had the introduction and the conclusion then you had to predict the middle part of the story

Lu: Yes

R: This one type and the other type was the topic discussion the teacher introduced a topic and each student was asked to express her opinion which one you liked the most

Lu: Topic discussion

R: Topic discussion

Lu: Topic discussion was very interesting. We liked it. Also the topics were related to our Lives. We



liked it very much and felt motivated during the Discussions. I think it was top, followed by image reading and finally mysteries.

R: Ok was there a disappointing topic you did not like or discouraged you from participation?

Lu: No we enjoyed most of the topics we participated in because these topics required us to speak so we had to speak. Every student was able to say something.

As seen in this transcript, Lu found that the topics in the topic discussion lessons were related to her life. She ranked reading images and mysteries in second and third position respectively. According to this transcript, Lu viewed these lessons as opportunities for participation, since “Every student was able to say something”. This might also indicate that participation and communicating ideas were more important to her than applying critical thinking.

Another interviewee was Sn, who was an active student who had an obvious sense of humour in the classroom. In her last interview, she stated a similar view to Lu. She mentioned that the critical thinking lessons provided her with more speaking opportunities than the listening and speaking textbook did, because the critical thinking lessons were more related to her personal life. “I like the discussions. We were able to share our ideas. Before the start of the semester, we sent a request to the

institute director telling her that we want more speaking sessions.” The type of activity she liked most was the topic discussions. Her reason for this choice was that discussions were more of a dialogue.

Unlike Sn, MI was a quiet student, but her contributions to some classroom discussions added to the quality of talk. She had a similar view to Lu and Sn concerning the influence of thinking activities on participation. She revealed in her last interview that her confidence in speaking had increased slightly. The lessons had given her the courage to speak despite the risk of making language errors. In part A, question 1 of the final questionnaire, she confirmed this, mentioning that class discussions helped her with “overcoming shyness, because errors are unavoidable for language learners.” Topic discussion activities were rated most highly in both her final interview and questionnaire. In her final questionnaire, she added that “none of the activities was ineffective because each activity was effective in a different way.”

Mr and Sw had different views from the students mentioned above. Both of them were shy learners, and they preferred group talk to participating in whole class talk, as stated in their final interviews. Although Sw preferred group talk to class talk, she mentioned in her final interview that the critical thinking lessons had provoked active talk in some classes, owing to the fact that interesting topics were being discussed.

In the final questionnaires, some learners wrote similar reasons to the learners above for preferring topic discussions, as appears in the examples below.

“I found the topics interesting because they were related to our lives.” (Rn/ final questionnaire)

“Discussions helped me to try using my discussion skills with the class, because it is not easy to convince everyone of your opinion.” (Ha/ final questionnaire)

### *Critical thinking opportunities*

Another point that learners appreciated about the critical thinking lessons was that some of these lessons encouraged them to think critically.

“The critical thinking lessons were good. They helped us to broaden our thinking to some degree. We tried to complete a story, figure out something from a picture. I mean the class was interesting, and we were motivated.” (Lu/ final interview)

Lu added that she had respect for opposing views and recalled an example from the Turkish series lesson, in which one student had been against these series. Lu said she respected the view of this other student, because every individual has her own likes and dislikes in life. It seems that Lu has a positive attitude towards opposing views. This finding was confirmed in her responses to the questionnaire, where she agreed with all the statements in part A.

Sn appeared tolerant of ambiguity. In her last interview, she stated that, “I think it would be better if exams entailed activities which promote thinking, so there is no one right answer. Every student answers the way she wants.” In the final questionnaire, Sn added, “Each learner presents her opinion without limiting herself to a particular view.” She also valued the other aspects of critical thinking that the activities had given rise to. “Each activity had an interesting point: self-expression in discussions, imagination in mysteries and analysis in image reading.” (Sn/final questionnaire)

Ml was more specific about the aspects of her thinking that the lessons had promoted, as revealed in the conversation below taken from her last interview.

Extract 5.7

M1: The activities that we did developed some skills.

The way we used to think in these lessons was different from routine thinking. There was creativity.

R: How did you feel about them?

M1: They made me think in a different way.

R: How do they differ from the textbook?

M1: The steps for doing activities in the textbook had

particular answers, but if activities encourage thinking, knowledge will be reinforced. It was important to integrate the thinking lessons with the text book.

Another point M1 valued about the critical thinking lessons was that there were opportunities to examine others' opinions.

“Discussions allow me to listen to different opinions and look at the topic from different angles.” (M1/final interview)

“Whole class discussion allows for analysing issues from different perspectives and different opinions. Also, it allows for looking critically at opposing opinions.” (M1/final questionnaire)

In the final questionnaire, M1 mentioned that the thinking skill she felt she had practised the most was evaluating others' views (see question 1, part C).

With regard to Mr, she appeared to be tolerant of ambiguity. The activity she found the most helpful was mysteries. On various occasions she stated that mysteries were the best activities because of the ambiguity they contained that triggered the imagination. In her last interview, she stated that "They (mysteries) promote your thinking and reveal to you how others think; for example I came across new information or ideas suggested by others that I have never thought about. It shows me another way of thinking." In the final questionnaire, she repeated the above reason and added that, "Mysteries helped me to think of alternatives and come up with hypotheses." (question 1, part A). It should be noted that her attitudes to mysteries at the end of the project was different from her attitudes at the beginning of the project. After the first mystery, she said she thought it would be better if the teacher provided the class with a resolution to the mystery, as she was interested in knowing the right answer. However, her attitude towards mysteries changed over the course of the intervention. It seems that she came to realise that in mysteries there is no single correct answer.

Sw, who shared Mr's view, referred to mysteries as her preferred activities, and the reason as stated in her last interview was that, "They triggered imagination". She extended her answer in the final questionnaire, stating that thinking activities allowed different views to emerge.

In the final questionnaire other students reported similar views, where they valued the aspects of critical thinking that the activities required. According to Kh, for instance, image reading did not generate active talk and she preferred mysteries because of the ambiguity that encourages alternatives to emerge. On the other hand, By wrote, “I have learned how to convey my opinion through analysing images and showing respect for others’ views.” Unlike these two students, Bs said that she found the mysteries least effective, because she did not like the action stories in mysteries 1 and 3. She preferred topic discussions where could share her opinions with others.

The interviewees also highlighted negative points that had coincided with carrying out the intervention. Table 5.4 below summarises these points.

Table 5.4 Negative aspects of the critical thinking pedagogy

Theme	Source	Respondents	Examples from the themes
Teacher control over topic choice	Final interview	Lu	We wanted to choose the topics
Reflection as an unnecessary learning strategy	Questionnaire-open ended question	Lu, Ml, Sn, Sw,	More helpful for the teacher
Shyness as a barrier	Final interviews	Mr, Sw	Shyness
Language as a barrier	Final interviews	Sn	Lack of grammar and vocabulary

Dominance of talk by active learners	Final interview, open-ended question of the questionnaire	Sw	Dominate talk
Marks over quality of learning	Final interview	Sn	not included in the exams
Need for extra hours	Final interviews	Lu, Sn, Mr, MI, Sw	More critical thinking lessons
Formality of the linguistic markers	Final interviews	MI, Mr	Formal, manage to communicate without them

As shown in the table above, the learners highlighted various limitations that they had encountered during the implementation of the intervention and came up with suggestions for future improvement. All the five interviewees agreed that the number of critical thinking lessons should be maximised in the future to provide them with more opportunities for practising using critical thinking. For instance, Lu suggested that 50% of the listening and speaking classes could be allocated to working from the textbook designated by the institute and 50% to critical thinking lessons.

Another limitation that was reported by Lu in the last interview was that the students were not allowed to choose topics for discussion. She would have preferred it if the choice of the topics had been decided by the students themselves, so they could choose what they found interesting and prepare for the discussion before coming to the class. Also, she wished the discussion topics had included some recent political issues, such as the Arab Spring.

MI suggested that the thinking lessons should be integrated with the textbook and that learners should be made aware that the thinking lessons were not introduced just for fun. They have a purpose, which is to enable the students to acquire thinking skills: “It should be interwoven within the course. It should be explained to learners that this pedagogy is not for fun. It is not for practising speaking only. It is about learning thinking skills.” This suggests that MI was aware of the need for infusing critical thinking into the classroom, and thus this concept should be emphasised in learning.

Another limitation of the intervention that was highlighted by Sw was that some students dominated talk and did not give others a chance to contribute to the discussions. Sw and Mr described themselves as shy learners, so shyness was a barrier to their participation in whole class talk. For this reason, they preferred small group talk to whole class talk. The students continued to hold the same view about reflection. They described it as an unnecessary strategy, and it might be of help to the teacher to modify her lesson plans.

Another limitation that needs to be discussed is that some learners might prioritise achieving high marks over the quality of their learning. For instance, Sn mentioned in the last interview that she was not interested in learning the pragma-linguistic markers because they were not included in the exam. This indicates that she wanted to concentrate on studying what would be included in exams. Two other students, MI and Mr, mentioned that they were able to communicate without these markers. MI said that, “they (the phrases) sound formal”, while Mr said, “I can manage to communicate my ideas without these phrases.” Language barriers were another limitation highlighted by Sn. She mentioned that one of the things that might discourage her from participation was a lack of vocabulary and grammar.



### 5.2.2 Attitudes of all participants

Generally speaking, the learners had positive attitudes towards learning English through critical thinking discussions throughout the study. Three types of thinking activities were used in the thinking lessons: topic discussions, mysteries and reading images. The table below presents the responses by all the 18 learners to the closed questions in the final questionnaire.

Table 5.5 Responses to final questionnaire

Questionnaire statements	Responses	Number of responses
<b>A. Thinking activities</b>		
1. What was the most effective thinking activity?	1. Topic discussions 2. Mysteries 3. Image reading 4. All activities	12 learners 4 learners 1 learner 1 learner
2. What was the least effective thinking activity?	1. Topic discussions 2. Mysteries 3. Image reading 4. None of these	1 learner 4 learners 6 learners 7 learners
3. Which thinking skills have you practised through critical thinking lessons?	1. Analysis 2. Making inferences 3. Evaluating others' views 4. All these skills 5. None of these skills	5 learners 1 learner 4 learners 8 learners 0 learners
<b>B. Attitudes towards critical thinking</b>		
1. I show respect for opposing opinions in thinking lessons.	1. Strongly agree/agree 2. Not sure 3. Strongly disagree/disagree	17 learners 1 learner 0 learners

<p>2. I consider alternative views before making a final decision.</p>	<p>1. Strongly agree/agree 2. Not sure 3. Strongly disagree/disagree</p>	<p>17 learners 1 learner 0 learners</p>
<p>3. I express my ideas in thinking activities, despite the language difficulties I have.</p>	<p>1. Strongly agree/agree 2. Not sure 3. Strongly disagree/disagree</p>	<p>18 learners 0 learners 0 learners</p>
<p>4. Supporting my views with evidence makes my idea convincing.</p>	<p>1 Strongly agree/agree 2. Not sure 3. Strongly disagree/disagree</p>	<p>18 learners 0 learners 0 learner</p>
<p>C. Rank the effects of critical thinking lessons on your participation, from 1 to 10. 1= very poor, 10= excellent</p>	<p>6 7 8 9 10</p>	<p>1 learner 6 learners 4 learners 6 learners 1 learner</p>
<p>D. Choose one statement that reflects your opinion about your experience with the critical thinking lessons.</p>	<p>1. I prefer critical thinking activities to textbook activities. 2. I prefer textbook activities to critical thinking activities. 3. I prefer to learn through both critical thinking activities and textbook activities. 4. I do not like thinking activities and the teacher should look for another methodology. 5. I prefer to learn through</p>	<p>9 learners 1 learner 8 learners 0 learners</p>

	the textbook only.	0 learners
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As shown in the table above, 12 learners chose topic discussions as the most effective activity for them. In their answers to the open-ended questions in the questionnaire, some learners related this to the relevance of the topics to their lives (see sub-section 5.2.1 above). With regard to the least effective activities, 7 learners said that they found all the activities helpful, while 6 learners selected image reading as the least effective activity.

It seems that all 18 learners valued the thinking skills associated with the activities (part A: question 3). All the learners said that they had found the activities helpful for practising some of their thinking skills. As stated in sub-section 5.2.1, some learners, such as By, enjoyed analysing the images, while Kh and Mr liked to be put in an ambiguous situation, as in the mysteries, which provided space for more possible views to be expressed.

The responses to part B of the questionnaire suggest that the learners had positive attitudes towards the idea of being critical. For instance, 17 learners agreed with the statements that they showed respect for other learners who had different views and that they considered alternatives before making a decision. All 18 learners agreed that they tried to express their ideas regardless of language challenges and they agreed on the importance of supporting their claims with evidence in order to convince others. In support of the views expressed by the learners in this part of the questionnaire, extract 6.15 in Chapter 6 shows how the learners became involved in critical thinking when the teacher gave them an opportunity to do so.

In their responses to Part C of the questionnaire, the students' ratings of the critical thinking lessons ranged between 6 and 10. They also made it clear that they would like to continue with the idea of thinking lessons on future courses. Regarding this point, 9 students said they found these lessons more interesting than the textbook and 8 learners thought that these lessons should be combined with the textbook. Only one student said she found the book more helpful than the critical thinking lessons, without giving reasons; however, none of them stated that these lessons should not be taught, which might indicate that these lessons created a feeling of engagement among the majority of the learners.

### **5.3 Teacher's attitudes towards the implementation of critical thinking as a language pedagogy**

This section presents the results obtained from the teacher regarding her attitudes towards the experience of implementing critical thinking as a language pedagogy. I interviewed the teacher informally after certain lessons to explain some of the observations I had made. A formal interview was conducted with her at the end of the course so she could evaluate and reflect on her experience with this pedagogy.

#### ***5.3.1 Positive aspects of the critical thinking pedagogy***

##### ***Positive effects on learners' participation***

From her responses in her last interview, it appeared that the teacher held both positive and negative views of the implementation of critical thinking lessons with her class. Starting with the positive views, her general view was that:

“I think this approach had a very positive impact on the class... students who were even very shy. They somehow let down their inhibitions during the discussion and even with limited vocabulary they managed to get motivated enough to join the discussion, because this is a major problem when students have some kind of talk but they are afraid to argue it out critically. But when they got into that discussion point, they were motivated enough to start speaking out, and even with their limitations they were able to convey their message.”

According to the teacher, the critical thinking lessons involved the learners in critical thinking dialogue when they were given opportunities to think critically about what they or others were saying. When the teacher was asked in the final interview which thinking activities were most effective in engaging learners, she pointed to reading

images:

“According to my observation they enjoyed reading images more because somehow it filled in the gaps that they had within themselves. They could understand better, especially because these learners are more visual these days, and they are so acquainted with technology in any form.”

Here, the teacher also highlighted the role of visual materials in engaging learners in talk.

The teacher also found the critical thinking pedagogy applicable for teaching different language skills. In one of the informal chats we had early on in the implementation of this pedagogy, the teacher explained how she had adapted reading images for teaching writing to another group of learners. She had presented the class with a picture of an old man and asked the students to decipher the man’s feelings. They were then asked to use their imagination to make up a story about this man.

### *The role of the teacher in the classroom*

In the teacher’s final interview, she described her role in the class as that of a facilitator. She had tried to act as a facilitator during the lessons and had tried to maximise the learners’ talk. In her view, learners should be given control over their own learning so that they can become independent.

Besides playing the role of a facilitator, in various interviews I had with her, the teacher emphasised her role in building rapport between herself and the students. In the last interview, she said that the students had built up a rapport with and trust in her. This relationship had given the students more confidence in class. Based on my

observations, the learners appeared to be confident with the teacher, despite the fact that she was trying to control their talk in some lessons. Teacher and learners exchanged jokes, personal views and stories in the class.

The following example, which seems to be relevant here, is taken from mystery 4.

Extract 5.8

562 S?: Miss  
563 T: Yes  
564 S?: She chose her husband  
565 Wi: >Yes I chose my: urr husband  
566 T: You chose your husband y:ou said I want this  
o:ne?  
567 Ss: ((laughter))  
568 Wi: We met before (.) urr he said to my parents I  
want  
((Talk continues))  
736 Rf: ↓Miss you have a ↑daughter?  
737 T: Yes ↓yes  
738 Rf: What if your daughter choo:se a man and urr you are  
739 not happy you will agree  
740 T: >I: will never let her marry:<

During this mystery lesson, some students were against the idea of arranged marriage, and they shared their personal stories with the teacher. This might be indicative of the friendly relationship that exists between the teacher and her students. Here, rapport seems to be an important element in improving the quality of talk, as will be seen in Chapter 6.

### *5.3.2 Negative aspects of the pedagogy*

#### *Sensitivity of the context with regard to some topics*

Throughout the study, the teacher pointed out several issues that might affect learners' participation in the critical thinking lessons. At the beginning of the course, the teacher said she did not want to leave the choice of topics to the learners. She believed that this could create disagreement among them and could waste class time.

After the focus group in the middle of the study, I told her that the learners would prefer it if she left the choice of some topics to them. However, she believed that this would waste class time, as these students tended to disagree over things. It seems that the teacher was cautious about choosing the topics. During image reading 3, the teacher stopped the students criticising their culture.

Extract 5.9

25 T: You think it's different  
26 Wi: clothes and the hairstyle  
27 T: Ok  
.....  
30 Rf: Our (old) culture the bad culture  
31 Lu: No you can't say bad (?)  
32 T: The bad and good are judgmental words  
33 Rf: Yah  
34 T: Every culture has bad and good points  
35 S: There is a-  
36 T: How can you bring change to the world

The discussion above involves comparing and contrasting life in the past and life in the present. Rf describes the culture of the past as “bad”, and Lu disagrees with her (lines30-31). The teacher closes down this opportunity for argument by stating her own view (line 34), and then moves to another point by asking a referential question to encourage the learners to think about how they could change things they do not like (line 36).

Also, the teacher was not in favour of discussing romance with her students. For instance, the third mystery was about a romance where a wife cheated on her husband. Classroom interaction was limited (see extract 6.13 in Chapter 6 for examples). The teacher explained after the lesson that she did not feel comfortable about extending the learners' participation with regard to this topic, since it was opposed to their religious and cultural values.

### *High demands on teacher*

Regarding the challenges that the teacher faced while applying this pedagogy, she told the researcher at the beginning of the course that using this pedagogy along with the textbook could be demanding for teachers. Although she prepared the activities, she asked the researcher to help her find ready-made mysteries. Her reason was that she was teaching different courses to different levels of learners for 20 hours a week. Therefore, she would not have time to design her own mysteries.

### *Classroom reflection as a strategy unnecessary for learning development*

The teacher's views on engaging learners in oral reflections were similar to those of the students. Her view, as expressed in her final interview, was that "it is more helpful for the teachers than for the learners because the teacher has to reflect on what went right and what went wrong and use that influence or the results or the effects of it to plan her future lessons." This extract reveals that in the teacher's view the value of reflection lay in developing her teaching rather than in developing the students' learning.

The teacher described the learners' participation in the oral reflections that took place at the end of some of the lessons as limited. The explanation she gave for this in the final interview was that they were not used to reflecting critically and that they were used to traditional methodologies. Another reason she gave was that the learners were afraid of losing marks if they had to express honest views. However, she had observed slight progress in their reflections from the first lessons because they started to understand the meaning of reflection, although it should be noted here that despite noticing this slight progress, she did not continue with class reflection until the end of the study and in fact discontinued it after phase 1.



The extract below is taken from the first lesson, in which the class discussed how to change things that one does not like. It shows how the teacher was trying to encourage the learners to reflect on the lesson.

Extract 5.10

864 T: Why did you like it because you had nothing to write  
 865 that's why?  
 866 S: [[Yes]]  
 867 S: [[No]]  
 868 S: [[Huh no]]  
 869 S: (?)  
 870 Bs: Because we like err discussions with talking  
 871 T: you liked urr to discuss and talk about something:?  
 .....  
 893 T: It might help you to: (.) urr urr: when you spea:k  
 894 about ↑it: (.) you all came to one  
 895 conclusion: a:ll of you agree that you should (.)  
 896 ch:ange things if you don't like step by step

In this extract, the teacher tries to encourage the learners to take part in reflecting on the lesson. She asks a referential question “why” in line 864 and summarises the discussion outcomes (lines 893-896); however, the learners do not make any effort to extend their short responses, which consist of only single words.

In the mystery 2 lesson, the teacher and learners were more involved in oral reflection, as seen in the extract 5.11 below.

Extract 5.11

563 T: [No:] (.) >urr so what did you do  
 564 with-< with the pieces of paper that I gave you?  
 565 S: Read it read it (.)  
 566 T: >You first r:ead: it (.) then what did you do:?  
 567 S: Er: d:iscuss  
 568 T: (.) You discussed it (.) >w- but w- d- <you were  
 569 doing something e:lse a:lso I thought?  
 570 Mr: Yes [sep:ara:te]  
 ((.....))  
 577 T: (.) And ↓h::- ↑what helped you to decide just your

578            mind or your heart or what?  
579    S:        Positive and negative points

In the above extract, the teacher asks the learners about the processes of performing the task in their groups and how they came up with a decision (lines 563-569). Some learners take turns to respond to the teacher's questions, and their responses appear to be longer than those in Extract 5.10. However, as stated above, although the teacher and the learners might have begun to make slight progress in the quality of class reflection, the teacher did not continue with reflection until the end of the study. She suggested that employing anonymous written reflection instead of engaging in reflective talk could minimise learners' fears. Also, she suggested that performing the oral reflection in their mother tongue could facilitate reflection by avoiding the learners' lack of appropriate English vocabulary.

### *5.3.3 Suggestions for future implementation of the critical thinking pedagogy*

In the teacher's last interview, she highlighted some of the issues that should be taken into consideration for future implementation. She suggested that the number of modelling sessions should be greatly increased because five sessions were not enough for the students. Also, in her view the pedagogy appeared more appropriate for higher level learners who are competent in the new language. Speaking of reflection, she suggested that learners should be asked to reflect anonymously on their learning instead of engaging in class reflection.

## 5.4 Summary

In this chapter the results regarding the attitudes of the learners and their teacher towards the implementation of critical thinking as a language pedagogy have been presented. The learners identified both positive and negative points. With regard to the positive points, the learners said that critical thinking lessons provided them with opportunities to speak, although in some of the lessons classroom talk did not take the form of dialogue. The learners highlighted the words ‘participation’ and ‘talking’ instead of the words ‘dialogue’ and ‘argument’, and this might indicate that they still value participation opportunities where they communicate their ideas, even if these opportunities do not include opportunities for practising critical thinking. As the learners explained in their baseline interviews (see Chapter 4), they wanted to have more opportunities for practising speaking, which seems to take priority over critical thinking. However, when the learners were given opportunities to engage in critical thinking dialogue, they became involved in applying their HOTS, as will be seen in Chapter 6. The learners valued aspects of thinking such as imagination, which were associated with certain activities like mysteries and image reading. In addition, they appeared to be tolerant of ambiguity. Most of them stated that they liked to consider and evaluate alternatives, and this point was obvious in their performance in mysteries 2 and 4 (see Chapter 6 for more details).

Regarding the teacher’s attitudes, she thought that critical thinking pedagogy did involve learners in talk when they were given opportunities to apply HOTS. However, she viewed this pedagogy as an additional burden on teachers because of the extra effort she had to make to prepare and conduct the lessons. The teacher explained her concerns with regard to talking about certain topics that seem sensitive in the context in question. Also, the teacher did not allow the students to choose topics they wanted to discuss in the classroom, and it seems that this may be because she wanted to avoid the emergence of sensitive issues. It seems that the teacher did not find the pedagogy convenient and this was noticed in the subsequent change in her performance, as will be described in the next chapter (Chapter 6).

A point on which both the teacher and the learners agreed concerned the oral reflections on lessons. Neither the teacher nor the students thought reflection was useful for learning, and they thought it would only be of benefit to the teacher in planning for the next lessons. It seems that the learners valued the application of critical thinking in the classroom more than the teacher. They expressed the view that one should be open-minded to different views and they thought that some of the more contentious topics should be discussed in the classroom, unlike the teacher, who had reservations concerning this point.

## CHAPTER 6: QUALITY OF CLASSROOM DIALOGUE

### RESULTS FOR RESEARCH QUESTION 2

#### 6.1. Introduction

The present chapter reveals results regarding research question 2:

To what extent could this pedagogy raise/ lower the quality of classroom dialogue?

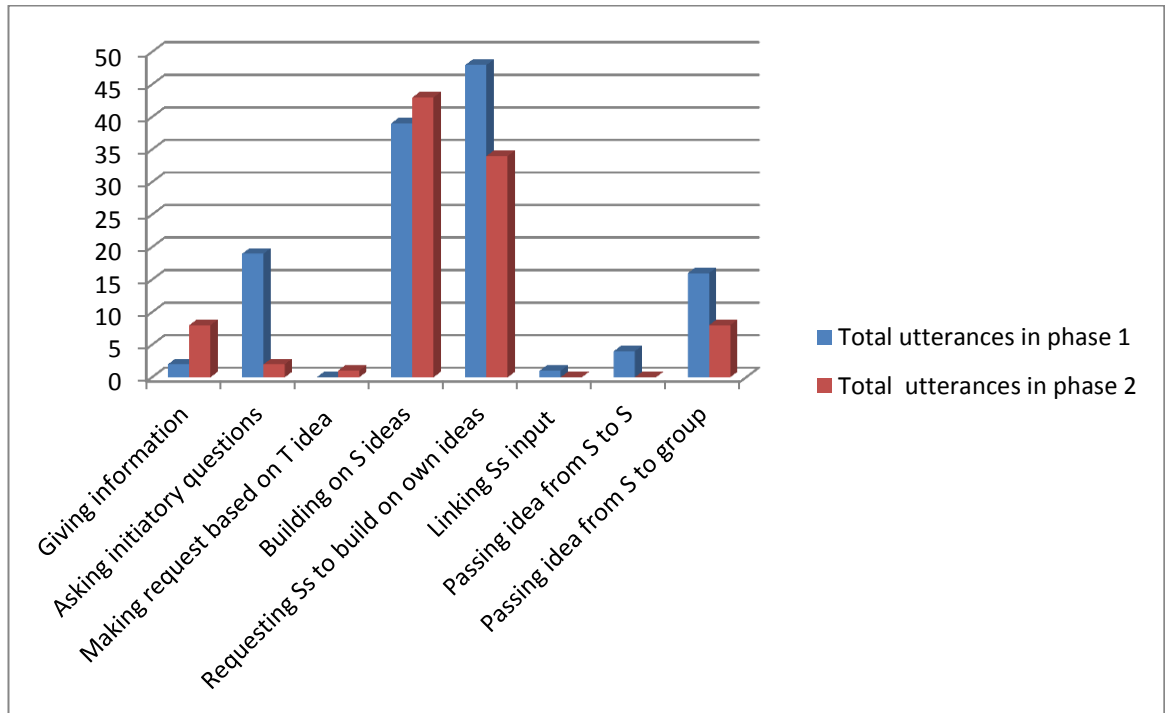
- a. What are the types and frequencies of the teacher's utterance in dialogue in the two phases of the study?
- b. What are the types and frequencies of students' utterance in dialogue in the two phases?
- c. To what extent could critical thinking lessons take classroom talk beyond the traditional IRF?

In order to answer questions (a) and (b), an adapted version of Brown and Kennedy's (2011) framework of quality of classroom dialogue was used. In this framework the types and frequencies of teacher and students' utterances in classroom dialogue are examined quantitatively. The aim of using it in this research was to track changes that occurred in talk between the teacher and students and among the students over the period of the study. More details on the quality of talk are presented in order to answer question (c) from a qualitative standpoint. The qualitative analysis was informed by CA methodology. The focus was on identifying opportunities for learning and thinking, and moments where these opportunities were obstructed.

## 6.2 Types and frequencies of teacher and student talk

### 6.2.1 Types and frequencies of teacher's utterance

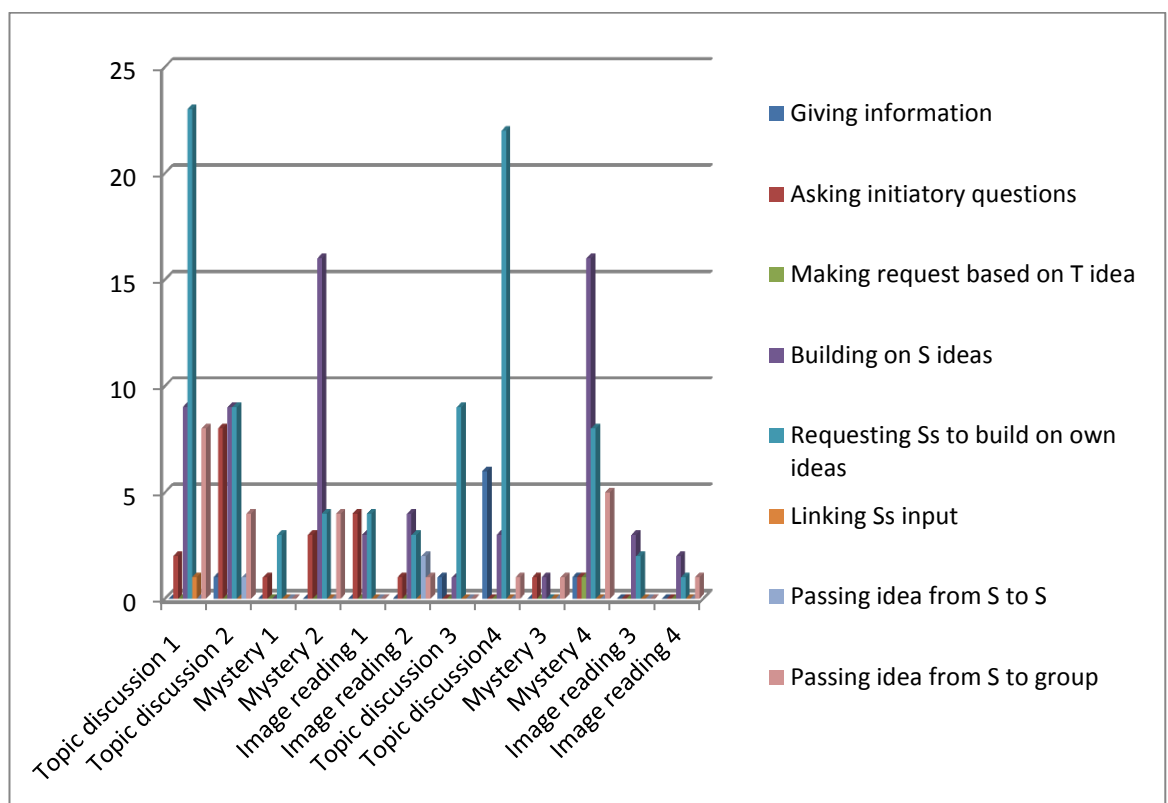
Figure 6.1 Types and frequencies of the teacher's utterance in the two phases



The figure above shows that there was a reduction in the number of most types of teacher utterance (i.e., the types of utterance that occur in dialogue) in phase 2 compared with phase 1. In phase 2 (i.e., after the first six weeks of commencing the project), the teacher reduced her efforts to ask initiatory questions (from 19 questions in phase 1 to only two questions in phase 2); she also reduced the number of requests she made to the students that they build on their own ideas (from 48 to 34 utterances), and the number of conversational links she made between students' input, the number of times she passed ideas from one student to another or from one student to a group of students was also reduced (from 21 to 8 utterances). According to Brown and Kennedy (2011), the number of such utterances should be maximised in dialogue. However, the teacher did slightly increase her building on students' ideas (from 39 to 43 utterances), and this has a positive function because it ensures

that the talk remains coherent. This change in the types of teacher utterance in classroom talk coincided with the start of the classroom observations that the authorities carry out in the middle and before the end of the academic term. The aim of these observations is to evaluate the teacher's performance in the class and make a decision regarding the renewal of her contract. As mentioned in Chapter 5, teachers become nervous during this period and it seems that in this instance the teacher was being careful not to provide the students with opportunities for argument, in which they might criticise the society or bring up a sensitive topic. A qualitative analysis of the teacher talk was conducted to obtain additional insights into the change in her interactional style. Illustrative examples of the results are presented later in this chapter (see section 6.3). The following figure illustrates the changes in these utterances in each lesson.

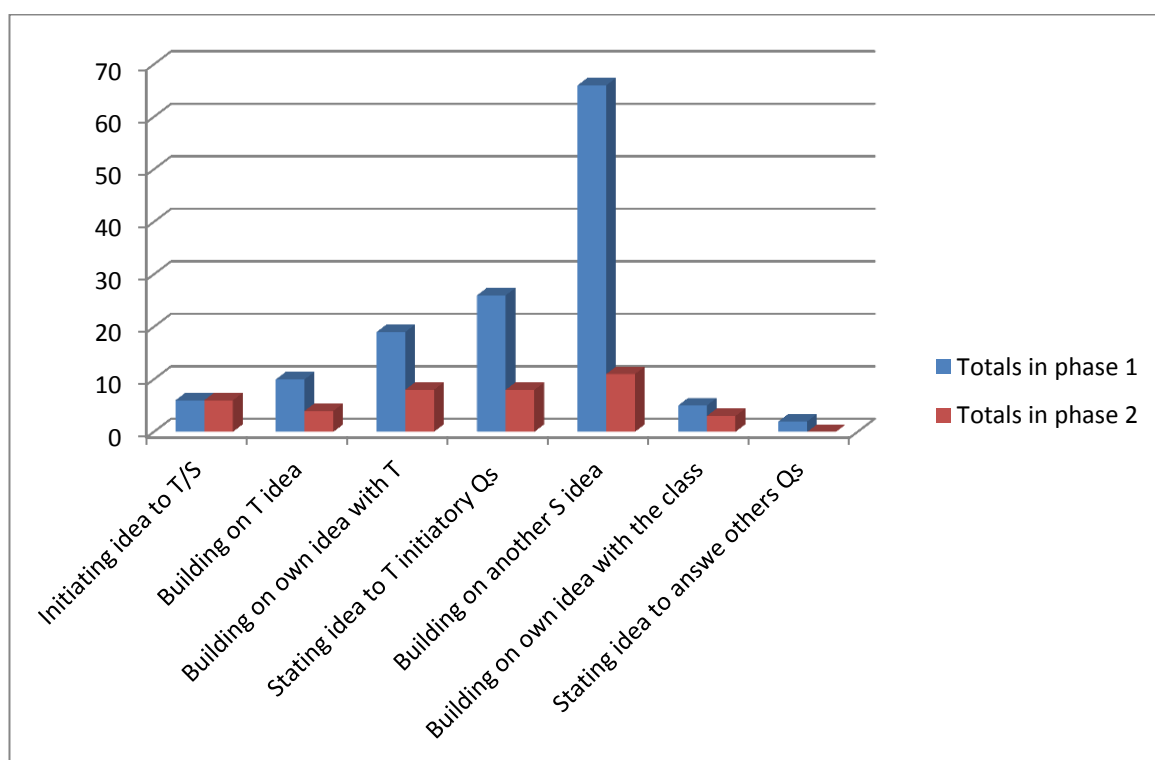
Figure 6.2 Types and frequencies of the teacher's utterance in each lesson



The figure above shows that the teacher's utterances performed various functions during the lessons in the first six weeks, with the exception of mystery 1. There was a reduction in the number of types of teacher utterance towards the end of the study, with the exception of mystery 4. Asking initiatory questions and making conversational links (i.e., linking inputs and passing ideas from one student to another or to the whole class) were absent from most of the lessons in the second phase. The teacher maintained the functions of building on students' ideas and asking students to build on their own ideas during the second phase, which might indicate that she was trying to involve the students in meaningful talk.

### 6.2.2 Types and frequencies of students' utterance

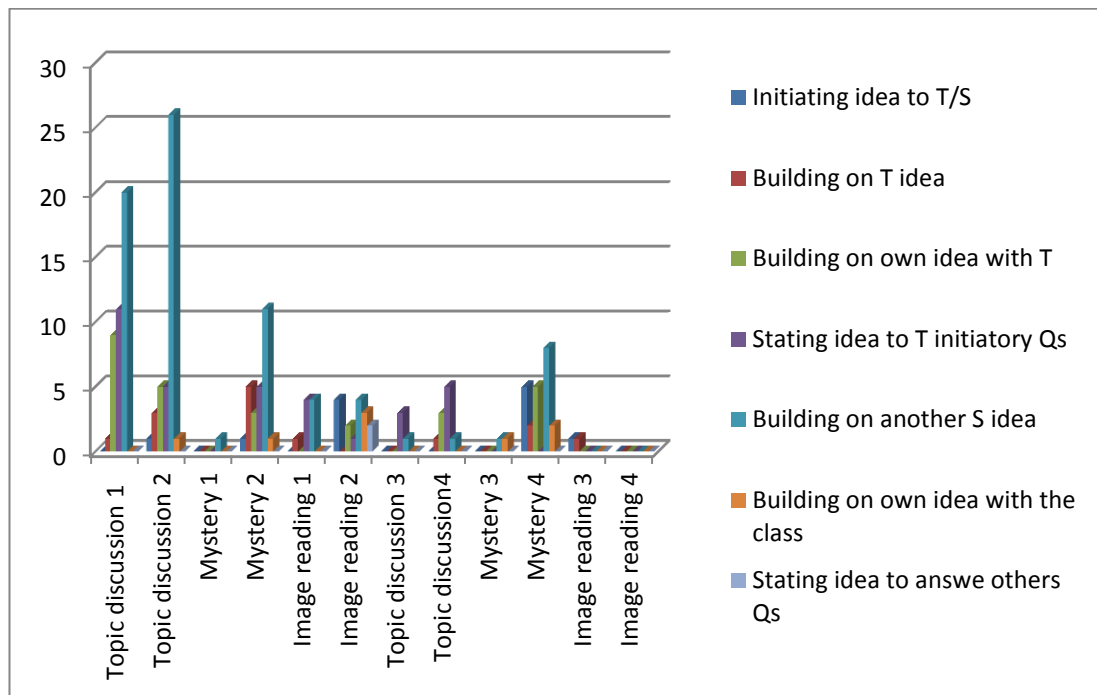
Figure 6.3 Types and frequencies of students' utterance





The decrease in the teacher's dialogic utterances mentioned above affected the types and frequencies of the students' utterances. Figure 6.3 presents a comparison between the students' utterances in the two phases of the study. The figure shows that there was an obvious decrease in the frequency of types of utterance that are essential to maintain the flow of dialogue: building on one's own idea with the teacher (decreasing from 19 to 8 utterances), stating ideas in response to the teacher's initiatory questions (from 26 to 8) and building on others' ideas (from 66 to 11).

Figure 6.4: Types and frequencies of students' utterances in each lesson



The above figure shows that the students were producing various types of utterance during all the first six lessons, with the exception of mystery 1. In the second phase of the study, some types of utterance, such as suggesting ideas to the teacher or other students, were absent from most of the lessons (with the exception of mystery 4). The figure shows also that the quality of talk did not depend on which type of thinking activity was involved, or on what Leat (2001) calls the ‘thinking strategies’ (i.e. solving mysteries and image reading) that were employed. For instance, the mystery 1 and mystery 3 lessons were not interactive, while mysteries 2 and 4 were. The same applies to the topic discussion lessons, with the first and second discussion lessons being highly interactive, compared to the third and last topic discussion lessons, in which the number of dialogic utterances was limited.

Now I will turn to the qualitative analysis of these lessons, which gave a clearer understanding of what changes had occurred and how they had occurred.

### **6.3 Quality of classroom talk: learning opportunities, thinking opportunities and interactional patterns**

The aim of this study was to engage learners in classroom dialogue characterised by an increased level of learning opportunities and the application of HOTS, and to identify the teacher’s strategies for creating such opportunities. In the previous sections the types and frequencies of utterances in classroom dialogue based on Brown and Kennedy’s (2011) framework of dialogue were presented. In this section a closer examination is made of how and why these utterances were occurring and changing throughout the period of the study, from a qualitative perspective. I would like to explain here how the qualitative analysis of talk can validate the quantitative results of this study. As already mentioned in Chapter 2, learning opportunities refer to meaning negotiation (Walsh, 2002) or learners’ initiative (Van Lier, 2008; Waring, 2011) (i.e., initiating a new sequence, volunteering a response or exploiting

an assigned turn). It seems that the type of utterance identified by Brown and Kennedy (2011) exemplify learning opportunities as defined by Van Lier (*ibid.*) and Waring (*ibid.*), and thus examining learning opportunities from a qualitative standpoint can provide evidence of language complexity (Van Lier, *ibid.*; Waring, *ibid.*).

The analysis of teacher-student interaction presented here was informed by CA methodology. The analysis also examined how learning opportunities provided the learners with a space to apply HOTSs to analyse, evaluate and create new ideas, as reflected in their answers (Li, 2011). In addition, the analysis took into account the teacher's role in creating learning opportunities by highlighting her elicitation strategies (i.e., probing questions, extended wait-time, building on students' answers to facilitate talk, linking students' input to encourage turn taking among students, and providing feedback).

In classroom dialogue, the interactional style is moving away from the traditional IRF style (Alexander, 2005; Alexander, 2006). In this research, the qualitative analyses of talk that occurred in the class allowed me to understand how and why the quality of dialogue changed over the duration of the study in terms of the creation of learning opportunities and thinking levels. Examples from the lessons revealed instances where the teacher tried to take control over the students' interaction, and this reduced opportunities available for learning and thinking. The deterioration in the quality of classroom talk was more evident towards the end of the study. Unexpectedly, the quality of classroom dialogue started to decrease and it became more of a controlled discourse from the middle of the study period until the end. The reasons for these changes in the interactional style will be discussed in Chapter 9. In the following sections, extracts from each lesson conducted from the beginning to the end of the study are presented. These extracts contain examples of opportunities for learning and thinking in classroom dialogue and of the obstruction of such opportunities, and highlight the changes that took place in the interactional exchange of classroom talk.

### *6.3.1 Phase 1: The shift from traditional discussions to dialogue based on critical thinking*

This section focuses on the quality of teacher-student and student-student talk during the first six weeks, called phase 1. During these weeks, the students received 2 topic discussion, 2 mystery and 2 image reading lessons. The analysis focused on the talk that followed group work in mystery and image reading lessons and on the talk that followed the posing of the main question for discussion in the topic discussion lessons.

#### *Discussions of opinions based on given topics*

##### *Topic discussion 1: If you don't like something, change it. Do not complain*

In the first of the topic discussion lessons, which was the first lesson of the project, the students discussed the above sentence. The students were wondering how thinking lessons might help them to practise speaking English. During the discussion they concentrated by carefully listening to and looking at the teacher all the time. This was also seen in their body language, as they constantly nodded their heads in response to what others said. However, some students, such as Sw and Mr, who explained in their first interviews that they did not feel comfortable in whole class discussions, were too shy to speak. The students were reminded of the ground rules before starting the discussion (see Appendix O). The teacher put in a great deal of effort during this discussion to encourage the students to speak. The following extract illustrates how the teacher facilitated the discussion and provided the students with opportunities to speak, learn and think.

#### Extract 6.1

207 T: Now I ↑want some people who disagree (.) °right°  
208 (.)I- p-put your hands up I want to see some gi-some  
209 girls who say (.) we ↓disagree with it.(.) What-what  
210 nobody wants to join the participation? She's  
211 encouraged with me but she wants to com:e and .hh  
212 Accompany her friend(.)↑yes? (.2)↑Alright what about  
213 you girls Bs?  
214 Bs: ↑Not all things we can change it y-you know ↑Miss  
215 T: .hh ↓Okay give me an exa↑mple (.2)

216 Bs: Like when I hate the class or anything.  
 217 Ss: ((laughter)) ((talk continues))  
 247 T: h:ow can (.)you change it do you think o:ne ↑person  
 248 can change[the ↓world?] ((asking Sw))  
 249 Sl: [Disagree]  
 250 Sn: ↑Yeah (?) [↓no.]  
 251 T: (.2) Sn How?  
 252 Sn: (.2) If you change your-urr-↑self (.) you can change  
 253 the [world]  
 254 T: [>Okay] .hh I want somebody to talk to:(.)to  
 255 answer [↓Sn]  
 256 Sl: Ok Miss j-  
 257 T: Yes Sl

258 Sl: I will agree you with e:::r here because if I start  
 259 from myself then I talk maybe someone will urr l:iike  
 260 my way: so they::  
 261 Rh: Follow you  
 262 Sl: Ye::s  
 263 Rh: Follow you:  
 264 T: That means you are- she's trying to give herself as  
 265 an e:xample (.) you mean if you're an example then  
 266 you .hh let others follow your example ↓okay. .hh  
 268 T: ((.....)) How many  
 269 ↑people urr are of the sa:me er: feeling as Bs and  
 270 [they want to add something come on I want you ↑all  
 271 to speak]=

This extract shows the teacher's effective use of elicitation strategies for involving students in talk in the first lesson. One strategy is passing ideas from a student to another student or class, as in lines (207), (254-255) and (268). Another strategy is asking probing questions to encourage students to build on their answers and extend their turns, lines (215) and (251). Some of the teacher's probing questions in this lesson are referential questions like 'how' in line (251). Referential questions can encourage students to use their HOTS skills (Li, 2011). According to this extract, not many students take part in talk, so the teacher initiates a new question (Do you think one person can change the world?), lines (247-248). The functions of the teacher's utterances in these lines go hand in hand with Brown and Kennedy's (2011) types of utterance recommended for involving learners in dialogue. The teacher also tries to ensure that all students understand what their peers are saying by paraphrasing students' responses (264-266). Although the teacher encourages students to reveal their opinions, she does not provide Sw with an opportunity to comment because her turn is taken by other students (lines 249 and 250). It should be noted that classroom discussion might be less favoured by shy students like Sw who explained in her interview that she does not find class discussion helpful because it is always dominated by active students (see Chapter 5 for details).

With regard to students' involvement in dialogue, their participation tends to be limited, despite the teacher's efforts in developing the quality of talk. A few students take turns for building on own ideas with the teacher, lines (216) and (252). Also, some students are involved in building on others' ideas, as in lines (258-260). There are a few examples where students are engaged in applying HOTS skills. For instance, the teacher (line 207) asks students who disagree with Sn's answer to speak, and Bs expresses her disagreement (line 214) and extends her answer (line 216). Bs's disagreement is an evaluation of Sn's idea, and evaluation is a higher level thinking skill (Bloom, 1956). These examples of students' utterances reveal that students learn through participating in the complex use of language (Sfard, 1998). Dialogue can create learning opportunities for learner by identifying gaps in learning (Walsh, 2011). For example, S1 tries to find out the correct word (line 260), and Rh provides

her with the appropriate word (line 261). This is an example of how students can provide one another with linguistic support in classroom talk.

This extract also reveals that the pattern of teacher-student interaction is IRI. This means that the teacher initiates a question that is followed by student's response, and the teacher then initiates another question either a probing question to extend the student's turn or making a conversational link where she asks students to evaluate the student's opinion.

### Topic discussion 2: Turkish series

The transcript below is taken from the second lesson “Turkish Series”. It represents an interesting example of active dialogue between the teacher and her students in which the initiation of talk and building on others’ opinions have taken place. These utterances resulted from the learners’ engagement in evaluating each other’s opinions, and evaluation is a higher order thinking skill. The teacher asks the learners about their views of Turkish TV that has become very popular in Saudi Arabia, and why they like watching it.

#### Extract 6.2

534 T: And ↑why do you like ↓them at some point you  
535 said [it was-]  
536 Ha: [The story] is urr:-  
537 S?: Very-  
538 S?: Very  
539 Ha: Very interesting and  
540 s?: Complex  
541 T: So they make the sto:ry interesting by their:  
542 (.) (i:nterests?)  
543 Lu: Miss Miss  
544 T: Ok  
545 Lu: Miss <you know after this urr series (.)  
546 thousand baby girl: (.) their name Lamese >  
(actress))  
547 Ss: Wow ((.....))  
565 T: she just urr:: (.) told us something very  
566 interesting that a thousand baby girls were  
567 named Lamese after her .hh °I’m sure she must  
568 be a proud woman° (.) that she’s so popular you

569            can see the pop:ularity of the (.) (?)  
 570 S:        (?)  
 571 Sn:        She thinks the Arab girl Arabs urr are very  
 572            silly:  
 573 S:        Oh  
 574 T:        ((Laughter)) Oh: I do:n't th:ink so:I don't  
 575            think so-  
 576 S:        (?)  
 577 T:        urr I don't think so if she has an audience  
 578            then- .hh >o:kay that's another point for  
 579            discussion let's go ahead (.) and see: (.)  
 580            a:lright (.) now ↑let's have a look at this (.)

In this transcript, the teacher initiates the talk. She asks student Ha why she likes Turkish series and Ha states her opinion in lines 536-539 and followed by teacher's feedback (line 541). In lines 545 and 546, student Lu takes the turn to initiate an idea with the teacher. She tells the teacher that the actress' name became a popular name for newly born baby girls in Saudi. Initiating ideas by learners rarely occurs in language classroom (Luk, 2004). Wi (line 548) builds on Lu idea by adding that even the actor's name became popular for boys. Lu builds on her previous point (line 549-550) by stating that the fact she mentioned was referred to in the news, in order to add credibility to what she said. Wi repeats that the same happened with the actor's name and her cousin was named after him (line 558-559). Lu initiates a sequence in which the direction of talk moves from discussing reasons for watching Turkish series to the effects of these series on the society. Learners' initiatives are encouraged in language classrooms as they promote the level of participation and thus lead to learning (Waring, 2011). These lines (550-559) illustrate how Lu and Wi bring examples from prior knowledge to the classroom discussion which represent the application level of thinking. Although application is a lower thinking skill, it appears in this extract to add value to the quality of talk. Lu and Wi in this extract extend their turns without teacher's intervention.



The teacher's role in creating dialogue is obvious in this extract. She gives a positive evaluation (line 565) and repeats Lu's idea (line 566-567). Then, she extends the students' contribution by adding her own opinion that the actress must be proud that her name in the series is popular now (lines 567-569). Sn builds on the teacher's idea by showing her disagreement (lines 571-572), followed by the teacher's disagreement with Sn's view (line 574). The interaction between the teacher and Sn here indicates that they are engaged in evaluation which is a higher order thinking skill. The teacher's presentation of her own view encourages Sn to evaluate it. This indicates that there are teaching techniques other than questioning that can encourage students to employ HOTS. However, the teacher in line (line 578-579) closes down further thinking and participation opportunities by taking the discussion in a different direction.

It is evident in this transcript that the interaction occurring between the teacher and the students is different from the classic IRF sequence that dominates most classroom interactional styles. Lu initiates an idea (I), followed by responses (Rs) by Wi and Lu's, and finally by the teacher's feedback (F) where she evaluates and builds on Lu and Wi's ideas (lines 565-569). The teacher's idea (lines 567-569) functions as an initiation (I) because it encourages Sn to disagree with it.

To sum up, this extract reveals that thinking lessons can create opportunities for students to use their HOTS. Also, it shows that lower level thinking opportunities can add value and participation opportunities to classroom dialogue. Finally, the extract reveals that thinking lessons can promote the quality of classroom dialogue that moves away from the traditional IRF. Despite the positive outcomes of this lesson regarding the quality of talk, there were a few examples where the teacher obstructed thinking and participation opportunities, as in line 578.

Below is another extract, showing the last part of the same lesson. The teacher drew a Venn diagram in order to jot down the similarities and differences between Turkish and Saudi television series. She asked the students to give advice to the producers of both series. The extract shows how interlocutors try to maintain the flow of talk either by paraphrasing what they say or switching to L1.

Extract 6.3

872 S1: Give urr be: urr be Muslim  
873 Sn: Respect because we are Muslim you have to  
874 respect the religious um  
875 T: H:ow?  
576 S1: Be polite  
((Talk continues))  
880 T: ↑I:- I am not getting your ↓p:oint  
881 Ha: Forbidden Love urr all the actors are Muslims  
882 T: Uh huh  
883 Ha: And they do:  
884 S?: Miss  
885 T: [?]  
886 Sn: [bad things]  
887 S?: (?)  
888 T: ((slight laugh)) >Alright they behave in a non  
889 Islamic way you ↑mean? (.) Alright.  
890 Ne: [**TURKEY IS A SECULAR COUNTRY**]  
891 S?: [**THERE ARE MANY MUSLIMS**]  
892 Ne: [**YES MUSLIMS YOU KNOW THE MEANING OF SECULAR**  
893 **THEY SEPARATE RELIGION FROM POLITICS**]  
894 Lu: [**YES TURKEY IS VERY**] easy

The teacher asks Sn to advice Turkish producers as she has a different opinion from most of the students. S1 responds first to the teacher's question (872), and then Sn responds (line 873) by paraphrasing S1's opinion. The teacher asks a clarification request (line 880) to extend learners' turns. Ha and Sn take turns to clarify the point to the teacher (lines 881-886). The teacher reformulates their answers (line 888-889). Her response in these lines provides the students with learning opportunities, as they listen to the appropriate way of expressing a particular point (see Walsh, 2002). Other students build on the students' previous turns by switching to L1 (lines 890-894). The switch to L1 could be a sign of the learners' engagement with the lesson and their desire for their voices to be heard even if they use L1.

### *Discussions based on mysteries*

#### *Mystery 1: Married to a murderer*

This mystery was the third thinking lesson that followed the first two discussion classes. In this lesson, the students had to listen to a mystery and were given two questions to answer. The questions required the students to make predictions and thus the answers were not to be found in the story itself. The students were asked to answer the questions in groups. I observed that the students in their groups were saying that it was difficult to answer the last question, as it was difficult to work out who the killer was because it was not indicated in the story. The interaction was limited because the students were not used to mysteries. The following extract is taken from a point during this lesson when the teacher was asking the students to discuss their answers.

#### Extract 6.4

97 T: >[°Who killed°] (.2) who: gave the poison?  
 98 M1: They did not mention  
 99 T: Huh?  
 100 Rh: [**YES**] they didn't mention that  
 101 T: I ↑know: we- urr I want you to think about ↓it  
 ((Talk continues))  
 132 T: Why Helen (.2) give me the wo:rd >quickly<

133 Om: Because she's jealous ((group answer))  
 134 T: >Oka:y< she is jealous (.2) alright urr th- they  
 135 give interesting answer yes  
 136 Sn: Miss love and he kill: him:self ((group answer))  
 137 T: <°Love°>  
 138 ((laughters))  
 ((Talk continues))  
 176 T: What is (.) yes what is your answer?  
 177 Sn: [**IT IS AMBIGUOUS**]  
 178 T: Huh?  
 179 Rh: They didn't mention that in the [?]

As can be seen from this extract, the students struggle to answer the second question (Who killed Clay) as it was a mystery and there were various possible explanations for what happened. M1 and Rh express the difficulty of finding an answer (lines 98-100). The interaction subsequently follows the IRF sequence. The students' answers are short and they do not build on what others say, as may be seen in lines (133-136). The confusion continues among the students (lines 177 and 179). Thinking and learning opportunities were limited in this lesson. Although mysteries can increase learners' participation (Lin and Mackay, 2004), the first mystery in this study appeared to be confusing for the students.

Immediately after the lesson, while the students were waiting for the next class to start, I asked some students about their views on this task.

M1: It was interesting uh helped us to think I mean there are answers that never came to your mind.  
 R: All alternatives are possible.  
 M1: Yes but it would have been more interesting if we were given an answer at the end to know if our answers were correct.  
 R: You prefer the teacher to tell you the right answer?  
 M1: Yes at least she tells us her opinion.  
 Sw: Yes it will be more interesting to tell us what she thinks after we give our opinions.

On the basis of the above interaction and the short interview, it appears that the students were used to doing tasks which require a single correct answer, and so could find it difficult to work on a mystery.

Mystery 2: "Which parent"

Compared to Mystery 1, in this lesson the classroom talk was active, and some parts of talk took the form of a dialogue. This mystery was about a girl called Coralie whose parents are divorced. Information about each parent was written on slips and the students had to decide whom Coralie should stay with. They first worked in small groups to arrive at their decisions and then discussed their answers with the teacher. The extract below shows how the teacher made further efforts to involve students in a dialogue when two groups came up with the same answer. Both decided that Coralie should stay with the mother. The teacher was trying to make the students think of alternatives, while at the same time eliciting group answers. The extract also shows examples when the teacher obstructed some learning opportunities.

Extract 6.5

349 T: [Bs] y- you agree with her (?) there's nothing that  
350 you you disagree with her (.) for (?)what's  
351 happening to the fath<sup>er</sup>? I'm sure th- there are  
352 reasons why you should be staying with your  
353 father al<sup>so</sup>  
354 Wi: (Er just er: he give her:) everything she wants  
355 T: (.) But she also li:ves close to- he- he also  
356 lives close to the school  
357 Wi: >AH!::< (.) also (.) °yeah° there's there's a (?)  
358 T: How- how is this pro- problem going to be sorted out  
359 he:- he lives close to the school <but the mother  
360 doesn't live close to the school?>  
361 Sl: But he c-came la:te  
362 Rh: And she is still young  
363 Wi: still young  
364 T: (.) So?  
365 Wi: But er: (because she's their) urr (.) her mother  
366 T: (?) Isn't her mother going to get married very soo:n  
367 Also (?)  
368 Wi: It's not urr so bad things to er

369 S?: But er if the father [hurt]  
 370 S: [?]  
 371 S: >Yeah:< if the father get married it's so: ↓ba:d  
 372 S: (?)  
 373 T: Okay [?]  
 374 Wi: [The mother is urr:::]  
 375 T: >Okay (.) ↑>alright come on let's see: if you agree  
 376 with her (.) the third group: (.) come on the third  
 377 group (.) plea:se (.) come on

The teacher tries to encourage students to think of the other alternative, staying with the father. For example, she nominates Bs to see if she disagrees with others who all decide that Coralie should stay with the mother (line 349). The teacher then tries to challenge students' decision by stating that there are reasons for why the girl should stay with the father (lines 350-353). The teacher builds on Wi's idea by adding another reason (lines 355-356). However, the teacher obstructs an opportunity for Wi to continue expressing her idea (line 358). Students also contribute to talk. For instance, S1 disagrees with the teacher's reason by reminding the teacher with information about the father, based on the slips given, which indicates that the girl cannot stay with the father (line 361). Rh builds on S1's contribution by adding another reason for Coralie not to stay with the father (line 362). The level of thinking that is evident here in lines 361 and 362 is knowledge (Bloom, 1956), because the students make use of existing information to evaluate the teacher's stated reason. The teacher continues her elicitation strategies by asking "so" to encourage Rh and S1 to extend their turns (line 364).

Another obstruction of learning opportunity occurred when Wi initiates a turn to respond to teacher (line 365), but the teacher again does not provide her with time to form her idea because the teacher states another point for Coralie to stay with the father in order to challenge S1 and Rh's points (line 366). Wi's insistence on presenting her idea in her initiative turn (line 368) leads other students to extend Wi's

turn (lines 369 and 371). Self-select for initiating an idea or turn is a learning opportunity (Van Lier, 2008 and Waring, 2011). Wi wants to build on her previous turn (line 374), but the teacher moves to another group to hear their answers (lines 375-376) which was another obstruction for learning opportunities. Although the teacher is engaged in IRI sequence (lines 349 and 366) to extend learners' talk, she does not provide a space for more turns to take place, as in the case of Wi (lines 366 and 375).

Towards the end of the lesson, the discussion became more active, and this might be related to the relevance of the topic to the students' society. Extract 6.6 below illustrates this point.

Extract 6.6

419 T: =↑>can this happen in your> society today  
 420 Ss: Yes  
 421 S: No  
 422 ((...some short turns))  
 427 S: (?) it's very common  
 428 T: (?) >Oh it's very common you th↑ink< (.) okay (.) do  
 429 you know of a:ny little ↑g:irl: who stays with her  
 430 father and she is happy ↓also: .hh and this has  
 431 happened to her?  
 432 S?: Yah  
 433 Sn: >Yes my< cousin he <get divorced °and they have (.)  
 434 one girl and one boy=  
 435 T: (.)okay what [↑does- (?)]  
 436 Sn: = [They live] with him and he's  
married  
 ((loud noise chair on floor))  
 438 T: <Alright> [?]  
 439 Bs: [>Miss this is no:t fair<]  
 ((.....))

446 T: <wh:at would you suggest the children should stay  
 447 with their ↑mother or with their ↓father?>  
 448 S?: Their mother  
 449 Ss: The mother  
 450 Wi: (?) the father sometimes the mother is not good  
 451 sometimes the father is not good (.) it depends upon  
 452 the: urr-  
 453 T: U:pon the >situation< you mean?  
 454 S?: yes  
  
 455 T: A:nd a::ccordingly >and what sh:ould they do:  
 456 supposing (.) sh:e sta:ys with the ↓mother (.)  
 457 sh:ould sh:e see: her father?  
 458 Ss: >Yeah<  
 459 S?: yes  
 460 Wi: If the children (.) stay with her urr their mother  
 461 should have- the mother have good job (.) or have a  
 462 urr::=  
 463 S: Home  
 464 S?: House  
 465 Wi: = home and have er have urr (.) have time to care  
 466 about this children (.) and [er::]  
 467 T: >[And] let's say the mother did< no:t hav:e a lot  
 468 Of money but the father (?)  
 469 S: (?)  
 470 Wi: The father give the money to give them the  
 471 >necessary< (needs)  
 472 S: Needs

Most of the utterances in this extract (i.e., initiating ideas, initiating questions and building on others) by the teacher and learners fit under Brown and Kennedy's (2011) framework of high quality dialogue. There are various examples of teacher's effective elicitation strategies. For example, the teacher initiates a question in line 419 to relate the activity to students' lives. Because students' responses are short (lines 420-421), the teacher asks a further question to extend their participation (line 428-431). Sn mentions an example (lines 433-436) and Bs presents her opinion to comment on Sn's example in line (439). Wi initiates a new idea (lines 460-461) where she thought of conditions that would allow the mother to keep her child. Initiating turns is viewed by Van Lier (2008) as a learning opportunity. The teacher



also applies a wondering technique to elicit more ideas (lines 467-468), where she builds on Wi's idea through wondering "Let's say the mother did not have a lot of money". This technique encourages Wi to extend her idea (470-471). Wondering techniques used by teachers are believed to evoke interactive talk (Verplaetse, 2000).

### *Discussions based on image reading*

#### *Image reading1: Emotions*

Image reading activities consist of describing and analysing images. The first image reading lesson in this study required the learners to describe and analyse an image of an unhappy-looking family at an airport. The task was to describe the family's feelings and think of reasons why they might be unhappy. Although the dominant interactional style in this lesson was IRF, the students gave different answers in response to the teacher's initiatory questions, and this indicates that learners were involved in thinking of alternatives.

#### Extract 6.7

129 T: ↑why do you think they are ↓sad  
 130 >what made them sad go one by one< (.) the  
 131 man why do you think the ↓man is sad (.) yes?  
 132 Bs: Maybe: because he's lost urr his job?  
 133 T: (.) Okay you think he's lost his job yes: [Om]  
 134 (.) why do you think the woman is sad?  
 135 Om: Because er: (.) there- there is some type of  
 136 problem °that they are told°  
 137 Problem okay  
 138 Bs: Maybe someone died  
 139 T: (.) >Okay: yes er:: (.) [Lu] why don't you join:  
 140 us: and tell u:s why do you think (.) the woman  
 141 is sad?  
 142 Lu: Maybe she is tired from the °children°  
 143 T: Okay er:: (.) urr (.) [Sn]  
 144 Sn: Maybe they lost °their home°

The interactional style from line 129 to line 143 follows the traditional IRE sequence. The teacher asks a question to a nominated student, students respond and then the teacher evaluates their responses. Having a look at learners' responses in these lines, the responses to the same questions are different, as learners think of alternatives, and this type of thinking requires them to use the analytical skills, which are HOTS. This extract shows that the IRF pattern should not be viewed as a negative sequence in the EFL context, as it could create a space for thinking of different answers. This point is in tune with Seedhouse's (1996) view that IRF can add value to learning. This example of the IRF sequence means that the function of an utterance is more important than the interaction pattern (Wells, 1993). We conclude that, although the move from traditional IRF is a dialogic feature, IRF could add a value to talk (a thinking value in this case).

Towards the end of the lesson, the teacher made efforts to provide more space for students to participate through building on own answers. The teacher related the task to students' own lives, as shown in extract 6.8 below.

Extract 6.8

231 T: Okay let's: urr: (.) ↑girls does it ever happen to  
 232 you like this everything is going ↓wrong on a  
 233 certain day?  
 234 S: Yes yes  
 235 T: [Yes why eh]  
 236 Sn: [Teacher all the time]  
 ((.....))  
 243 Sn: Some happen  
 244 Bs: Some hard work with university  
 ((.....))  
 248 Sn: [I wake up late]  
 249 Sl: >I lose mark<  
 250 S: (?)  
 251 T: [You: urr-] May be lo::se mark you >wake up late<  
 252 (.) ↑what do you do: how do you:: [(.) get o:ver  
 253 this ↓problem?]  
 254 S?: [ ? ]

255 Rf: >↑Just< ↓smi:le  
 256 T: Just- >okay: v:ery good I li:ke thi:s suggestion  
 ((.....))  
 260 T: =°you know° it only takes ↑ni:ne muscles to ↓smile  
 261 (.) whe:reas when you ↑frown it >takes thirty-  
six  
muscles< (.) ↓so: you: can have more ↑e:nergy:  
 262 to  
 263 do something r:i:ght °okay° (.) that's it

Although the interactional style in this extract is IRF, the teacher's initiatory act in every new sequence is grounded in the previous move, which is an aspect of dialogue (Alexander, 2005). It has been found that this style maintains the flow of talk and creates a meaningful discussion (Alexander, *ibid.*). For example, the teacher asks if they have ever been in such a situation. The teacher follows her initiative question in lines 231-232 with a probing question (line 252) to encourage students to build on their responses. Rf responds to the teacher by saying "Just smile" (line 255). The teacher evaluates Rf's answer in line 256 and builds on Rf's idea by adding information about smiling (lines 260-263).

#### Image reading 2: Dubai or Paris?

This lesson required the students to work in groups to decide where they should go as a group for their summer holiday. They were given pictures of two popular destinations: Dubai and Paris. Most of the students came up with similar points, which offered limited opportunities for negotiating ideas. However, the teacher used effective strategies to challenge the students' ideas and extend talk, as shown in extract 6.9 below.

Extract 6.9

431 T: =>p:lea:se g:irls: (.) don't speak out of turn  
432 if you had fashion shows in Dubai and you have  
433 fashion shows in (.) P:aris (.) ↑what is the  
434 difference (.) why do you prefer (.) Dubai: to  
435 (.) Paris? (.) What is your difference (.) why  
436 Do you like it bett:er?  
437 Sn: It's smaller  
438 T: Yes (?)  
439 Rh: **[THEY DO NOT SHOW BAD THINGS ]**  
440 Nu: **[EVEN THERE THEY SHOW BAD THINGS]**  
**((.....))**  
450 T: [Nu] You were telling her something why: the  
451 fashion in D:ubai how is it different from P:aris:?  
452 S?: (?)  
453 T: Why: do you like it bett↓:er because it is not (.2)  
454 more (.)  
455 Bs: °Traditional°  
456 T: ↑Yes it is more traditional it is more cultural  
457 (?) more adaptable to you: (.) okay  
458 Bs: Like our country  
459 T: It should be culturally ((writing on board))  
460 Sq: Because they are all Arabs like us  
461 T: >For instance (.) if supposing you have urr  
462 Something to do with your Abaya something to do with  
463 your wedding clothes etcetera:

This extract shows how the teacher attempts to challenge the students' ideas in order to extend the dialogue and encourage them to build on their answers (lines 432-436). Rh and Nu disagree in Arabic (lines 439-440). Rh says that the fashion shows in Dubai do not exhibit clothes that clash with traditional Arab dress, clothes which she refers to as “bad things”, while Nu says that even in Dubai one can find “bad” fashion. The teacher tries to help them to express this idea properly in English (lines 453-457). This example shows how classroom talk can provide learners with opportunities for learning and thinking at the same time (Li, 2011).

An interesting point in this lesson occurred when the teacher asked the students to question one another and handle the talk, instead of posing her own questions. The students became involved in dialogue when they felt that they had some control over their talk. In extract 6.10 below, she asked the only group of students who chose Paris to challenge the others concerning their reasons for choosing Dubai rather than Paris.

Extract 6.10

542 T: Because I want some people to ask ↓questions[Sw]  
 543 a:sk them: they don't have (.) urr any shopping or  
 544 entertainment [in Paris?]  
 545 S?: (?)  
 546 Mr: Miss I want to ask them the similarities (?) this  
 547 miss the similarities silmaratie-  
 548 T: No (?) I want you to ask them: urr a- urr a  
 549 quest↓ion about their choices why not Paris (.)  
 550 why not Paris (.) why::- urr-  
 551 Mr: Why do y ou prefer ur- Dubai?  
 ((...))  
 555 Sw: Why do you prefer fashion shows in (.) D:ubai?  
 ((.....))

563 Ml: Paris have er big brands like er: (.) Louis Vuitton  
 564 T: (.2)>Lou:dly: I can't hear-  
 565 Rh: Okay sorry even Dubai has er  
 566 Ml: Has brands  
 567 Sn: Yes  
 568 Rh: Yeah of course brands  
 ((.....))  
 577 Rh: We can easily come and get uh communicate  
 578 Bs: Without English language  
 ((...))  
 587 Sw: How are you interesting in Dubai uh the bad weather  
 588 T: Okay did you hear the question ask [Sw] [Sn]  
 589 Rh: No Dubai they have different th:ings except weather  
 590 Sn: We can go in the winter

Students Mr, Sw and MI are from the same group who chose Paris and who are trying to challenge the other groups who chose Dubai. They succeed in starting an argument with the other group. Sw asks why they chose Dubai for fashion (line 555) and MI builds on Sw's question by saying that popular brands are to be found in Paris (563). Rh says that these brands can also be found in Dubai (565). Rh picks up a different point, which is the fact that Arabic is spoken in Dubai, and Bs confirms the fact that there is no need for English for communicating with people in Dubai (lines 577-578). Sw moves to the weather as another point that might convince the other groups that Paris is better (line 587). Rh insists on her choice of Dubai and Sn adds that they can go in the winter to avoid the hot weather (lines 589-590). In this extract the teacher tries to let the students handle the dialogue and learn how to ask and answer challenging questions. Giving students control over talk is a learning opportunity (Ellis, 1998). In terms of thinking opportunities, learners in this example use their analytical skills to compare and contrast the two destinations.

### *6.3.2 Phase 2: Back to traditional classroom talk*

In this phase, the quality of classroom talk was different from that found in phase 1. The teacher chose fewer contentious topics, which resulted in fewer opportunities for applying HOTSs, more particularly, evaluation skills. Most of the teacher's questions asked learners to share personal or factual information with the others. Therefore, there was little space for the students to initiate ideas or build on each other's ideas, as discussed in section 6.2 (the quantitative results) above. It could be said that the classroom talk had changed from dialogue to simple discussions based on the sharing of information. The dominant interactional style was the IRF sequence, in which the teacher initiated a question, a student responded and the teacher evaluated the answer by repeating or paraphrasing the student's answer. However, there were a few instances where participants were engaged in dialogic talk, as in mystery 4. The section below presents examples from the last six lessons conducted in phase 2.

## *Discussions of opinions based on given topics*

### Philanthropy

The third topic discussion lesson in this project took place in phase 2 and it was about philanthropy. The teacher introduced a video clip from Opera Winfrey's show about philanthropy as a stimulus for the discussion. The extract below illustrates the quality of interaction that occurred between the teacher and the students.

Extract 6.11

181 T: =would you give (.) err: some money not  
182 >necessarily< one million  
183 Sn: (?) million  
184 T: O:kay:((writing on board))  
185 S?: (?)  
186 T: W- How- (.) what else? (.) ↑WHAT DO YOU  
187 THINK:? (.2) [Yes:]  
188 Ha: [>If she] is very rich and err  
189 (.) she can make others ha-h:appy  
190 Bs: >Happy yah  
(.....)  
200 T: [Not only money] it could even be t:ime  
201 Bs: [To be ↑fam↓ous?]  
202 Sn: [To change people lives]  
203 Bs: [To be famous (.2) To be ↑famous?]  
  
204 T: To be famous okay ((writing on board))  
((short answers by learners continue))  
215 T: =the word is benevolence (.)for b:enevol↑ence  
216 means to please (?)Allah and to do good  
217 dee:ds okay: (.) to p:lea:se God  
218 (.2)((writing on board))  
((Talk continues in the same manner))  
281 T: =↑now people who give ↓money: (.2) and  
282 they're concerned about other people (.) what  
283 ↑are ↓they called?  
284 Bs: >Volunteers<  
285 S?: Mm: mm  
286 T: >No! Volunt↑eers is for e:verything (.) ↓for  
287 work specially I come to volunt↑eer:rs (.)  
288 there's an- a ↓word (.) there is a ↑word  
289 which means when people give money and show  
290 concern:?

291 Mr: [D:onate? Donate?]  
292 S?: [Dontate.]  
293 T: >No< ↑donate means to ↓give (.) or don↑ation  
294 means (.) the thing that you ↓give like money  
295 (.) but ↑peop:↓le ((student chair moves)) who  
296 show c:ncern: and who donate m:oney: (.) and  
297 ti:me (.) they're called something what are  
298 they ↑called ↓°something°?=  
299 S?: (?)  
300 T: =↑Can you name somebody in: (.) the Saudi  
301 community who gives (.) ↓money and-  
302 S?: [Alwaleed] Bin Talal King Abdullah]  
303 [(?)]  
304 T: >Uh?<  
305 Bs: [King Abdullah]  
((examples continue))  
325 T: [>The< King (.) >people like this (.2) they  
326 are called <PHILANTHROPISTS> all of you  
327 Repeat  
328 Philanthropists  
((Teacher explanation continues))  
348 ↓philanthropists (.) ↑but there are o:ther

The sequence in this extract is traditional IRF. Although IRF is viewed as a valuable learning sequence by Seedhouse (1996) and Wells (1993), it does not provide the students in this lesson with opportunities to produce complex turns. The students' language here does not reflect their real English level. Most responses are short and required students to recall information. For instance, Ha and Bs's responses in lines 188-190 are short. Bs's answer expresses cumulative agreement (line 190), and cumulative agreement is not favoured when the focus is on exploring others' ideas (Mercer, 2000). The students continue providing short answers (lines 201, 202 and 203), and the teacher gives feedback and writes their answers on the board (line 204). The teacher could have taken the opportunity to encourage the students to create a list of the most important reasons for becoming a philanthropist.



Although the lines discussed above present how the teacher obstructs thinking opportunities, there are other opportunities for learning the new word 'benevolence', 'donation' and philanthropy (lines 215-217 and lines 293-348). This is in tune with Seedhouse's view (1996) that IRF can be a positive sequence for learning.

After the lesson the teacher explained to me that she was trying to link the lesson to the students' real lives and increase their awareness of their roles in the society. She tried to make them aware of how they could benefit the society through volunteer work, even while they were still students.

#### Appropriate jobs for women

This lesson was the last lesson in this project and it clearly illustrates how the quality of talk had changed from dialogue, where students build on their own and others' answers while applying critical thinking skills, to communicative discussions, where they convey personal information, views and/or factual information without engaging in a dialogue with the class. In this lesson, the teacher's control of classroom talk was clear.

Extract 6.12

86 T: ↑What do you think: is th:e best job  
for ↓women:? .hh Let's think of (?) f:ive yea:rs  
87 mo:re  
88 Bs: [Engineering]  
89 S?: [Yes miss]  
90 S: Engineering  
.....  
99 S: Engineering  
100 S: Pilot  
>No< (.) not in- you may be specific (.) you: want  
101 T: to  
  
102 sort Of <build a r:esort (.) a ho:tel: (.) or  
103 ...Would be working for a co:mpany: (.)or you would  
be  
(Eliciting information from learners continues))

132 T: [O:kay:] (.) anybody else (.) uhh for architects  
133 >the- the ones who want to become architects  
134 what do you want to do: (.) yes?

135 S1: I want to design a big mosque (.) represent the:  
136 Islamic °architecture°

137 T: O:kay (.) so you want to design a mosque ver-  
138 which represents Islamic architecture (.) a:lright  
139 (.)something which is typical of ↑Islamic  
140 tradi↓tion like the blue: mosque in Turke:y or

141 something (.) out of the way:. (.) Alright urr  
((Teacher continues eliciting more answers from  
learners))

154 Ne: No I want to complete a Master and then-

155 Wi: Yeah and then [eh:::]  
156 S: [Yeah:::]  
157 T [>Let's say you] complete your  
Masters=

In the extract above, the interaction is more of communicative nature rather than a critical dialogue. Although the teacher is involved in asking probing questions to encourage learners to talk and clarify their views, the focus of the teacher's questions seem to obstruct learning and thinking opportunities. The teacher's main focus is to elicit answers already known to the students. She starts the lesson with a HOTS question that requires evaluation (What do you think is the best job for women) (lines 86-87). The students give one response (engineering) without any explanation or reasons for their choice (lines 88-92). The teacher poses a specific question (Where do you want to be) and tries to give a student thinking time to think of answers (line 98); however, the students provide quick one-word answers (lines 99-100). The teacher gives a negative feedback to indicate that this was not the expected answer and paraphrases her question by giving examples of where they want to work or do in five years (101-104). The teacher changes the focus of her question from evaluating best job for women to a more specific question about what the students

want to do in the future. This question closes down opportunities for evaluating jobs in terms of suitability for women. The question in lines 86-87 could have been used as an opportunity for building a critical dialogue where the students could build on what had been said through creating argument based on evaluation as a thinking skill. The students give examples of places they want to work in (lines 106-107). It seems that asking specific questions that require naming might limit the options for students to engage in a dialogue where they decide on what to say and lead the talk occurring in the classroom. The teacher could have asked them why they wanted to work for a company rather than another, in order to provide them with thinking opportunities so that they could express their views and evaluate others' opinions.

The discussion continued in a similar vein, with the teacher asking the students to give examples of things they might want to make and places where they might like to work. For example, lines (132-133), the teacher asks (anybody else uhh for architects the the ones who want to become architects what do you want to do yes). SI replies (line 135) and her answer is followed by the teacher supplying feedback and giving further examples of things SI might do (lines 137-141).

One interesting point is that the teacher actually reduces the scope of the learners' thoughts and opinions. For example, in line 154 Ne says, "No I want to complete a Master and then", but the teacher interrupts her and asks her about the sort of work she wants to do in the future (line 157). This could be seen as her creating an obstruction to the sort of response the student actually wants to give. The teacher does not allow the student to continue saying what she wanted to say. By saying, "let's say you completed your master", the teacher might have given the students the impression that she wants to hear short, direct answers. The teacher's power is evident here in the way she steers the students' answers in a particular direction and closes down opportunities for other thoughts to emerge. Limiting the options for the students' answers and narrowing down the focus of their talk by constantly asking for specific examples might limit the extent of the learners' participation. The frequency of referential questions like 'why' (Mercer, 2000) should be maximised if we want to build a critical dialogue. Such referential questions could have engaged

these students in reflecting on their choice of a future job and might have led to evaluation and the creation of useful ideas to confront the emerging issue of unemployment in the Kingdom.

### *Discussions based on mysteries*

#### Mystery 3

This task was an incomplete written mystery, involving a woman who had cheated on her husband. She and the person she loved decided to commit suicide by jumping off a cliff, but later they were found shot. The students were asked to imagine what might have happened to them and speculate on how they died. The interaction took the form of a traditional IRE/F sequence. The teacher elicited a group answer, evaluated the answer and moved to the next group. As she explained in the interview which followed the lesson, the teacher felt uncomfortable about stimulating discussion and argument among the students and extending their turns, since the topic was a sensitive one to discuss as it conflicts with the learners' religion. The teacher explained that she had to control the interaction, so the students did not take the opportunity to say something that might upset the authorities at the institute. The students, as they explained in their interviews, had a different perspective. They enjoyed discussing such topics because they watched programmes about them on TV.

Extract 6.13

176 T: >O:kay (?) she- maybe they had some past  
177 relationship .hh (.) ↑also h:ow does he loo:k?  
178 (.) Does he look-?  
179 S?: (.) Handsome  
180 T: O:kay >do you think that might be one of the  
181 Reasons?<  
182 Ss: [[Yeah]]  
183 T: Also: anybody else who wants to a:dd something to  
184 that? (.) T- thi- tha- th:at's o-o:k↑ay:? (.)  
185 Alright (.) anything u:rr the second question  
186 Sn: Urr:: (.)

187 T: >Read it (.) read it<  
188 Sn: Why did Rita and Barry decide to commit suicide  
189 instead of running away:? ((reads the question))  
190 T: (.)O:kay: instead of elop↑ing (.) instead of  
191 running away: they decided to >commi- .hh you  
192 know when urr the girl want to run away t- for  
193 e:lo:pe (.) oka:y (.)↓eloping (.) to elope means to  
194 run a:way: (.) without t:telling a:nyone (.) so: (.)  
195 why instead of: urr e:loping so why did they d:ecide  
196 to commit suicide?  
197 Sn: We think that they wouldn't deci:de we think that  
198 her husband (.) Alex followed them and sh:ot them  
199 together:. (.) Because he's jealous of of they guy  
200 because he's ((group answer))  
((The teacher continues eliciting group answers))  
287 T: ..... er (.) wh- what do  
288 you think (?) that- that any of these h-h:appen? (.)  
289 Can it really happen?  
290 S: Yes  
291 S: Yes  
292 T: Yes (.) yes may:be: love is- they say- they say (.)  
293 <Lo:ve is blind>  
294 Bs: Not here  
295 T: What did you say?  
296 Sn: Yes it happen  
297 Bs: Not in Saudi Arabia  
298 S: **[YES IT IS POSSIBLE]**  
299 Short inaudible chatter in Arabic  
300 T: A:lright (.) anyway thank you v:ery much: I hope you  
301 Enjoyed the activity

Although the interaction is traditional in all parts of the lesson and the teacher asks questions from the task sheet, there is an opportunity to introduce a new word to students 'elope' which is not mentioned in the story (lines 190-194). The teacher initiates a question (lines 288-289) which requires argumentation. The students express disagreement (lines 290- 298), but the teacher does not extend their responses, and she ends the lesson at that point.

#### Mystery 4

This lesson illustrates how the empowerment of learners in the classroom can lead to high quality talk, where learners personalise the task, engage in extended turns and apply evaluation as a thinking skill to judge each other's ideas. The story was about a woman abused by her husband, and the students had to decide in groups what she should do at the end of the story. Most of the students and the teacher were involved in the dialogue that occurred after the groups had reported their decisions. Extract 6.14 below reveals how the students were engaged in extending their turns and building on the turns of others.

#### Extract 6.14

395 T: W- What do you think- ↑Why do you think this happens  
396 so much: nowa↓days?  
397 S: (?)  
398 T: [?] Violence like this happens every day (.)why  
399 L: Yes I told you because ((cough)) because the man  
400 don't choose any urr-  
401 S?: His wife  
402 Lu: His wife  
403 S?: Sometimes you know  
404 ((laughter))  
405 Wi: Miss- miss (.) Sometimes and it's very popular °in  
406 Saudi° okay the man loves some girl and when he (.)  
407 want to marry her (.) he go to her parents (.) the  
408 parents say "no" er so they're not from our family  
409 not er: same culture urr I will er: search for err  
410 a good wife for you they force him to marry (.)  
411 another girl so it's one of the reason  
412 T: >So< he beats her- so you think he should beat up  
413 this new girl?

414 Sn: Miss in my mind the man should choose the urr girl  
415 T: Okay (?) what about you: g:irls here? (.) What  
416 you do: do you agree: with her: or you don't ag:ree  
417 with her what are your reasons what do you think:(  
418 why is this happening in society tod↓ay?  
419 Sn: Because er [**IF THERE IS NO PUNISHMENT THEY WILL**  
420 **MISBEHAVE**]  
421 T: ↑>Speak in English<  
422 ((laughter))  
423 Wi: Miss also  
424 T: Quick quick) let her ↑speak (.) ↓don't speak Arabi  
425 Sn: >He knows that no-one will pun↑ish him he will  
426 do ↓whatever he wants.  
427 T: O:kay so you're thinking s:uch: men need to be  
428 Punished?  
429 Sn: >↑Of< course  
430 T: Let's open a ni:ce page in the newspaper for us an  
431 we will (.) try to advise these er: men

In the above extract, the teacher initiates the referential question (why do you think this happens so much nowadays?) (lines 395-396), and Lu responds to it by stating a reason (line 399-402). Wi extends Lu's turn by showing agreement and adding more explanation for the reason being discussed in a long turn (405-411), in which she succeeds in presenting her view. The teacher here does not interrupt the students' turn, which results in Wi's complex turn. Active interaction continues because the teacher exploits her feedback moves to involve the learners in a dialogue. The teacher's feedback moves are not evaluative, but are used to apply elicitation strategies (i.e., wondering in lines 412 and 413, passing a student's idea to the class for judgement supported with reasons in line 416, confirmation request in line 427 and building on Sn's turn by adding her suggestion in lines 430 and 431). The teacher's feedback moves here encourage the students to take part in the dialogue. For instance, Sn builds on the others' contributions by suggesting a solution (line 414), and she extends her turn by referring to an Arabic proverb and succeeds in explaining it in English (419-426). A valuable learning opportunity for the students is created by the teacher's insistence that Sn say the Arabic proverb in English (lines 421 and 424). This could help the other students to learn how to explain this proverb in English and might help them in communication outside the classroom. However, one drawback in the elicitation strategies the teacher applies here is the fact that she asks two different questions (lines 416-418) (i.e., requesting an evaluation of Sn's idea and requesting more reasons for why abuse is increasing). Asking students more than one question at once might confuse them. In a dialogue, a turn should be grounded in the one before it (Alexander, 2005).

As seen in extract 6.15 below, the teacher continues the dialogue using various elicitation strategies which involve the students in relating the task to their personal lives and later provoke a sensitive discussion about rejecting the idea of arranged marriages, a topic which is highly sensitive in a conservative society like that of Saudi Arabia.



Extract 6.15

562 S?: Miss  
563 T: Yes  
564 S?: She chose her husband  
565 Wi: >Yes I chose my: urr husband  
566 T: You chose your husband y:ou said I want this o:ne?  
567 Ss: ((laughter))  
568 Wi: We met before (.) urr he said to my parents I want  
569 er: your ↑daughter  
570 Ss: ((laughter)) ((Overlaps in Arabic))  
573 Wi: Yeah but my parents at first (?) they urr ignored  
574 and not urr and not want and er but I come and say  
575 I say: .hh I want him: urr I don't want anyone er:  
576 an↑other and just I want him  
577 ((laughter))  
690 T: O:kay (.) a:nyway (.) do you agree: with her dad or  
691 do you agree ↓with her?  
692 S?: No  
693 S?: Her dad with her dad  
694 T: ↑>Plea:se listen< to e:very↓one (.) th- yes  
695 Rh: Um if my dad er: doesn't like my er husband er:  
696 I will not er choose him  
697 S?: (?)  
698 Rh: Because he know the better for me  
699 Lu: >Yes the first step my [dad]  
((Talk continues))

736 Rf: ↓Miss you have a ↑daughter?  
737 T: Yes ↓yes  
738 Rf: What if your daughter choo:se a man and urr you are  
739 not happy you will agree  
740 T: >I: will never let her marry:<  
741 ((laughters))((Some turns by learners))  
746 T: As far as m- a boy is concerned it's ↓different but  
747 as far as a ↑girl is concerned it's more subtle

The extract shows that active talk takes place. In line 564, a student initiates a turn, which is rare in a language classroom, and reveals a secret about a friend of hers who got married to someone she had known previously. Wi bravely admits this (line 565) and tells the class about her story in a series of extended turns (lines 568-576). It seems unusual for learners in conservative societies to talk about their personal lives or experiences that do not fit within their cultural norms. However, this task was related to the students' lives, as such stories of abuse can be seen in real life, on TV or in the newspapers. The students found themselves talking about a real-life problem in the society and trying to think of a solution, and Wi did not hesitate to bring her own story to light. The teacher's role in this extract is focused on extending turns by asking the other students to judge Wi's idea (line 690). The students take the floor and engage in building on Wi's idea by expressing disagreement (lines 692-699). A student again initiates a personal question to the teacher (line 736), which is again an uncommon type of talk in an EFL context, and asks her if she would allow her daughter to marry someone of her own choice (line 738-739). The teacher presents her personal opinion about this issue (746-747). This pattern of student initiation and teacher response might not be common in the language classroom. From the extract above, it appears that the dialogue that occurred was similar to one that might occur outside the classroom, because it required the interlocutors to express themselves regarding a real-life issue. It created opportunities for the learners to express themselves in extended long turns, as in the case of Wi, and to use their higher order thinking skills to evaluate a particular issue.

## *Discussions based on reading images*

### Image reading 3

This task involved comparing and contrasting life in the past and present, using a Venn diagram. The talk was active and there were examples of the teacher and students engaging in dialogue, which provided space for learning and thinking opportunities. One limitation was that the director made an unexpected visit to the class in the middle of this lesson in order to give the students some information about exams and about a meeting; she took up 15 minutes of class time, which resulted in a short lesson. The extract below is an example of how the teacher and students together were able to direct talk to take the form of dialogue.

Extract 6.16

- 429 T: now let's see wha:t- what was the big ch- the  
430 ↑biggest change (.) ↓each one of you °think° (.)  
431 what is the biggest cha:nge that has come over  
432 Sau:di Arabia?  
433 Rf: Malls  
434 S?: Education  
435 T: Education (.) and ↑which education?  
436 S?: General education  
437 ((general chatter))  
440 T: >Did you know: when K:ing Faisal first o:pened the  
441 school for the girls .hh he had a lot of  
442 °opposition° and the ↑first school: there were  
443 o:nly two girls (.) Alright (?) so it's er:: er  
444 girls' education ↓as well.  
445 S?: Miss  
446 Lu: Miss er: before maybe our grandmother now they take  
447 education it was a big problem before.  
448 T: E::xactly  
449 Lu: Yes n mean before 25 years my grandmother graduated  
450 **I mean** because urr  
451 T: >In their time<  
452 Lu: In their time there was no education and when she  
453 got hospital (.) er: she was she has to speak  
454 E:nGLISH: no one speaks it  
455 T: O:kay so now: they- do you think they speak  
456 E:nGLISH: mo:re?  
457 Ss: [[Yes ]]  
458 T: I think they're speaking Hindi now:

459 ((laughter))  
460 T: >Wherever you go you have you- (.) before  
461 l:iterally spea:king (.) I'm talking of thirty  
462 years ago: when I used to come and I had to .hh  
463 try: and understand Arabic (.) n:ow (?) they can  
464 understand my language so it's (?) so girls'  
465 education is c:ommon (.) what- what else did you

What is notable in this extract is the teacher's feedback moves that are used for encouraging students in taking turn in talk. The teacher asks a probing question (lines 429-430) and then she builds on the students' short responses by telling them about how female education started in Saudi (lines 440-444), which in turn encourages Lu to initiate a turn that builds on the teacher's turn by recalling an example (lines 446-447). Van Lier (2008) states that making initiative is a learning opportunity. In her initiatory turn, according to Van Lier's view, Lu tries to express her idea in a complex turn. In line (450) Lu tries to find the appropriate word and the teacher fills in the gap (line 451) to maintain the flow of talk. Lu repeats the teacher's phrase and continues with her idea (lines 452-454). Although Lu relies on recall (446-447), which is a lower thinking skill, her participation demonstrates her understanding of what is being said and smoothes the flow of talk. Lu's idea enables the teacher to ask a probing question (lines 455-456), tell a joke (458) and extends her feedback move to tell the students about her story when she first came to Saudi (460-465). This can tell us that ideas based on lower level thinking can add to the quality of dialogue.

Image reading 4

This task required the students to define the word ‘beauty’ and rank three types of beauty: Indian, Arabian and European, giving reasons for their ranking. This lesson consisted of a typical IRF interaction. The following extract is a representative example of the interaction that occurred in this lesson.

Extract 6.17

429 T: =the o:ne who said ↑Indian ↓first (.) the first  
430 group: >the one who said Indian first< (?) y:es why  
431 did you choose the ↓I:ndian one?  
432 Rn: Er because (they) skin color and er they have  
433 nice (hair) urr and the shape of the >body<  
434 T: (.) Okay: so she has (her) reasons (.) the figure  
435 the colour of the skin: (?) (.) urr the complexion  
436 you know the colour of the skin is called the  
437 complexion  
438 S?: Complexion  
439 T: (.) [Rn] can I help you: (.) anyway: so the  
440 colour of the skin is called the complexion  
441 (.) ↑a:lright (.) so the complexion: the figure  
442 the urr:: (.) also the eyes (.) okay ↑anything  
443 e:lse that you want to a:dd to this:  
444 (( The teacher asks another group))  
454 T: Okay why did you:- why did you think  
455 that the ↑Europeans (.) urr are more beautiful  
456 than the ↓Ar:abi:ans?  
457 Sw: Because th- urr they are natural  
458 Ml: Yes more natural  
459 T: ↑Is it natu:ral: (?) [ ok ]

The teacher initiates a question lines (429-431), a student responds by reporting a group decision (lines 432-433) and the teacher gives her feedback in lines (434-437). What is interesting about the teacher's feedback is that it is an evaluation, which takes the form of her saying 'ok' and repeating the student's answer, and it gives her the opportunity to introduce a new word ('complexion') to the students (lines 435-437). The teacher repeats this word again in (line 441) to encourage students to use it. Thus, although the sequence is an IRF sequence, there is an opportunity to introduce a new word to the students. Seedhouse (1996) states that IRF could facilitate learning EFL because the cycle IRF is found in parent-child talk and it helps children to learn their mother tongue. In this extract, although the students did not repeat the word after the teacher it is possible that some of them have noted it down, so they would remember it later.

#### 6.4 Summary

This chapter presents results in relation to research question 2, which is about the quality of classroom talk. Data are examined from both quantitative and qualitative perspectives. The quantitative part is an adaptation of Brown and Kennedy's (2011) framework about the types and frequencies of teacher and learners' utterances in dialogue, while the qualitative part is a close examination of thinking and learning opportunities, taking into account the interactional style between the teacher and the students. Results reveal that talk has been more of dialogic during the first weeks of the project; however, the quality of talk decreased towards the end of the project by focusing more on exchanging simple ideas or information rather than involving learners in critical thinking dialogue. The reasons for this change will be discussed in Chapter 9.

## CHAPTER 7: RESULTS FOR RESEARCH QUESTION 3

### 7.1. Introduction

In this chapter the results are presented relating to research question 3:

What are the effects of critical thinking lessons on the level of learners' language complexity applied for creating dialogue?

This question included the following sub-questions:

- a. What are the results regarding the Mean Turn Length (MTL) in the pre- and post- tests?
- b. What are the types and frequencies of utterances devoted to developing the quality of dialogue in the pre- and post-tests?
- c. What are the frequencies of use of HOTS in the pre- and post-tests?
- d. What are the types and frequencies of pragma-linguistic markers in the pre- and post-tests?

## 7.2 Mean Turn Length, quality of ideas, level of HOTS and pragma-linguistic markers as features of language complexity

### 7.2.1 Mean Turn Length (MTL) in the pre- and post-tests

This section presents the results related to turn-taking in both pre- and post-tests. Having explained the rationale behind using this measure and the application of this measure in sub-section 4.3.3 of Chapter 4, the question to be asked here is: what constitutes a turn? I contacted Professor Rod Ellis by email to find out if learners' contributions that consist of single words, fillers or gambits like 'um', 'er' should be counted as turns. His answer was that they should. I excluded fillers, repetitions, L1 words and task questions when coding words (Chen, 2010). Tables 7.1, 7.2 and 7.3 below present the MTL in the pre- and post-tests for each individual learner.

Table 7.1: MTL (pre- and post-test)

MTL	Students							
	MI	Sw	Lu	Mr	Sn	By	Om	Sa
MTL in the pre-test	19.63	6.62	9.12	6.82	4.42	3.91	4.16	5.07
MTL in the post-test	13.03	8.61	8.36	6.7	9.76	9.25	6.61	7.5



Table 7.2 Total number of words and turns for each individual learner in group 1

	Pre-test				Post-test			
	MI	Sw	Lu	Mr	MI	Sw	Lu	Mr
<b>Totals of words</b>	373	106	219	116	378	112	159	67
<b>Totals of turns</b>	19	16	24	17	29	13	19	10

Table 7.3 Total number of words and turns for each individual learner in group 2

	Pre-test				Post-test			
	Sn	By	Om	Sa	Sn	By	Om	Sa
<b>Totals of words</b>	168	133	50	71	166	74	86	75
<b>Totals of turns</b>	38	34	12	14	17	8	13	10

In table 7.1 above, the MTL of the 8 learners in the pre- and post-tests are presented. However, it should be noted here that the students were divided into two groups for the pre- and post-tests. The reason for dividing them into groups was to provide individual learners with more speaking opportunities and to reduce the possibility of any individual learners dominating talk. Based on my teaching experience, I believe that when the

number of students is reduced in group work, they tend to participate more, while if there are more than 4 to a group, some students might rely on other more active students to perform the task. In order to provide more details on the individuals' performances within their groups, in tables 7.2 and 7.3 the number of words and turns produced by each individual learner in her group in the two tests is presented.

One of the aims of this study was to encourage the learners to take risks in conveying their ideas and to challenge others' ideas in dialogue. This type of involvement, which would also result in more dialogic talk, required them to extend the length of their turns. As shown in table 7.1 above, the critical thinking lessons did not have a significant effect on the MTL for the majority of the learners. Mr and Lu tended to produce slightly shorter turns in the post-test than in the pre-test: 6.82 in the pre-test compared to 6.7 in the post-test for Mr, and 9.12 in the pre-test, going down to 8.36 in the post-test for Lu. Ml's MTL decreased significantly: from 19.63 in the pre-test to 13.03 in the post-test, which means that she produced shorter turns in the post-test than in the pre-test. This might indicate that the interventions had had no effect on her use of language. A slight increase was found in the length of the turns of three other students - Sw, Om and Sa, although this does not necessarily indicate that they had benefited from the critical thinking lessons. Sw's MTL increased from 6.62 in the pre-test to 8.61 in the post-test; the MTL for Om increased from 4.16 in the pre-test to 6.61 in the post-test, and Sa's MTL increased from 5.07 in the pre-test to 7.5 in the post-test. On the other hand, there was a significant increase in MTL for Sn and By: from 4.42 in the pre-test to 9.76 in the post-test for Sn, and from 3.91 in the pre-test to 9.25 in the post-test for By. As may be seen in table 7.3, both Sn and By used fewer words and took fewer turns in the post-test (i.e., 166 words and 17 turns by Sn and 74 words and 8 turns by By in the post-test) compared to the pre-test (i.e., 168 words and 38 turns for Sn and 133 words and 34 turns for By in the pre-test). Despite the reductions in the number of words and turns produced by these two students in the post-test, in the post-test their MTL had increased; this means that these students had produced more, but shorter turns in the pre-test, and fewer, but longer turns in the post-test. This might indicate that these students realised

that extended turns, rather than short answers, are one of the requirements for creating dialogue. However, the extension of turn length did not necessarily mean that the quality of dialogue had improved, as will be seen in the next sub-sections (7.2.2 and 7.2.3). The following section will shed light on the types and frequencies of utterances used in an effort to improve the quality of dialogue in the two tests.

### *7.2.2 Types and frequencies of ideas exchanged in dialogue*

Another measure of complexity referred to by Ellis and Barkhuizen (2005) is the propositional measure, in which an idea is considered as a unit of analysis (see Chapter 4). I had a specific interest in ideas that reflected involvement in dialogue. According to the literature on dialogue (see Chapter 2), dialogue requires learners to take risks in initiating ideas and responding to others' ideas (Alexander, 2006; Brown and Kennedy, 2011). For the purpose of measuring the development of the learners' involvement in dialogic talk over the period of the intervention, I designed my own checklist, in which the ideas were coded into six categories: stating opinions on task questions, stating ideas in response to initiatory questions, building on others' ideas, building on one's own ideas with others, initiating a new idea and initiating a question. These categories were developed on the basis of Brown and Kennedy's (2011) framework. I excluded the following utterances from the coding: repetitions of task questions, repetitions of others' ideas, reading out information from task slips, incomplete ideas, utterances of agreement or disagreement which lacked supporting reasons and utterances in Arabic. The tables below show the types and frequencies of utterances used to develop dialogue in the pre- and post-tests, starting with group 1 and then group 2.

Table 7.4 Total number of types of idea in the pre- and post-tests among the 8 learners

Types of idea	Total number of ideas in the pre-test	Total number of ideas in the post-test
Stating ideas to task questions	13	6
Stating ideas to initiatory questions	2	1
Building on others	26	25
Building on own	8	9
Initiating ideas	5	5
Initiating questions	4	2

As seen in the table, there were no significant changes in the types and frequencies of the utterances produced by the group 1 learners in the pre- and post-tests. The stating of ideas in response to task questions decreased from 13 to 6 utterances, and there was also a slight decrease in the stating of ideas in response to initiatory questions: from 2 utterances to one utterance. ‘Building on others’ opinions’ was the most frequently occurring type of utterance, and the number of occurrences decreased very slightly: from 26 utterances in the pre-test to 25 utterances in the post-test. The high frequency of this type of utterance indicates that the talk which was occurring among the learners was dialogic. There was a slight increase in ‘building on one’s own ideas’: from 8 to 9 utterances, while the number of utterances related to initiating ideas was the same in both tests (5 utterances), and the number of initiatory questions was low in both tests (i.e., 4 questions in the pre-test and 2 questions in the post-test). The tables below present details of each individual’s performance in the two tests.

7.5 Totals of the types of idea in the pre- and post-tests (group 1)

Types of idea	Utterances per student in the pre-test				Utterances per student in the post-test			
	MI	Sw	Lu	Mr	MI	Sw	Lu	Mr
Stating ideas to task questions	2	3	1	1	0	1	1	0
Stating ideas to initiatory questions	0	0	0	0	0	1	0	0
Building on others	3	2	6	2	6	4	5	2
Building on own	2	1	2	1	3	1	3	0
Initiating ideas	3	0	1	0	4	0	0	0
Initiating questions	2	1	0	1	1	0	0	1

Starting with the pre-test, the students were producing various types of utterance, although the frequency level of these utterances among some learners was low. The most frequently occurring type of utterance was ‘building on others’ ideas’, with MI producing 3 utterances, Sw and Mr producing 2 utterances each and Lu producing 6 utterances. ‘Stating ideas in response to task questions’ was a low frequency type of utterance found in dialogue among the students: MI produced 2 utterances, Sw produced 3 utterances, and Lu and Mr produced 1 utterance each. Another less frequently occurring type of utterance was ‘building on one’s own ideas’, with MI producing 2 utterances, Sw producing 1 utterance, Lu producing 2 utterances and Mr producing 1 utterance. There were a few incidences of learners initiating new ideas, with 3 ideas being put forward by MI and one by Lu. Similarly, the initiation of new questions was limited, with 2 questions being asked by MI, and one each by Sw and Mr. There were no

instances of responding to initiatory questions by any of the four participants. These findings indicate that the interaction among the students in group 1 was limited.

According to the results obtained from the post-test, there was no significant change in the quality of the students' talk. There were only two occurrences of 'stating ideas in response to task questions', with only Lu and Sw producing 1 utterance each. The students were encouraged to produce fewer utterances in this category, as it was thought this might encourage them to produce the other types of utterance. However, this did not happen in this study, as may be seen from the fact that there was very little change or development in the types and frequencies of the learners' utterances between the pre- and post-tests. As in the pre-test, 'building on others' ideas' was the most commonly used type of utterance, with 6 utterances being produced by MI, 4 by Sw, 5 by Lu and 2 by Mr. MI and Lu did become involved in building on their own ideas, with 3 of this type of utterance being produced by each student. MI was the only student who made an effort to initiate new ideas, producing 4 new ideas of her own, compared with the other students in group 1 who did not initiate any new ideas in this test. There were few incidences of utterances in which the learners initiated questions: one question each was asked by MI and Mr, and there was only one utterance in which an idea was stated in response to an initiatory question.

In the following table the results obtained for the second group of students in the pre- and post-tests are presented.

Table 7.6 Totals of the types of idea in the pre- and post-tests (group 2)

Types of idea	Utterances per student in the pre-test				Utterances per student in the post-test			
	Sn	By	Om	Sa	Sn	By	Om	Sa
Stating ideas to task questions	1	2	1	2	1	2	0	1
Stating ideas to initiatory questions	0	0	2	0	0	0	0	0
Building on others	4	3	3	3	1	2	3	2
Building on own	0	2	0	0	1	0	0	1
Initiating ideas	0	1	0	0	0	1	0	0
Initiating questions	0	0	0	0	0	0	0	0

As seen from the results for the pre-test presented in the above table, the students produced various types of utterance, although the frequency of these utterances was low. The most frequently occurring type of utterance was ‘building on others’ ideas’, with 4 utterances being produced by Sn and 3 utterances each by By, Om and Sa. The students did become involved in stating their ideas in response to task questions: Sn and Om both did so once, while By and Sa expressed 2 ideas in response to the task questions. With regard to the other categories, the students’ production was 0, with the exception of Om, who produced 2 utterances in the category of ‘stating ideas in response to initiatory

questions' and By, who produced 2 utterances in the 'building on one's own ideas' category and one utterance 'initiating an idea'. These results indicate that the students' interaction in the form of dialogue was limited.

With regard to the post-test, there was no evidence of any improvement in the students' talk compared to the pre-test. The students were involved in building on each others' ideas, which was similar to the results obtained from the pre-test, but the frequency level was low, with only 1 utterance being produced by Sn, 2 by By and Sa and 3 by Om. The students made less effort to build on their own ideas, only one utterance each being produced by Sn and Sa. They also gave fewer ideas in response to task questions: 2 utterances by By and 1 utterance each by Sn and Sa. Only By initiated one idea; however, the number of initiatory questions and responses to initiatory questions produced by the students was 0.

### *7.2.3 Levels and frequencies of HOTS*

Another aim of the speaking tests was to measure the extent to which the students could use their HOTS to produce high quality talk. In this section the types of utterance produced by the students is linked to their level of thinking, following Bloom's taxonomy. According to this taxonomy, there are 6 levels of thinking: knowledge, comprehension, application, analysis, synthesis and evaluation. The last three levels are known as Higher Order Thinking Skills (HOTS). One of the aims of the current study was to encourage learners to produce high quality dialogue which reflected the application of their HOTS. The table below presents the results obtained from the pre- and post-tests.



Table 7.7 Totals of uses of HOTS and other thinking levels in the pre- and post-tests for groups 1 and 2

Thinking levels	Total number of thinking levels in the pre-test	Total number of thinking levels in the post-test
Knowledge	3	0
Comprehension	14	8
Application	1	1
Analysis	10	10
Synthesis	11	3
Evaluation	25	25

As may be seen from the table, the learners applied various thinking levels in both the pre- and post-tests. However, as also indicated in this table, there was no significant development in their use of these thinking levels between the two tests. Evaluation skill, which is the highest level of thinking, was the most commonly used skill in both the pre- and post-tests. A similar result was obtained for the skill of analysis, with 10 utterances on this level being found in both tests. However, the frequency of use of the synthesis level decreased from 11 utterances in the pre-test to 3 utterances in the post-test. Instances of the comprehension level of thinking being used decreased from 14 to 8 utterances, and the number of uses of the knowledge level decreased from 3 utterances to 0 utterances. Application was the least used skill, with only one utterance in both tests. In table 7.8 below more details of the HOTS applied by each individual learner in group 1 in the pre- and post-tests are presented, and in table 7.9 the corresponding results for group 2 are presented.

Table 7.8 Total uses of HOTS and other thinking levels in the pre- and post-tests (group 1)

Thinking level	Utterances per student in the pre-test				Utterances per student in the post-test			
	MI	Sw	Lu	Mr	MI	Sw	Lu	Mr
Knowledge	1	0	1	1	0	0	0	0
Comprehension	1	0	2	4	1	0	2	0
Application	0	1	0	0	0	0	0	0
Analysis	1	4	3	1	3	2	1	0
Synthesis	2	2	1	0	2	1	0	0
Evaluation	3	0	2	2	5	1	3	0

As the above table shows, there were few examples of HOTS being applied by the learners in either the pre- or the post-tests. This means that there was no improvement in the learners' use of HOTS in the post-test. The learners applied various thinking skills in the pre-test. By the post-test, knowledge and application had disappeared, but this was not owing to an increase in the learners' use of the other HOTS. Unexpectedly, the number of examples of the use of analysis skills decreased: from 9 utterances in the pre-test to 6 in the post-test, and the use of synthesis skills decreased from 5 to 3 examples. The applications of HOTS by individual students were low in general in both tests, with the exception of MI, whose use of HOTS increased slightly: from 6 utterances in the pre-test to 10 in the post-test. In contrast, Sw's and Lu's use of HOTS decreased by the same amount: from 6 utterances in the pre-test to 4 in the post-test. It should be noted that, although the decrease and increase in the learners' use of HOTS were slight in both tests, the results in general were unsatisfactory, as it was expected that in the post-test the learners would spend more of their talk time using HOTS.

In the table below the pre- and post-test results of the second group are presented.

Table 7.9 Total uses of HOTS and other thinking levels in the pre- and post-tests (group 2)

Thinking level	Utterances per student in the pre-test				Utterances per student in the post-test			
	Sn	By	Om	Sa	Sn	By	Om	Sa
Knowledge	0	0	0	0	0	0	0	0
Comprehension	1	4	2	0	2	1	1	1
Application	0	0	0	0	0	1	0	0
Analysis	1	0	0	0	1	1	1	1
Synthesis	2	2	0	2	0	0	0	0
Evaluation	0	1	2	2	2	2	0	0

As indicated by the results presented above, the learners' application of HOTS did not improve in the post-test. Sn, By and Sa did make use of the synthesis level of thinking in the pre-test (2 utterances by each of them), but the use of this level disappeared in the post-test. The students' use of the highest level of thinking (evaluation) was not high in either test. Om's and Sa's application of this level decreased from 2 utterances each in the pre-test to 0 utterances in the post-test. Sn and By applied this level in a limited way in both tests (i.e., 0 utterances by Sn and 1 utterance by By in the pre-test, increasing to 2 utterances by each of them in the post-test).

#### 7.2.4 Types and frequencies of pragma-linguistic markers (pre-and post-tests)

In this section, the results relating to the learners' use of pragmatic markers both before and after the intervention are presented. The following sub-question was answered:

What are the types and frequencies of pragma-linguistic markers in the pre- and post-tests?

The aim of this question was to measure the development in the use of pragma-linguistic markers of opinions, agreement and disagreement that learners might have learned during the course of the study, through applying pre- and post- speaking tests.

As mentioned in Chapter 4, the learners received six training sessions in the use of advanced formulaic phrases during the first weeks of the project, so they could use them to start, expand on and end an argument in a polite way. They were also given a guide on when and how to use different types of lexical phrase, with examples. Most of these lexical instructions were based on Walsh (1996). I adapted an analytical method used by Nemeth and Kormos (2001) for measuring the development of pragma-linguistic markers in argumentation. Nemeth and Kormos (*ibid.*) identified three types of pragma-linguistic marker: agreement, disagreement and opinion expression markers. They defined markers as phrases or single words. In a similar way to Nemeth and Kormos in their (2001) study, I counted single words such as 'yes', 'no', 'ok' and 'but' and formulaic phrases such as 'I agree', 'I get your point', 'I don't think so', 'you are right but' etc. The tables below present the results obtained from the pre-test and post-test regarding the use of markers.

Table 7.10 Total number of markers in the pre- and post-tests in the two groups

Types of marker	Total markers in the pre-test	Total markers in the post-test
Agreement words	16	8
Agreement phrases	5	5
Disagreement words	10	3
Disagreement phrases	0	1
Opinion phrases	18	17

The results presented in the table above show that there was no significant change in the frequencies and varieties of markers used. The markers most commonly used in the pre-test were agreement words and opinion phrases (16 and 18 markers respectively). Most of the one-word agreement markers were ‘yes’ and ‘yeah’. The number of agreement words decreased from 16 markers in the pre-test to 8 in the post-test, and the number of opinion markers fell slightly from 18 in the pre-test to 17 in the post-test. The markers used least frequently by the learners were disagreement phrases (i.e., 0 markers in the pre-test, increasing to 1 marker in the post-test). The number of agreement phrases was stable in the two tests, with 5 markers being used in the pre-test and 5 in the post-test. The number of disagreement words used decreased from 10 markers pre-course to 3

post-course. Tables 7.11 and 7.12 below present details of the number and types of marker used by each learner in the pre and post-tests.

Table 7.11 Total number of markers used by each learner in the pre- and post-tests

(group 1)

Types of marker	Markers in the pre-test				Markers in the post-test			
	MI	Sw	Lu	Mr	MI	Sw	Lu	Mr
Agreement words	1	0	2	2	2	1	0	1
Agreement phrases	0	0	0	3	1	1	1	0
Disagreement words	2	0	3	2	1	1	0	0
Disagreement phrases	0	0	0	0	1	0	0	0
Opinion phrases	3	4	2	1	4	2	4	1

The table above reveals that all the learners in group 1 produced opinion phrases. The least common type of marker was the disagreement phrases. The table below presents the results for the second group.

Table 7.12 Total number of markers used by each learner in the pre- and post-tests

(group 2)

Types of marker	Markers in the pre-test				Markers in the post-test			
	Sn	By	Om	Sa	Sn	By	Om	Sa
Agreement words	0	9	2	2	1	2	0	1
Agreement phrases	2	0	0	0	1	0	1	0
Disagreement words	0	1	2	0	1	0	0	0
Disagreement phrases	0	0	0	0	0	0	0	0
Opinion phrases	3	1	1	3	1	2	1	2

The results presented in table 7.12 show that the number of markers used by the group 2 learners in the pre-test was slightly higher than in the post-test, slightly lower or exactly the same. As with group 1, all the learners in this group produced opinion expressions, and no disagreement phrases were used.

### 7.3 Summary

In this chapter the results relating to the third research question: ‘What are the effects of critical thinking lessons on the level of learners’ language complexity?’ have been

presented. It may be said that in general the results were unsatisfactory. The interventions did not help most of the participants to develop their language complexity. In other words, most learners did not extend the length of their turns in the post-tests. Also, there was no development in the types of idea that occurred in the dialogue from the pre-test to the post-test. Their thinking levels either did not change at all or changed only slightly between the pre- and post-tests. A similar finding was obtained for the use of pragma-linguistic markers. The use of these markers did not vary between the pre- and post-tests. In the next chapter, the results related to the fourth research question, concerning the extent to which learners might exploit thinking and learning opportunities in other classes, are presented.



## **CHAPTER 8: CHALLENGES TO THE TRANSFER OF CRITICAL THINKING SKILLS**

### **8.1 Introduction**

This chapter presents the results relating to the fourth research question:

What evidence of transfer of critical thinking is there in other lessons?

The aim of this question was to investigate the extent to which participants were involved in applying critical thinking skills in other classes when they were put in situations that required the use of these skills. In Chapter 7, it was shown that the critical thinking lessons did not have the effect of increasing the learners' language complexity, although there were instances where the learners applied HOTS to create dialogue. The purpose behind examining the learners' involvement in exploiting critical thinking opportunities in talk that occurred in other classes was to determine what they had learned from the introductory critical thinking sessions and lessons in terms of using HOTS to stimulate critical thinking dialogue, which in turn would result in the construction of knowledge. In addition, it was thought that identifying evidence of transfer would shed light on practices in the context that could facilitate or obstruct the infusion of critical thinking skills in this context. It was also hoped that this investigation of those aspects that could facilitate or obstruct the transfer of critical thinking skills might improve the future implementation of the critical thinking pedagogy at the institute.

In this study, the learners were observed in two listening and speaking lessons, one taking place in the middle of the term and the other at the end of term. These lessons were conducted by the same participant teacher, using the textbook. They were also observed in two writing lessons, also in the middle and at the end of term, conducted by

another teacher. The findings obtained from the observation of each course are presented below, and a summary of the results is provided at the end of this chapter.

## **8.2 Transfer of thinking skills in listening and speaking lessons**

There appears to have been no attempt made to create opportunities for applying HOTS in other classes by either the teacher or the learners. This claim is based on the findings obtained from the open observation of two listening and speaking lessons. The results obtained for each lesson are presented below.

Interaction in these lessons was based on an assigned textbook. The activities in the textbook were varied, including listening comprehension, grammar and vocabulary activities. I was interested in capturing moments in which the learners applied their critical thinking skills to generate classroom dialogue. Opportunities for generating classroom dialogue were limited. There were some points where learners came up with different responses; however, they did not make any efforts to clarify or extend their answers, although they had been able to do such things in the critical thinking lessons when opportunities were created. Similarly, the teacher did not encourage the learners to clarify their answers.

Extract 8.1 below is taken from a lesson that took place in the middle of the study. The subject of the lesson was philanthropy, and the question involved deciding on which of three social groups a student would donate to.

Extract 8.1

634 Lu: Church [MEANS] mosque and number two is (university  
635 college or school and number three a hospital  
636 T: OK so you would give it to a religious place like a  
637 mosque or a church or something ..any other choices  
638 Om: Number one a (?) health clinic number two a church  
639 T: Synagogue it's for the Jews and  
640 Om: temples  
641 T: Alright third  
642 Om: Third a university college or school  
643 T: Okay third is a university college yes [Bs]  
644 Bs: Number one hospital number two mosque number three  
645 T: Number two is what?  
646 Bs: Mosque  
647 T: Mosque ok  
648 Bs: For number three the (university)  
649 T: Okay you can see hospital and she has um er a mosque  
650 and then she has university or something most of you  
651 are going in yes [Sn]

In this extract, there are no opportunities for the students to rank the groups according to which one most deserves to receive donations, and they do not provide reasons for their rankings (lines 634,638 and 644). The teacher does not encourage the learners to extend their answers by giving reasons for their choices. She evaluates learners' responses by repeating and sometimes paraphrasing what they say (lines 636, 639 and 649).

Below is another extract taken from the last listening and speaking lesson, 'Emotional Intelligence'. During the lesson, activities related to the listening aspect took place, in which the aim was to check listening comprehension. There was another activity which required students to agree or disagree with given statements, based on their understanding and feelings. The learners had to choose one answer. Extract 8.2 below illustrates the quality of talk in relation to critical thinking.

Extract 8.2

570 T: O:kay (.) yes urr [Sn] (.) what did you write for  
571 number six  
572 S?: (?)  
573 S?: Me too  
574 T: ↑>H:ow many of you strongly disagree: with that:?  
575 (.) Okay ↓wh- and why you think success and  
576 intelligence are not equ↑al?  
577 S?: No it's related  
578 S?: Miss I disagree just not °(a) strongly°=  
579 T: O:kay ...>You may have your reasons< (.) °b:ut  
580 like you said maybe° (.) °°she doesn't strongly  
581 disagree:??°° .hh Alright >↑e:ach person is born with  
582 a certain amount of intelligence?  
583 Ss: [[Yes]]  
584 T: How many of you got a one for it?  
585 S: (?) who is number one?  
586 S?: Number three  
587 T: Okay (.2) <we talk of> number t:wo: how  
588 many of you got a o:ne on it? (.) Strongly agree:?  
589 S?: yes  
590 S?: Me  
591 S?: number three  
592 T: Okay now: intelligence can be a:ccurately measured  
593 (.) h:ow many of you got a one on that?

594 S?: Three  
595 S?: Urr four  
596 T: >↓One minute (.) you think it can be (.) a:ccurately  
597 e:xactly measured (.) intelligence?  
598 S?: No no  
599 T: (.2) You can't exactly measure it because there are  
600 other factors related to it. (.)you ma:y measure it  
601 (.) to some degree but like you said (.) at eight  
602 o'clock in the morning you are different (.)  
603 at eleven you are different .hh and three:  
604 it is different is↑n't it so I can't e:xactly  
605 measure your maybe the same test if I gave you

In this extract, the students either agree or disagree, without making any attempts to give reasons or to suggest alternatives. The teacher does not provide the learners with opportunities to extend their answers. Instead, the teacher states her opinion, and this seems to be done in order to save class time. She asks the students a referential question ‘why’ in lines 574 and 575 and the learners disagree in their short turns (lines 577-578). In line 579, in saying, “you may have your reasons”, the teacher is not encouraging the learners to reveal the reasons for their choices. She could have used this point as an opportunity for the students to apply HOTS, in which they analysed and evaluated various reasons. The teacher’s subsequent questions are about the learners’ choices (lines 584 and 591), and the learners’ responses to the teacher’s questions take the form of single words and no more detailed explanations of their answers are given. The teacher wonders if intelligence can be measured (line 597), but she simply states her opinion (lines 599-605) without listening to the students’ explanations. Again, this point could have been a useful opportunity for the learners to practise using the HOTS that they had applied in the critical thinking lessons.

### **8.3 Transfer of skills in writing lessons**

I observed two writing lessons in order to find out if the learners exploited critical thinking opportunities to create dialogue, since this might have demonstrated that they had learned how to apply HOTS from the critical thinking lessons. I will start by examining the lesson that took place in the middle of the term. (Only certain parts of these lessons were transcribed, which is why the lines in the transcripts below are not numbered.)

The teacher began by revising previous lessons, asking the learners what makes a good paragraph. She was thus eliciting information already known to the learners. She then introduced the three purposes of writing: giving information, argumentation and entertainment. She asked the learners to read a paragraph in their books and to answer questions in groups about the writer's purpose in this paragraph and about whether the writer had achieved this purpose.

Extract 8.3

T: >What kind of paragraph that would be< or purpose  
let's [say]  
S?: [advice]  
S?: Information=  
T: = Informing (.) you tell somebody of the negative  
results and this one↑

S?: Persuading=  
T: =No [again]  
S?: [Also]  
T: Informing this is also informing ok  
((Talk continues))  
T: I want you to complete the statements ok Sn purpose  
Yes  
S?: This paragraph is-  
Rh: This [paragraph]  
S?: [Describe]  
T: Is  
Rh: Is to describe  
S?: [Messy]  
S?: [The messy]  
T: The messiest  
S?: Room  
T: I  
Rh: I have ever seen  
T: I have ever seen very good so the purpose  
of this paragraph is to describe the  
messiest room I have ever seen and what kind of a  
purpose is this?  
S?: Entertainment  
T: May be entertainment yes you are describing  
Something

As seen in the above extract, the teacher does not make any efforts to encourage the learners to state reasons for their answers. For instance, the learners come up with different types of paragraph without giving reasons for why they classify them into these particular types. Similarly, in the last few lines of the discussion, the learner does not mention why she thinks the purpose of the paragraph is entertaining, nor does the teacher encourage her to build on her answer. Instead the teacher herself states the reason for the learner's answer. The lesson continued in this manner, with no attempts made by either teacher or learners to create a discussion or dialogue.

The last lesson involved writing a comparison and contrast essay. The teacher showed a series of power point slides to introduce the meaning and structure of this type of essay. It appeared that the teacher talked more than the students in this lesson. There were no opportunities for the learners to apply HOTS and they were mainly listeners. The teacher presented the learners with an example of a compare and contrast essay about Sydney and London. She read from the slides what the learners needed to include in each part of this essay, as shown in the following extract.

Extract 8.4

T: Now how do you conclude your assignment? you (?) key points you summarise you restate your main points  
May be you show the city you prefer more okay which you want to visit you have many different free ways of how to explain a conclusion okay  
((talk continues))

The teacher provided the learners directly with what they should include in each part of the essay, as seen in the case of the conclusion above. She could have asked the learners to infer what they needed to include in the conclusion and other parts of the essay, in order to encourage the application of HOTS.

#### 8.4 Summary

In this chapter the results have been presented relating to the last research question:

What evidence of transfer of critical thinking is there in other lessons?

Although it was found that the learners were able to create space for critical thinking dialogue in the critical thinking lessons (see Chapter 6), it seems that they did not succeed in transferring the application of HOTS to other classes. The teachers did not provide the learners with opportunities to apply HOTS, nor did the learners attempt to turn the classroom talk into dialogue. The lessons followed the traditional format, with the teachers eliciting answers and the learners giving short responses, followed by the teacher's feedback.

In the next chapter the results of the current study are discussed in relation to the relevant literature.



## **CHAPTER 9: DISCUSSION**

### **9.1 Introduction and structure of the chapter**

In this chapter the main findings of the study, presented in the preceding Chapters 5, 6, 7 and 8, are discussed. The discussion takes relevant literature into account and the significance of the study is highlighted.

I was curious to explore the applicability and effectiveness of critical thinking as an EFL pedagogy, a new pedagogy which so far needs in-depth investigation. I employed the naturalistic inquiry approach to obtain in-depth insights into this issue, and I was able to identify both benefits of and challenges to implementing this pedagogy through examining participants' attitudes, quality of classroom dialogue and the transfer of critical thinking skills. It should be noted here that the challenges were found to outweigh the merits. I will first discuss the benefits of this pedagogy and then move on to identifying the challenges, in line with existing literature. Following this, suggestions are made as to how critical thinking pedagogy may be infused into language institute courses and a pedagogical framework is proposed. Finally, a brief summary of the main findings concludes the chapter.

### **9.2 The applicability of critical thinking as a pedagogy in the EFL context**

The claim that critical thinking is not appropriate for teaching and learning EFL in non-Western contexts encouraged me to conduct this study. The main goal of the study was to investigate the extent to which critical thinking could be applied as language pedagogy. My argument is that critical thinking could be an effective EFL pedagogy for developing the quality of classroom dialogue when learners and teachers feel empowered. It creates thinking and learning opportunities; however, the pedagogy is beset by challenges that can obstruct such opportunities. The results suggest that critical thinking was preferred more by the learners than by the teacher, owing to the teacher's concern regarding the context. In the following section the merits of implementing critical thinking pedagogy in the EFL classroom are discussed.

### *9.2.1 Merits of critical thinking lessons*

This study has revealed some positive outcomes of critical thinking lessons in relation to learners' attitudes. The learners, who were more positive than the teacher regarding this pedagogy, thought that the critical thinking activities, more particularly topic discussions, provided opportunities for participation and for applying HOTS (see Chapters 5 and 6). In other words, when the teacher gave the learners a chance to talk, they were able to engage in dialogue where they initiated ideas and extended their own or others' ideas through applying analysis, synthesis and evaluation skills. Learners' participation in dialogue might tell us about their willingness to communicate in dialogue regardless of the language difficulties they have. In this research, it appears that the learners' willingness to communicate was associated with the topics chosen for discussions. They tended to participate more in topics that they found related to their lives, such as Turkish series and domestic violence. This finding supports findings from existing research that highlight the importance of topic familiarity in learning (e.g., Mora 1995; Kang, 2004). It also supports views by Williams and Burden (1997) which emphasise the role of the affective domain in learning.

With regard to the types of activities, most of learners preferred topic discussions where they were able to express their feelings. All introduced activities did not have one correct answer which provided learners with some degree of freedom to express their opinion in the form of dialogue and even go further to share their personal experiences with others as in mystery 4. This finding is in line with findings by Coa and Philip (2006) and Leger and Storch (2009) who claim that small group talk is not always preferred to whole class talk by learners who seem to be willing to communicate. I would also add that, in this study, learners' feeling of being empowered in some of the lessons might be the reason for their active participation in critical thinking dialogue. The feeling of empowerment in an EFL classroom has positive learning outcomes (Norton, 2005; Canagarajah, 2005; Wachob, 2009). It is

through empowerment that learners participate and develop their understanding of critical thinking and achieve autonomy (Norton, *ibid.*).

In terms of learners' willingness to think critically, most of the learners seemed to be positive about being open-minded to opposing views and to considering alternatives before making a decision, points which they highlighted in their final interviews and questionnaire. The findings also revealed among most of the learners a tolerance of ambiguity, more specifically towards mysteries, which is an aspect of critical thinking (Facione and Facione, 1992). The learners' attitudes towards mysteries changed over the course of the intervention. As shown in Chapters 5 and 6, during the first mystery the learners did not find it easy to think of a possible solution to the mystery, and asked the teacher about what the correct answer might be; however, their attitudes became more positive, and this was evident in the different ideas and alternatives they came up with in mysteries 2 and 4. Also, in their interviews and questionnaires some learners, such as Mr and Sw, emphasised the fact that mysteries trigger imagination and encourage participation. The students' hesitation in providing answers for mystery 1 could be a result of the influence of the traditional teaching methodologies and syllabi the students had experienced in their previous education, where they could find answers written in their books or could ask the teacher directly.

The ambiguity that was a principal feature of the mysteries did not act as a barrier to the learners engaging in classroom talk. Also, it could be concluded that ambiguity may encourage learning in the classroom and have a positive effect on the quality of classroom dialogue, a point which has not been researched. In this respect, Littlemore and Low (2006) state that learners who are tolerant of ambiguity are successful language learners. According to the discussion above, introducing activities that contain ambiguity could be viewed as a positive pedagogical strategy for creating interest in the language classroom. This point should be considered by teachers and curriculum designers when designing activities aimed at encouraging learners to think of alternatives.

The positive attitudes of the learners towards critical thinking lessons are in accordance with findings of other studies concerning the positive effects of critical thinking on students' attitudes (e.g., DfEE, 1999; Chen, 2010, Fairley, 2009). Although it seems that the learners were willing to communicate in some situations, they did not maintain this willingness in other situations, as will be discussed later in Section 9.3.

### *9.2.2 Positive aspects of the critical thinking pedagogy from the teacher's standpoint*

Generally speaking, the pedagogy was challenging for the teacher. However, there were still some positive aspects to be found from her point of view. The teacher started the experience with enthusiasm for applying critical thinking. This was evident in the effective role she played in facilitating talk. In Chapter 6, it was shown how the teacher varied the types of her utterance to encourage talk among the learners. For instance, she was involved in building on others' ideas, requesting learners to build on their own ideas, linking learners' input and asking referential questions. Her elicitation techniques exemplified successful elicitation that has been identified by some educationalists (e.g., Mercer, 2000; Alexander 2005; Alexander, 2006; Brown and Kennedy, 2011). The teacher thought that critical thinking could increase learners' participation, and rapport was her key to involving learners in talk.

### **9.3 Challenges to implementing critical thinking pedagogy**

Although this study was a small-scale case study, it was possible to identify some of the barriers that could stand in the way of implementing critical thinking pedagogy. These barriers influenced the views and performance of the participants in this pedagogy. In this section, I will discuss why these barriers exist and the detrimental effects they had on the progress of the study. Each barrier will be discussed in a separate sub-section. I will then discuss how these barriers together limited opportunities for pragmatic development and for the subsequent transfer of skills to take place.

### *9.3.1 Barriers related to the teacher's concerns*

In this study, the teacher was hesitant to apply critical thinking dialogue in her classroom. The quality of classroom dialogue changed from critical dialogue at the beginning of the course to communicative classroom discussions towards the end, where the learners shared information or ideas without being involved in critical thinking. The teacher's concerns about applying critical thinking in her class led to a change in her interactional style. According to the results presented in Chapter 6, the teacher tended to play down the emphasis on argumentation by avoiding topics that seemed sensitive within the context, according to her opinion, and this change is evident in most of the lessons in phase 2 of the study. Also, she made fewer conversational links in the last discussions to avoid evaluations being made (see figure 6.2). There were some instances where the teacher controlled students' initiatives (see, for example, extract 6.13 in Chapter 6). There are various possible explanations for the change in the teacher's interactional style. These explanations, presented below, are based on my observations and the regular chats I had with both this teacher and other members of staff at the language institute.

#### *Teacher's concern about the readiness of the context to adopt critical thinking*

The first explanation of the change in the teacher's interactional style is related to the context in which the study was conducted. As mentioned in sub-section 3.3.1 in Chapter 3, the educational system in Saudi Arabia is bureaucratic, and developmental plans and changes are limited to educational authorities. Another limitation with the educational system is that decisions are made by male authorities and female authorities in female universities have limited duties that do not go beyond the supervision of staff and students performance. The high control of female departments in Saudi universities by the MOHE and by male authorities in universities indicates that power is unequally distributed in HE. Teachers' ideas and efforts for educational innovation seem to be demolished by such imposed power. Almanara University was no exception. It has been run and supervised directly by the MOHE and has been controlled by male authorities. In this study, the feeling of

powerlessness seems to be the reason of the teacher's reluctance to create opportunities for critical thinking in the classroom and introduce ideas that are not part of the learners' curricula that have been assigned by authorities. The teacher in this study works under contract for this particular institute. Contracts are usually renewed in May before the end of term. The renewal of contracts depends on the authorities' evaluation of the teacher's practice. The authorities observe all teachers' classes twice: in the middle and at the end of the academic term. The authorities do not let teachers know when they are coming to observe them, as they want to observe their regular teaching without the teachers having made specific preparations for these observations. Students also take part in evaluating their teacher. I noticed during both the pilot study and the final study that teachers became more nervous in May, and all they talked about in their lunch breaks was feedback and impressions they had received from some of the people in authority who had observed their classes.

The teacher who took part in this study was careful not to talk about sensitive topics or to create discussions that might lead to criticisms of the society. For instance, the teacher explained to me that she does not like to discuss romance with her students, because such topics are not accepted by the authorities and they conflict with the students' culture and religion. This view is contradictory to learners' views who do not think that romance should be forbidden in the classroom, because they watch romance on TV.

### *The demanding nature of critical thinking pedagogy*

It should be mentioned that teachers are also evaluated according to whether they are following the books assigned for teaching their students and the weekly plans. This puts additional pressure on them, as they have to try and cover the book units within the given time frame. The teacher who took part in this study explained that critical thinking pedagogy is demanding for both teachers and students. This finding supports Dillon's (1994) claim that teachers might find critical thinking approaches a

burden. Job stress and the lack of flexibility of the context for applying critical thinking appear to be the major obstacles for this teacher in this study.

It seems that the teacher preferred to provide the students with participation opportunities where they practised speaking through presenting simple ideas or facts, rather than to engage them in dialogues that reflected HOTS, particularly evaluation. This finding was inferred from the teacher's final interview, in which she stated that she tries to give every student an opportunity to speak, and also from her bidding technique in the classroom (i.e., calling students by names to answer a specific question). It might be that the fact that there is no sharing of experiences or ideas about applying critical thinking among teachers in this institute led this teacher to reduce and control learning and thinking opportunities in critical thinking dialogue, as will be discussed in detail in sub-section 9.3.2 below.

#### *Teacher's power in the classroom*

Another point that led to unsatisfactory results in this study is related to the teacher's obvious wielding of power in the classroom. She refused to give the learners opportunities to choose topics they would like to discuss. Moreover, there were some occasions on which she controlled the students' talk while they were evaluating a particular point, either to save class time or to ensure they did not criticise the society.

Studies have revealed that providing students with opportunities to express themselves and choose activities they like to do can help them to become reflective learners (Moreno-Lopez, 2005). This means that students who are empowered engage in evaluating the contents of their courses and reflect on their learning progress. In this study, the teacher's power controlled the learners' reflections on the activities. The students explained in the focus group discussion that they could not tell the teacher how they really felt about the activities because they did not want to lose marks. If we want students to become reflective learners, we should empower

them and give them space to present ideas and take part in the course plans (Wachob, 2009). It might be the lack of reflection that exists in the Saudi culture and the nature of the educational system that have led to their limited understanding of reflection in this study (Abdulwahab, 2000).

### *9.3.2 Barriers related to the vague application of critical thinking in the context of this study*

The language institute has adapted the university objectives of developing learners' HOTS for writing and reading courses. Although there are other courses, such as English for Specific Purpose and Academic English, taught to students in their final term, it seems that the institute confines the implementation of the critical thinking pedagogy to academic reading and writing courses. HOTS do not appear among the objectives of other language courses. As already mentioned in Chapter 3, there is no clear guidance for language teachers on how to implement this pedagogy. Also, according to my observations, at this institute there has been no training given to teachers on how to apply effective critical thinking practices. Teachers work in isolation to plan and teach according to the institute's critical thinking objectives, relying on their existing experience or personal efforts to build an understanding of this pedagogy. It is important for this context to establish a clear understanding of the meaning and application of critical thinking in order to facilitate its implementation. The NCAAA should be aware of the need for critical thinking guidance for teachers in HE and post-secondary school institutes, including language institutes.

Another point that is worth discussing is the idea of limiting teaching critical thinking to reading and writing skills. Limiting HOTS to reading and writing skills might lead to a misunderstanding among teachers that critical thinking is language-skill specific. The director, in her interview, talked about critical thinking in relation to writing and reading courses, which might indicate that she considers this concept to be of primary importance for acquiring these skills. It should be noted that critical thinking could be used with any language skill (for examples, see Lin and MacKay (2004) and Appendix A for a summary of recent studies). In order to be able to meet



NCAAA standards with regard to HOTS objectives, the language institute should infuse critical thinking into all language skills and courses for higher level students to ensure that they are able to convey their critical thinking skills in English.

It is true that there are many studies that have investigated the application of critical thinking with a sole focus on one or two specific language skills in non-Western contexts, and that these studies have reached positive findings (e.g., Daud and Husin, 2004; Chen, 2010; Shahini and Riazi, 2011; Rahimi, 2013). However, the success of these studies could be owing to the openness of the contexts in which the studies were conducted towards the concept of critical thinking. Another interpretation could be that studies on the application of critical thinking are more likely to make progress if they are conducted as action research, with the researcher as the teacher. The researcher/teacher could then be more enthusiastic about the conducting of his or her study and might have more control, in terms of making changes or modifying the processes of the implementation (e.g., Dantas- Whitney, 2002; Fairley, 2009; Chen, 2010; Turuk, 2010; Park, 2011; Rahimi, 2013).

All undergraduate degrees require students to become critical thinkers. Therefore, language institutes should start furnishing students with intermediate and high levels of language proficiency and prepare them to use these skills through incorporating thinking skills into all courses and making the objectives explicit to learners.

Introducing thinking skills during the preparatory programmes may help students to overcome difficulties they might face when starting their undergraduate degrees. The linking of critical thinking to language courses would need to be carefully designed. Language institutes not only need to infuse critical thinking into all language courses, but they should also provide teachers with training sessions, as mentioned previously, to enable them to understand and apply critical thinking in language teaching and learning in order to strengthen the value of critical thinking. The objectives of these courses should be in accordance with the NCAAA standards for graduate degrees.

The literature on the issue of how to incorporate critical thinking into preparatory programmes as a whole approach has not received sufficient attention. The focus is more on introducing critical thinking for teaching a particular language skill in isolation from other skills (see Table 2.1 in Chapter 2). According to thinking skills literature on school education, it has been a matter of debate as to whether to introduce critical thinking as a separate course or to infuse it within subjects (McGuiness, 1999; Teaching and Learning Research Programme, 2006). Regarding the introduction of critical thinking in undergraduate education, Moore (2011) suggests that this could be done by teaching critical thinking as both a separate course and as a part of subject-specific courses. This would enable learners to combine both generic and subject-specific critical thinking skills. Speaking of introducing critical thinking for English preparatory programmes as a whole approach, I could not locate any framework designed for this purpose. I therefore propose such a framework in order to compensate for this deficiency (see Section 9.4). This framework highlights the principles and processes of infusing critical thinking into all courses across the language institute.

### *9.3.3 Barriers related to learners*

Although the learners were more positive concerning this pedagogy than the teacher, they did highlight a few challenges to this pedagogy. One of these is associated with some of the difficulties learners might have regarding their use of complex language. According to Vygotsky's theory of socio-cultural interaction, learners should be given tasks that are somewhat higher than their current levels. Involvement in dialogue requires learners to build on others' and extend their own turns. The learners in this study reported that sometimes the lack of appropriate vocabulary could be a difficulty; however, according to my observations, they were able to overcome such difficulties through employing L1 (see Chapter 6, extract 6.3/ lines 768-773, for an example), or by supporting one another with appropriate vocabulary

to maintain the flow of talk (see Chapter 6, extract 6.17/ lines 413-415, for an example). It should be noted that sometimes using L1 can be a sign of engagement (see Chapter 6, extract 6.14/ lines 375-380). Teachers are recommended to allow L1 in their communicative classrooms to encourage talk (Raschka *et al.*, 2009).

#### *9.3.4 Discussion of the effects of the barriers to applying critical thinking on language complexity and transfer of thinking skills*

In this section the detrimental effects of these challenges on the progress of the study are explained. I will start with the effects on language complexity and then move on to the effects on transfer.

##### *Complexity and pragma-linguistic development*

Generally speaking, the intervention did not have a significant effect on the development of learners' use of complex language. According to results obtained from the speaking tests in chapter 7, the length of turns, the quality of ideas and the level of thinking they reflected did not improve significantly in the post-tests. The reason was that the teacher was not stable in her use of the critical thinking

pedagogy. Learners did not master the skill of creating critical thinking dialogue because they have not had a space to do so in the class, and this was obvious in the decreased quality of talk that started in the middle of the study.

Also, as shown in Chapter 7, the learners did not make a significant use of pragma-linguistic markers. Developing an awareness of pragma-linguistics in a context where English is taught as a foreign language is difficult (Washburn, 2001; Grant and Starks 2001; Alcon, 2005 and Martinez-Flor, 2007). In Saudi Arabia, English is taught as a foreign language because it is not widely used outside the classroom. Therefore, students might not practise or hear these pragma-linguistic markers very often.

Another reason for the students' limited use of these markers is related to the explicit nature of instruction in pragmatics. In accordance with Alcon (2005) and Takahashi's (2001) suggestions regarding the inclusion of authentic audio-visual input on using pragmatics, the students in this study were given six sessions of listening to and reading transcripts of authentic conversations, followed by role-play activities. They were also given a handbook full of different pragma-linguistic markers, with examples to help them understand how the markers are used. However, it seems that the number of instructional and modelling sessions on using markers was not sufficient for them.

It could be also said that the exclusion of markers from the students' exams has led to the limited use of these markers. Learners mentioned in the interviews that they did not have time to go over the handbook to read the markers before class discussions because they were busy with their homework and preparing for exams. It seems that the students did not take learning the phrases seriously because they were not included in the exam. They gave priority to studying things that would be included in their exams. The desire to achieve good grades can exert power over learners. When the importance of achieving good grades is emphasised, this encourages students to study for grades, and the quality of their learning is less important to them (Lamey, 2009).

Also, learners explained that they could manage to communicate without using such markers. This might indicate that students do not find markers helpful and they can communicate without them. One finding that supported this view was that a few learners were able to extend the length of their turns in the post-test; however, they did not demonstrate an increased use of markers. This finding was different from other claims that there is a positive relationship between length of turn and pragmatic competence (see Olshtain and Blum-Kulka, 1985; Bardovi-Harlig and Hartford, 1993; Bardovi-Harlig, 2001).

### *Transfer: the ultimate goal of critical thinking*

There was no evidence of the transfer of HOTS in this study into talk that occurred in other lessons of the listening and speaking course, where interaction was based on a text-book taught by the same teacher, or into talk in argumentative writing lessons which were taught by a different teacher. Although there were opportunities for the learners to use HOTS, they did not take advantage of them (see Chapter 8). It may be that because the students were dealing with the textbook, they knew there must be one correct answer that the teacher was looking for, while in the critical thinking lessons they knew it was their own opinions that mattered.

The absence of transfer evidence in this study does not mean that the transfer of thinking skills is impossible or rarely occurs. The reason for rejecting this conclusion is that there is evidence from other studies that thinking skills can be transferred (Billing, 2007). Thinking skills were not transferred in this study because some of the conditions that could facilitate transfer were not met during the conducting of the study. The following discussion focuses on which transfer conditions (as summarised by Billing, *ibid.*) were met in this study and which were not. Although most of Billing's (*ibid.*) conditions relate to the transfer of problem-solving skills, they could be applied to any cognitive skills.

#### *Condition 1: Learning principles and concepts for facilitating transfer*

The meaning of being critical was explicitly explained to the learners. The importance of listening to others' views and of evaluating these views was emphasised before the start of the programme and during the focus group session. More importantly, some of the students were aware that the tasks were mainly about self-expression. Also, the teacher tried to encourage the students to support any opinion they presented with a reason while they were talking. However, it would

have been more effective if the teacher had emphasised during the lessons why she was telling them this. This would have helped the learners to remember always to think of reasons to support any claim or opinion and it could thus have become a learning habit. Another limitation with the training for transfer sessions was the insufficient number of modelling sessions, a point which the teacher mentioned in the final interview. One possible way of overcoming this limitation could be by increasing the number of training sessions and emphasising the issue of transfer in teacher training programmes.

### *Condition 2: Self-monitoring*

The plan was to encourage metacommunication and openly discuss barriers to learning with the teacher to allow for modifying future lessons according to learners' needs. Reflection was not successful in this study because of the students' fears of being punished by the teacher if they gave their honest opinions about the suitability of the tasks.

### *Condition 3: Learning in a social context*

This condition means that transfer could happen if learners are introduced to tasks that require them to interact in meaningful talk. Although in this study there were

opportunities for creating critical thinking dialogue in the classroom in some lessons, it is possible that the teacher's control of the learners' talk reduced their application of HOTS in other lessons, as shown in Chapter 6.

In addition to Billing's (2007) conditions for facilitating transfer, conditions mentioned by other researchers were also taken into account to facilitate transfer in this study. Thus, an effort was made to ensure that the activities were related to the learners' lives and experiences, as suggested by Staib (2003) and James (2006).

#### **9.4 Contribution of this study: A framework for introducing critical thinking into EFL language institutes**

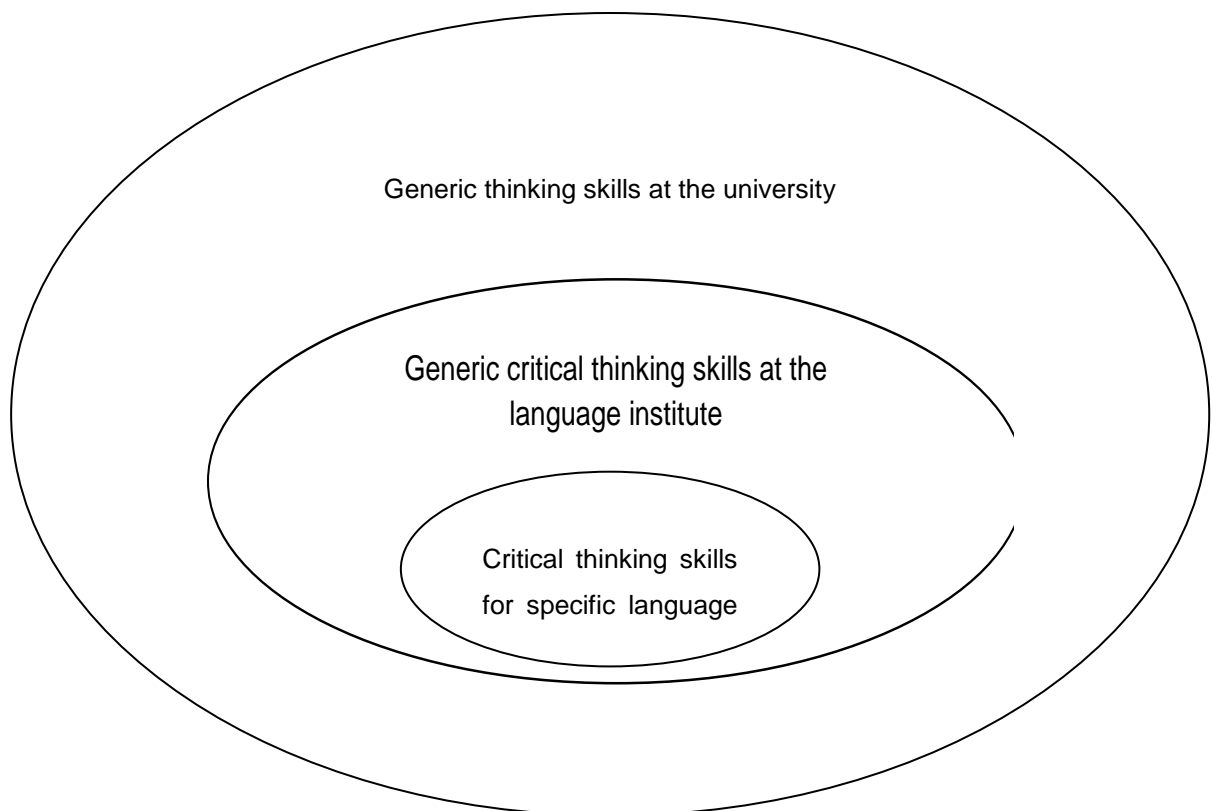
A framework is proposed for introducing critical thinking into English preparatory programmes. This framework could be helpful for the language institutes at Almanara University. It could also be adopted by language institutes at other Saudi universities that are struggling to understand and apply the concept of critical thinking as language pedagogy. This framework is based on the observations I made during the pilot and final studies at Almanara Language Institute. According to these observations, Almanara University includes the objective of developing learners' HOTS, which is one of the NCAAA standards for post-secondary school education in Saudi Arabia. As explained in Chapter 3, NCAAA standards are based on international Quality Assurance criteria, where critical thinking is emphasised. However, I could not locate any publications by NCAAA on infusing critical thinking in post-secondary education.

According to the observations presented in Chapter 3, Almanara institute does not follow clear guidelines on how teachers in that institute can apply this pedagogy, although the development of HOTS for reading and writing skills is clearly stated as one of the objectives. Adopting HOTS for reading and writing courses alone might indicate that the context gives priority to these two courses. As mentioned in Chapter 3, this limitation helped me in designing an intervention where critical thinking is infused into the speaking classroom. I also noticed that there was no continuous training of teachers who teach writing and reading regarding the infusion of critical thinking. The teacher participant in this study was hesitant to teach critical thinking because she was concerned about giving the students an opportunity to criticise the society or to discuss what seems to be a sensitive topic. The combination of all these elements led to the unsatisfactory development of the intervention, although there were a few instances where the teacher and learners were engaged in critical thinking

(i.e., applying evaluation skill) and where they participated in interesting dialogue. I believe that the teaching of critical thinking should not be done in isolation or limited to particular language skills. The infusion should take place across all language courses and all teachers should be involved in ongoing training.

To my knowledge, there is no framework for introducing critical thinking pedagogy in language institutes which are run by universities to prepare post-secondary school students for pursuing undergraduate studies. I therefore here propose a framework for infusing critical thinking into preparatory programmes at language institutes (see Figure 9.1 below). The proposed framework, modified from Moore's (2011) and Burden and Williams' (1996) frameworks for infusing critical thinking. The framework explains that the language institute should link its generic critical thinking skills objectives to those identified by the university. The institute can then identify the specific critical thinking skills required for every language skill course.

Figure 9.1 A framework for infusing critical thinking in language institutes





As already stated above, the proposed framework is informed by Moore's (2011) Transdisciplinarity model and Burden and Williams' (1996) SPARE model. Moore (*ibid.*) proposes his model for use in HE contexts. His framework consists of two parts. Part one considers teaching critical thinking skills to HE students as generic skills in an additional course designed specifically for this purpose, so that students master general aspects of critical thinking that could be applied to any field of study. Part two is concerned with infusing critical thinking into all courses taught in university departments. The SPARE model, on the other hand, has been used by Burden and Williams (*ibid.*) as a model for investigating the processes of implementing foreign language interventions in schools. The acronym SPARE stands for Situation, Plan, Apply, Review and Evaluation.

Based on these models, I recommend that a language institute that focuses on teaching the four language skills (i.e., writing, reading, listening and speaking), sub-skills (e.g., grammar, vocabulary) and other skills (e.g., presentation skills and projects) should incorporate thinking skills into these courses, and design an additional course for teaching generic thinking skills that learners can apply in any subject in any field. This additional course could focus on the main aspects of critical thinking and build an understanding among learners about the nature of critical thinking and what is expected from them as critical thinkers. These generic skills should be linked to the skills that students will be required to possess when they join different university disciplines. The language institute used in this study links the courses they provide for students in their final term to the requirements and objectives of their future discipline. For example, they provide them with presentation skills and research project courses to prepare them for academic studies. However, the concept of critical thinking needs to be emphasised, and clear teachers' guides on its implementation should be provided in order to achieve better results.

Some language courses require specific thinking skills that could be more appropriate for learning certain language skills than others. For example, writing an argumentative essay requires learners to use critical thinking skills in a formal way and to present their work logically in terms of clear argumentation and the validation of claims and references used. On the other hand, participating in a classroom debate requires learners to apply HOTS in questioning and evaluating others' views, and this is usually done through the use of informal language, such as using polite interruption phrases to express disagreement. In this example, questioning is the generic skill, while the means of questioning, whether writing or speaking, are the specific skills that need specific design and training. Therefore, each of the language skill courses mentioned above should focus on specific tools for practising critical thinking skills. This incorporation of critical thinking across the language institute is inspired by Moore's (*ibid.*) Transdisciplinarity model.

I adapted the steps identified in the spiral SPARE model to use as the stages for implementing critical thinking lessons in the classroom. The acronym stands for Situation, Plan, Apply, Review and Evaluation. Burden and Williams (*ibid.*) proposed this framework as an evaluative framework for investigating the effects of interventions in foreign language classrooms. I have adapted it for evaluating an intervention in a single language course. Based on my experience with this study, the SPARE model is practical for applying and assessing critical thinking for various language courses. I suggest that teachers follow this framework for evaluating the introduction of critical thinking in terms of their teaching and for evaluating students' learning. The teacher, for example, identifies the critical thinking skills needed for her course, plans lessons, applies the plans for a certain length of time, reviews results obtained by either quantitative instruments such as tests or qualitative instruments such as learners reflections in journals or focus groups, evaluates the lessons, modifies the plans and starts the spiral sequence of SPARE again.

## 9.5 Summary:

This chapter discussed the main findings of this study. Learners' overall attitudes to critical thinking as a language pedagogy were positive. However, they highlighted some limitations that were related to the teacher's power in the classroom. Unlike learners, the teacher found the pedagogy challenging in terms of the time it required and the sensitivity of some topics that might clash with the context. Despite these limitations and challenges, learning and thinking opportunities took place in some of the lessons. Based on the challenges explored, I presented a framework for incorporating critical thinking into Saudi Arabian EFL language institutes which prepare post-secondary school learners for pursuing their undergraduate degrees in which English is the language of instruction. A review of the literature has revealed that the implementation of critical thinking in language institutes has so far been linked to only one or two language skills, instead of being applied in all language skills courses for the purpose of developing effective teaching and learning, and this limitation contributed to the emergence of this framework. The framework could benefit other language institutes in other contexts, since no framework has been proposed yet, to the best of my knowledge, regarding the implementation of critical thinking in EFL preparatory programmes for post-16 learners.

## **CHAPTER 10: CONCLUSIONS, CONTRIBUTION AND IMPLICATIONS**

### **10.1 Introduction and structure of this chapter**

This chapter provides a summary of the main findings of the study. It also highlights the strengths and limitations of this study, and some suggestions are then put forward for future research.

### **10.2 Summary of findings**

In this study, I sought to investigate the extent to which critical thinking could be applied as an effective EFL pedagogy. The specific focus was on implementing this pedagogy in the EFL preparatory year at Almanara language institute, run by Almanara University in Saudi Arabia. The main question which framed the study was:

To what extent could the critical thinking pedagogy be used as an EFL pedagogy at Almanara language institute?

This main question was divided into the following specific questions:

1. What are the attitudes of the learners and teacher towards the implementation of the critical thinking pedagogy for developing the quality of classroom talk?
2. To what extent does this pedagogy raise or lower the quality of classroom dialogue?

3. What are the effects of the critical thinking lessons on learners' language complexity?

4. What evidence of transfer of critical thinking is there in other lessons?

I collected data using regular interviews with participants, classroom observations, audio recording of classroom talk, final questionnaires and pre- and post-tests. The data were analysed qualitatively and quantitatively.

I found that critical thinking when used as an EFL pedagogy could have some positive effects on learners' attitudes and the quality of classroom dialogue. Learners valued the aspects of critical thinking that underpinned the design of activities. Their positive attitudes towards learning through critical thinking were evident in some examples of their interaction, where they demonstrated their openness to different ideas and a tolerance of ambiguity. However, it should be noted that some shy students found that classroom dialogue did not suit their personalities, as they preferred small group talk to whole class talk.

Unlike the learners, most of whom had positive attitudes towards the pedagogy, the teacher found it challenging, owing to the sensitivity of the context regarding some topics. Although the teacher varied her strategies for creating critical thinking dialogue during the first weeks of the study, she started to take control over classroom talk, more particularly towards the end of the study, which coincided with the authorities' observations of her teaching. Another point the teacher mentioned was that this pedagogy requires careful preparation and seems to place added pressure on teachers when taught along with the textbooks. The change in the

teacher's interactional style from dialogue to traditional IRF exchange did not help the learners to develop their language complexity in the post-tests and meant that there was no transfer of HOTS into classroom talk in their interaction in the other classes.

I concluded from my observations of the context where the study was carried out that critical thinking was applied in a vague manner which affected the development of this study. The development of learners' use of HOTS as components of critical thinking was the objective of reading and writing courses. There was no training of teachers in the implementation of critical thinking at the institute. On the basis of these limitations, I have proposed a framework for infusing critical thinking across language courses at the institute. The framework combines the SPARE model by Burden and Williams (1996), which looks at the processes of the implementation, and Moore's (2011) Transdisciplinarity model, which gives a more general view of how to link critical thinking across language courses.

### **10.3 Contribution and limitations**

This study has several points of strength. Firstly, the issue of implementing the critical thinking pedagogy for the purpose of creating high quality dialogue in the EFL classroom has not been explored widely. There are a plethora of studies that have examined common themes associated with EFL classroom interaction, such as interaction sequences, communication strategies and code switching, and only a limited number of studies have paid attention to the role played by critical thinking in affecting the quality of classroom talk (see Chapter 2 for more details on current studies in the field). Most studies have examined critical thinking from the point of view of developing reading and writing skills and overlooked the role of critical thinking in developing the quality of classroom talk. This study has obtained valuable findings. One finding is that the critical thinking pedagogy can be an effective pedagogy for involving learners in classroom dialogue that creates learning and thinking opportunities. Another finding is that this pedagogy can be received

positively by learners, more particularly if the topics are linked to their lives and if the activities contain some aspect of ambiguity. The study also identified challenges encountered by the teacher and learners during the implementation of the critical thinking pedagogy. The identification of the challenges associated with the implementation of this pedagogy has been neglected in previous research. Unlike existing studies on critical thinking in the EFL classroom which have produced positive results, the findings of this study did not reveal significant progress, although some benefits were identified. The identification of the challenges that accompanied the implementation of the critical thinking pedagogy, resulting in the detrimental effect produced by the intervention, is what distinguishes the current study from other, existing studies.

Another point of strength lies in the approach adopted for the design of the study. I adopted the single case study design underpinned by the naturalistic inquiry approach to attain a deep understanding of the processes of the implementation. Case study research has been employed for examining interventions (Nunan, 1992; Burden and Williams, 1996) (see also Table 2.1 in Chapter 2 for more examples). The flexible design of this study made it possible to gather evidence from multiple sources, and this led to the identification of both the challenges to and merits of applying the critical thinking pedagogy. These findings could not have been obtained if the scope of the study had been limited to examining particular variables by means of experimentation. Another point related to the design of this study was the use of Burden and Williams' (1996) SPARE model, which is specifically designed for evaluating classroom interventions in foreign language education, to evaluate the implementation of this pedagogy. I have not been able to locate any other studies that have adapted this model for use in an EFL context. This may therefore be considered to be a new contribution to the field made by the current study.

In addition to the above points, to the best of my knowledge, studies on the implementation of critical thinking in the Saudi context are scarce. I could not locate any studies that have examined critical thinking in relation to the quality of classroom talk in Saudi Arabia. Therefore, I hope that this study could be of help to language researchers and educators who are interested in applying critical thinking in language classroom.

Finally, I have proposed a framework designed to overcome the difficulties associated with the implementation of critical thinking in language courses across the institute. This framework might be of help to the NCAAA, which emphasises critical thinking as one of the educational objectives for post-secondary school education in Saudi Arabia. The framework could also be of help in other contexts, at the international level. Although I made a thorough search of the literature, I could not locate any frameworks for infusing critical thinking into foreign language institutes. All existing studies have limited the use of this pedagogy to one or two language skills, without attempting to infuse the pedagogy across all language courses. Therefore, there is a need for holistic frameworks that could facilitate the implementation of critical thinking in foreign language institute.

Like any piece of research, this study has some limitations that could not be avoided. The study was a case study that does not allow for generalisation of findings. However, as discussed in Chapter 4, generalisation of individual experiences could be made if further studies were conducted in similar contexts. Another limitation involves the small number of participants. I would argue, however, that it would have been difficult to derive an in-depth understanding of the processes of the implementation of the pedagogy if a large number of participants had been used.



Finally, the study was carried out over the relatively short period of 12 weeks, and it would have been more beneficial if the period of the investigation had been extended over one year to allow additional themes to emerge and further examinations to be made. The length of the study was unfortunately out of my control, because the authorities at Almanara University did not give me permission to carry out the study for more than one academic term. The length of the study should not be seen as a significant limitation, however, since several experimental and non-experimental studies have carried out classroom interventions over periods of 10 and 12 weeks and were able to answer the research questions and identify evidence of development (see Table 2.1 in Chapter 2 for examples).

#### **10.4 Implications for future research**

On the basis of the above findings, and taking into account the strengths and limitations of this study, it is possible to suggest an area for future research. Firstly, I hope that researchers will conduct comparative studies to investigate the differences or similarities among teachers at private and governmental language institutes and among Saudi and non-Saudi teachers, to find out if one group of teachers would be more open to the implementation than another. This suggestion emerges from the finding regarding the teacher's hesitation to implement critical thinking because she was a non-Saudi teacher teaching at a private institute, and it seems that she was worried about her contract renewal. It might be interesting to find out if Saudi teachers who teach at governmental institutes have the same concerns. Another possible direction for future investigation could involve comparing the effects of the critical thinking pedagogy on high achieving and low achieving learners to find out if the pedagogy benefits one group more than the other.

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## **List of my publications**

1. Alnofaie, H. (2013). A Framework for Implementing Critical Thinking as a Language Pedagogy in EFL Preparatory Programmes, *Thinking Skills and Creativity Journal*, 10, pp. 154-158. Available at:

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3. Alnofaie, H. (2012). 'An investigation of the effects of critical thinking lessons on the quality of classroom discussions: a case study', paper presented at the 2<sup>nd</sup> International Foreign Language Teaching and Learning (FLTAL) Conference, 4-6 May 2011, Sarajevo: Bosnia.

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## Appendices

**Appendix A: Table of studies on implementing critical thinking in EFL classrooms**

A. Experimental studies					
study	Focus	context	Participants	Methodology	Findings
1. Rahimi, M. (2013)	The effects of student reviewers' feedback on the quality of their peers' writing	Iranian university	56 Sophomores taking an advanced writing course (29 students in the experimental group and 27 students in the control group)	The researcher modeled written essays and learners were asked to follow the techniques presented in these models for writing essays. Later, learners exchanged their essays to be reviewed by peers for evaluation and then returned to the students for checking peers' comments. There were 11 writing sessions in this project. <b>Data analysis:</b> Content analysis of students' first and fifth essays following Jacobs <i>et al.</i> 's (1981) scoring rubric and coding data into main categories based on their functions: formal and global.	Learners in the trained group have significantly developed the quality of their written essays, compared to the control group. This indicates that training students for becoming reviewers can lead to effective learning of writing skills.



<p>2. Mehrdad <i>et al.</i> (2012)</p>	<p>The effects of teaching cognitive and metacognitive strategies on the development of learners' reading comprehension</p>	<p>Iranian university</p>	<p>180 students studying English as a BA major were randomly assigned into control and experimental groups of different levels of proficiency (lower, average and higher levels)</p>	<p>Learners in the experimental groups were given 10 lessons where they received instructions on applying cognitive and metacognitive skills (e.g., evaluation, skimming, scanning). <b>Methods</b> Pre- and post-tests (reading tests) <b>Analysis</b> Quantitative</p>	<p>The intervention had a significant impact only on the intermediate level learners. With regard to the lower level learners, language difficulties were barriers to their benefiting from the intervention. As for advanced learners, they had already developed awareness of identifying writers aims. Therefore, it could be concluded that cognitive and metacognitive strategies might be inappropriate for elementary level learners and might not necessarily benefit higher level learners.</p>
<p>3. Hashemi and Ghanizadeh (2012)</p>	<p>The effect of Critical Discourse Analysis (CDA) on developing learners' critical thinking skills in reading journalistic texts</p>	<p>Iranian university</p>	<p>Fifth semester students doing a reading course in English, 24 students in the control group and 29 students in the experimental group</p>	<p>Learners received session on how to apply critical thinking skills for reading and analysing texts. These skills included inference, recognizing unstated assumptions and evaluation of views. The teacher was one of the researchers. <b>Methods</b> Pre and post-tests Watson – Glaser Critical Thinking Appraisal (CTA) <b>Analysis</b> Quantitative</p>	<p>There was a more significant effect of the CDA on the development of learners critical thinking skills in the intervention group compared to learners in the control group. This indicates that CDA can be a positive method for developing learners awareness and increasing their application of critical thinking skills. The study encourages the implementation of case studies and suggests more focus on investigating the processes of introducing critical thinking to language learners.</p>

<p>4. Alwehaibi (2012)</p>	<p>Developing five general critical thinking skills among a group of university students (i.e., causal explanation, argument, prediction, determining the reliability of sources, and determining parts-whole relationships)</p>	<p>A Saudi university, Saudi Arabia</p>	<p>80 second year university students studying English as a major</p>	<p>Over 5 weeks, learners were given instructions on applying critical thinking skills. <b>Methods</b> Pre- and post-tests for measuring the five thinking skills. <b>Analysis</b> Quantitative</p>	<p>The students made significant progress in the post-test. This suggests that effective direct instruction can enhance learners' critical thinking skills.</p>
<p>5. Cruz de Quiro's et al. (2012)</p>	<p>Longitudinal study: measuring the effects of following a 5 element story telling procedure on the development of learners' language acquisition</p>	<p>Texas, USA</p>	<p>Experimental and control groups of 38 Spanish school children learning English (grade 2)</p>	<p>Learners received a training programme on telling and re-telling stories, following 5 stages for storytelling and re-telling <b>Data collection</b> <b>Methods:</b> Story re-telling by children was audio-recorded in L1 and L2. A rubric was used to assess their L2 development <b>Analysis:</b> Quantitative</p>	<p>The development of the experimental group was significant, compared to the control group. This indicates that the technique of story re-telling is effective for acquiring the new language.</p>

6. Shahini, and Riazi (2011)	Improving speaking, writing and thinking skills	Iran	34 university students (two groups: control and experimental groups). Learners were at the intermediate level of language proficiency	Learners received 17 sessions where philosophical questions were posed for discussion. <b>Data collection tools:</b> Pre and post-tests for measuring speaking and writing skills, Open observations <b>Analysis:</b> Quantitative and qualitative	Experimental group outperformed the control group, and this shows the positive effect of the intervention.
7. Cross (2011)	Developing the skills of prediction, inference and evaluation through metacognitive instructions	Japan – language school	20 advanced level learners of English between the ages of 20 and 55	Learners were introduced to 5 listening lessons (each 90 minutes long). <b>Data collection tools:</b> Pre- and post-tests and interviews with participants <b>Analysis:</b> Quantitative and qualitative	The progress of the lower level learners was more significant than that made by higher level learners. This might indicate that the intervention benefited the lower level students more than the higher level group.

<p>8. Chooa and Singha (2011)</p>	<p>Developing argumentative writing skills through integrating media and explicit instruction (2011)</p>	<p>Malaysian university</p>	<p>46 students in both experimental and control groups doing a course called 'Business and Communication English'</p>	<p>The intervention was carried out over 14 weeks. <b>Methods:</b> Pre- and post-tests for assessing critical thinking in students written essays, interviews at the end of the project <b>Analysis:</b> Quantitative and qualitative</p>	<p>Although the experimental group did not show significant improvement when compared to the control group, results revealed that participants in the intervention group made significant progress in their performance in the post-test compared to their performance in the pre-test. This might indicate that media and explicit instruction can develop critical thinking in literacy.</p>
<p>9. Tabrizi (2011) Note: This study is a conference abstract and details of the actual processes of the implementation and analysis methods are absent from the abstract</p>	<p>Developing critical reading skills among EFL learners</p>	<p>Iranian university</p>	<p>159 students studying English as a major, (experimental and control groups)</p>	<p>The experimental group received reading skills activities. <b>Methods</b> TOEFL reading test, final questions concerning learners' views</p>	<p>The experimental group made better progress than the control group. The study suggests that critical thinking interventions can develop critical thinking skills.</p>

<p>10. Turuk (2010) (action research)</p>	<p>Applying reasoning skills in an argumentative writing course</p>	<p>Sudanese university</p>	<p>30 students from the school of medicine studying English as a degree requirement (experimental and control groups)</p>	<p>Argumentative writing was taught through reading. The intervention was carried out over 12 weeks. <b>Methods:</b> composition tests (pre-, post- and delayed tests) , pre- and post-interviews with the learners <b>Analysis:</b> Qualitative and quantitative</p>	<p>The progress of the experimental group was more significant than that of the control group. The study concludes that teaching argumentative writing through reading can develop learners' writing , reading and speaking skills.</p>
<p>11. Chen (2010)</p>	<p>Applying HOTS approach to develop learners' speaking proficiency</p>	<p>Taiwanese university</p>	<p>6 non-English major freshmen in the experimental group and 6 in the control group</p>	<p>Learners received 12 thinking lesson over 12 weeks <b>Methods:</b> Audio-recording of classroom talk, pre-, post- and delayed post -tests, pre- and post-questionnaires and post-questionnaires interviews at the end of the study <b>Analysis:</b> Tests: Quantitative coding of utterances into HOTS levels, IELTS criteria for assessing speaking Interviews and open-ended questions of the questionnaire: Thematic ,Closed question of the questionnaire: quantitative</p>	<p>HOTS approach had a significant impact on learners' language proficiency . Applying this approach in EFL classroom is encouraged.</p>

<p>12. Yang and Chung (2009)</p>	<p>Infusing critical thinking into civic education through designing and implementing a critical thinking programme</p>	<p>Taiwan/ Junior school</p>	<p>Grade 8 students , 34 students in the experimental group and 34 students in the control group</p>	<p>The intervention group received a critical thinking programme over 10 weeks. <b>Data collection methods:</b> Pre- and post-tests for measuring dispositions and skills, perceptions survey and learning sheets. <b>Analysis:</b> Quantitative and qualitative</p>	<p>The experimental group achieved significant progress, compared to the control group, except for some skills. This indicates that programmes based on critical thinking can lead to positive educational outcomes.</p>
<p>13. Goh and Taib (2006) (small scale study)</p>	<p>Improving learners' awareness of their listening strategies through metacognitive instructions</p>	<p>Primary school in Singapore</p>	<p>10 pupils between the ages of 10 and 11</p>	<p>8 lessons were introduced to the pupils, where they had to reflect on their listening skills at the end of each lesson. <b>Data collection Methods:</b> Pre- and post-listening tests, self-reports <b>Analysis:</b> Quantitative and qualitative</p>	<p>The majority of learners, more specifically lower level learners, developed their understanding of their listening strategies which lead to an increase in their post-test marks. This might reveal the effectiveness of employing metacognitive skills in the development of listening skills.</p>

<p>14. Daud and Husin (2004)</p>	<p>The role of computer software in developing critical thinking in a reading course</p>	<p>Malaysian university</p>	<p>40 university students at the lower intermediate level of language proficiency (21 students in the experimental group and 19 in the control group)</p>	<p>Shakespeare's play <i>Othello</i> was the text used for analysis in this study. Students in the experimental group were asked to check the occurrences of particular words and their meaning in different contexts, using 258 concordance software, while the students in the control group had to do the same task manually. <b>Data collection methods:</b> Cornell Critical Thinking Tests (pre- and post-tests)</p> <p><b>Analysis</b> Quantitative</p>	<p>Experimental group outperformed the control group. This might reveal that technology can develop learners' thinking skills.</p>
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15. Nemeth and Kormos (2001)	The development of classroom argumentation	Hungarian secondary school	24 Hungarian learners of EFL . (control group and experimental groups)	<p>A short-term training intervention on argumentation was introduced to learners.</p> <p>Data were collected over 2 years to track the development of the students.</p> <p><b>Methods:</b></p> <p>Pre- and post-tests (i.e., oral performance of tasks)</p> <p><b>Analysis:</b></p> <p>Quantitative</p>	<p>The students did not make significant progress in this study in terms of the quantity of utterances. However, they showed more developments of the content, owing to their familiarity with tasks. It is suggested that training sessions that accompany an intervention should be conducted over a longer period.</p>
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B. Single case studies						
Study	Focus	Context	Participants	Methodology	Findings	
1. Pessoa and Freitas (2012)	Identifying challenges of discussing critical themes for teaching English	Brazilian language centre at a university	43 students (intermediate level) The teacher researcher and collaborator were involved in this study.	Learners received themes on gender and race inequalities over 4 months <b>Data collection methods:</b> Students' questionnaire, one reflective session with all learners at the end, two reflective sessions between the teacher and the collaborator, researcher's diaries and students' questionnaire at the end of the study. <b>Analysis:</b> Quantitative and qualitative	Findings revealed that students had positive views about discussing critical thinking themes in terms of engagement and self-realisation. However, the views of the students and teachers could be dominant, so counterpart views need to be highlighted.	
2. Park (2011)	Examining the benefits and challenges of integrating newspaper articles into reading curriculum as a pedagogical tool for developing learners' critical thinking skills in reading classroom	Korean university	One classroom of 38 Korean students studying English Education for their majors.  The teacher was the researcher.	Learners were asked to prepare for reading lessons by selecting articles to read, discussing them in the class with others, writing assignments based on these articles and revealing their reaction in reflective papers. <b>Methods:</b> Audio recording of discussions, interviews, field notes and learners' response sheets <b>Analysis:</b> Qualitative	The learners made notable progress throughout the period of the study. Their participation in critical thinking discussions increased and their use of particular expressions that revealed their ideas and involvement in thinking increased. However, this pedagogical tool appears to be unfavoured by lower level learners, and requires preparation efforts from the teacher.	

3. Lo (2010)	Investigating the students' awareness of the concept of autonomous learning in written portfolios, which required them to use their critical thinking skills	Taiwanese university	101 students from two classrooms	<p>All 101 students were asked to write portfolios in which they reflected on their learning</p> <p><b>Methods:</b> Researcher' field note and pre and post- self- assessment questionnaires</p> <p><b>Analysis:</b> Quantitative and qualitative</p>	Many learners demonstrated their awareness of their learning. This seems to indicate that portfolios can be a helpful tool for developing learners' awareness of their learning.
4. Fairley (2009) (action research)	Investigating the effect of debate on involving silent women in class talk which had been dominated by male students	Egyptian university	Five females and six males doing an intensive English programme	<p><b>Methods:</b> Audio recording of 140 minutes of 6 classroom debate sessions, teacher's notes and final questionnaires.</p> <p><b>Analysis:</b> Audio recorded talk: quantitative coding of data (i.e., the total number of turns and the length of turns by individuals) Question naire and researcher's notes: thematic analysis</p>	The study suggests that empowering female learners and providing them with opportunities to participate in debate can lead to equal participation.

<p>5. Chiu (2009)</p>	<p>Implementing the Shepherd leadership pedagogy into online discussions as supplementary sessions to a reading course</p>	<p>Taiwan</p>	<p>43 university students, year 3. The participants were studying an upper intermediate reading course.</p>	<p><b>Data collection methods:</b> Two learners' focus groups, one in the middle and another at the end of the study <b>Analysis:</b> Qualitative</p>	<p>Most learners demonstrated an understanding and development of critical thinking.</p>
<p>6. Porto (2007)</p>	<p>Encouraging learners to use their reflective skills to explore their experiences with learning English</p>	<p>Argentine/ University level</p>	<p>95 students</p>	<p>Learners used to write reflective diaries over 35 weeks. <b>Data collection methods:</b> Learning diaries <b>Analysis:</b> Qualitative</p>	<p>Learners valued keeping diaries where they expressed their views about their learning.</p>

<p>7. Beckett and Slater (2005)</p>	<p>Increasing learners' awareness of the use of language, content and thinking skills through group projects.</p>	<p>Canadian university, an exchange programme</p>	<p>The study was conducted for 14 weeks with 57 international university students whose language proficiency level was upper intermediate</p>	<p>Students were asked to prepare and accomplish a project in groups over 14 weeks, and they had to complete weekly portfolios <b>Data collection methods</b> Weekly reflections by learners in their port-folios, teacher's reflections on lessons and interviews with 22 learners <b>Analysis:</b> Qualitative</p>	<p>The study proposed a framework for teaching language, content and thinking skills and learners valued learning through following this framework</p>
<p>8. Nunes (2004)</p>	<p>The role of learners' reflections in promoting their understanding of their own learning and the teacher's understanding of their learning</p>	<p>Portuguese high school</p>	<p>Grade 10 students</p>	<p>Students were introduced to portfolios in which they reflected on their learning in L2 over one year. <b>Data collection methods:</b> Portfolios <b>Analysis:</b> Content analysis</p>	<p>Portfolios can increase teacher's awareness of students' learning</p>
<p>9. Allen (2004)</p>	<p>Promoting learners' research skills for examining French cultural stereotypes in written portfolios</p>	<p>USA, university</p>	<p>31 university students learning French as a foreign language</p>	<p>Participants were asked to write portfolios for investigating stereotypes in the French culture, through applying their analytical skills and research skills. <b>Methods:</b> Self-assessment questionnaires at the end of the study. <b>Analysis:</b> Quantitative for the closed questions and qualitative for the open questions</p>	<p>Learners demonstrated their engagement in applying thinking skills in the portfolios; they had positive views towards writing portfolios and they became aware of their metacognitive processes.</p>

<p>10. Dantas-Whitney 2002</p>	<p>Developing learners' speaking skills through audio-recorded journals</p>	<p>International students in an English preparatory programme</p>	<p>18 international students doing a language programme, before starting their undergraduate degrees</p>	<p>Learners were asked to audio-record their learning experience of units taught to them in a listening and speaking course over 10 weeks, and the teacher listened to their reflections and responded back by recording her views.</p>	<p>Learners built more awareness of their learning by relating the units to their lives and identifying their needs.</p>
<p>11. Auerbach And Paxton (1997)</p>	<p>Developing reading skills through reflection</p>	<p>USA</p>	<p>20 international students in a pre-freshman intensive language programme</p>	<p>Learners were involved in an ongoing process of reflection on their reading strategies throughout the semester.  <b>Data collection methods:</b>  Pre and post-interviews and reflective papers  <b>Analysis:</b>  Qualitative</p>	<p>Training learners to use their reflective skills can improve their awareness of their learning.</p>

C. Descriptive or exploratory case studies						
Study	Focus	Context	Participants	Methodology	Findings	
1. Li (2011)	Investigating the role of teachers in creating and obstructing thinking opportunities in EFL classroom talk.	Chinese secondary schools	6 teachers and their classroom students aged between the ages of 12 and 16 years old.	<b>Methods :</b> Audio recording of classroom talk <b>Analysis:</b> CA analysis of talk.	The study revealed that teachers can encourage learners to go beyond providing responses based on memorisation and use HOTS by extending the wait-time, reducing interruptions and asking referential questions.	
2. Floyd (2011)	Exploring the influence of L1 and L2 on the extent of applying critical thinking skills	Postgraduate Chinese students	55 Chinese students enrolled on a language course in preparation for starting their Master degrees, average age 24.	Learners received <i>Watson Glaser Critical Thinking Appraisal (WGCTA)</i> test in both L1 and L2.	Learners performed better in the L1 test. This indicates that Chinese students can demonstrate the possession of critical thinking, unlike the dominant view about Asian learners which classifies them as non-critical thinkers. It seems that the low performance in the critical thinking test is related to the use of a second language.	

3. Pinkevičienė (2011)	Investigating how to create a free conversation in language classroom	Lithuania	8 teachers of EFL at a language institute and their students who were of different age (young and adults)	<b>Data collection tools:</b> Audio-recording of classroom talk <b>Analysis:</b> Qualitative (Discourse and Conversation Analysis)	Extended IRF patterns can be of value to language classroom, in terms of creating learning opportunities and building conversation-like discussions.
4. Zhang (2010)	Investigating learners' metacognitive knowledge in relation to learners' level in a reading course	Two universities in China	20 freshmen students in arts and science who were studying English as a compulsory language	<b>Data collection method</b> Semi-structured interviews <b>Analysis:</b> Qualitative	Learners who demonstrated more awareness of their learning in the reading comprehension course were successful language learners. This seems to add weight to the employment of metacognition in language classroom for successful learning.
5. Graham (2006)	Exploring learners' beliefs about themselves as language learners through reflection	School students	10 English participants (16-18 yrs) studying French in preparation for GCSE and AS examinations. They were at the intermediate and advanced levels of language proficiency	<b>Data collection methods</b> interviews and questionnaires concerning the students' views of themselves as language learners <b>Data analysis</b> Qualitative and quantitative	Most earners had low self-confidence about their abilities to face the challenges of learning the language.

6. Roether (2004)	Exploring critical thinking skills among a group of Korean students in an American language institute and comparing their performance to U.S. students	L.A., U.S.	50 Korean students studying ESL at an American language institute.	<p><b>Methods:</b> The California Critical Thinking Skills Test (CCTST) was administered to the Korean students and their results were compared to U.S. college students obtained in 2002.</p> <p><b>Analysis:</b> Quantitative</p>	<p>The scores of the Korean students were lower than their U.S counterparts. This may be related to the influence of the Korean students' background on the level of their thinking skills.</p>
7. Stapleton (2002)	Identifying aspects of critical thinking in L2 writing among Japanese students	Japanese university	70 second year university students	<p>Students received a 70- item questionnaire to investigate their critical thinking dispositions</p> <p><b>Methods:</b> Questionnaire</p> <p><b>Analysis:</b> Quantitative</p>	<p>Unlike the dominant view about Japanese students as being passive students, most of the students achieved high scores in the questionnaire, which revealed that they possessed aspects of critical thinking .</p>
8. Benesch (1999)	Describing the quality of classroom dialogue based on critical thinking pedagogy	USA, EAP (English for Academic Purposes)	A group of international students from different backgrounds studying English as an L2.	<p>Learners were involved in classroom dialogue in one reading lesson that was linked to a writing lesson.</p> <p><b>Methods:</b> Teacher's reflection based on observation</p>	<p>Critical thinking dialogue can encourage learners to reveal their views and challenge opposing views.</p>



## **Appendix B: Baseline interviews with learners**

### **Appendix B.1: an example of a baseline interview with (Lu) (English version)**

I: Before we start I would like to remind you of your participation ethics. All information provided will be dealt with confidentially. All recordings will be destroyed after I finish with this research. I want to ask you some questions and you don't have to answer those you don't want to answer.

Lu: OK

I: You can withdraw from the interview anytime you want

Lu: Ok

I: Why do you learn English?

Lu: To help me continue my education and succeed

I: Do you think English is an important language?

Lu: Of course I think it is an international language everywhere even here in Saudi Arabia when we go to hotels or anywhere we meet people who do not speak Arabic and speak English. I think it is important.

I: What do you think about doing different university majors in English?

Lu: I don't fully support this. Arabic is our mother tongue and we are proud of it. There are some courses that should be done in English, but courses in Arabic should be included. Here we do everything in English and my spelling is becoming confused. I think we need Arabic.

I: OK, let's go to the four language skills listening, speaking, reading and writing.

What is the most difficult skill?

Lu: Writing

I: Writing

I: What is the easiest skill for you?

Lu: Speaking.

I: Do you encounter any difficulties when speaking?

Lu: Sometimes if the speaker is a native and speaks fast.

I: What do you need to encounter such difficulties?

Lu: We need discussion sessions and the teachers should be native. The class should be divided into 5 groups each group talk about a topic then we share the discussion with others.

I: It is likely that some students dominate group talk and do not allow others to participate.

Lu: No the discussion could be divided equally among learners and each student can be asked to provide two points.

I: Does that mean you like group work?

Lu: yes

I: To what extent does the text book help you to practice speaking?

Lu: The book alone is not enough. Learning activities should be related to our lives. For example, if the unit is about media, we can visit a media company and see how advertisement are published. If the lesson is about insomnia, we can invite a

doctor to discuss the problem with him. I will never forget the discussion. It will be more linked to our lives.

I: How would you describe your ability to engage in discussions and making arguments?

Lu: I don't participate in topics that I don't like, For example, I don't like to talk about movies. I like political topics. My father works as a diplomat in another country and I feel happy when he comes back for a visit because we can talk about politics. But topics I don't like uh-

I: You don't participate?

Lu: I don't participate because I don't have an idea about the topic. It is important that I know about the topic to participate.

I: Do you feel disappointed if opinions clash during a class discussion?

Lu: No because either I convince others or other might convince me. Each person has his own view.

I: What tasks help you to speak in speaking classroom?

Lu: Class discussions

I: In what conditions do you feel relaxed and can speak freely?

Lu: I did not understand this can you explain?

I: If you are given a topic for discussion when do you feel relaxed and when do you feel anxious?

Lu: Usually I feel relaxed.

I: Do you feel more relaxed when speaking: inside or outside your classroom?

Lu: Inside the classroom.

I: Inside the classroom?

Lu: Yes, I don't like speaking English a lot outside the classroom.

I: What situations might increase stress in speaking classroom?

Lu: It depends on the teacher. Some teachers put us under pressure.

I: You think it depends on the relationship between the teacher and her students!

Lu: Yes, rapport is necessary and I feel confident in discussion if the teacher is friendly. I find myself more open to her criticism than to those by other teachers who are formal.

I: What do you think of tasks that require you to provide opinions based on reasons?  
Why?

Lu: I don't find it difficult.

I: How would you describe your ability of providing long answers?

Lu: I don't like to provide long answers unless the lesson is a discussion. I don't find it difficult to provide long answers. I do mistakes when I speak, but I don't care about these mistake as long as I can communicate.

I: What is an ideal speaking classroom?

L: I didn't understand this?

I: What are the criteria needed for an ideal discussion session?

Li: It is important not to have late sessions after 3:00 pm by the time we feel tired.  
Also, the teacher needs to be in a good mood for the discussion. If she's in a bad mood we will not participate. As I mentioned before, dividing the class into

discussion groups. We want to choose our topics.

I: What are your expectations of this course?

Lu: I want to attend the class with motivation, not just for the sake of attendance. I speak English better outside the classroom perhaps because we focus more on grammar in the classroom.

I: Would you like to add any thing

Lu: no thanks

## Appendix B.2 an example of a baseline interview with (Lu) (Arabic version)

### مثال: المقابلة الأولى بين الباحثة والطالبة (ل)

الباحثة: قبل أن نبدأ أذكرك بحقوقك كمشاركه، المعلومات تعامل بمتهى السرية وستتلف جميع التسجيلات بمجرد انتهائي من البحث

الان عندي بعض الاسئلة وانتي غير ملزمة بلاجابة على الاسئلة التي لاترغبين في الاجابة عليها

ل: طيب

الباحثة: وبإمكانك الإنسحاب من المقابلة في اي وقت

ل: OK

الباحثة: لماذا تتعلمين اللغة الانجليزية

ل: حتى اواصل تعليمي وانجح

الباحثة: هل تعتقدين انه اللغة الانجليزية لغة مهمه

ل: طبعاً انا اعتبرها لغة عالمية في كل مكان حتى في بلدنا الحين في السعودية لما نروح فندق لما نروح اي مكان كثير نواجه ناس مايتكلمون عربي ويتكلمون انجليزي ، فاعتقد انها جدا مهمه

الباحثة: ماهو رأيك في دراسة التخصصات المختلفة باللغة الانجليزية

ل: انا ماأويدها بشكل كامل يعني كمان احنا لانا لغتنا العربية وفخورين فيها صح في مواد تكون انجليزي ولازم انها تكون انجليزي بس لازم يكون في مواد عربي هنا صايرين مايندرس عربي ابدا ماشوف العربي يعني حتى بالاملاء انا صرت شوية الخبط شوية فاعتقد انه المفروض يكون في عربي شوية

الباحثة: طيب ننتقل لمهارة المحادثة في اربع مهارات الاستماع التحدث القراءة والكتابة ماهي اصعب مهارة بالنسبة لك

ل: الكتابة

الباحثة: واسهل مهارة

ل: محادثة

الباحثة: هل تواجهين اي صعوبات اثناء المحادثة

ل: يعني اوقات لما يكون المتحدث من اهل اللغة فيكون بيتكلم بسرعة

الباحثة: ماهي احتياجاتك لمواجهة مثل هذه المواقف

ل: اول حاجه المفروض يكون عندنا مناقشة والاساتذة يكونوا من اهل اللغة

والمناقشة المفروض بقسمونا مجموعات كل مجموعة 5 طالبات وموضوع مختلف وناقش بعدها مع الصف.

**الباحثة:** احتمال في بعض المجموعات تفرد بعض الطالبات بالنقاش ولاترك فرصة للاخريات للمشاركة

ل لا توزع الفرص بينهم كل طالبة تشارك بفكرتين مثلا

**الباحثة:** يعني تفضلين العمل الجماعي او التمارين الجماعية

ل صحيح

**الباحثة:** لأي مدى قد يساعدك الكتاب على ممارسة المحادثة

ل: الكتاب وحده مايكفي المفروض يكون في تعليم ملامس للواقع يعني مثلا اذا كانت الوحدة عن الاعلام نزور جريده نشوف كيف ينشرون الاعلانات وفي درس اضطرابات النوم المفروض نستضيف دكتور يتكلم معنا شوية عمري ماراح انسى اني يوم اخذت هذا الدرس و له علاقة بحياتنا

**الباحثة:** طيب كيف تصفين قدرتك على المشاركة في النقاش الصفّي والدخول في جدال مع الاخرين

ل: يعني انا مادخل بجدال في اي موضوع مايعجبني لي ميولي يعني مثلا موضوع يتكلمون في موضوع عن الفن ومالفن انا ابدأ اكره هذي الاشياء ولا يقولون لي من الفيلم الفلاني انا عندي ميول سياسي 24 ساعه قاعده اخبار ، بابا بصفة عمله خارج المملكة مانشوفه الا بالاجازات يعني يا حنا نروح له ياهو يجينا افرح لما يجي عشان اقعد اتناقش معاه هو يشوف الاخبار وانا اشوف الاخبار واساله اذا في شي مافهمته يعني احب اتناقش في المواضيع هذه ومواضيع انا ماحبها ماتناقش فيها صراحة ابعدها عنها ما ...

**الباحثة:** ماتشاركين

ل: ماشارك فيها لانه ماعندي فكرة ماحب اتكلم عن موضوع انا ماعندي خلفية عنه يعني حلو يكون انا مطلع على الموضوع من قبل ولا مايجون يقولون فيلم ومدري من هو وهذا الفلاني انا لما اعرفه من هو اتكلم عنه ما..

**الباحثة:** طيب هل تشعرين بالاستياء لو حصل تعارض اراء أثناء نقاش موضوع معين في الصف

ل: لا يا يقنعني ياقتعه في النهاية كل واحد ورأية

**الباحثة:** طيب نتكلم عن تمارين المحادثة ماهي التمارين التي تساعدك على التحدث في الصف

ل: المناقشة الجماعية

**الباحثة:** المناقشة، في اي الحالات تشعرين بالراحة والقدرة على التحدث داخل الفصل

ل: مافهمت ممكن توضحين

**الباحثة:** اذا قدم لك تمرين معين للنقاش متنتشرين بالتوتر ومتى تشعرين بالاسترخاء؟

ل: اكون مرتاحة اكثر الاوقات

**الباحثة:** طيب تشعرين براحة اكبر لما تتكلمين مع زميلاتك باللغة الانجليزية داخل الفصل او خارج الفصل

ل: لا داخل الفصل

**الباحثة:** داخل الفصل

ل: ماحب اتكلم خارج الفصل

**الباحثة** ماهي اسباب التوتر داخل محاضرات المحادثة

ل: هذا يعتمد على استاذة المادة اوقات صراحه في ناس مستفزات يكونوا فانا اتوتر طبيعي من يوم ماتدخل يعني واوقات لا عادي

**الباحثة:** يعني علاقة الطالبة بالمعلمة .

ل: نعم ..وانا مؤيده لعلاقة الطالبة بالمعلمة تكون انها في علاقة شوي اكثر من ماهي استاذة وطالبة مهما كان في الجامعه في المدرسه باي مكان يعني مهما كان لو انها بتدرسنني شهر واحد مادام انا علاقتي فيها شوي قوية راح اخذ راحتي معاها في الديسكشن وراح اخذ راحتي معاها باي شي يعني حتقبل حتى انتقاداتها ممكن بسهولة اكثر من اني اتقبله من معلمه تكون شوي انا مو متقبلتها مره في حاجز بيني وبينها

**الباحثة:** مارايك في الاجابات المبنية على دلائل

ل: ماأواجه مشكلة فيها

**الباحثة:** كيف تصفين قدرتك على اعطاء اجابات مطولة

ل: انا مااحب اجاب اجابات طويله اذا كان مطلوب مني جواب فقط وليس نقاش واتكلم وماواجه صعوبه يعني في اخطاء بس اتكلم بدون ماأهتم بالاطفاء لأنني قادرة اتواصل مع زميلاتي

**الباحثة:** ماهي محاضرة المحادثة المثالية في نظرك

ل: ما فهمت

**الباحثة:** ماهي الشروط الازم تحقيقها في صف المحادثة ليعتبر مثالي؟

ل: اول شئ مايكون اول شرط واهم شرط مايكون الكلاس من الساعة 2 ل 3 او من 3 ل4 مايكون الكلاس متاخر مره يعني ثاني شئ الاستاذة تكون يعني تناقش وهي في مزاج يساعدها اذا هي كانت معصبه احنا حنلاحظ ولاننجم هذه اهم شينين ومثل ماقلت لك يقسمونا مجموعات للنقاش المفروض يخلو النقاش مفتوح



الباحثة: طيب اخر سؤال ماهي توقعاتك لمادة المحادثة هذا الفصل ايش تطلعاتك ايش تتمنين

ل: اتمنى اتمنى يكون عندي محاضرة و احضر وانا في قمة الحماس ومايكون حضوري لمجرد الحضور خاصة يعني انا اتكلم افضل برا اكثر مما اتكلم بالكلاس ماعرف ليش يمكن عشان الكلاس هنا يدققوا عالجرمر

الباحثة: اي تعليق أو اضافة

ل: لا شكرا

## **Appendix C: Focus group questions conducted with learners in the middle of the study**

### **Appendix C.1 Focus group (English version)**

1. What are the thinking skills you think you have used in the different thinking lessons?
2. Which of these skills you find difficult to apply?
3. What are the negatives of the activities you have been introduced to so far in terms of your  
learning?
4. What are the positives of the activities you have been introduced to so far in terms of your  
learning?
5. At the end of some of the lessons you were asked to reflect on these lessons in terms of their effects on your lives or learning. What do you think about this step?

## AppendixC.2 Focus group (Arabic version)

1. ماهي مهارات التفكير التي طبقتها في دروس التفكير النقدي؟
- 2 أي من هذه المهارات تجدينه صعب التطبيق؟
3. ماهي سلبيات التمارين المقدمة لك من حيث تأثيرها على تعلمك؟
4. ماهي ايجابيات التمارين المقدمة لك من حيث تأثيرها على تعلمك؟
5. طلب منك في نهاية بعض الدروس بالتفكر في تأثيرها عليك سواء في حياتك او تعلمك. مارأيك في هذه المرحلة؟

## Appendix D: Learners' final interview questions

### AppendixD.1 (English version)

Evaluate the three components of the listening and speaking course: the book, presentation skills and critical thinking lessons.

What do you think of integrating the thinking lessons with the book?

How the critical thinking activities differ from the activities in the book?

To what extent do you feel satisfied with your engagement in class talk?

What might affect your participation in the critical thinking lessons?

How helpful is using Arabic in the group or class talk?

How would you describe your openness to criticism and opposing ideas?

What do you think of the phrases?

Which strategy/ task you liked the most and why?

Which task/ strategy you found helpless? Why?

If you are given the same course again what suggestions would you give?

## Appendix D.2 (Arabic version)

1. ماهو تقييمك لمحتوى مادة المحادثة: الكتاب، تمارين التفكير النقدي ومهارات العرض.
2. ماهو رأيك في دمج تمارين التفكير النقدي مع الكتاب؟
3. كيف تختلف تمارين التفكير النقدي عن تمارين الكتاب؟
4. لأي مدى تشعرين بالرضا عن مشاركتك في المحادثة الصفية؟
5. ماذا يؤثر على مشاركتك في تمارين التفكير النقدي ؟
6. لأي مدى يساعدك استخدام اللغة العربية في المحادثات الصفية ومحادثات المجموعات؟
7. كيف تصفين تقبلك للراء المختلفة؟
8. مارأيك في العبارات الجدلية؟
9. اي تمارين فضلتها ولماذا؟
10. اي التمارين كان اقل فعالية ولماذا؟
11. لو قدمت لك دروس التفكير النقدي مرة اخرى ماهي اقتراحاتك ؟

## Appendix E: Baseline questionnaire for learners

### AppendixE.1 Baseline Questionnaire (English version)

#### Part 1/ BACKGROUND INFORMATION:

- A. Name
- B. Age
- C. Type of high school (please circle)
1. Public
  2. Private
  3. Other (specify).....
- D. Undergraduate major: .....
- E. Do your parent speak English (circle your answer)
1. Yes, both of them speak English
  2. Only my mother speaks English
  3. Only my father speaks English
  4. None of them speak English
- F. What was your entry TOEFL score at the institute? .....
- G. For how long have you been studying English at the following levels:  
(Write the number of years in the boxes)
- Primary school
- Intermediate school
- High school
- H. 1. Have you done any additional language courses during your studies at the language institute.
1. Yes
  2. No
- I.2 If so, for how long? .....
- J. Which language you use more in everyday life. (circle your answer)
1. Arabic
  2. English
  3. I use both equally



0 1 2 3 4 5 6 7 8 9 10

very very

unsatisfied satisfied

Additional comments:

.....  
.....

d. How satisfied are you with your abilities to express your opinions in discussions

0 1 2 3 4 5 6 7 8 9 10

very very

unsatisfied satisfied

Additional comments:

.....

.....

e. How satisfied are you with your abilities to participate in dialogue where you evaluate others' opinions.

0 1 2 3 4 5 6 7 8 9 10

very very

unsatisfied satisfied

Additional comments:

.....

.....



Part 4/ SPEAKING ANXIETY

Please circle difficulties that you might have in speaking classroom. You can choose more than one answer.

1. My self-confidence is low when speaking
2. I stutter when the teacher asks me a direct question.
3. I feel anxious if you do not prepare for the lesson.
4. I feel embarrassed if my classmates laugh at my mistakes.
5. I feel anxious if I do not have an answer to the teacher's question.
6. I lack argumentative skills, so I prefer to stay quiet.
7. I lack the skills of analysis, inferring and evaluation.

Additional difficulties or comments:

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

Part 5/ ATTITUDES TO CRITICAL THINKING

Circle one answer.

- a. It is important to show respect for opposing opinions.  
1. strongly agree 2. agree . 3. not sure 4. disagree 5. strongly disagree  
Additional comments:

- b. It is important to consider alternative views before making a final decision  
1. strongly agree 2. agree . 3. not sure 4. disagree 5. strongly disagree  
Additional comments:

- c. It is important to make a convincing argument  
1. strongly agree 2. agree . 3. not sure 4. disagree 5. strongly disagree  
Additional comments:

Part 6/ EXPECTATIONS ABOUT THE NEW COURSE.

- a. What skills you are looking to acquire in this new critical thinking course.  
.....



## Appendix E.2 Baseline Questionnaire (Arabic version)

### أ. معلومات عامة عن الطالبة

اسم الطالبة

العمر

الرجاء تحديد المدرسة الثانوية التي تخرجتي منها بوضع دائرة حول الاجابة المختاره.

1. مدرسة حكومية 2. مدرسة خاصة 3. أخرى (الرجاء التحديد).....

4. ماهو التخصص الجامعي الذي ترغبين في الالتحاق به؟.....

5. هل يتحدث والدك اللغة الانجليزية؟ الرجاء وضع دائرة حول الاجابة المناسبة.

1. نعم كلاهما يتحدثان الانجليزية

2. والدتي فقط تتحدث الانجليزية

3. والدي فقط يتحدث الانجليزية

4. لأحد منهما يتحدث الانجليزية

6. كم كانت آخر درجة اختبار توفل حصلتي عليها عند التحاقك بمركز اللغة؟.....

7. الرجاء كتابة عدد السنوات التي قضيتها في تعلم اللغة الانجليزية في المراحل الدراسية المختلفة التي سبقت

دخولك للجامعة. الرجاء كتابة عدد السنوات في المربعات الموجودة بالاسفل.

المرحلة الابتدائية

المرحلة المتوسطة

المرحلة الثانوية

8 (أ) هل التحققي بدورات لغة انجليزية اضافية قبل او بعد التحاقك بالجامعة؟ ضعي دائرة حول اجابتك.

1. نعم 2. لا

8 (ب) اذا كانت الاجابة نعم, كم كانت مدة التحاقك بالدورة؟ .....

10 (أ) اختاري اللغة التي تستخدمينها بشكل اكبر في حياتك اليومية بوضع اشارة √ امام اجابتك .

العربية  2. الانجليزية  3. استخدم اللغتين بشكل متساوي

### ب. مهارات المحادثة

11. ماهي التمارين التي تعتقدين بأنها تساعدك على ممارسة المحادثة في الفصل؟ ضعي دائرة حول

اجابتك

أ . أفضل لعب الادوار

1. نعم 2. لا 3. غير متأكد

ب. افضل الاجابة على الأسئلة التي تتطلب ابداء رأي حول مواضيع ذات صلة بالحياة.

1. نعم 2. لا 3. غير متأكد

ح. أفضل المشاركة في اللقاء باعداد موضوع معين أعرضه في الصف أمام زميلاتي.

1. نعم 2. لا 3. غير متأكد

أفضل مناقشة مواضيع اللقاء التي تعرضها زميلاتي في الصف

1 نعم 2. لا 3. غير متأكد

12 هل هناك تمارين أخرى تفضلين أدائها غير التمارين المشار اليه في الأعلى والتي تعتقدين بأنها قد تساعدك

على ممارسة المحادثة في الفصل؟ الرجاء ذكر نوعية هذه التمارين. يمكنك اعطاء أمثلة إذا أرتي.



تعليقات أخرى

14. (ج) ما مدى رضاك عن مقدرتك على التعبير عن رأيك عند مناقشة موضوع ما مع زميلاتك في الصف.

غير راضية على الاطلاق 1 2 3 4 5 6 7 8 9 10 راضية جدا.

تعليقات أخرى

14 (د) مامدى رضاك عن مقدرتك على المشاركة في حوار صفي يتطلب منك تقييم اراء الآخرين

غير راضية على الاطلاق 1 2 3 4 5 6 7 8 9 10 راضية جدا.

تعليقات أخرى

15 (أ). في الأسفل بعض الصعوبات التي قد تواجهينها أثناء المشاركة في النقاش الصفّي . الرجاء وضع

دائرة حول الصعوبات التي تواجهينها ان وجدت. يمكنك اختيار أكثر من اجابة.

الصعوبات التي أواجهها هي:

ثقتي في نفسي من حيث القدرة على التحدث ضعيفة.

أتلعثم عندما توجه لي المعلمة السؤال مباشرة.

أشعر بالخوف عندما أتحدث بدون تحضير مسبق للدرس

أخاف من سخرية زميلاتي في الصف عندما أتحدث الانجليزية

أشعر بالقلق اذا وجهت لي المعلمة سؤال لم أعد له اجابة مسبقا.

أحاول تجنب الصدام في الآراء مع الآخرين لذلك أفضل الصمت بدل النقاش .

أفتقد القدرة على التحليل , الاستنتاج, التقييم ومشاركة الآراء مع الآخرين

15 (ب) الرجاء اضافة أية صعوبات أخرى في المساحة المعطاه.

.....  
.....

### ج. الاستعداد للتفكير النقدي

16 اختاري اجابة واحدة لكل جملة من الجمل الآتية بوضع دائرة حول الاجابة التي تعبر عن رأيك . يمكنك كتابة

تعليقات أخرى في المساحة المعطاة.

16 (أ). من الضروري اظهار الاحترام للآراء المختلفة

1. أوافق بشده 2. أوافق 3. غير متأكده 4. لأوافق 5. لأوافق بشده

تعليقات أخرى

.....  
.....

16 (ب) من الضروري أن تؤخذ البدائل بالاعتبار قبل اتخاذ القرارات.

1. أوافق بشده 2. أوافق 3. غير متأكده 4. لأوافق 5. لأوافق بشده

تعليقات أخرى

.....

.....

.....

16 (ج). أمن الضروري أن يبني الحوار على أدلة ملموسة.

1. أوافق بشده 2. أوافق 3. غير متأكد 4. لأوافق 5. لأوافق بشده

تعليقات

.....

.....

..... د. تطلعاتك حول محاضرات المحادثة لهذا الفصل .....

17. ماهي مهارات المحادثة التي تتطلعين لاكتسابها في نهاية هذا الفصل.

.....

.....

.....

18. هل هناك أية اقتراحات أخرى بخصوص مادة المحادثة المبنية على التفكير النقدي هذا الفصل و التي قد

تطور مهارات المحادثة.

.....

.....



23. كيف تقيمين مستواك في اللغة الانجليزية في المهارات المختلفة . اختاري رقم واحد فقط لكل مهارة بوضع

دائرة على الرقم, علما بأن 1=ضعيف و 10=ممتاز

المحادثة ضعيف 1 2 3 4 5 6 7 8 9 10 ممتاز

الاستماع ضعيف 1 2 3 4 5 6 7 8 9 10 ممتاز\_\_

القراءة ضعيف 1 2 3 4 5 6 7 8 9 10 ممتاز

الكتابة ضعيف 1 2 3 4 5 6 7 8 9 10 ممتاز

## Appendix F: Final Questionnaire for learners

### Appendix F.1: Final questionnaire for learners (English version)

#### Part 1/ Evaluation of activities

You have been introduced to critical thinking activities like topic discussions, mysteries and image reading. The aim was to encourage you to engage in classroom dialogue where ideas are expressed alternatives are considered and different opinions are explored.

- a. Which type of the following activities were the most effective ones for your involvement in class talk. Please circle one answer.
1. Topic discussions (e.g., Turkish Series, Philanthropy)
  2. Mysteries (e.g., she died a lady and which parent)
  3. Image reading (e.g., describing people's emotions in a picture and comparing life in the past and present)
  4. All above types of activities
  5. None

Please provide your reasons for this choice.

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

- b. Which of the activities were least effective for your involvement in classroom talk. Select one answer.
1. Topic discussions
  2. Mysteries Image reading
  3. All above types of activities
  4. None

Please provide your reasons for this choice.

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

- c. Which thinking skills have you practiced through critical thinking lessons?
1. Analysis
  2. Making inferences
  3. Evaluating others' views
  4. All these skills
  5. None of these skills

Part 2/ ATTITUDES TOWARDS CRITICAL THINKING

- a. I show respect for opposing opinions in thinking lessons.  
1. strongly agree 2. agree . 3. not sure 4. disagree 5. strongly disagree
- b. I consider alternative views before making a final decision.  
1. strongly agree 2. agree . 3. not sure 4. disagree 5. strongly disagree
- c. I can express my ideas in thinking activities, despite the language difficulties I have.  
1. strongly agree 2. agree . 3. not sure 4. disagree 5. strongly disagree
- d. Supporting my views with evidence makes my idea convincing.  
1. strongly agree 2. agree . 3. not sure 4. disagree 5. strongly disagree

Part 3

Rank the effects of critical thinking lessons on your participation, from 1 to 10. 1= very poor, 10= excellent

0 1 2 3 4 5 6 7 8 9 10

very poor

excellent

Additional comments

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

Part / 3EVALUATING THE WHOLE EXPERIENCE

- a. Choose one statement that reflects your opinion about your experience with the critical thinking lessons.
  - 1. I prefer critical thinking activities to textbook activities.
  - 2. I prefer textbook activities to critical thinking activities.
  - 3. I prefer to learn through both critical thinking activities and textbook activities.
  - 4. I do not like thinking activities and the teacher should look for another methodology.
  - 6. I prefer to learn through the textbook only.

Please write any comments, suggestions or highlight any unpleasant experience with these lessons.

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

Thanks for your cooperation

## Appendix F. 2: Final questionnaire for learners (Arabic version)

اسم الطالبة

### أولاً: تمارين التفكير

قدمنا لك في هذه الدراسة بعضاً من تمارين التفكير مثل النقاش الصفي، قصص الغموض، و قراءة الصور وكان الهدف منها تشجيع الطالبات على المشاركة في حوار صفي من خلال التفكير في احتمالات عدة و تحليل الآراء المختلفة ومنح الطالبة الثقة لتعبر عن رأيها بحرية بالاضافة لتقبل الآراء المعارضة.

1 أيا من هذه التمارين كان أكثر فعالية بالنسبة لك. الرجاء وضع دائرة حول اجابة واحد فقط.

1 مواضيع النقاش الصفي (مثل المسلسلات التركيبية، الأعمال الخيرية،)

2 قصص الغموض (she died a lady, which parent)

3 قراءة الصور (قراءة أوصاف الأشخاص من خلال الصورة و المقارنة بين الماضي والحاضر)

4 جميع ماسبق

5 لاشئ مما سبق

الرجاء ذكر الأسباب المتعلقة باختيارك للاجابة السابقة

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

ب. أيا من هذه الاستراتيجيات كان أقل فعالية بالنسبة لك. الرجاء وضع دائرة حول اجابة واحد فقط.

1 مواضيع النقاش الصفي

2 قصص الغموض

3 قراءة الصور

4 جميع ماسبق

5 لاشئ مما سبق

الرجاء ذكر الأسباب المتعلقة باختيارك للاجابة السابقة

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

ج. ماهي مهارات التفكير التي اكتسبتها أو تمكنتي من ممارستها أو تطويرها

1. القدرة على تحليل الأدلة

2. القدرة على الاستنتاج

3. القدرة على تقييم الآراء

4. جميع ماسبق

تعليق .....>.....  
.....

### ثانياً: الاستعداد للتفكير النقدي

أرجو اختيار **إجابة واحدة** لكل جملة من الجمل الآتية بوضع **دائرة** على الإجابة المناسبة بناء على مشاركتك في حصص التفكير النقدي.

(أ). أظهر الاحترام للآراء التي تختلف مع رأيي عند أداء تمارين مهارات التفكير.

1. أوافق بشده 2. أوافق 3. غير متأكد 4. لاأوافق 5. لاأوافق بشده

تعليقات .....  
.....

(ب) قبل أن أكون رأيي حول موضوع ما آخذ بالاعتبار الآراء المختلفة.

1. أوافق بشده 2. أوافق 3. غير متأكد 4. لاأوافق 5. لاأوافق بشده

تعليقات اضافية .....  
.....

(ج). أفضل المشاركة في تمارين مهارات التفكير والتعبير عن آرائي بالرغم من الصعوبات اللغوية التي أواجهها.

1. أوافق بشده 2. أوافق 3. غير متأكد 4. لاأوافق 5. لاأوافق بشده

تعليقات اضافية

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

د. ان دعم ارائي بأدلة يجعل ارائي أكثر اقناعا.

1. أوافق بشده 2. أوافق 3. غير متأكده 4. لا أوافق 5. لا أوافق بشده

تعليقات اضافية

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

ثالثا: تقييم تجربتك مع التفكير النقدي

ا. ماهو تقييمك لحصص التفكير النقدي من حيث مساعدتك على المشاركة في حوار هادف مع زميلاتك. الرجاء اختيار درجة واحدة فقط من 1 الى 10، علما بأن 1= غير مفيدة و 10= مفيدة جدا

10 9 8 7 6 5 4 3 2 1

اضافة

تعليق.....  
.....

ب اختاري جملة واحده فقط تعبر عن رأيك حول ماقدم لك من حصص التفكير النقدي

1. افضل اداء تمارين مهارات التفكير النقدي على تمارين الكتاب

2. افضل اداء تمارين الكتاب على اداء تمارين التفكير النقدي

3. افضل اداء تمارين الكتاب وتمارين مهارات التفكير معا فهما مكملان لبعضهما

4. لافضل ابدا أداء تمارين التفكير النقدي وافضل ان تبحث المعلمة عن نوعية اخرى من التمارين

5. أفضل الاكتفاء بالكتاب فقط

ح الرجاء كتابة اية تعليقات او اقتراحات اضافية او ذكر اية صعوبات واجهتها أثناء مشاركتك في هذه التجربة

شكرا على تعاونك



## Appendix G: Observation checklists

### AppendixG.1: Coding categories by Brown and Kennedy (2011)

Types of teacher's utterances

Teacher builds on students' ideas			Teacher makes conversational links		
Teacher gives information	Teacher makes a request based on his idea	Teacher builds on child's ideas	Teacher passes a child's input to another <b>child</b>	Teacher passes a child's input to class	Teacher links children's ideas

Types of children utterances

child makes new initiative to teacher and/or children	child builds on teacher's idea	child builds on their own idea with the teacher	child builds on their own idea with another child	child builds on another child's idea	child in negative or off-task conversation
-------------------------------------------------------	--------------------------------	-------------------------------------------------	---------------------------------------------------	--------------------------------------	--------------------------------------------

**Appendix G.2 Brown and Kennedy's (2011) modified version**

<b>T initiates talk</b>			<b>T builds on students' ideas</b>	<b>T requests student to build on student's idea (probing)</b>	<b>T makes conversational links</b>		
T gives information/idea to initiate talk	T asks initiative question	T makes requests based on T's idea	e.g. 1. T expresses agreement/disagreement with a reason 2. T gives example 3. T tells a joke 4. T presents her idea		Teacher passes a student's input to another student	Teacher passes a student's input to class	Teacher links student's ideas

\*T stands for Teacher      \*S stands for Student

<b>Student (S)</b>	<b>S initiating idea to T/S</b>	<b>S building on T ideas</b>	<b>S building on own idea with the T</b>	<b>Stating idea to T initiative Question</b>	<b>Building on another S idea</b>	<b>Building on own idea with the class</b>	<b>Presenting an idea based on S Qs</b>

## Appendix H: CA conventions

### Transcription Conventions (Atkinson and Heritage 1984)

[[ ]]	Simultaneous utterances – (beginning [[ ] and ( end]])
[ ]	Overlapping utterances – (beginning [ ] and (end])
=	Contiguous utterances
(0.4)	Represents the tenths of a second between utterances
(.)	Represents a micro-pause (1 tenth of a second or less)
:	Sound extension of a word (more colons demonstrate longer stretches)
.	Fall in tone (not necessarily the end of a sentence)
,	Continuing intonation (not necessarily between clauses)
-	An abrupt stop in articulation
?	Rising inflection (not necessarily a question)
—	Underline words indicate emphasis
↑↓	Rising or falling intonation (after an utterance)
° °	Surrounds talk that is quieter
> <	Surrounds talk that is faster
< >	Surrounds talk that is slower
(( ))	Analyst's notes
(?)	Intelligible speech
LOUD	increased volume is written in capitals
\$ \$	Smile voice'
(what)	Transcriber unsure
<b>[BOLD]</b>	Arabic words are written in <b>BOLD</b> capitals between brackets

## Appendix I: Activities

### Appendix I. A Activities in phase 1

#### 1 Topic Discussion 1

Discuss the following:

**'If you don't like something, change it. Don't complain'**

## 2. Topic Discussion 2

**Do you like watching Turkish series? Why/ Why not?**



### 3. Mystery 1 'Married to a murderer'

Task Instructions:

Listen to the story and answer the 2 questions on the task sheet.

Why did Danielle Marry Clay

Who killed Clay?

Each group should write their answer on the answer sheet

#### 4. Mystery 2 'Which parent?'

Coralie is a French teenager. Her parents used to quarrel a lot. Now they are divorced and Coralie has to choose either to live with her father or her mother.

Based on the statements given below, decide in your group whether Coralie is going to stay with her father, her mother or neither and why. Support your answers with reasons.

##### **Statements written on slip:**

Her father lives close to the school.

Her mother has a criminal record.

Her father does night shift.

Her father has a lot of debts.

Her mother is often grumpy and tired.

Her father is remarried and has a small baby.

Coralie loves the bedroom that she has at her mum's home.

Coralie has a little brother who lives with her mum

Coralie's father gives her all that she wants

Her mother always helps Coralie with her homework.

Coralie was very upset when her parents split up.

Her father insists that Coralie returns home at nine o'clock at night

Her mother has a good job.

Her mother will get married soon.

Coralie goes to her grandmum at lunch time.

## 5. Image reading 1



Describe the feelings of the people in the picture.

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

What has just happened?

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

What will happen next?

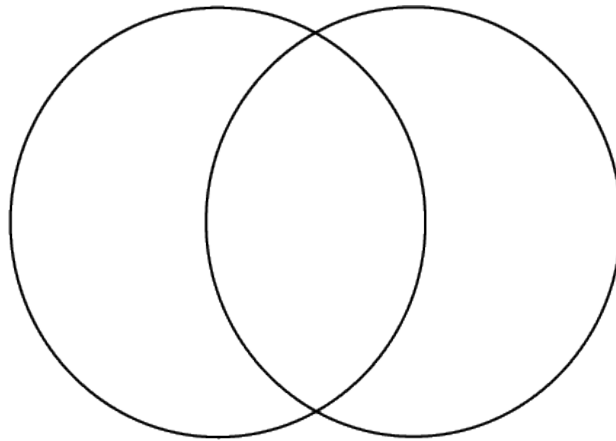
.....  
.....



## 6. Image reading 2

You have pictures of Paris and Dubai which are popular tourist destinations.

In groups, look at the pictures and discuss the *similarities* and *differences* between these two tourist cities, using Venn diagram. You **don't** have to write complete sentences. You can just write phrases or words.



Venn diagram

**Decide in your group whether you prefer to visit Paris or Dubai this summer? Explain why?**

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

DUBAI

Dubai Mall



Snow Park in Dubai



PARIS



lakii.com



lakii.com



Appendix I.B Activities in Phase 2

7. Topic Discussion 3 'Philanthropy'

Discuss why philanthropy is important for the society

Bill Gates



Opeta Winfrey



## **8. Topic discussion 4 'jobs'**

What is the best job for women in Saudi?

## 9. Mystery 3

### *She Died a Lady*

---

Rita is 38, "a mature beauty with a weakness for younger men". Her gentle husband, Alec, more than 20 years older, seems more interested in radio broadcasts of World War II news than in his wife's notorious affair with Barry, a handsome young American actor.

Rita and Barry decide to run away together but a radio performance of Romeo and Juliet apparently turns their minds to a romantic double suicide. One rainy night, Rita and Barry climbed a cliff overlooking the ocean, and none return. Their bodies are found, though, it is found that both of them had been shot through the heart.

#### Questions

- 1 .Why did Rita fell in love with Barry?
2. Why did Rita and Barry decide to commit suicide instead of running away?
3. Who killed Rita and Barry?



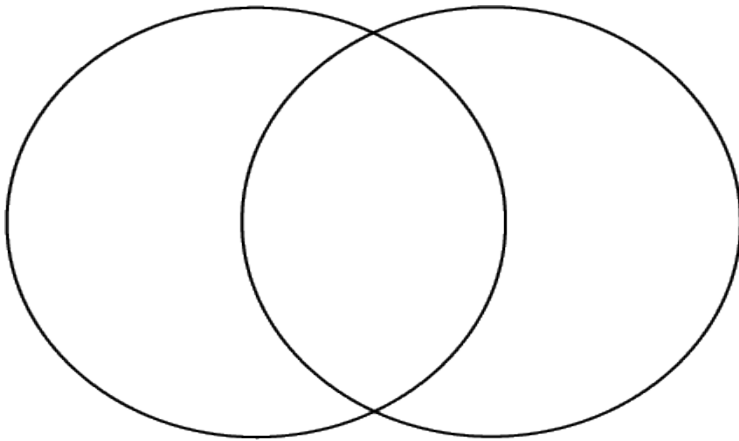
## 10. Mystery 4

Read the statements below, put them in a logical order. Decide if Maryam is going to run away from her husband.

1. Maryam is a 35 year old woman. She is married and has got 5 children.
2. Maryam husband is abusive. He beats her every day and keeps saying "I hate you! My mother forced me to marry you".
3. Maryam works as a house maid in the morning while her husband is in bed. The money her husband gains is not enough for the family.
4. Maryam works for a nice old lady who lives in her luxurious villa. The lady is pleased with Maryam.
5. Though Maryam's husband treats her badly, he is nice to his children. He never beats them.
6. Maryam likes the idea of running away from her husband, but she still fears her husband as she knows that he is a brutal man.
7. Maryam's husband is a taxi driver. He works at nights and returns home early morning.
8. One day, the old lady noticed some scars on Maryam's arms. Maryam told the lady for the first time about her sufferings with her husband. The old lady felt sorry for Maryam and offered her help. She suggested Maryam to run away with her children from the husband and they can stay with her in her villa.
9. The husband does not know that his wife works as a house maid in the morning because he wakes up late in the afternoon.

### 11. Image Reading 3

**Task:** compare and contrast life in the past and present, using Venn diagram.





**I12. Image Reading 4 'Beauty'**

**Task sheet**

1. Rank beauty and explain your answers.

Ranking	Reasons
1.	
2.	
3.	

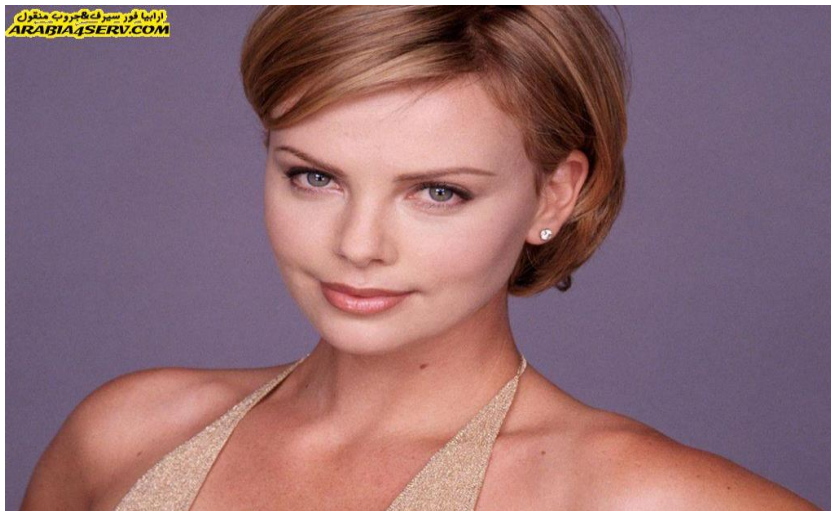
In your group, decide on a definition of the word “beauty”.

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

## Arabian beauty



## 2. EUROPEAN BEAUTY



### 3. INDIAN BEAUTY



## Appendix J: Example of a transcribed lesson

### Lesson 1 transcript from Topic discussion 2 'Turkish series'

- 534 T: And ↑why do you like ↓them at some point you  
535 said [it was-]  
536 Ha: [The story] is urr:-  
537 S?: Very-  
538 S?: Very  
539 Ha: Very interesting and  
540 S?: Complex  
541 T: So they make the sto:ry interesting by their:  
542 (.) (i:nterests?)  
543 Lu: Miss Miss  
  
544 T: Okay  
  
545 Lu: Miss <you know after this urr series (.)  
546 thousand baby girl: (.) their name Lamese >  
547 Ss: Wow  
548 Wi: Yes and also the boys  
549 Lu: Yes this number Miss they bring it in the  
  
550 news  
  
551 Wi: Also-  
552 Lu: Thousand baby girl named Lamese  
553 Wi: Also Yahya also Yahya  
554 S?: (?)  
555 S?: I think Turkish series  
556 T: Okay: that-  
557 S?: (?)  
558 Wi: My cousin my cousin urr born boy name is  
559 Yahya ((Talk continues))

**Appendix K: Checklists for measuring propositional complexity in  
the pre- and post-tests**

Types of ideas	stating ideas to task questions	stating ideas to initiatory questions	building on others	building on own	initiating ideas	initiating questions
Frequency Of ideas						

## Appendix L: Activities for the pre- and post-tests

### Activity 1

#### Open Discussion

#### Generalised anxiety disorder:

#### What is generalised anxiety disorder?

If you have generalised anxiety disorder (GAD) you have a lot of anxiety (feeling fearful, worried and tense) on most days. Your anxiety tends to be about various stresses at home or work, often about quite minor things. Sometimes you do not know why you are anxious.

Source: <http://www.patient.co.uk/health/Anxiety-Generalised-Anxiety-Disorder.htm>

#### Task instructions:

1) You have one minute to think about ways of treating Generalised Anxiety. Then, discuss and compare your answers with your peers.

Task slips:

**Talking with a friend:** Discuss your worries and problems with a friend and seek her advice.

Anxiety management courses: A person can join Anxiety management courses. The courses may include: learning how to relax, problem solving skills, coping strategies, and group

**Using anti-anxiety medicines:** Consult a doctor to get medicines for anxiety such as antidepressant medicines.

**ALL what you need** is to Stop thinking about things that worry you.

Activity 2: Myster 'Is Paul going to smoke?'

**Task instructions:**

1. You have seven slips. Read through the different pieces of information.
2. After reading the information, answer this question: **is Paul going to smoke?**

Please discuss your answers with your peers and support your answer with reasons based on clues from the information given.

Paul's parents do not smoke.

Cigarettes are very expensive.

Paul's uncle died of lung cancer.

Paul's parents give him £5 pocket money per week.



Mark, Paul's best friend, likes smoking.

Last week, Mark gave Paul a cigarette and he smoked it.

Paul is 15 years old.

## Appendix M: Examples of transcribed talk in the pre- and post-tests

### AppendixM.1: Pre-test (group 1)

Sw: [MI] what do you think about ...the best way of treating anxiety.

MI: ah..ok my opinion I think there is many way to get over your problems and to avoid trouble things such as headaches or hesitating in your decision for example you can have a long breath it will help you in many ways. What do you think Mr

Mr: When someone has a..a... many problems in their family it affect in their personatly and

Sw: What about you Bs?

Bs: You know when you feel like that try change your place and go to the beach and try ..listen to music and go to your friend change your mood

MI: But I think you should face the problem to solve it

Mr: yes I'm with you

Bs: yah I think but you know this feeling

MI yes you need to relax frist but

Bs this this feeling not

MI you shouldn't face it [MEANS]

## Appendix M.2: Post-test (group 1)

MI ok what about the best solution?

Bs: In my opinion I think when I talk with my friend this can make me feel better and  
may be she can give me solution you know

MI : Yes I agree with you because when you are talking with your friend your friend  
understand specially your best friend understand you and understand the way of  
your thinking and what is really you feel so she can give you the best advice but also  
I agree with the first one which is join the activity or courses to relax or problem  
solving skills it can help you in your anxiety how about Mr

Mr In my opinion I chose talking with a friend like what Bs say because when you  
discuss with your friends specially when your friend is in the same level of  
thinking she give you more advice and solution and listen to your um to your

Bs: feeling

Mr feeling yes

Bs or problem yah and you [asking Sw]

## Appendix N: Teacher's first interview

(I: the researcher; A: Amina, the teacher)

I: Okay I would like just to remind you of your ethical rights. Your participation is optional in this study and I will interview..have an interview with you now and you have the right to skip any question that you don't like o let's start

Would you please tell me about your educational background and teaching experience?

A: Okay my..my name is Amina I have been my I have done my masters in English English language and literature and have about twenty five years nearly I spent in Saudi Arabia I first taught in Riyadh and then I've taught in Jeddah for the past eleven years I have been at X institute for the past five years during these five years I've worked at the institute where we have foundation level students and I teach English and all the different skills of English that is reading writing speaking listening as well as study skills um most of the students who come here they come from Arabic schools and they need a lot of attention in these in the areas of both speaking and writing because they the schools that are prevalent in Jeddah or in Saudi Arabia in general they have different levels by that I mean that some of them are private schools and they can give intensified English programmes whereas there are other schools where English is very preliminary so the students have taken six years of English in reality but they know very little and the skills have to be reinforced all the time the of course because the students are going on to master their majors which are of various difficulties like architecture they need English which is not just basic but which has to be really advanced because they have to deal with terminology later in their life ah the TOEFL is a major problem for them that's why we try to see their achievement levels at least to reach up to five hundred in institutional TOEFL that they take so all the time we are striving to make the students as proficient as possible in all the skills of English and over the years that's what has been like (inaudible) X university students should be able to read write and speak English up to an international standards.

I: And is there any certain approach teaching approach you prefer to follow while teaching especially when you teach speaking as you mentioned.

- A: Okay yeah usually I'm when you speak of approach what do you want to tell me about what kind of
- I: Well for example we have different examples of teaching approaches like audiolingual communicative approach
- A: Yah okay most of the time we try to follow the communicative approach because it brings results instantly and also it makes students feel comfortable because normally different or like audiolingual approach it's not so easy to administer as a communicative approaches and the communicative approach they can use language in all walks of their lives it's not just related to a classroom situation they can actually see themselves improving so it motivates them more if you use the communicative approach
- I: Are you familiar with the critical thinking approach?
- A: Yes I'm because I mean in the past 2 years especially we have a lot of emphasis on the critical thinking approach and both in the foundation year programme for reading as well as in college I'm teaching a basic level course in college we have been using the critical thinking approach and the North Star books that are prescribed actually promotes this approach.
- I: Would you please explain in what way they promote critical thinking the textbook the North Star
- A: Okay basically the way the book structured the question answer strategy their way of approaching reading it's it's as if they are not teaching students reading but they are teaching them how to think what is there. For instance they have you have a CD the students can listen to this CD they don't have to read read read as they would in any normal in any other approach they can listen to it but the the answers are based on what they think about certain questions that are there so it it's all (inaudible) to what they stand a lot of questions have no right or wrong answers so it's the critical thinking that has been promoted you know so they can come up with it for purposes of advertising why do think this advertisement works better in America than it would work in say Japan or something.
- I: You have mentioned that you have been teaching listening and speaking to Foundation two students would you please just give me some idea about how you teach this course.

A: Okay I've taught this not now a few years back two or three years back we used to have a book called interaction and they have used to make the students listen to an excerpt they had to listen for the main idea and they had to listen the gist task they did the gist task and then they went on to the what look for the main idea and such but the general idea however the approach was quiet straight forward and it was more to promote note taking. I mean we the they were required to either take note or complete closed text you know where they had just to listen for information it was more for information than for critical thinking they were hardly asked questions on critical thinking whereas now I see when I'm teaching listening and speaking in North Star it's all based on critical thinking

I: Do you think we need to teach critical thinking in foreign language speaking classroom?

A: We definitely so because each person as an individual and every individual has their own opinion even if they don't have the language to support it sometime a student might not be able to express themselves completely yet the cr- if you question them critically they would come up with certain observations which can help them to learn language and overcome their fears of the language because normally you are fearful to speak fearful to make mistakes but when it has to do with your own way of thinking or of expressing opinion then you forget that you don't know the language very well and you can still come up with your answers you know so it also and sometimes the answers of other students can help students who don't like to speak very much to say something too. So it and it more like can be a group activity because in their minds they form a little group that whether they agree or they don't agree and this helps the learners who are slow, who are lazy to catch up because it's not always necessarily in group for everyone to speak, but yet they can express themselves you know they feel apart of a group

I: So what critical thinking skills you try to emphasise among learners are there any specific critical thinking skills

A: Okay specific critical thinking skills is that I would...for instance I'm I feel inferences very important prediction is prediction is necessary also emphasising agreement and disagreement would you call that under critical thinking I mean those are the skills that you need to be clear about that how how do you infer how do you

agree with the person how do you disagree with the person and what are the signposting you know signposting in the language it's very important to when you are speaking because sometimes a person wants to be against the topic , but they use the word and while speaking instead of but or however or not withstanding that so I feel all the transitions I generally emphasise on the using transitions

I: What strategies or activities you think might develop learners' argumentative skills in speaking

A: You mean like games and all that?

I: Yah the usual activities that you present to your class or your own strategies

A: May be debate

I: Yah you can mention an example

A: For instances a role play you can have a debate all these really emphasise the critical thinking abilities and also something I wanted to do and I haven't done really a lot is webquest webquest really help you to promote critical thinking abilities.

((Talk continues))

I: Foundation two students are doing their last course in the language programme now so do you think they have reached a satisfactory level in term of practicing their argumentative skills

A: Um I I wouldn't say that I would just say they have a lot of potential to do that this is the first time as far as I know the students are doing their presentation skills course and er it's a speaking course but the approach is different they had speaking before but they didn't have argument- argumentation and critical thinking put in that course you know

I: You mean in Foundation one

A: In any they used to have bridge and gateway and you know different levels and different placement but however it has changed they have never had critical thinking for speaking they had it for reading yes but never for speaking so it's a it's a big challenge for them and of course they still need a lot of work on it

I: Yeah

A: they have to work a lot and I think that the institute director feels this because she has given them extra classes for speaking apart from the classes that dealing with me on presentation skills

I: Yeah are there any barriers that you think might hinder the development of learners' argumentative skills?

A: Basically the barriers is vocabulary they have their vocabulary skills are not up to the mark according to me where they can actually express themselves because they can they still at a very simple basic rudimentary level of speech. So they cannot they don't have the vocabulary to pack it up most of their vocabulary is passive vocab not active vocab so for argumentation you need an active vocab the right word at the right time and this is this adaptability hopefully will promote by the end of this semester

I: What might encourage learners's practice of argumentative skills in the classroom what might facilitate

A: Okay According to me if they are given real life situations it will help them to feel exactly what they want to say and they will be able to get the vocab and the thoughts together and to communicate better

I: What changes you are planning to make this course during this course

A: In the students you mean or in the course?

I: In the students?

A: Well in this course because it's like the first time what we have done is that we are using not only listening and speaking books where they learn certain kinds of vocabulary or you know the usual methodology that's used but we have also introduced other presentation skills where students learn how to present and control the intonations and eye contact and present power point learning skills on how to present power point and not look at what they are really presenting so we want to promote the right I want to promote the right body language, the correct intonation and the delivery also the method of delivery



- I: What are your expectations of learners' development by the end of this course?
- A: By the end of this course at least I feel they will be able to give a simple presentation with the right kind of content as well as you know bring about an awareness that presentation skills just don't mean you know making a power point and giving it it means that you are able to communicate properly effectively they are able to communicate effectively even if it's as simple as an interview you know if they go for an interview they have to be able to communicate what they want
- I: And what about
- A: Effective communication that's what I simple effective communication that's what I think
- I: And what about your expectations about their use of argumentation
- A: Well I'm sure that they will be able to argue much better. I feel that at the moment they are not very focused. They may present their argument in a normal course of event if they want to shorten the day or an excuse from the class or something but they don't know how to present it They don't know how to focus on the most important point but I feel at the end of this course at least I will be able to show them that this is how they should distribute their thoughts how they should bring their thoughts together collate them to be able to get effective communication
- I: Do you find it helpful to ask students to assess their own learning?
- A: Yes I'm I'm very (inaudible) because I feel that once they start assessing their own learning self-reflection helps them to improve upon the weak areas because they are adults learners..they are not really little children so being an adult learner they don't they don't like to be told by another person it hurts their self-esteem this way they can by self-correction they can the self-esteem is preserved more and the improvement shows much more
- I: How do you normally let students know about their progress and evaluation
- A: Well they have normally I do at the end of every presentation or quiz or whatever I tell them how they did I usually have something I call anecdote diary where I make special comments on their strengths and their weaknesses I also tell them how would they improve you know manners like between previous time and the time now I also

give them tell them in certain areas how they can improve much more and inform them because unless I do that they will think they are ok you know and they will not do that and of course grades we evaluate them with the grades we have constant quizzes and tests that assessment goes on but above all that I feel they are it's more important they get assessment from me periodically to know how they are progressing because that's what they are looking for

I: Okay thank you very much

A: You are most welcome

## **Appendix O: Examples of introductory sessions on critical thinking for the teacher**

Developing high quality talk requires learners to demonstrate ability for:

1. Evaluating ideas
2. Extending turns
3. Identifying evidence
4. Using markers appropriately

The teacher plays the role of a facilitator where she gives the floor of talk to learners and extend thinking time after her questions

To facilitate such talk, modelling is needed prior to the start of the project.

e.g., presenting examples, from authentic materials, where thinking skills are practiced

Examples of critical thinking strategies

Mind maps

2. Mysteries
3. Diamon ranking
4. Philosophy for children

(Lin and Mackay, 2004)

## Appendix P: Example of introductory sessions about critical thinking for learners

### Introducing group talk/ class talk

When you discuss an activity in a small group or with the class, you should:

State your opinion clearly with supporting reasons

Listen carefully to your friends and give them a chance to talk

Tell your friends if you agree or disagree with them and support your answers with reasons

Talk in English

What words and phrases do you need?

### Agreement

I agree with you

You are absolutely right                    BECAUSE .....

Yeah, that's right

### Disagreement

I disagree with you.

I don't think so.                                BECAUSE.....

I have a different opinion.

## Appendix Q: Intra-rater check for the types and frequencies of class talk (examples)

### Explanation of abbreviations and symbols used in the tables

Coding	Explanation
C1 + C2+	I coded an utterance identically at two points of time.
C1 * C2 +	I coded an utterance differently in the second time.
C1 - C2 +	I identified and coded an utterance, which was missed out in the first coding.
C1 + C2-	I excluded an utterance that was coded in the first time from the coding in the second time.

Intra-reliability check of lessons					
Lesson: Discussion 1 'Change'					
No	Line	Coding 1	Coding 2	Agreement	Notes
1.	148	*	+	no	
2.	156-159	+	+	yes	
3.	174	+	+	yes	
4.	176	+	+	yes	
5.	190	+	+	yes	
6.	205	+	+	yes	
7.	210	+	+	yes	
8.	210- 211	+	+	yes	
9.	225	+	+	yes	
10.	227-229	+	+	yes	
11.	244-248	*	+	no	

## Appendix R: Intra-rater check of the pre- and post-tests (examples)

### Reliability check for coding the levels of thinking

Pre-test coding of group 1 (levels of thinking)				
No	Line	Coding 1	Coding 2	Agreement
1.	3	+	+	Yes
2.	4	+	+	Yes
3.	5	*	+	no*
4.	7-8	+	+	Yes
5.	9	+	+	Yes
6.	12	+	+	Yes
7.	16	+	+	Yes
8.	25	+	+	Yes
9.	26	*	+	no*
10.	27	+	+	Yes
11.	29	*	+	no*

### Reliability of coding the types of utterance

Pre-test coding of group 2 (types of utterances)				
No	Line	Coding 1	Coding 2	Agreement
1.	2-4	+	+	Yes
2.	9	-	+	no*
3.	18-19	+	+	Yes
4.	20-25	+	+	Yes
5.	26-27	+	+	Yes
6.	30	+	+	Yes
7.	34	+	+	Yes
8.	35-36	+	+	Yes
9.	37	+	+	Yes
10.	42	+	+	Yes
11.	61	-	+	no*
12.	62-63	+	+	Yes
13.	65-66	+	+	Yes
14.	79	-	+	no*

## Appendix S: Inter-rater reliability check of the types and frequencies of class talk (example)

Explanation of abbreviations and symbols used in the tables for the inter-rater coding

Adopted from Afitska (2008)

Coding	Explanation
R1 + R2+	Both researchers coded the data identically
R1 + R2 */ + Or R1 */ + R2 +	The researchers coded the utterance differently, but after discussion they agree on the coding
R1 +/- R2 +/-	The researchers included the utterance in the coding, but they coded it differently and did not agree on the coding.
R1 -/+ R2 + Or R1 + R2-/+	One of the researchers identified the utterance and coded it, while the other researcher missed out this utterance. After discussion, the researcher who missed out the utterance coded it identically to the other researcher.
R1 -/. R2+/.  Or  R1 +/- R2 -/.	One of the researchers identified an utterance and coded it, while the other researcher did not. After discussion they could not agree on the code.
R1 -/ R2+/- Or R1 +/- R2 -/-	One of the researchers identified and coded an utterance, while the other researcher did not. However, after discussion, both agreed that the data should not be coded
R1 - R2 */- OR R1*/- R2-	One of the researcher coded an utterance, while the other researcher thought that the utterance should not be coded. After discussion, they both agreed that the utterance should be excluded.

Lesson	Line	Utterance	R1 coding	R2 coding	Agreement	Notes
Discussion 3 'Philanthropy'						
1	131	What did you think of that	+	+	yes	
2	140	What do you think of people?	+	+	yes	
3	141	Why would somebody give 1 million?	+/-	+/-	yes	The two researchers identified this utterance; however, after examining the question it was found that it was a paraphrasing of the question in line 140. Therefore, it was excluded from coding.
4	156	What are other reasons	+	+	yes	
5	156-157	Why do people give money	-/-	+/-	yes	This utterance was found to be a paraphrasing of that in line 156; therefore it was excluded.
6	159	It could be time	+	+	yes	



**Appendix T: Inter-rater reliability check for the pre- and post-tests  
(examples)**

**Reliability check for coding the levels of thinking**

<b>Pre-test coding of group 1 (levels of thinking)</b>				
No	Line	Researcher 1	Researcher 2	Agreement
1.	3	+	+	Yes
2.	4	*/+	+	Yes
3.	5	*/+	+	Yes
4.	8	+	+	Yes
5.	9	+	*/+	Yes
6.	10	*/+	+	Yes
7.	12	+	*/+	Yes
8.	15-16	+	+	Yes
9.	17	+/-	*/-	Yes

**Reliability check for the types of utterance**

<b>Pre-test coding of group 1 (types of utterances)</b>				
No	Line	Researcher 1	Researcher 2	Agreement
1.	2-4	+	+	Yes
2.	5	+/.	+/.	no*
3.	7-8	+	+	Yes
4.	9	+	+	Yes
5.	10	+	*/+	Yes
6.	12	+	*/+	Yes
7.	15-16	+	+	Yes
8.	21-26	+	+	Yes
9.	27	+	+	Yes

## **Appendix U: Approval letter from the site of the study**

**REMOVED FOR ETHICAL CONSIDERATIONS**

## Appendix V: Learners' consent form

### Appendix V.1: consent form (English version)

The role of critical thinking in involving learners in class talk

We are pleased to invite you to participate in this study. Before you make a decision, we would like to give you some important information about what this study will include and why we have decided to conduct it.

Please take your time to read the following information carefully and discuss it with others if you want. Do not hesitate to contact us when you have any questions. Contact details are on the last page of the ethical form.

The study aims at increasing learner's consciousness about learning and participation in critical thinking discussions, through applying critical thinking skills. These skills require the learner to engage in meaningful class discussions through revealing her opinions freely, making decisions, providing convincing reasons and examining opposing views.

The study is under the supervision of Newcastle University, UK. Dr Steve Walsh and Dr Sue Robson are the academic supervisors.

The study has been planned to complement the speaking textbook. 12 critical thinking lessons will be introduced over 12 weeks. The activities will be related to the textbook, learners' lives and the course objectives. The researcher will not be involved in teaching. She will sit at the back of the classroom to record her observations.

Your participation is optional and you are free to withdraw anytime you like without giving reasons or being involved in financial commitments or any other commitments. Also, this will not affect your marks, nor will it affect your relationship with your university.

If you accept to participate, you will be asked to complete questionnaires (20 minutes length) which inquire about your background and needs for improving your speaking skills. The researcher would like to interview some learners over 3 periods throughout the conduction of the study, either individually or in groups, to get more information about their experience with critical thinking. Final questionnaires

All information you provide will be protected and your name will not appear in the results, nor in the published study.

The researcher will audio-record learners' talk in class and during the interviews. Please note that learners' names will not appear in the study. The aim of the audio-recording is to enable the researcher to collect more data and transcribe them later into written texts.

The researcher and her academic supervisors at Newcastle University are the only people who will listen to these recordings, and the researcher will destroy all recordings after obtaining her degree. You have the right to withdraw anytime throughout the study and this will not affect your marks or your relationship with the university.

If you feel that you need help during the study, you can contact the researcher. You will find below contact information. The contacts are able to help you or refer you to the right person for help.

To participate in this study, please sign below, so we can start together a journey which I hope to be interesting for you.

Student's signature

I have read and understood all information above and received satisfactory answers to all my queries. I sign to participate in this study.

Name:

date:

signature:

Thank you for your support

## AppendixV.2: Consent form (Arabic version)

### صحيفة المشاركة

عزيزتي الطالبة

يسرنا دعوتك للمشاركة في بحث حول استخدام التفكير النقدي في مادة المحادثة باللغة الانجليزية. الهدف من البحث هو زيادة وعي الطالبة بنقاط الضعف والقوة لديها أثناء تعلم مهارة المحادثة ومساعدتها على المشاركة في حوار صفي مبني على التفكير النقدي ، من خلال تقديم تمارين تتطلب استخدام بعض المهارات العقلية مثل تحليل المشكلة , تقديم الأدلة وتقييم آراء الآخرين و الآراء المعارضة.

الدراسة تحت اشراف جامعة نيوكاسل في بريطانيا , وسيتولى الاشراف على البحث الدكتور ستيف ولش والدكتور سو روبسون. كما تم الحصول على موافقة جامعة\*\* لتطبيق هذا البحث مع الطالبات بعد التأكد بأن البحث لن يكون فيه أي ضرر دراسي أو شخصي عليهن.

هذه الدراسة ستكون جزء من مادة الاستماع والتحدث, ستتبع الطالبات الكتاب المقرر كما جرت العادة, وستخصص ساعة واحدة أسبوعيا للنقاش لمدة 12 أسبوعا. ستسمح هذه الساعة للطالبة بممارسة المحادثة والتعبير عن رأيها حول مواضيع اجتماعية وماتم دراسته من مواضيع. لن تتدخل الباحثة في التدريس حيث ستقوم أستاذة المادة بالتدريس أما الباحثة ستكتفي بالجلوس في الصف لمشاهدة تفاعل الطالبات مع طريقة التدريس المقدمة لهن.

اذا وافقتي على المشاركة فسيطلب منك تعبئة استبيان قبل بداية البرنامج لمعرفة المشاكل التي قد تواجهها الطالبة أثناء تعلم المحادثة والتعرف على احتياجاتها. مدة الاجابة على الاستبيان 20 دقيقة. كما تأمل الباحثة بأن تتطوع بعض الطالبات للاشتراك في مقابلة تجريها الباحثة معهن, أما مقابلات فردية أو جماعية . الهدف من المقابلة هو تسليط الضوء على المزيد من احتياجات الطالبة لتعلم المحادثة واعطائها الفرصة للتحدث عن تجربتها في النقاش الصفي المبني على التفكير النقدي . سيكون هناك 3 مقابلات على فترات متباعدة وستحدد الطالبة الوقت المناسب لها وستكون المقابلة في داخل الجامعة. ستجيب الطالبات على استبيان أخير في نهاية الفصل الدراسي حيث ستقيم تجربتها مع برنامج المحادثة المقدم لها, وسيستغرق الاستبيان 20 دقيقة تقريبا. سيكون الاستبيان والمقابلات باللغة العربية ليسهل على الطالبة التعبير عن رأيها.

لجمع بيانات البحث بدقة ستقوم الباحثة بتسجيل النقاش الصفي والمقابلات صوتيا فقط وذلك حتى تتمكن الباحثة من تحويل البيانات الى نص مكتوب ولن يتم نشر أسماء الطالبات في البحث وستعامل التسجيلات بغاية السرية ولن يطلع عليها سوى الباحثة ومشرفيها في جامعة نيوكاسل, وستسمح التسجيلات بعد انتهاء الباحثة من كتابة البحث.

ان مشاركتك في البحث اختيارية, كما يمكنك الانسحاب من البحث في أي وقت دون أن يؤثر ذلك على دراستك أو علاقتك بالجامعة.

اذا احتجت الى مساعدة, يمكنك الاتصال بالباحثة على البريد الالكتروني الموجود في الأسفل. وفي حال وجود أي استفسار يمكنك مراسلة المشرفين على البحث في جامعة نيوكاسل على البريد الالكتروني الموجود بالاسفل.

للمشاركة في الدراسة الرجاء كتابة الاسم و التوقيع في الأسفل

قرأت المعلومات الموجودة بالأعلى وتلقيت اجابات مرضية على تساؤلاتي. أوقع على رغبتني في المشاركة في البحث.

الاسم

التوقيع

معلومات الاتصال

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sue.robson@ncl.ac.uk	المشرفة الثانية د. سو روبسون

## Appendix W: Teacher's consent form

### The role of critical thinking in involving learners in class talk

Dear Teacher,

We are pleased to invite you to participate in this study. Before you make a decision, we would like to give you some important information about what this study will include and why we have decided to conduct it.

The study aims at increasing learner's consciousness about their learning and involving them in critical thinking discussions through applying the critical thinking approach. These skills require learners to participate in meaningful class discussions through revealing their opinions freely, making decisions, providing convincing reasons and examining opposing views.

This study is complementary to learners' listening and speaking textbook. It will put more emphasis on whole class critical thinking discussions. In this study, learners will be trained to use their critical thinking skills in speaking classroom. Their classroom performance of different tasks will be observed by the researcher once a week.

The researcher will introduce you to some critical thinking strategies and techniques and you will choose those that suit your own beliefs and context. The researcher will not intervene with your teaching. You will be interviewed by the researcher throughout the semester regarding your views of the critical thinking approach. Also, classroom interaction will be audio recorded. All data will be destroyed after the study is published. Only the researcher and her supervisors will listen to the recordings.

Your participation is optional and your decision of whether to participate or not will not affect your relationship with your university. If you accept to participate, your participation will be anonymous.

Please sign below if you accept to participate.

Name:

Date: