

**Challenging Perceptions about Critical Thinking: Researching the Nature
and Development of Criticality through the Eyes of Algerian Doctoral
Students in the UK**

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Dedication

This work is dedicated to my loving parents for their frequent encouragement and support throughout my PhD journey.

A special dedication to my brothers, sisters-in-law, my adorable son Juba Oussaid, my beloved nephews Yani and Achraf and my dearest nieces Fatima and Lilia.

I also dedicate this work to my husband who supported and motivated me during difficult times of my PhD.

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Abstract

This research explores the perceptions of Algerian doctoral students in a UK university in relation to their understanding and development of critical thinking. Criticality is defined differently by different scholars (e.g. McPeck, 1981; Ennis, 1985; Lipman, 2003), and has been considered by some authors (e.g. Ramanathan and Kaplan, 1996; Atkinson, 1997) a Western practice. International students have also been stereotyped by some Western teachers as non-critical thinkers due to their culture, based on the behaviours they demonstrate in the classroom and assignments (Nisbah, 2012 and Fell and Lukianova, 2015). Despite the plethora of research investigating the conceptualisation of critical thinking and its position within non-Western and especially East Asian students, it is still crucial to explore its meaning from various perspectives in order to generate an inclusive definition. This study deals with the Algerian students' perspective of looking at criticality, a perspective which has not been extensively addressed in the literature. To carry out the study, I employed a qualitative research approach with a total of eleven participants. I conducted fourteen semi-structured interviews including some follow-up interviews to gather data, and I used thematic analysis to analyse them.

The findings reveal a more complex understanding of Algerian students' practice of critical thinking than the deficit model from which non-Western students have been approached. They propose a two-sided view of critical thinking i.e. process and product, for which I employ Chomsky's distinction between competence and performance as a useful construct for interpreting this view. The participants believe that they possess the competence to think critically, and they may for cultural reasons or one's individual's background, be reluctant to express or show explicitly their performance of criticality in certain contexts, which does not necessarily signify a lack in critical thinking skills. The findings demonstrate that the participants develop criticality gradually throughout their lives and achieve high levels especially when taking independent control of their learning and thinking, as well as detaching from the control of their family and society's thinking. This method of developing themselves as critical thinkers is explained in terms of Vygotsky's sociocultural theory. The participants' struggle to develop criticality is found in the lack of sufficient opportunities that allow them to express their critical thinking competence in more concrete ways.

This research challenges the view that criticality is a Western concept and questions the stereotypes about international students' deficiency in critical thinking skills. It calls for taking

a distinct approach that values the differences in the way these students conceptualise and exercise their criticality.

Glossary of Abbreviations

CBLT	Competency-Based Language Teaching
EFL	English as a Foreign Language
ESL	English as a Second Language
HE	Higher Education
L1	First Language (Native Language)
LMD	Licence, Master and Doctorate
MKO	More Knowledgeable Other
PBL	Project-Based Learning
ZPD	Zone of Proximal Development

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Chapter 1: Introduction

1.1. Introduction

This research investigates the topic of critical thinking, which is an important cognitive and intellectual skill in people's educational and social lives. The use of critical thinking is vital in a world where large amounts of information are introduced to the public through a variety of media, and specifically to university students through academic works such as books and articles. Dunne (2015, p. 92) asserts that the vast amount of information and data that people receive every day constitutes an inevitable part of human existence in the world. People are faced with the task of processing the data presented to them in different formats through being selective and cautious about what to believe (Dunne, 2015, p. 92). For this reason, critical thinking is considered a convenient tool that enables people to 'see through [the] propaganda and distortions of thought' (Paul and Elder, 2020, p. 2) that are disseminated in the media as well as 'prevent thoughts from flowing, unexamined, through learners' minds and directly out of their mouths' (Burkhalter, 2016, p. 7). The teaching of critical thinking is, therefore, fundamental to current education because of students' need to evaluate the reliability of the sources that they consult and to be selective about the information that they obtain online (Halpern, 1999, p. 71). This discussion shows the importance of critical thinking in helping people, and particularly students, to examine and evaluate rather than accept certain information without thoughtful and critical examination.

The purpose of this initial chapter is to introduce the topic under investigation, as well as justify the context of this research. The chapter consists of the following sections:

- An introduction to the position of critical thinking within the context of higher education in order to contextualise the research and draw out the focus of the thesis.
- An overview of the research aims, which are articulated in more specific terms through the research questions.
- The rationale and incentives behind conducting this study, including both an academic justification and my personal motivation.
- The new contribution and knowledge that the findings of this study bring to the body of literature.
- An outline of the entire structure of the thesis in terms of chapters and main sections.

1.2. Introducing Critical Thinking in Higher Education

The objective of this section is to present the research topic, under exploration, as well as establish the context of the study. I first introduce the topic and the focus of this thesis. I then provide a meta-discussion of the literature about the notion of critical thinking together with an explanation of the concept of higher education (HE) and its different dimension in relation to schools. I finally draw the position and nature of criticality in HE institutions because this study is conducted in the context of HE.

This research is an endeavour to understand the notion of critical thinking from the standpoint of North African international university students. This qualitative study, using semi-structured interviews, aims to investigate critical thinking from the emic perspective of a group of 11 Algerian students pursuing their doctoral studies in one of the UK's universities. More specifically, this research seeks to explore their perceptions and beliefs in relation to defining criticality and understanding the journey towards developing themselves as critical thinkers, as well as looking at the factors that positively or negatively influence their practice and ways of enhancing their critical thinking skills.

This research addresses the area of critical thinking definition because it is concerned with exploring the participants' individual understandings of criticality. Critical thinking is a controversial notion on whose meaning researchers fail to reach a consensus due to its ambiguity. This ambiguous nature has led to the generation of numerous conceptualisations by several authors (e.g. Dewey, 2010; Ennis, 1964; Halonen, 1995; Morgan, 1995; Bailin et al., 1999; Lipman, 2003), who have attempted to demystify its meaning and establish a definition that makes the teaching of its different skills a feasible task. For instance, Dewey (1910, p. 6) defines reflective thought as an 'active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusion to which it tends'. Criticality is also defined as a set of skills, abilities and dispositions (e.g. Ennis, 1985; Bloom et al., 1956; Siegel, 2010), as well as a normative concept (e.g. Lipman, 1988; Bailin et al., 1999; Siegel, 2010). It is normative in the sense that the task of thinking is regarded as critical when it meets certain criteria, such as acceptability (Siegel, 2010, p. 141). Other criteria involve achieving the purpose of making a judgement about an individual's beliefs and actions, along with meeting the standards of adequacy and accuracy (Bailin et al., 1999, pp. 286-287). Validity, consistency, reliability, strength and relevance, which should qualify one's reasons, as well as backing up with evidence and justification are

other criteria that define the normative nature of criticality (Lipman, 1988, p. 39). These distinct definitions reveal the diversity in the way criticality is perceived by various scholars.

Researching the practice of critical thinking especially in the context of education, and students' development of criticality from the perspective and experience of the participants, are among the areas of focus of this study. Despite the lack of agreement on its meaning, criticality is considered one of the most desirable educational objectives (e.g. Halonen, 1995; Bailin et al., 1999). Radulović and Stančić (2017, p. 12) note that developing cognitive skills is an area of interest that the USA began to develop in 1960, and which has since extended to other countries of the world. However, certain issues arise when addressing the question of integrating criticality into teaching. Some of these issues involve the lack of concrete and practical procedures that, when applied in the classroom, mean that critical thinking is taught (Egege and Kutieleh, 2004). Other challenges include disagreement on the appropriate pedagogical approach to adopt in the classroom - that is, the general or the subject-specific approach (Ennis, 1997) - in addition to uncertainty about the transferability of this skill from one context to another (e.g. McPeck, 1981; Brookfield, 1987; Gelder, 2005). These issues, along with the ambiguity of the meaning of criticality, make its incorporation in education a non-straightforward task. Despite the various challenges of teaching critical thinking, much research (e.g. Grogan, 2011; McCall, 2011; Saiz and Rivas, 2011; Rashid and Qaisar, 2016; Saptura et al., 2019; Ahmady and Shahbazi, 2020; Fitriani et al., 2020; Lapuz and Fulgencio, 2020; Polat and Aydin, 2020; Samba et al., 2020; Tang et al., 2020) has been conducted on testing the effectiveness or impact of certain teaching methods, techniques and software programmes on developing students' criticality.

Since the study deals with the critical-thinking-related perceptions of participants studying in HE, it is important to consult the literature regarding the position of criticality at university. HE institutions appear to play a slightly different role when compared to schools in terms of pedagogy, such as the teaching content, method and objectives. As suggested by Barnett (1990, p. 6), the term HE is a 'reference to a level of individual development over and above that normally implied by the term "education"'. HE involves a different level of education which entails practices that are different from those applied in school, as it also requires the use of higher intellectual and cognitive skills. In this regard, Fenwick and Edwards (2014, p. 36) claim that 'in common sense understandings of higher education practices, academics are employed to generate and modify knowledge, assess and challenge it and, to help others to engage with

it'. In other words, university lecturers are themselves supposed to create knowledge by processing and evaluating the already existing knowledge, as well as encourage students to engage with it actively and critically rather than accepting it passively without questioning. For this reason, Bailin (1987, p. 23) states that 'we also want students to be more creative-not simply to reproduce old patterns but to respond productively to new situations, to generate new and better solutions to problems, and to produce original works'. Students, based on lecturers' expectations, are supposed to go beyond the mere reproduction of information to achieve the production of novel ideas and solutions to problems. At university, both the students and the lecturer are involved in the learning process and the construction of knowledge.

Given that HE values creativity over reproduction and encourages analysis and evaluation over passive reception of information, the development of students' critical thinking is among the outcomes it strives to achieve. Lee (2012, p. 395) asserts that developing autonomous learners who carry out their work with a critical eye is one of the main purposes of Western¹ HE institutions. Criticality is a way of giving students the freedom to shape their own learning by addressing the content that meets their needs and allowing them to approach knowledge from their own perspective, as well as bringing new ideas and perspectives to their work. Dunne (2015, p. 88) refers to the need of students to approach the knowledge acquired in their discipline of study with an evaluative and critical stance, rather than limited to the simple comprehension of this knowledge. The role of HE is not restricted to teaching the theory and knowledge of the discipline under study; rather, it also involves the teaching of the method of approaching and contributing to this knowledge. Therefore, HE institutions are confronted with the task of developing students who are expert in their specific field of study, and equipping them with the necessary skills that allow them to function effectively and autonomously in society, and to succeed in taking reasonable and well-thought-out decisions in their studies and future careers. Critical thinking would appear to be an appropriate tool that assists students in taking an active role towards learning through questioning, analysing, evaluating and, therefore, producing original work.

¹ As they are used in this thesis, the two concepts of the "West" and "Western", according to Hall (1992, p. 185), do not refer to geographical issues. In addition, a nation can be categorised as belonging to the West if it exhibits the type of *developed, industrialised, urbanised, capitalist, secular* and *modern* societies despite its location on a map (Hall, 1992, p. 186).

1.3. Research Questions and Aims

The main objective of this research is to investigate the nature and meaning of critical thinking through the lens of Algerian doctoral students in a UK university. The study looks at the critical thinking-related perceptions and views of students regarding their conceptualisation and way of developing criticality. It examines their entire academic and non-academic experiences in both Algeria and the UK.

Three specific objectives have guided this study. The first objective is to explore the participants' definition of criticality. Since the meaning of critical thinking is ambiguous and sometimes, differs from one person to another, it is crucial to first explore the participants' understanding of critical thinking before proceeding to investigate other aspects of it. Although this area has received a large amount of attention in research, it seems that more research is still needed to understand this concept from a variety of perspectives and traditions of thought.

The second objective is to gain an insight of the participants' perceptions towards their subjective lived experiences of developing critical thinking through the perspective of Algerian students who have experienced two different cultures of learning and living, i.e. Algeria and the UK. It is important to understand the stages and circumstances that have shaped the participants' journey to enhance their critical thinking skills.

The third objective consists of identifying the different factors that influence the participants' development of criticality. These factors refer to the educational practices that might directly or indirectly and positively or negatively contribute to this critical thinking journey of development. The purpose is to determine the practice of critical thinking in education and discover whether the conditions exercised are conducive for its development. This aspect will provide an insight into what might constitute possible effective practices to aid students to foster criticality, in addition to those practices that are better avoided in order to allow students to apply their criticality in the classroom.

The above-mentioned aims are specifically articulated in the following research questions. The central research question that governs this study is as follows: What are the perceptions of a group of Algerian doctoral students studying in a UK university towards conceptualising and developing their critical thinking? The specific research questions derived from this central research question are stated below:

1. What do Algerian students understand critical thinking to be?
2. How do Algerian PhD students in the UK perceive their way of developing critical thinking?
3. What are the factors that influence the participants in developing themselves as critical thinkers?

1.4. The Rationale for the Study

In this section, I build the rationale for conducting this study on the topic under investigation. To construct and explain this rationale, I draw a picture within the frame of two different aspects. These aspects relate to the development of an academic justification for the study in terms of investigating criticality from the perspective of Algerian doctoral students, in addition to the personal motivation for choosing to explore the notion of critical thinking.

1.4.1. Academic Rationale

Research on international students in relation to the topic of critical thinking has received large attention from the literature because of the assumed difficulties that these students encounter during their studies abroad. Since this research is concerned with the experiences of Algerian students in the UK in relation to the nature and practice of critical thinking, the issues of internationalisation and students' experiences of criticality in international universities are some of the areas addressed in this work.

The internationalisation of HE through student mobility programmes is an area of interest, especially in Western countries such as the UK and Australia. Activity, competency, ethos and process are four approaches that institutions use when adopting an internationalisation strategy (Knight, 1999). The activity approach is considered by Knight (1999) to be the most frequently applied, refers to the activities and programmes used in relation to international students' recruitment and academic mobility. Since 1980, universities in Australia and the UK have been successful in recruiting international students and becoming market leaders in the development of overseas validated courses (Bennell and Pearce, 1998, p. 3). Internationalisation attracts overseas students from diverse parts of the world to take courses in the English language or obtain a degree in a foreign country whose educational system enjoys a good reputation. The advantages of student mobility include both economic benefits and reputational interests for the universities (Castro et al., 2016, p. 419). The internationalisation of HE and the recruitment

of overseas students are beneficial strategies for making money as well as creating a good reputation and ranking for the universities.

Studying in a foreign country constitutes a challenge for international students. This challenge is found in the difficulty of adapting to the new social and academic environment because of the differences between international students' backgrounds and culture of the host country, as well as the university's expectations and standards. International students come to the host country with diverse cultural, social, linguistic, academic and educational backgrounds as well as different learning styles. For this reason, Zhou et al. (2008, p. 63) claim that coping with the new social life and pedagogic requirements is one of the tasks with which students are faced when enrolling in foreign HE institutions. Several studies (e.g. Lewthwaite, 1996; Robertson et al., 2000; Senyshyn et al., 2000; Andrade, 2006; Bramford, 2008; Zhou et al., 2008; Wenhua and Zhe, 2013; Yu and Wright, 2016; Bird, 2017; Singh, 2017; Li et al., 2018) have dealt with the topic of internationalisation in HE and international students' experiences in Western countries, namely the UK, USA and Australia. The above-mentioned studies range from research that explores international students' experiences of adaptation to the new social environment and culture to studies that deal with their adaptation to the formal and academic setting. For instance, in the academic context, Nisbah (2012, p. 17) asserts that 'international students need competencies not only in English language, but also in the educational practices and study skills which lie at the core of British university education'. Overseas students are required to adjust themselves to the new academic context and standards valued in the host university in terms of the mastery of the language and study skills. It is important to mention that this study does not deal with the adaptation of students to the social life; rather, it is concerned with the students' perceptions of critical thinking especially in the academic context.

There have been widespread beliefs about international students' deficiency in critical thinking skills due to their traditions of thinking and their assumed low performance in classroom discussions and written assignments (e.g. Fox, 1994; Ramanathan and Kaplan, 1996; Bataineh and Zghoul, 2006; Nisbah, 2012; Al-Dumairi and Al-Jabari, 2015). There is also the belief that critical thinking is a Western concept that can be developed only through immersion in the Western world (e.g. Ramanathan and Kaplan, 1996; Atkinson, 1997; Ramanathan and Atkinson, 1999). Lee (2012, p. 396) claims that 'learners from different cultures may face difficulties in employing learning styles that do not coincide with their own cultural traditions

and educational approaches'. More specifically, their difficulty in adaptation and low performance at the host university, in terms of poor-quality written works, reproduction of information, dependence on teachers, memorisation and passivity in the classroom, are interpreted as evidence of their deficiency in critical thinking abilities (e.g. Grimshaw, 2011; Fell and Lukianova, 2015; Vandermensbrugghe, 2004; Goode, 2007). In this respect, Fell and Lukianova (2015) found that British instructors, in his study, attributed international students' lack of criticality to their lack of questioning habits and to the mere collection and reproduction of information in written assignments. International students' poor performance in the classroom and their failure to adjust to the requirements of the foreign university is interpreted as a deficiency. Thus, the stereotypes about international students' deficiency in criticality arise from their performance in the foreign university.

This study was conducted with Algerian students, since there is, little published research that explores critical thinking in the Algerian context. It considers a new way of looking at criticality i.e. Algerian students' perspectives, an area of research that has received little attention. The imagined lack of critical thinking skills is an aspect that non-Western students, particularly Chinese students, are criticised for (Vandermensbrugghe, 2004; Goode, 2007; Fell and Lukianova, 2015). The literature investigating international students' critical thinking is widely focused on East Asian students specifically Chinese students (e.g. Durkin, 2008; Tian and Low, 2011; Fakunle, 2016) with other studies focusing on Middle Eastern students (e.g. O'Sullivan, 2013; Allamnakhrah, 2013; Rapanta, 2013; Alwadai, 2014; Al-Dumairi and Al-Jabari, 2015; Amrous and Nedjmaoui, 2016; Al Qahtani, 2019; Bahatheg, 2019), in addition to research about the Moroccan context (e.g. Chouari and Nachit, 2016; Mrah, 2017; Benjelloun and El Allame, 2019; Es-Salhi and Elfatihi, 2019; Jebbour, 2019; Laabidi, 2019; Nejmaoui, 2019; Ghazlane et al., 2020; Rouijel and Bouziane, 2020; Hellalet, 2021; Laabidi, 2021). A number of studies (Bougherara, 2019; Abdaoui and Grine, 2020; Djouima, 2020; Achoura and Merrouche, 2021; Baghoussi, 2021; Benmouhoub, 2022; Ouhiba, 2022; Hadj Said, 2023; Gasmi and Dib, 2023; Melouah, 2017) have also been conducted to explore the nature and position of criticality within the Algerian context from mostly teachers' standpoint. Since there is a little research on criticality from Algerian students' perspective, this research seeks to address this gap in the literature and explore a distinct approach to consider multiple perspectives and different cultures. The aim of this research is to give an opportunity for the participants, who are non-Western students, to articulate their thoughts and beliefs about

criticality and narrate their personal accounts of developing themselves as critical thinkers. The purpose of the study is to explore whether their attitudes conform to, reject, or suggest a distinct point of view towards the stereotypes of non-Western students' lack of criticality.

Given that the participants in this research are Algerian students in the UK, it is important to provide context on the programme in which they have been involved. It is further important to first acknowledge the fact that I am also an Algerian student, who benefited from a scholarship to conducting my doctoral studies in the UK. Some of the participants were colleagues, an aspect which made their recruitment to participate in the study an uncomplicated task. The movement of Algerian students to study in the UK provided an opportunity to conduct this research and to explore their perceptions about their critical thinking-related experiences. In 2014, the Algerian government, in collaboration with the Algerian Ministry of Higher Education and Scientific Research, began to develop an interest in students' transition programmes and students' mobility. They reached an agreement with the British government to send 500 students to different UK universities over five years, starting from 2014 (British Council Algerie, n.d). The two sides therefore signed a five-year contract and launched a transition programme of annually sending a given number of Algerian students, who had completed their Masters' degrees and were classified among the first successful students in their respective field of study, to the UK to study. Beginning in the year 2014, there has been a growing number of Algerian students who have been enrolled in British universities to pursue their doctoral studies and research projects. The British Council Algerie (n.d) states that the transition programme is considered part of the Algerian plan to become a partner with the UK in the construction of English teaching abilities, as well as the diversification of its partners in the English-speaking world.

The claims about international students' non-criticality have been considered mere stereotypes challenged by some authors (e.g. Stapleton, 2002; Oda, 2008; Rear, 2017; Heng, 2018; Moosavi, 2020; Wu, 2020). The differences in the pedagogical practices between Western universities and international students' home university were behind students' poor performance in criticality in the foreign classroom (Moore et al., 2003; Wu, 2015; Lucas, 2019). The experiences of international students are rather viewed different and complex, and their low performance can be interpreted in terms of difficulty in expressing criticality in a foreign language when compared to their L1 (First Language) (e.g. Floyd, 2011; Zhou et al., 2015; Safipour et al., 2017; Liang and Fung, 2021) in addition to their unfamiliarity with the Western

style of argumentation. This study contributes to this area of literature that challenges the stereotypes about non-Western students' deficiency in critical thinking. The findings brought a distinct way of constructing and understanding the concept of criticality, which will be explained using Chomsky's distinction between competence and performance. The perspective of Algerian students, who lived in a particular society and experienced a particular educational system, seems to influence their conceptualisation of criticality, and their way of developing it. In other words, the culture of thinking and community experienced by the participants shaped the nature of criticality they practice.

To summarise, international students' poor performance and difficulty of adaptation to the Western universities' standards, is interpreted as a deficiency in criticality. They have been addressed from the perspective of a deficit model due to their assumed lack of critical thinking skills. While many studies have been previously conducted to examine East Asian students, and specifically Chinese students, as well as Middle Eastern students and Moroccan students, this topic is far from being an exhausted research area. There is a need for new studies to be carried out on critical thinking in order to address the perspective of other non-Western students such as Algerian students, an area that has not yet been extensively explored. This study's goal is to contribute a new perspective to the field of critical thinking: the perspective of the Algerian students, who have experienced a particular educational and cultural context.

1.4.2. Personal Rationale

The purpose of this section is two-fold. I discuss my personal motivation for conducting this study on the topic of critical thinking. Particularly, I provide an account of how I developed an interest in carrying out my PhD thesis on critical thinking. Moreover, I present my positionality in terms of the initial assumptions and thoughts that I adopted about criticality and its connection with international students in the very early stages of encountering this concept.

My passion for the profession of teaching shaped my research interests towards the field of teaching and learning, which influenced my orientation as a novice researcher while writing my Master's dissertation. I was interested in researching the teaching approaches that enhance the quality of education and achieve higher outcomes in terms of students' learning and development. I conducted a study in the department of English at my university on teachers' and students' perceptions towards the role of Project-Based Learning (PBL) in assisting learners to overcome their foreign language speaking anxiety. Extending my interests in PBL

at the beginning of my PhD allowed me to read more about this technique and thus encounter the notion of critical thinking, which has become the focus of this study. I found a brief reference to criticality in a small, thin book, of which, to be transparent, I no longer remember the title.

In that first instance of coming across critical thinking, I could not think of any specific definition because of my unfamiliarity with it. A quick browse on the internet, along with some reading on the topic, enabled me to generate a basic definition that criticality is about asking questions and not taking any information for granted without careful analysis and evaluation. After reading more deeply about the subject, I found that it is viewed as a concept that can only be learnt in the Western world (e.g. Atkinson, 1997; Ramanathan and Atkinson, 1999) and that international students encounter difficulties in Western universities due to their inability to engage critically in their written assignments and classroom discussions (e.g. Fox, 1994; Nisbah, 2012). My lack of sufficient and deep knowledge about this field and my reading about such stereotypes of international students' lack of criticality led me to align myself with them.

I developed some assumptions about the relationship between international students and critical thinking, and I adhered to the assumptions that diminish their critical thinking abilities. I started to reflect on and question the nature and practice of criticality under the existing teaching and learning circumstances in the Algerian context. On reflection, there were several factors that I thought, at that time, supported the idea that Algerian students are deficient in critical thinking and lack questioning habits, based on my previous educational experience in Algeria. Some of these factors included the use of the transmission model for teaching, students' dependence on memorisation, the copy-paste phenomenon, the reproduction of knowledge and the absence of special courses that teach critical thinking skills, in addition to the fact that I had not heard of this concept in Algeria. I believed that all these practices and behaviours led to students being non-critical thinkers.

My thinking has been influenced by some of the pedagogical practices adopted in the classroom in Algeria. These practices involve the focus of the teacher on the transmission of knowledge to students, students' dependence on the memorisation of information, their passivity and non-contribution to their learning and their questions remaining at the clarification level and not going beyond to achieve the critical level. I understood that these practices lead students to be merely passive recipients who are spoon-fed huge amounts of information and therefore are

not critical thinkers. The absence of special courses and the explicit teaching of critical thinking skills meant that students are not trained and thus lack criticality. I remembered studying a subject in secondary school with the title of “philosophy”, where students were supposed to write small, argumentative essays as a critique of a particular topic, using the Arabic language. Although the subject could have been significant in assisting students to develop a critical mind and a sense of evaluation, students relied on the memorisation of already written essays, rather than providing their own critique and position. Despite that some teachers’ questions in exams required discussion and analysis, students addressed the questions with memorised knowledge learnt from handouts. All these practices shaped my way of thinking in terms of essentialising Algerian students and considering them as deficient.

My integration within the academic community in my respective university in the UK allowed me to become involved in discussions with experienced academics and some colleagues about my assumptions with regard to Algerian students’ lack of criticality, which they strongly rejected. These discussions were influential because they pushed me to think more carefully and avoid making such assumptions, especially before conducting the study and without having evidence for such claims. I cannot ignore the confusion that I encountered in the early stages of trying to understand how Algerian students can be regarded as critical thinkers if they do not engage or give their point of view in classroom discussions and do not write critically. However, I attempted to approach the study with an open mind and with the intention of exploring the participants’ thoughts about their perceptions of critical thinking rather than with the purpose of confirming already existing theories.

To gain an understanding of the topic of critical thinking, particularly with regard to international and non-Western students, I decided to conduct this research from the perspective of the students themselves. The purpose of conducting this study with students is to explore criticality from a different perspective. The stereotypes about international students’ assumed lack of criticality partly emerged from teachers’ criticisms and judgements on students assumed poor performance in the classroom and written assignments (Clark and Gieve, 2006; Nisbah 2012; Fell and Lukianova, 2015). As international students are stereotyped as lacking the necessary cognitive skills of learning, I thought that this research would provide an opportunity for students to articulate their thoughts about their personal experiences and views of criticality. Students’ perspectives are valuable, and talking to them may elicit new insights and possible explanations about their performance especially in international universities.

My objectives in this study were to explore whether the participants would assign themselves to the stereotypes about non-Western students' deficiency in critical thinking or they have a different story to tell. I sought to explore whether critical thinking was a familiar concept to them, whether they understood what it implied and what they think it was. I wanted to understand whether they had been trained in the classroom to develop critical thinking and how they believed they were developing themselves as critical thinkers. Among the other aims was to explore whether they had a different view and understanding of criticality and to allow them to talk about their experience in the UK in relation to how they were treated and approached by their supervisors.

As a conclusion, my interests in teaching have driven me to conduct my doctoral thesis on the topic of criticality. My unfamiliarity with and lack of knowledge about the notion of critical thinking led me to make some assumptions based on unreasonable evidence and data. I developed certain biases and pre-conceived ideas that could have had an influence on the way in which I conducted this study and constructed the interview questions. For this reason, I attempted to clear my mind of these assumptions and begin the study with the goal of exploring new insights into and ways of looking at the topic. I would now claim that, after conducting this study, my perceptions have been changed towards the notion of critical thinking and its relation to Algerian students, when compared to my perceptions at the start of this research. I will present an account of the changes to my beliefs and attitudes that have occurred in the final chapter of this thesis (see chapter 9, section 9.5).

1.5. The New Contribution of the Study

The purpose of this section is to introduce the new contribution that this study brought to the body of literature. I discuss how the findings present a different understanding of the practice of critical thinking from the perspective of a group of Algerian doctoral students in the UK. I also demonstrate how the new contribution emerges from the interpretation of the participants' understanding of criticality in terms of Chomsky's theory of language learning.

The new contribution of this research is found in the conceptualisation that the participants brought to the concept of critical thinking and the adaptation of Chomsky's theory of language learning in order to explain this conceptualisation. The findings reveal that criticality is a two-sided practice i.e. a mental process and a product (see chapter 5, sections 5.2.2 and 5.3). Based on Chomsky's theory, a mental practice of criticality relates to the idea of competence whereas

product relates to the aspect of performance. The participants suggest that they possess the ability and competence to think critically because they considered it as part of them and viewed it as a natural way of thinking and dealing with everyday life situations (see chapter 5, section 5.2.3). They also propose that their critical thinking possesses a performance side where they demonstrate the product of their thinking process (see chapter 5, section 5.2.3). According to the findings, the performance of critical thinking is divided into two aspects: an internal performance and an external performance. The internal performance is adopted when the participants choose to be covert critical thinkers by limiting themselves to the internal process of thinking critically, remaining silent and not showing their critical side. The external performance is the demonstration of criticality in an overt way, and it takes different forms that are not often considered as forms of criticality. The contribution of this study is found in the division made between internal critical thinking performance and external critical thinking performance, a division which has not been made in the original theory of Chomsky about language learning. Therefore, the theory of Chomsky is adopted to interpret the findings and adapted in order to conform to the findings and thus, make a new contribution to the theory.

The new knowledge of this study challenges the stereotypes about non-Western students' deficiency in critical thinking skills. Unlike the literature that undermines non-Western students' critical thinking abilities, this research challenges this body of literature along with the view that criticality is a Western concept. In other words, non-Western students' behaviours - memorisation, non-contribution to classroom discussions and dependence on teachers - in Western universities is not a direct indication of their lack of critical thinking. Rather, these behaviours are sometimes adopted by the students in order to conform to their personal, social or cultural beliefs.

1.6. Outline of the Thesis

This section provides a general overview of the thesis in terms of the organisation and content of the chapters. It is structured around nine chapters. The first chapter is an introduction to the research topic. The second and third chapters consist of a review of the literature. The methodology chapter is the fourth chapter of the thesis that deals with research design and approach in addition to the procedures of data collection and analysis. This fourth chapter is then followed by three findings chapters, which deal with a discussion of the data, in addition to the eighth chapter, which is a discussion of the different findings in relation to the literature.

Finally, the thesis ends with a conclusion chapter, which details the implications, some suggestions for further research and general conclusions.

Chapter 2: Understanding Critical Thinking

This chapter is devoted to explaining the diverse aspects of the concept of critical thinking. The historical roots and background of criticality are presented first. The issue of defining it is also discussed. In addition, a discussion on the different components of criticality is generated. The chapter also includes a discussion on the importance of background knowledge in thinking critically. The final section of this chapter deals with the theories that are employed to explain the data.

Chapter 3: The Teaching of Critical Thinking and International Students' Criticality

The purpose of this chapter is to discuss critical thinking in relation to other areas such as education and international students. It first begins with a discussion of the literature concerned with studies that attempt to explore the area of developing students' criticality. Another section is devoted to discuss the issues of integrating critical thinking in education as well as the approaches that can be adopted for its teaching. Other sections deal with a review of the literature in relation to the practice of critical thinking in North African countries, Algeria and the Middle Eastern world. There is a discussion of the relationship between international students and the practice of criticality.

Chapter 4: Research Methodology and Design

The aim of this chapter is to explain the research methodology in terms of the research philosophy, the research design and the procedures for collecting data. The philosophical assumptions and underpinnings that informed this study are established first. A thorough discussion and explanation of the methodological choices, in terms of data collection and analysis methods, follows. The rationale behind using semi-structured interviews and vignettes and conducting follow-up interviews is explained. A detailed description of the procedures and steps for gathering and analysing the data is also elaborated on this part of the thesis.

Chapter 5: Critical Thinking: Between a Mental Process and a Product

This is the first findings chapter, where the participants' distinct understandings of the notion of critical thinking are presented. This chapter is built around the findings that demonstrate how critical thinking is understood as a two-sided practice: a process and a product.

Chapter 6: A Route for Autonomous Learning as a Route for Critical Thinking

In this second findings chapter, the participants' beliefs and experiences in relation to developing themselves as critical thinkers are introduced. The chapter is organised around sections that deal with the institutions and stages that shaped the participants' development of criticality including family, society, school and university, in addition to living and studying in a foreign country.

Chapter 7: The Teaching of Criticality Through Pedagogical and Classroom Practices

In this chapter, the various factors that the participants considered as contributing to and influencing the development of their critical thinking skills are discussed. These factors refer to the classroom dynamics, the relationship between students and the teacher, students' perceptions towards the nature of knowledge, in addition to the challenge of thinking critically in a foreign language.

Chapter 8: Discussion of the Findings

The objective of this chapter is to discuss and make a link between the main findings, as well as explain how they relate to the literature. At first, the research questions are reviewed, with a discussion of the extent to which they have been answered, or not, by the findings. There is also a demonstration of how the findings are interpreted in accordance with the theoretical models of Chomsky's theory of language learning, Vygotsky's sociocultural theory and Bloom's taxonomy.

Chapter 9: Implications, Suggestions for Further Research and Conclusions

The final chapter of the thesis contains theoretical and practical implications for future understanding in relation to critical thinking and international students. Additionally, suggestions and questions for future research on the topic of criticality are presented. This chapter also involves my reflections and changes to my perceptions and attitudes about critical thinking. The chapter ends with some conclusions that have been generated from this study.

Chapter 2: Understanding Critical Thinking

2.1. Introduction

The purpose of this chapter is to review the literature and provide some background in relation to the notion of critical thinking, in terms of both its historical roots and different approaches to conceptualising it, as well as its various components. Since one concern of this research is exploring the participants' understanding of the concept of critical thinking, the aim of this chapter is to introduce the concept and demonstrate how it has been defined in the literature. The notion of criticality has received much attention in research because of its importance in current society. Its significance in everyday life, education and work, and the lack of a consensus with regard to its meaning, as well as the absence of concrete elements and practices that would help to incorporate it within education, have led to great efforts to demystify its meaning and make its teaching a feasible task. This chapter comprises the following sections:

- An account of the history and ancient roots of critical thinking, going back to the teaching practices of Socrates.
- A discussion of the issue of defining criticality, through an exploration of the reasons behind the discrepancies between the myriad definitions presented in the literature.
- An explanation of the various critical thinking components, based on certain theoretical models such as Bloom's taxonomy (1956) and Paul and Elder's framework of critical thinking (2008).
- The scope and areas in which criticality can take place, depicted through Barnett's model of a critical being (1997).
- A discussion of the importance of possessing and understanding background knowledge relating to a particular topic or subject when thinking critically.
- A presentation and discussion of the view that critical thinking is a Western concept.
- A discussion of the two theories, including Chomsky's distinction between competence and performance and Vygotsky's sociocultural theory adopted in order to understand the findings.

2.2. Historical Origins of Critical Thinking

The objective of this section is to illustrate the historical origins of criticality. Originally, the practice of critical thinking emerged in the Western world, more specifically in the Greek

tradition. Critical thinking has been regarded as a Western practice that does not exist in other parts of the world because of this idea that it first appeared in the West (see section 2.5). For this reason, I discuss, in this section, the historical roots of criticality and its representation not only in the Western tradition but also in the Islamic tradition within the Arab world.

As will be demonstrated in the following paragraphs, the practice of critical thinking is not a recent finding, but has existed for many years under the umbrella of other concepts and practices. Such concepts include Socratic questioning, reflective thinking, criticality and critical thinking. Many scholars, educationalists and philosophers have contributed to the development of this type of thinking, currently known and referred to as critical thinking.

The early origins of criticality go back to the time of Socrates (469–399 B.C.); he created the Socratic method, which involves asking questions about human thoughts and understanding (Morgan, 1995, p. 336). The principles characterising Socrates’s teaching practices were those of following a method of asking questions without attributing specific claims to knowledge, and the idea that knowledge is not only in the possession of those in authority (Paul et al., 1997, p. 18). In other words, Socrates emphasised the role of questioning rather than taking any claims for granted, in addition to the necessity of developing the belief that highly experienced scholars are not a repository of knowledge possessing the absolute truth.

The essence of Socratic questioning is to hold a questioning attitude towards established beliefs and to differentiate between rational and non-grounded beliefs (Paul et al., 1997, p. 18). Copeland (2005, p. 7) defines Socratic questioning as a ‘systematic process for examining the ideas, questions and answers that form the basis of human belief’. He maintains that Socratic questioning embraces the recognition that the established system of human thinking forms the basis for future thinking, and emphasises the importance of developing an awareness that thinking and asking questions are an embedded part of people’s lives. In relation to some of the questions highlighted in Socratic questioning, Lewis and Smith (1993, p. 131) assert that ‘Socrates challenged the ‘loose’ thinking of the youth of his day by asking such questions as: “What is the evidence?” and, “If this is true does it not follow that certain other matters are true?’. Socrates thus emphasised the importance of evidence and logic in human thinking. Following Socrates, fellow Greek philosophers Plato and Aristotle were the next contributors to the field of critical thinking (Paul et al., 1997, p. 18). Coney (2015, p. 516) asserts that ‘Plato’s dialogues are vivid models of how critical thinking reveals itself in a certain kind of

human interaction'. In the Middle Ages, for example, Thomas Aquinas insisted on the idea of reasoning and the importance of cultivating and “cross-examining” it (Paul et al., 1997, p. 18). For this reason, Paul et al. (1997) emphasise the role of a trained mind in thinking in a systematic way, achieving well-reasoned and comprehensive thinking, and therefore going beyond the surface level to detect the deep realities of life and achieve profound insights. Thinking should be developed and interrogated, in the sense that human beliefs and thoughts need to be questioned and examined thoroughly.

In the Renaissance and Enlightenment periods, criticality received considerable attention from a variety of philosophers. The Renaissance period saw a growth in the practice and a call for the use of criticality, which can be demonstrated through the works of various authors, including *Advancement of Learning* by Francis Bacon in England, *Rules for the Direction of Mind* by Descartes in France, *The Prince* by Machiavelli in Italy and *Utopia* by Thomas Moore (Paul et al., 1997, p. 18). Both Francis Bacon and Descartes referred to the necessity of training and disciplining the mind to foster good habits of thought and to reach the standards of clarity and precision (Paul et al., 1997, p. 18). Coney (2015, p. 516) states that ‘no philosophers of the classical period theorised CT [critical thinking] as distinct from other ways of thinking... it was not until the European Enlightenment that it was discretely theorised’. The Enlightenment period was the period where critical thinking was distinguished and theorised as a distinctive type of thinking. The French eighteenth-century Enlightenment philosophers Bayle, Montesquieu, Voltaire and Diderot highlighted the importance of analysing and critiquing all views and carrying out reasonable and critical questioning of authority (Paul et al., 1997, p. 19). Recent contributors to critical thinking include Dewey (1910), who is considered the ‘modern-day founder of the critical-thinking movement’ (Sternberg, 1986, p. 4), Bloom (1956), Ennis (1964), McPeck (1981) and Lipman (2003). The contribution of European authors and philosophers to the field of critical thinking is thus apparent through their different works throughout time.

Although much work on criticality can be found in the Western tradition, other traditions of thought have also contributed to this field. One example of these traditions is that of Islam (Nordin and Surajudeen, 2015; Machouche and Bensaïd, 2015; Malik, 2017). A representation of the Islamic tradition can be depicted in Ibn Khaldun’s work, entitled *Almuqadimah*, which means “the introduction”. Farooq (2017) notes the relationship between critical thinking and Ibn Khaldun’s work, and it appears that Ibn Khaldun’s perspective of looking at and

approaching critical thinking emerged from Islamic roots and practices (Machouche and Bensaid, 2015). For example, Machouche and Bensaid (2015, pp. 203–204) claim that:

the Islamic literature contains forms of cognitive thought operations such as examination (tahqiq), critic (naqd), review (tahdhib), critical evaluation of narrators or (impugment), (tajrih al-ruwat), simplifying/approximation (taqrib), justification (ta 'lil), refutation (radd), and evaluation of the cause in new cases (tanqih al manat).

Machouche and Bensaid refer to the existence of certain cognitive abilities that are valued and emphasised in the Islamic tradition. They propose that critical thinking skills are also present in other cultures and traditions of thought under different names in their respective language, in this case the Arabic language. Nordin and Surajudeen (2015, p. 42) also suggest a theoretical model of critical thinking that is derived from the Islamic tradition, which consists of five elements: *taddabur* (judging the idea), *tafqiḥ* (analysing), *tafakkur* (prediction), *ta'qil* (synthesising) and *tadhakkur* (summarising). Therefore, the Islamic tradition is among the traditions of thought that have contributed to and focused on the different skills and practices of critical thinking.

The above discussion demonstrates that the topic of critical thinking has received much attention from various philosophers and authors across diverse countries and traditions of thought. It suggests that criticality is not a practice that is typical to only one tradition or culture of thought, but one that exists and is applied in different traditions of thinking. However, this practice has only been known under a variety of umbrella concepts, such as questioning, Socratic questioning, developing habits of mind and the use of evidence and logic. As Machouche and Bensaid (2015, p. 203) claim, ‘critical thinking has expressed itself through individual and collective scholarship practices, the use of cognitive skills, strategies and thought processes having unique specifications that belong to particular religious and civilizational origins’. In other words, the appearance and practices of critical thinking emerge and take place within numerous fields of study and domains of life, such as the Western tradition of critical thinking rooted in philosophy, and the Arabic tradition of critical thinking rooted in the Islamic religion.

2.3. Differences in the Definitions of Critical Thinking

Criticality is a highly researched concept, and the literature has focused largely on its definition

(e.g. Dewey, 1910; Ennis, 1964; Lipman, 1988; Facione, 1990; Halonen, 1995; Morgan, 1995; Bailin, 1999; Siegel, 2010; Facione, 2011) because it is a concept that is defined differently and lacks agreement on what it implies in practice, especially in relation to its development (Snider, 2017, p. 2). Halonen (1995, p. 75) claims that the issue surrounding the notion of critical thinking is the absence of an agreed definition, even though it is one of the desirable outcomes for developing the intellectual ability of both learners and teachers. The absence of a clear and straightforward definition has led to the generation of several conceptualisations and interpretations of the concept. However, the belief that any given definition is the absolute right one would seem a senseless idea (Bailin et al., 1999, p. 286), because ‘any brief formulation of critical thinking is bound to have important limitations’ (Paul et al., 1997, p. 14). Some scholars’ avoidance of a single definition of criticality is due to their belief in the different cognitive practices and skills involved in critical thinking (Moore, 2013, p. 507). Clearly, the essence and practices of critical thinking cannot be depicted in one definite and bounded definition, but instead through a combination of different understandings.

The purpose of this section is to discuss the possible factors that have led to the variations in defining the notion of critical thinking. These factors include the perspective or field from which it is addressed, the focus of each definition and some of the expressions that can be used interchangeably. The reason for this discussion is to demonstrate that the understanding of critical thinking differs from one author to another, and from one person to another depending on factors that will be discussed in this section. These discrepancies in perceiving criticality form one of the incentives for researching Algerian students’ conceptualisation of criticality in this study, which represents a different perspective of approaching the concept of criticality.

2.3.1. Different Perspectives towards Approaching Critical Thinking

In this sub-section, I discuss how the definitions of critical thinking are different because of the perspectives and fields of study from which criticality is addressed, encompassing philosophy, cognitive psychology and education. Halonen (1995, p. 75) asserts that the various attempts and huge efforts to define criticality have led to the variations in the perspectives of approaching it. In this respect, Sternberg (1986) claims that criticality can be developed and viewed within three different theories of thought, namely the philosophical, cognitive psychological and educational approaches. More particularly, Morgan (1995, p. 339) asserts that the confusion surrounding the notion of critical thinking and its varying definitions is caused by the traditions of both philosophy and cognitive psychology, in terms of a lack of

communication about how to clarify the meaning of the concept because of the different language that characterises each of these disciplines.

The philosophical approach underlies the role of logic in the practice of critical thinking. Sternberg (1986) states that the philosophical tradition is concerned with the requirements of formal logical systems. More specifically, Lewis and Smith (1993, p. 132) claim that ‘philosophers are basically interested in the use of logical reasoning and perfections of thinking to decide what to believe and do’. From a philosophical perspective, the use of logic or reasoning to make decisions about certain beliefs and actions appears to be the corner stone of the practice of critical thinking. However, McPeck (1981, p. 8) rejects what he calls ‘the philosopher’s fallacy’, which he defines as the use of logic as a sufficient condition in criticality. He believes that experience and background knowledge of the discipline under study are more important than logic. In addition, Lipman (2003) claims that the definitions generated from the philosophical perspective do not raise conflicting debates in the field of critical thinking and are not helpful in developing critical citizens. Lipman’s claim is not clear, but could mean that a view of criticality as the simple focus on the assessment of a chain of statements through logical reasoning without a consideration of other contextual factors, such as knowledge and experience, is problematic.

The cognitive psychological approach considers criticality as the acquisition and application of certain cognitive skills, actions and implicit behaviours (Halonen, 1995; Abrami et al., 2008; Fahim and Masouleh, 2012). The emphasis of the psychological approach is on the acquisition of cognitive and implicit abilities and dispositions, such as analysis, evaluation and interpretation, which can be transferrable to and applied in myriad contexts (Abrami et al., 2008, p. 1103). In addition, the cognitive psychological approach is concerned with “showing how people think critically in the absence of full information, unlimited time, perfect memory, and so on” (Sternberg, 1986, p. 6). Critical thinking, according to this perspective, focuses on the thinking process as well as the cognitive practices and behaviours that people tend to adopt while engaged in certain situations. In explaining Piaget’s approach to cognition in relation to critical thinking, Halonen (1995, p. 76) claims that:

Piaget’s approach to cognition suggests that critical thinking abilities emerge as children interact with the physical world. His stages of development reflect a natural unfolding ability over time elicited by a discrepancy-producing environment that stimulates growth through disequilibrium. In emergent approaches the development of critical thinking is assumed to be

systematic, although individuals will differ in how wide-ranging and sophisticated their critical thinking skills will ultimately become. Less attention is paid to formal instruction of skills that will emerge naturally over time.

In this quotation, Halonen stresses some crucial points that have been highlighted in Piaget's approach in relation to criticality. The first point involves the idea that the development of critical thinking skills is a lifelong activity that occurs in a natural manner over time, through children's interactions with the external world rather than through explicit teaching. The second point relates to the differences in the degree of critical thinking that people might achieve, despite the fact that developing this skill is regarded as being systematic in emergent approaches.

The educational approach of perceiving and theorising criticality is based on classroom observation and experience, rather than on epistemology (Sternberg, 1986, p. 7). In other words, critical thinking practices are derived from observed classroom behaviours and the experience that practitioners undergo in their teaching. Sternberg (1986, p. 7) refers to Bloom's taxonomy as one of the theories that has been generated from the educational tradition of looking at criticality. The focus of this tradition is on children's needs and requirements in terms of solving problems, making decisions and learning concepts (Sternberg, 1986, p. 7). Sternberg (1986, p. 7) asserts that the educational approach to criticality combines aspects from the philosophical approach, in terms of focusing on "what people can do", and aspects from the psychological approach, which is concerned with the aspect of "what people actually do". In other terms, the educational approach focuses on both the theoretical and the practical aspects of the practices that people exercise in terms of criticality. Thus, the field of education is concerned with developing the skills of critical thinking in terms of analysis, evaluation and problem-solving, along with other skills.

In conclusion, attempts to define critical thinking have emerged from multiple disciplines of thought. Philosophy emphasises the use of logical reasoning; cognitive psychology highlights the importance of mental skills, abilities and behaviours; while education focuses on the two. The focus of each discipline in defining criticality might be explained in terms of what Lewis and Smith (1993, p. 131) claim in relation to the distinction between philosophy and psychology, in the ways in which they approach critical thinking and the way in which each discipline seeks to discover the nature of the truth. Although these disciplines each emphasise

specific features of criticality, they all contribute to the depiction and clarification of its meaning and principles. Therefore, criticality would seem to involve the use of logic and necessitate background knowledge as well as the acquisition of cognitive operations and skills.

2.3.2 Emphasis in Definitions of Critical Thinking

In this section, I seek to demonstrate how the discrepancies in the definitions of critical thinking might also be due to the distinct aspects that are emphasised within each definition. Different scholars highlight different features of the practice of criticality, and these features are discussed in this section. The discussion is established on the basis of three definitions, chosen based on the idea that each definition highlights a divergent feature of criticality, in order to achieve the purpose of this section. The first definition is that of Ennis (1985, p. 45), who asserts that critical thinking is “a reflective and reasonable thinking that is focused on deciding what to believe or do”. Another definition is presented by McPeck (1981, p. 7), who considers criticality as ‘the propensity and skill to engage in an activity with reflective scepticism’. In addition, Lipman (2003, p. 26) defines reflective thinking as ‘thinking that is aware of its own assumptions and implications as well as being conscious of the reasons and evidence that support this or that conclusion’. Through an analysis and discussion of these definitions, I explain the focus of each and illustrate how some definitions highlight the tools, others the process and others the product of critical thinking.

The focal point of Ennis’s definition (1985) is on both the nature of the thinking, which is described as reflective and reasonable, and the result that can be generated from this type of thinking: making decisions about one’s beliefs and actions. The first aspect refers to the thinking itself, which needs to be reflective in the sense that it should involve deep thought and reflection about a specific matter, before proceeding to make a decision about what to believe or do. In the same vein, Dewey (1910, p. 13) considers reflective thinking as a ‘judgement suspended during further inquiry’. In other words, making a judgment is considered the result that is achieved when carrying out a deep analysis and investigation. The second aspect of Ennis’s definition refers to the doing and the believing, which are the products that result from the process of contemplation and thinking. Making decisions about what to believe or do are the judgements that are made after deep thinking and analysis in relation to a particular matter.

Reflective scepticism is the aspect noted in McPeck’s definition (1981). The element of scepticism and the idea of being suspicious about certain statements or modes of thought are

among the essential criteria that determine the task of critical thinking (McPeck, 1981, p. 6). Reflective scepticism might serve as the first step in triggering and stimulating individuals to engage in the task of criticality. In addition, Brookfield (1987, p. 6) asserts that claiming total certainty about the world is something that ignores and rejects the role of critical thinking. People are not expected to believe or take for granted all the information that they receive. Rather, they should be sceptical and doubtful about certain claims, assumptions and decisions that form human beliefs and knowledge so that critical thinking can be practiced. Having said that, McPeck (1981, p. 7) emphasises the importance of being aware and careful in successfully using this reflective scepticism in certain fields of study. However, Ennis (1993, p. 180) disagrees with McPeck's definition and claims that criticality is not limited to mere scepticism. Criticality thus involves more than just scepticism, extending to include other practices that are also mentioned in McPeck's conceptualisation.

The definition of Lipman (2003) appears to emphasise the importance of reasons and evidence in critical thinking. Both supporting reasons and evidence are two fundamental elements that should be taken into consideration when believing a statement to be true or when trying to convince someone about a particular idea or thought. In this respect, Siegel (2010, p. 142) asserts that 'beliefs, judgements, and actions are rational just to the extent that the believer/actor has good reasons for so believing, judging, or acting'. Siegel appears to suggest that critical thinking is not limited to the mere fact of holding positions and making judgements, but also involves considering the reasons and evidence behind choosing those positions and decisions. Judgements and actions need to be justified by supporting reasons and backed up by convincing evidence as a principle of critical thinking, in order for these judgments to be reasonable.

The above discussion has demonstrated that different conceptualisations of critical thinking highlight various practices and principles of criticality. Some conceptualisations emphasise the thinking processes, such as scepticism and reflective thinking; others focus on the result of the thinking, such as making judgements and decisions about what to believe or do; while others highlight the use of tools such as evidence and reasons in the practice of criticality. Therefore, the essence and various principles of critical thinking cannot be captured within one brief definition.

2.3.3. Critical Thinking and Related Terms

The aim of this section is to discuss the link between the various expressions that are sometimes employed interchangeably with critical thinking. These expressions include higher-order thinking, problem-solving, decision-making and creative thinking. Clarifying the nature of the relationship between critical thinking and these expressions is important for drawing boundaries and avoiding confusion between them.

The concept of higher-order thinking is employed to differentiate between higher-order and lower-order thinking. To explain this distinction, Lewis and Smith (1993) refer to lower-order thinking as reproductive thinking that involves a mechanical recall of information, whereas higher-order thinking is considered productive thinking that generates new ways of contemplating problems. In brief, the latter involves the processing, analysis and evaluation of information, rather than the memorisation and understanding of information characterised by the former. Higher-order thinking involves combining the formation of relationships between novel data with already existent information in one's mind to generate new interpretations and find solutions to problems (Lewis and Smith, 1993, p. 136). Lewis and Smith (1993) suggest using higher-order thinking as an inclusive term for critical thinking, creative thinking, problem-solving and decision making. Therefore, criticality is part of higher-order thinking that values the productive and analytical aspects of thinking.

The distinction or connection between critical thinking and creative thinking also needs to be established. Critical thinking and creative thinking are two related rather than separate practices (e.g. Bailin, 1987; Bailin et al., 1999; Paul, 2005; Paul and Elder, 2008). Bailin et al. (1999, p. 288) disagree with the views and conceptions that differentiate between critical and creative thinking, and claim that these two concepts are interrelated in the sense that each one is in need of the other. The interrelatedness between these modes of thought lies in their complementary nature and their purpose of achieving "good" thinking in a particular area (Bailin, 1987, p. 26). One of the similarities between these practices is that they are both the product of thought (Paul and Elder, 2008, p. 4). However, the difference between these two types of thinking is manifested in the analytical nature of critical thinking, aiming to reach a judgement in a particular context, and the imaginative and generative nature of creative thinking for enhancing that same context (Bailin, 1987, p. 23).

Despite the differences in the purpose and principles of critical thinking and creative thinking, they are interrelated to some extent. Paul (2005) considers critical thinking as the examination, evaluation and enhancement of thinking, and views this latter aspect as the stage where creative thinking occurs. For this reason, Paul (2005, p. 28) defines creative thinking as a ‘natural by-product of critical thinking, precisely because analyzing and assessing thinking enables one to raise it to a higher level-to recreate it’. The link can be explained when Paul and Elder (2008, p. 4) assert that ‘when engaged in high-quality thought, the mind must simultaneously produce and assess, both generate and judge the products it fabricates’. Critical thinking also involves the use of creative thinking to seek other alternatives, possibilities and potential perspectives in dealing with and approaching problems (Bailin et al., 1999, p. 288). The interconnection between these two types of thinking is related to the use of critical thinking to achieve creative thinking. On the one hand, critical thinking necessitates creative thinking in order to draw upon the creative imagination to read between the lines, seek alternatives to approaching problems and therefore generate new solutions to problems. On the other hand, creative thinking requires critical thinking due to its analytical nature in terms of analysing and evaluating the outcomes generated from creative thinking. In simple terms, creative thinking is the product of critical thinking.

Problem-solving and decision-making are two other terms that are sometimes employed interchangeably with critical thinking. However, Bailin et al. (1999, p. 288) classify them as two areas in which critical thinking can occur, rather than separate practices that signify the same meaning as critical thinking. In other words, they are considered situations that demand the use of criticality to accomplish certain tasks, such as finding a solution to a problem or making a decision about a particular aspect. Making decisions and finding solutions to problems might be regarded as areas where criticality is applied but at the same time as the outcome of the act of thinking critically. Lipman (1988, p. 38) claims that the definitions of critical thinking from Sternberg (1986) and Ennis (1985) are too narrow and specific in identifying the outcomes of critical thinking. Instead of viewing problem-solving, decision-making and learning concepts as outcomes of critical thinking, Lipman (1988) suggests using the word “judgement” because of its generic and inclusive nature.

In a nutshell, the above discussion has revealed the link between certain expressions related to critical thinking, as depicted in Figure 1. As can be seen in this figure, which summarises the discussion elaborated on in this section, higher-order thinking is an umbrella term that

comprises critical thinking, creative thinking, problem-solving and decision-making. Critical thinking and creative thinking are two interrelated practices that cannot be separated, because each one needs the other. Creative thinking is considered the product of critical thinking because of the tendency to use criticality to analyse and evaluate thinking for the purpose of achieving creative thinking, i.e. enhancing thinking in a new way. Problem-solving and decision-making are considered areas where critical thinking occurs, but they might also be the result or the product of the thinking process.

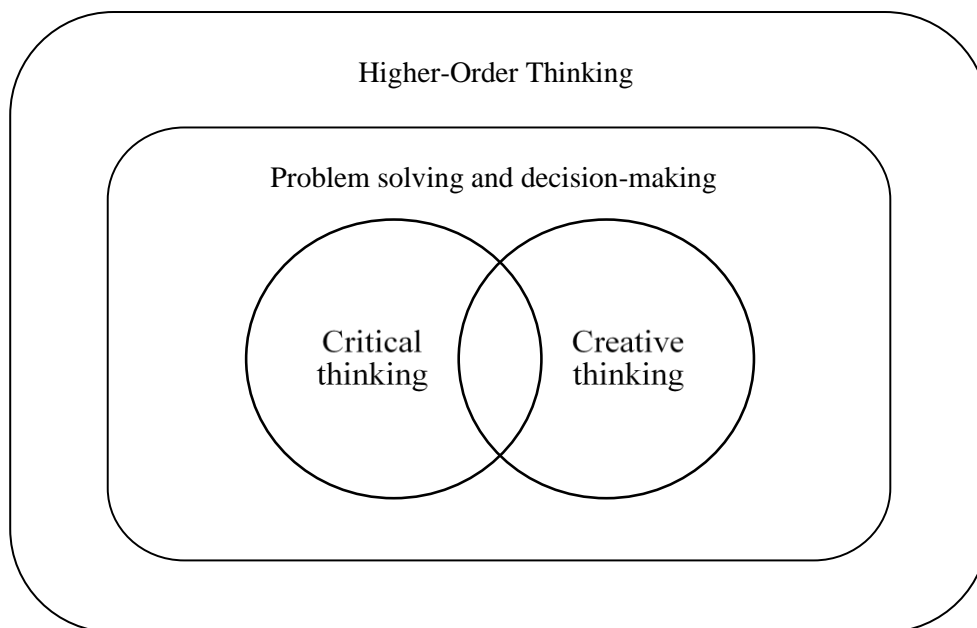


Figure 1 The Relationship Between Critical-Thinking-Related Terms

2.4. Critical Thinking Skills and Dispositions: Frameworks and Models

The objective of this section is to discuss the various components involved in the practice of critical thinking. This discussion is constructed around a combination of two frameworks generated by leading scholars in the field of critical thinking, namely Bloom's taxonomy of educational objectives (1956) and Paul and Elder's critical thinking framework (2008). I also explain how criticality is defined by some scholars (Bloom et al., 1956; Ennis, 1985; Siegel, 2010) as a combination of skills and dispositions of the mind. Ennis (1985) believes that several abilities and dispositions are involved in the process of deciding what to believe or do. In the same vein, Siegel (2010, p. 142) indicates that skills and dispositions are important components of criticality, and that developing the ability of good reasoning and the disposition towards

being guided by reason should be taken into consideration in education in order to claim that critical thinking is among its desired goals.

The reason for including this literature is to discuss how criticality is viewed by various authors in the existing body of literature. In this way, it is possible to identify whether the participants have similar understandings to the definitions introduced in the literature or whether they bring new insights to the field. In other words, it enables me to examine the commonalities and differences between the findings of this study and the existing research.

2.4.1. Skills of Critical Thinking

Critical thinking is regarded as a set of cognitive skills and abilities (Bloom, 1956; Ennis, 1985; Paul and Elder, 2008). Despite the difficulty in clarifying the meaning of this concept, there are some clear skills of critical thinking that can be taught to students in order to enable them to become successful thinkers (Halpern, 1999, p. 71). Bloom et al. (1956) created a taxonomy of educational objectives that lists the outcomes that the educational system should strive to achieve in students. This taxonomy is organised primarily according to educational, then logical and finally psychological principles (Bloom et al., 1956, p. 8). It demonstrates a hierarchical process of learning, starting from simple (knowledge, comprehension and application) to complex outcomes (analysis, synthesis and creation). These outcomes reflect the skills of critical thinking, ranging from lower- to higher-order thinking skills.

The taxonomy of educational objectives was revised by Anderson and Krathwohl in 2001. Seaman (2011, p. 36) notes two changes in the revised version of Bloom's taxonomy: changes in terminology and in dimension. He claims that the first change relates to the alteration of the educational objectives from nouns to verbs for highlighting the behaviours and cognitive abilities that students are expected to achieve and for simplifying the teacher's task within the curriculum design. The second change refers to the introduction of a new aspect to the taxonomy, namely the aspect of knowledge, in order to extend its dimension beyond the cognitive aspect (Seaman, 2011, p. 36).

A debate has been raised regarding the relationship between the skills introduced in Bloom's taxonomy of educational objectives, and Halonen (1995, p. 77) asserts that the taxonomy is criticised by some scholars for its hierarchical nature and the distinction made between the lower- and higher-order thinking skills; each skill follows the other skill in an orderly manner.

In contrast, Ennis (1993, p. 179) believes that the ‘levels are not hierarchical’ and that the relationship between them is one of interdependence.

The two main skills that characterise the practice of critical thinking are analysis and evaluation. In their framework of critical thinking, Paul and Elder (2008) provide a detailed explanation of these two skills of critical thinking. As explained in this framework, the skill of analysis refers to the examination and dissection of a particular argument or product of thought into its elements of reasoning. These elements of reasoning are: purpose, questions, points of view, information, inferences, concepts, implications and assumptions (Paul and Elder, 2008). The skill of evaluation is linked to the assessment of these elements of reasoning through intellectual standards that Paul and Elder (2008, p. 24) list as follows: clarity, accuracy, precision, relevance, depth, breadth, logic, significance and fairness.

The above discussion demonstrates that critical thinking involves the use of a combination of skills. Some of these skills include analysis, evaluation and creation. For example, the skill of analysis refers to the deconstruction of a specific thought into its various elements whereas the skill of evaluation refers to the assessment of these elements.

2.4.2. Dispositions of Critical Thinking: A State of Mind

Dispositions are another component of criticality. Critical thinking consists not only of cognitive skills and abilities but also of certain dispositions and traits of the mind (Elder and Paul, 1998; Halpern, 1999). In this respect, Elder and Paul (1998, p. 34) assert that criticality involves the use of both the skills and the intellectual traits that define a person’s character and state of mind. In a similar vein, Halpern (1999, p. 72) claims that critical thinking relates to the appropriate employment of skills and dispositions and to possessing the willingness to engage in this cognitive process. Therefore, dispositions refer to the traits and attitudes of the mind that an individual should develop as part of critical thinking.

A disposition refers to the “tendency to do something, given certain conditions” (Ennis, 1996, p. 166) or ‘a genuine, tendency, propensity, or inclination to think in certain ways under certain circumstances’ (Siegel, 1999, p. 212). Ennis (1996, p. 166) highlights the difficulty of identifying critical thinking dispositions because of their hidden nature and their tendency to be captured under certain incentives and circumstances. For this reason, Siegel (1999, p. 212) asserts that a disposition is ‘an underlying trait of a person that exists even when not being

manifested'. The essence of dispositions is that they refer to the willingness to demonstrate certain behaviours rather than being behaviours in themselves (Siegel, 1999, p. 213). In other words, as defined by Facione (2000, p. 64), disposition is 'a person's consistent internal motivation to act toward, or to respond to, persons, events, or circumstances in habitual, and yet potentially malleable, ways'. Therefore, dispositions are not directly observable behaviours; rather, they involve the volition and willingness to partake in certain activities and occur under certain conditions.

One of the dispositions of critical thinking is possessing the willingness to engage in the task of thinking critically. Bailin et al. (1999, p. 271) assert that 'critical thinking involves more than the ability to engage in good thinking. It also involves the willingness or disposition to do so'. There is no guarantee that people who possess critical thinking skills would apply them unless they have the disposition to do so (Halonen, 1995, p. 77). For this reason, Siegel (2010, p. 142) claims that 'having the ability to determine the goodness or probative force, of candidate reason for belief, judgement, or action may be necessary, but cannot be sufficient, for critical thinking, since a given thinker may have the ability but not (or not systematically or routinely) use it'. Critical thinking is thus not restricted to the idea of possessing the ability to make judgements but includes people's willingness to always engage in this thinking and develop a critical spirit. Morgan (1995, p. 339) also agrees with the view that critical thinking cannot happen if there is a lack of willingness to apply it, and relates this issue to the fact that students may not employ critical thinking skills despite the successful teaching and instruction of criticality.

In their framework, Elder and Paul (1998) refer to the relevance of certain traits of the mind, which they call "intellectual virtues". Elder and Paul (1998, p. 35) claim that 'to cultivate the prerequisite virtues of mind within our students is to cultivate critical thinkers'. Enhancing intellectual virtues appears to be one of the central requirements that characterises an individual critical thinker. The development of the traits of the mind occurs through the application of standards of reasoning to the elements of thought (Elder and Paul, 1994, p. 34). In drawing the relationship between these elements of critical thinking, Elder and Paul (2008, p. 60) claim that intellectual standards need to be applied to the elements of reasoning in order to develop intellectual traits. Elder and Paul (1994, p. 34) claim that 'critical is not simply a way of thinking but a way of being'. In other words, criticality refers to a state of the mind that defines one's qualities and dispositions. They suggest a list of some of these intellectual standards as

follows: *intellectual humility, intellectual courage, intellectual empathy, intellectual integrity, intellectual perseverance, faith in reason and fair-mindedness* (1994, p. 34).

From the above discussion, it can be concluded that critical thinking is not the mere application of certain skills of analysis and evaluation to a certain thought. Rather, it is a state of mind that characterises an individual's way of being. For individuals to engage in critical thinking, they should be equipped with appropriate dispositions – qualities that will motivate them to use critical thinking as well as allow them to be critical thinkers in the right sense. Therefore, a critical thinker should have or develop certain important features in order to achieve a high level of critical thinking.

2.5. The Normative Nature of Critical Thinking: Criteria for Thinking

The purpose of this section is to discuss the literature that deals with the normative nature of critical thinking. The aspect of thinking should achieve certain criteria in order to be considered critical and purposeful.

Thinking can be evaluated in terms of whether it meets certain standards that make it “good”, disciplined and critical. For this reason, critical thinking is viewed as a normative concept (Lipman, 1988; Bailin et al., 1999; Siegel, 2010) that involves the application of certain criteria that help people to engage in good thinking rather than ordinary thinking (Lipman, 1988, p. 39). To be considered critical, thinking should be suitable in terms of seeking to attain certain norms and criteria of acceptability (Siegel, 2010, p. 141). It should also achieve the purpose of making a judgement about an individual's beliefs and actions and developing an awareness of certain standards of adequacy and accuracy and, more importantly, trying to achieve them (Bailin et al., 1999, pp. 286-287). Therefore, thinking should be purposeful for either solving a problem, making a decision or a judgement about a particular mode of thought, or judging the credibility of a particular source or author.

The criteria and standards of thinking guide the thinker to achieve certain characteristics and ensure good-quality thinking and judgements. Lipman (1988, p. 39) asserts that ‘the fact that critical thinking relies upon criteria suggests that it is well-founded, structured and reinforced thinking, as opposed to ‘uncritical’ thinking, which is amorphous, haphazard and unstructured’. Moreover, Lipman (1988, p. 39) suggests that *validity, evidential, warrant and consistency* are some of the criteria on which critical thinkers base their thinking, and that *reliability, strength*

and *relevance* are meta-criteria that characterise an individual's reasons. Thus, judgement must be supported by valuable evidence and backed up with adequate reasons.

To conclude, the above discussion demonstrates that critical thinking is not random thinking about a particular thought or knowledge. Rather, thinking in critical thinking is supposed to meet certain criteria that defines the quality of the thinking product. Some of these criteria include making a judgement, structured thinking, reliability and evidential.

2.6. The Scope of Critical Thinking: Barnett's Model

The scope and application of critical thinking is broad and not limited to one area or context. McPeck (1981) argues that criticality does not happen in general and does not exist as a skill in isolation; it always involves thinking about a certain problem, activity or subject area. As will be demonstrated below, critical thinking is triggered by a stimulus and takes place within various areas such as the ideas, beliefs and assumptions that individuals hold about a certain type of knowledge. For example, the model of a critical being initiated by Barnett (1997) defines the scope and the various areas where critical thinking can be employed. Barnett (1997) suggests a broad model of criticality that describes the essence of a critical being or a critical person in contrast to the narrow view of critical thinking as the mere critique of formal academic knowledge learnt in education. Since the application of critical thinking is not restricted to the ideas and thoughts of formal knowledge, Barnett (1997) widens the scope of criticality to include other domains where it can occur and identifies the aims that it achieves. These domains encompass critical reason about knowledge; critical self-reflection, which is concerned with the self; and critical action, which occurs in the world (Barnett, 1997). Barnett (1997, p. 69) summarises the model as per table 1:

	Domains	Forms of Criticality
1	Knowledge	Critical reason
2	Self	Self-reflection
3	World	Critical action

Table 1 Domains of Critical Being and their Associated Forms of Criticality

In this table, Barnett shows that criticality is not limited to the area of formal knowledge of academic subject disciplines, but is also applicable in domains of the self and the world, through critical self-reflection and critical action respectively. Barnett (1997, p. 7) asserts that the critical thinking that is generally referred to in Western HE is limited to only formal knowledge and neglects the domains of life and the world. For this reason, he highlights the need for HE to put more emphasis on developing students as ‘actors in the world, not just thinkers’ (Barnett, 1997, p. 103). In other words, the development of critical individuals is not concerned with the mere thinking about formal knowledge, but also involves taking action in the world. In describing this, Dunne (2015) explains how criticality is different and includes a different aspect of critical thinking that relates to the idea that criticality is about being a critical individual engaged in everyday life. He claims that:

Criticality, in contrast to critical thinking, is not something that is simply “switched on” or engaged, when a specific topic that requires critical thinking emerges. Rather, criticality as critical being, is inexorably embedded in our everyday activities and experiences, regardless of how mundane they may appear.

In this quotation, Dunne suggests that critical being is about holding a critical mind towards everyday life situations – a way of being in the world and an embedded practice in one’s life. It relates to making decisions about various aspects of life despite how minor these decisions may appear.

From the above discussion, it is clear that the application and need for critical thinking go beyond academic settings to include other contexts. Such contexts include applying critical thinking to the self and to everyday life situations, as well as taking actions in the world. People should analyse and evaluate the information that they acquire in educational institutions. They should also question their existence in the world and self-reflect on their established thinking, in addition to taking actions in the world based on their self-reflection and criticality.

2.7. The Relationship Between Critical Thinking and Background Knowledge

The aim of this section is to demonstrate the relationship between critical thinking and background knowledge, an area of debate that has received much attention from certain scholars. The discussion below demonstrates that criticality is not bounded to the use of technical skills, but also requires some contextual factors, such as the acquisition and

comprehension of knowledge. Thus, I discuss, in this section, how possessing background knowledge is crucial for the practice of criticality. The reason for including this area of literature is because background knowledge is one of the elements that helps to avoid attributing students' non-engagement critically in classroom discussions and written assignments to a lack or deficiency in criticality. Rather, I demonstrate how unfamiliarity and a lack of background knowledge about a particular domain under discussion might sometimes be the reason behind students not thinking critically about this domain.

The practice of criticality involves but is not restricted to certain abilities, skills and dispositions. It also involves other components, such as background knowledge of a specific subject. McPeck (1981) and Bailin et al. (1999) disagree with scholars who define criticality in terms of a list of skills and dispositions that, when developed, mean that the individual is qualified as a critical thinker. Bailin et al. (1999, p. 290) consider such a conceptualisation as an inappropriate way of looking at the process of developing critical thinking, because it might push teachers to assume that improving students' higher-order thinking is limited to the teaching of these skills. Critical thinking is determined by the possession of background knowledge within a field, rather than viewing it as a series of generic skills that are applicable at any time and in any place (Willingham, 2007, p. 10). In a study conducted by Lucas (2019, p. 5), the participants considered background knowledge and being well-informed about a particular topic as among the necessary conditions for criticality to happen. Ennis (1989) also agrees on the importance of background knowledge of a subject in thinking critically, but insists on not considering this aspect as the sole condition for criticality. Therefore, critical thinking goes beyond the application of skills of analysis and evaluation to include the need for background knowledge.

The possession of sufficient knowledge and familiarity with a certain field define the quality of an individual's thinking and questioning. Background knowledge of a particular field is one of the crucial components of critical thinking (McPeck, 1981; Ennis, 1989; Bailin et al., 1999). In order to think critically in a field and carry out an evaluation of specific information or forms of thought, it is important to develop and possess a mastery and comprehension of the content of that field (McPeck, 1981, p. 24). In addition, Bailin et al. (1999, p. 290) claim that 'the depth of knowledge, understanding and experience persons have in particular area of study or practice is a significant determinant of the degree to which they are capable of thinking critically in that area'. Having sufficient knowledge about a specific subject in terms of the debates and

discussions that have been established in the field is considered among the requirements of thinking critically and approaching a specific subject with a critical eye.

Familiarity with knowledge of the field enables individuals to engage in good-quality thinking. For this reason, McPeck (1981) highlights the role and importance of knowledge surrounding the field under consideration in engaging in an activity with reflective scepticism, in an appropriate way and when necessary. In other words, this background knowledge of the field is the reference that allows individuals to know when and where to apply criticality and scepticism in a field. Ballard (1995, p. 155) asserts that an individual's 'productive questions are both shaped and constrained by the questioner's own knowledge of the field'. The knowledge and understanding of a domain are influential in the practice of criticality and play a role in defining the degree of critical thinking and the nature of the questions that can be generated.

Controversy has been raised in relation to the question of whether knowledge precedes critical thinking or the inverse, i.e. whether critical thinking precedes knowledge acquisition. In this respect, Barnett (1990, p. 167) refers to the need for the presence of particular content in order for criticism to occur and be applied. In other words, students are expected to possess some knowledge, on which they apply their criticality. However, Burkhalter (2016, p. 4) disagrees with the view that the learning of facts and information precedes criticality because, according to her, this idea denies the essence and significance of critical thinking. Rather, she believes that 'facts and information should be subjected to the rigors of CT [critical thinking] *as they are being learned*' (Burkhalter, 2016, p. 5). Critical thinking is considered a tool that helps with learning knowledge of the field by processing the received information, rather than by regurgitating it without critical consideration. In simple terms, the content of a subject is learnt through the application of criticality to that subject.

To sum up, critical thinking is a practice that requires not only the use of skills of analysis, evaluation, synthesis and questioning, but also the necessary background knowledge of a specific domain in order to be able to think critically and effectively. The acquisition and possession of sufficient knowledge defines both the degree of criticality applied towards the content and the quality of the questions that can be raised. In addition, it enables people to develop an understanding of the appropriate time and place at which to engage with scepticism

in the field. Criticality is equally regarded as an important tool through which to learn background knowledge of a field or subject discipline.

2.8. The View of Criticality as a Western Concept

In this section, I discuss the view that critical thinking is a Western practice that can only be developed through being immersed in Western society. The influence of cultural background and social contexts on the act of thinking critically will also be discussed. In addition, this section comprises a discussion of the importance of differentiating between theory and practice of critical thinking, because the presence of criticality in British university statements is not evidence of its application. The reason for discussing this literature relates to the assumption in relation to international students' inability to think critically because of the Western nature of critical thinking which is assumed to be a type of thinking that is absent in other cultures of thought, particularly in Eastern traditions.

Evidence from the literature demonstrates that criticality is viewed as a concept that is typical to the West and suggests that it is fostered merely in the Western world and society (e.g. Ramanathan and Kaplan, 1996; Atkinson, 1997). Ryan and Louie (2007, p. 412) assert that 'the questioning approach underpinning critical thinking is presumed to be unique to Western pedagogy and is said to have its genesis in the Socratic tradition'. Moreover, Atkinson (1997, p. 72) argues that criticality is a social practice present in cultures where it is encouraged, and since it is a culture-related practice, it is challenging to teach it to international and language-minority students. A social practice refers to a type of behaviour or practice that is developed naturally and unconsciously through immersion in the environment in which an individual was brought up, and it is this implicit nature of the social practice that makes it effective (Atkinson, 1997, p. 73). Thus, the view that criticality is a social practice that is developed only in the Western world and has roots in the Socratic method would seem to suggest that international students' development of critical thinking would be difficult.

Cultural backgrounds and social contexts are seen by Ramanathan and Kaplan (1996) to be influential in the acquisition (or not) of critical thinking. For this reason, Benesch (1999, p. 574) claims that 'non-native speaking students are portrayed, at once, as deterred by their cultural backgrounds from thinking critically'. For example, Ramanathan and Kaplan (1996, p. 230) consider criticality as a socio-cognitive practice and state that 'the ability to think in particular ways can be seen to be rooted as much, if not more, in the social contexts than in the

individual'. In other words, critical thinking is determined by social rather than individual criteria. Again, Ramanathan and Kaplan (1996, p. 227) assert that the nature of critical thinking skills as being drawn from cultural backgrounds appears to mean that L2 (second language) learners are unable to use these skills. They assert that criticality is acquired through being raised in a certain society, which makes it a difficult task for ESL (English as a second language) writers who have not experienced this society to develop critical thinking skills. Therefore, the social context in which international students have been brought up and their fact of being non-English native speakers are considered two factors that hinder them from fostering their criticality.

Despite the fact that the application and development of students' critical thinking are among the objectives and requirements of Western universities, it is important to differentiate between theory and practice. Lee (2012, p. 395) states that 'the ultimate goal of western-style universities is creating self-directed, self-motivated, independent learners who are able to critique and direct their own work with critical thinking and rational judgment'. In addition, Thomas (2011, p. 26) claims that most of the time developing students' criticality is among the outcomes that Australian HE institutions include in their statement of purpose and tasks. The emphasis of Western universities is on developing students' autonomy and the use of criticality in their learning. On some UK university websites, statements about the objectives of developing critical thinking in students are present. Examples can be found on the Leeds University website (University of Leeds, no date), Sussex University website (Wilson, 2018) and the website of the University of Edinburgh (University of Edinburgh, 2021). However, the fact that criticality is mentioned as one of the academic skills and objectives that these universities seek to encourage and develop in students does not necessarily suggest that it is taught and practised in the classroom. In this regard, Barnett (1997, p. 50) declares that:

Most universities have a stated mission, usually indeed in the form of a "mission statement". But we should distinguish between a mission as stated and a mission as practised ... The question before us is not whether universities refer to the idea of critical thought in their manifestos, but rather whether universities are in practice conducive to the development of the forms of critical thought that we have begun to sketch out.

Barnett claims that the use of critical thinking in educational institutions cannot be defined by the university or school's statements and curriculum goals, and is rather determined by its actual practice in the classroom in terms of providing students with ample opportunities, space

and time to employ it. He adds that the nature of the practices, teaching methods and activities adopted in the classroom are crucial in determining whether criticality is applied in practice or merely in theory. Therefore, the presence or non-presence of the concept of critical thinking within the curriculum and university statements does not necessarily imply its actual application in the classroom.

To summarise, criticality is assumed, as discussed in the paragraphs above, to be a social practice and a Western concept that is acquired through immersion in the Western world by experiencing certain cultural backgrounds and social contexts. The social context and cultural background of international students are considered by some authors as two aspects that influence and hamper their use and development of critical thinking. Although criticality is one of the objectives of Western universities mentioned in their statement of outcomes is not evidence of the actual application of it in the classroom.

2.9. Theories for Understanding the Data

The objective of this section is to present two theories that I employed to understand the data and interpret the findings: Vygotsky's sociocultural theory and Chomsky's theory of language learning on the distinction between competence and performance. It is important to mention that I did not use them as a theoretical framework from the beginning of the study but, I was able to visualise a connection between the findings and these two theories after the data collection and analysis and at the start of writing up the data chapters.

2.9.1. Chomsky's Competence and Performance Dichotomy

The idea of competence and performance in language learning is convenient when explaining the understanding of critical thinking generated in this study. This distinction is useful in depicting the nature of critical thinking as a two-sided practice, i.e. a mental process and a product that results from the mental process (see chapter 8, section 8.2.1).

The differentiation between competence and performance is a theory that was originally initiated in the field of language learning by the American linguist Noam Chomsky. Its aim is to distinguish between competence and performance while learning and using a language. Chomsky (1965, p. 2) describes a distinction between '*competence* (the speaker-hearer's knowledge of his language) and *performance* (the actual use of language in concrete situations)'. In other words, an individual's competence refers to their mastery of the language

system whereas performance relates to the use and application of this system to produce utterances in the external world. In explaining the relationship between competence and performance, Newby (2011, p. 15) asserts that ‘the use of the linguistic code of a language (performance) is steered by tacit rule-based knowledge stored in the minds of speakers (competence)’. The competence that refers to the individual’s implicit and cognitive knowledge of the language system is a determining factor in people’s performance and use of the language. In simple terms, performance is informed by competence. While the aspect of competence involves the knowledge and grasp of the grammatical rules and structures of the language, performance refers to the embodiment and articulation of this competence in more concrete ways.

There are issues in relation to the development of competence and performance within an individual and the extent to which an individual’s actual competence in language is incorporated in performance. There is not a definite process or structure that suggests that competence develops before performance or the opposite. McCorskey, (1982, pp. 5-6) claims that:

In some cases, competence develops before performance, in others the pattern is the reverse. Many studies have illustrated that children, for example, know more than they can say ... In contrast, children can be taught to recite the pledge of allegiance or the Lord's prayer long before they have any understanding of what they are reciting. One may not infer competence from performance ... Neither is a necessary condition for the existence of the other.

McCorskey seems to imply that competence and performance do not develop at the same time and level. In addition, the existence of performance does not necessarily signify the existence of competence within an individual and vice versa. Children might develop a good understanding of the language system, but they do not manifest this competence in practice. In the opposite sense, they can also perform well in a language without a mastery and knowledge of how language is structured. In a similar vein, Crain and Fodor (1989, p. 122) argue that ‘linguistic competence may not always be revealed by linguistic performance’. In brief, an individual’s use of language in concrete situations does not usually reflect the individual’s actual understanding and internal knowledge of the language system. Newby (2011, p. 20) notes that Chomsky rejects the idea that performance cannot be both an ideal and a reliable way to determine competence. However, Crain and Fodor (1989, p. 119) claim that it is not possible to associate the poor performance of children in language with their lack of knowledge

about the grammatical structures of the language unless there are methods that recognise and detect children's flaws.

2.9.2. Vygotsky's Sociocultural Theory of Learning

The sociocultural theory of learning was generated by the Russian psychologist Lev Vygotsky (1978). Its fundamental idea relates to children's need for assistance in the early stages of childhood to complete certain activities before carrying them out independently. The reason for discussing this theory relates to its relevance in interpreting the findings of this study in relation to the participants' perceptions of their way of developing critical thinking skills (see chapter 8, section 8.2.2). This relevance is found in the role of societal and cultural factors in influencing the participants' development of criticality. The focus of Vygotsky's sociocultural theory is on the myriad elements that contribute to the development of children's thinking, including society, culture and historical encounters (Pathan et al., 2018, p. 232). Scaffolding, 'more knowledgeable other' (MKO) and 'zone of proximal development' (ZPD) are some pertinent key terms that will be discussed and employed for the purpose of this study.

The ZPD, which was initiated by Vygotsky, refers to the 'distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers' (Vygotsky, 1978, p. 93). In simple terms, it is the 'zone between a child's test performances under two conditions: with or without assistance' (Wells, 1999, p. 313), thus it consists of the difference between a learner's actual achievement and the achievement that they reach with the guidance of others. Mercer (2000, p. 40) asserts that 'Vygotsky's conception of the ZPD embodied his view that intellectual development is something sensitive to dialogue and situational factors, a process by which *intramental* (individual) processes can be facilitated and accelerated by *intermental* (social) activity'. Mercer talks about the complementary nature between the individual and the social aspects in the sense that children's individual abilities and intellectual development can be enhanced through interaction with and guidance from the social world.

Scaffolding is another practice of the sociocultural theory of learning. It refers to the guidance that children receive from adult individuals to help them succeed in completing certain activities at which they are not competent. According to Mercer (2000, p. 40), the objective of scaffolding is to provide initial assistance that allows learners to develop a certain degree of

competence to do a particular task, and hence act autonomously in similar activities in the future. Thus, scaffolding serves as a tool that enables children to achieve both competence and independence in doing specific activities that they could not do before.

The idea of “more knowledgeable other” (MKO) is another concept of the socio-cultural theory that is relevant in demonstrating the influence of adults and more experienced people on the way in which the critical thinking of the participants is shaped. MKO refers to the contribution of adults who possess the necessary and required knowledge that supports children to accomplish a certain activity. Wells (1999, p. 295) claims that ‘Vygotsky stressed the crucial role of more expert members of the culture in providing the guidance and assistance that enable the learner to become an increasingly competent and autonomous participant in the activities in which he or she engages’. Expert adults can act as the MKO, who provide the guidance for children to develop both the competence and independence to accomplish certain activities independently. More specifically, children or learners are assisted by adults who have more experience and knowledge of the world, in order to help them develop an independent way of thinking and acting.

2.10. Conclusion

This chapter has addressed different areas of the literature in terms of introducing the history, definitions and components of critical thinking. The historical roots and initial practices of critical thinking appeared in the Greek tradition, specifically at the time of Socrates, who encouraged the use of both questioning and not attributing knowledge to authority. Following Socrates, criticality has received major attention from many philosophers and scholars across various parts of the world throughout time. These scholars have contributed to the development and the call for the use of critical thinking.

The ambiguous nature and lack of a consensus on what constitutes critical thinking has led to the generation of numerous definitions that differ from one another. Based on an analysis of some of these definitions, the discrepancy between them could be due to a variety of factors. These factors include the perspective or discipline from which critical thinking is approached, the focus of each definition and the use of different expressions interchangeably with the notion of critical thinking. First, criticality has been explored from a philosophical, a socio-cognitive and an educational perspective. Second, different authors emphasise different elements of

criticality in the various definitions that they have generated in relation to the concept. Third, distinct but related expressions are employed to indicate the same meaning as critical thinking.

The discussion of frameworks of critical thinking, namely Paul and Elder's framework of criticality (2008) and Bloom's taxonomy of educational objectives (1956), demonstrates that criticality can be described in terms of a set of skills and dispositions. Criticality is depicted as encompassing skills of analysis, evaluation, synthesis and creation. The skill of analysis involves the dissection of an argument into its elements of thought, such as information, points of view, concepts, assumptions, implications and inferences. The skill of evaluation refers to the use of standards of reasoning, encompassing clarity, precision, accuracy, relevance, breadth and depth – standards used to evaluate the elements of thought. Moreover, critical thinking is also described as a state of mind involving various dispositions that characterise a critical thinker, such as open-mindedness, tolerance, intellectual empathy, fair-mindedness, intellectual autonomy, intellectual perseverance and intellectual humility.

Based on Barnett's model (1997), the scope of critical thinking is broad and not restricted to an academic setting. Criticality can be applied in different domains and areas of life, rather than being limited to formal knowledge acquired in educational institutions. These areas include thinking critically about the self and the world. In addition, one of the important components of criticality is the acquisition and comprehension of knowledge of a particular domain, to think critically and effectively in an area, it is important to be well-informed and develop an understanding of that field.

Critical thinking has been viewed as a Western notion that can be developed through integration in the Western world and society. Students from the non-Western world are viewed as unlikely to possess the ability to think critically. Including statements of purpose in Western university curriculums about developing students' criticality does not constitute evidence that demonstrates the actual practice of critical thinking in the classroom.

The chapter contains a discussion of the two theories that are used in order to interpret the data. These theories involve Chomsky's theory of language learning and Vygotsky's sociocultural theory. Chomsky's theory deals with the distinction between competence – knowledge about the language system, and performance – the use of language in concrete situations. Vygotsky's sociocultural theory involves the importance of scaffolding which refers to the need of learners to be guided before conducting a particular activity independently. This theory also involves

the idea of MKO that refers to the experienced adults who can provide assistance for learners in order to conduct activities autonomously.

The discussion generated in this chapter suggests that investigating the meaning of critical thinking is still crucial, despite the large amount of research that has been conducted in this area. The ambiguous nature of criticality, differences in conceptualising it and the existence of various perspectives from which it can be addressed, as well as the view that it is a Western practice, make it a non-exhaustive area of study. For this reason, this research is an attempt to explore Algerian students' understanding and ways of conceptualising criticality, a perspective that has thus far received little attention. The rationale behind choosing Algerian students is discussed in much detail in the next chapter.

Chapter 3: The Teaching of Critical Thinking, and International Students' Criticality

3.1. Introduction

The purpose of this chapter is to discuss two areas in relation to the topic of criticality. The first area covers a discussion of the literature on the teaching and development of critical thinking skills in the context of education. Critical thinking instruction is faced with the challenges of the ambiguity of the concept of criticality; and confusion about the appropriate teaching approach, along with uncertainty on the transferability of its skills from one context to another. The second area relates to the literature covering the relationship between critical thinking and international students. This area includes the literature that otherises international students who have been approached from the point of view of a deficit model and stereotyped as non-critical thinkers, due to their culture and tradition of thinking. It also includes the literature that critiques and challenges the body of literature otherising international students. This chapter comprises the following sections:

- A discussion of the literature on the various methods that are regarded as suitable for the development of critical thinking skills.
- An account of the difficulties that interfere in the teaching of critical thinking, as well as a discussion of a possible approach to ensure its integration in educational settings.
- A discussion of the literature that describes how international students have been “othered” and treated from the perspective of a deficit model because of their assumed lack of criticality.
- A discussion of the body of literature that deals with the position and practice of critical thinking in the Arab world and North African countries through the various studies that have been conducted in these settings.
- A discussion of the emerging literature that challenges the stereotypes about international students' deficiency in criticality, in addition to explaining the performance of these students in terms of their differences and the problem of internationalisation.

3.2. Developing Critical Thinking

Among the objectives of this research, one is to look at the way in which the participants develop their critical thinking. For this reason, in this section I aim to discuss the research that has been conducted on critical thinking development and explain how students are found to develop their criticality. I also explain how certain researched techniques and methods have been found to be beneficial -or not- in fostering students' critical thinking abilities.

Several books (e.g. Fisher, 2001; Moore and Parker, 2009; Brink-Budgen, 2010; Cottrell, 2011; Wallace and Wray, 2016; Chatfield, 2018; Bowell, 2020) have been presented as guides for students in particular to develop critical thinking. Such books might serve as a reference for understanding and clarifying the diverse critical-thinking-related concepts and technical terms. They also introduce advice, guidelines and activities in relation to how to evaluate and construct arguments. However, it is important to mention that, in this study, I discuss the empirical research that explores the use of certain methods and techniques for students' development of criticality.

The literature (e.g. Grogan, 2011; McCall, 2011; Saiz and Rivas, 2011; Rashid and Qaisar, 2016; Saptura et al., 2019; Ahmady and Shahbazi, 2020; Fitriani et al., 2020; Lapuz and Fulgencio, 2020; Polat and Aydin, 2020; Samba et al., 2020; Tang et al., 2020) demonstrates the existence of various strategies, programmes, practices, techniques and software that have been suggested and applied in order to explore their effectiveness in improving students' critical thinking skills. In this respect, Walker (2003) carried out a review of the literature and suggests that questioning, classroom discussions and debates, and written assignments are three strategies that could promote students' critical thinking. Some other techniques that have been tested for their effectiveness in developing critical thinking involve the combination of jigsaw and problem-based learning (Saputra et al., 2019), teaching philosophy for children (Rahdar et al., 2018) and questioning strategies or Socratic questioning (Rashid and Qaisar, 2016; Sahamid, 2016) in addition to students' projects (Canziani and Tullar, 2017). The abundance of research on exploring the possible strategies that may enhance students' criticality indicates the significance of criticality in education and the enormous attempts to find suitable methods that help students to develop critical thinking skills.

The focus of some studies on international students' development of criticality only during their experience in Western universities might implicitly suggest that their previous experience is

disregarded. In other words, researching international students without considering the contribution of their home country to the development of their criticality is problematic. In this respect, Durkin (2008) and Faknule et al. (2016) conducted research with international students and considered how they adapted to the new context of Western countries. Faknule et al. (2016) carried out semi-structured interviews with six Chinese master's students about their perceptions of developing their critical thinking during their one-year experience in Scotland. They found that developing criticality is a gradual process that ranges from two months for some students to one semester for other students, through critical reading and writing courses, classroom discussions, writing assignments and joining social groups. However, this study did not take into consideration the experiences of the participants in their home country such as during their undergraduate studies. This aspect might indirectly suggest that the development of their criticality started only during their engagement in the Western university, and that their home university did not play a role in this development. Durkin (2008) carried a study using interviews with Chinese students in terms of their critical thinking skills and adaptation to Western norms of argumentation, as well as investigate the way these students' cultural influence either facilitate or hinder their understanding and attitudes of Western criticality and argumentation. The findings showed the reluctance of Chinese students to adapt to the British approach of argumentation because they find it an aggressive way of searching for the truth.

To conclude, much research has been conducted on exploring the effectiveness of certain methods on enhancing students' criticality. In addition, some studies have investigated the personal experiences of international students with regards to how they develop critical thinking skills. However, they are limited to only looking at students' experiences of developing critical thinking in Western universities without valuing the contribution of their universities to this development.

3.3. Critical Thinking Instruction

The purpose of this section is to address the area of teaching critical thinking in education. Since this research explores students' development of critical thinking, it is important to discuss how education strives to enhance students' criticality through the pedagogy adopted in different educational settings. In the first sub-section, I present the issues that arise when addressing the area of teaching criticality. In the second sub-section, I generate a discussion about how developing and teaching critical thinking can be an interplay between lecturing and dialoguing

i.e. creating a balance between knowledge acquisition and critical thinking by allowing discussions, debates and questioning in the classroom.

3.3.1. Issues for the Integration of Critical Thinking in Education

I first discuss the issues that need to be considered before integrating critical thinking in the classroom. Despite the encouragement to integrate criticality in education, there is a conflicting debate regarding the possibility of formally teaching it in classrooms. In this respect, Willingham (2007) claims that cognitive research on critical thinking points to the unlikelihood of being able to teach criticality. According to the literature that will be cited in the following paragraphs, the difficulty that surrounds this area appears to be the result of three issues. The first relates to the ambiguity of the concept of critical thinking and the lack of clear and concrete practices to teach. The second issue refers to the controversy over the appropriate pedagogical approach to adopt in the classroom - that is, whether criticality should be integrated into a certain subject matter or taught separately. The third issue is the unlikelihood of the transferability of critical thinking skills from one context to another, i.e. from the classroom to real-life situations.

The lack of clarity about what constitutes criticality in practice is the first issue that results in teachers' confusion about what to incorporate and teach in the classroom. Bailin et al. (1999, p. 285) state that the agreement on the necessity of teaching critical thinking in North America and the UK soon disappears when dealing with its meaning and teaching at the concrete level. In this regard, Egege and Kutieleh (2004, p. 79) contend that the absence of obvious outcomes to seek to achieve and teach in education, as well as students' lack of knowledge of the necessary practices to apply as part of criticality, make the teaching of critical thinking a challenging task. The failure to determine concrete critical thinking practices to teach and on which to measure students is considered a complicated issue. Kuhn (1999, p. 17) suggests that teachers should be assisted in including thinking-related objectives with subject-related objectives, and 'make them concrete realities rather than vague abstractions'. Therefore, developing specific thinking skills is set out as the goal of critical thinking instruction (Halpern, 1993, p. 240). To make the teaching of critical thinking a practical and a feasible task, clarifying the meaning of criticality and identifying its requirements and outcomes are necessary.

The second issue refers to the confusion about the appropriate approach to adopt for the teaching of criticality. When thinking about the incorporation of critical thinking in the

curriculum, a question is raised about whether it should be taught as a separate general subject or whether it should be embedded in a specific subject (Ennis, 1997). Ennis (1989, p. 5) lists four approaches to critical thinking instruction, namely the general, infusion, immersion and mixed approaches. The general approach involves teaching critical thinking skills and dispositions separately from the subject matter (Ennis, 1989). The other two main approaches are the infusion approach, where critical thinking is explicitly integrated in the subject, in contrast to the immersion approach, where it is taught and encouraged in an implicit way (Ennis, 1989, p. 5). Ennis (1997, p. 1) suggests implementing an approach that integrates the general approach with either the infusion or the immersion approach, which Sternberg (1986) calls the mixed approach. Deciding on the appropriate approach to adopt in the classroom is also considered one of the crucial elements to ensure an effective integration of criticality in education.

Evidence from the literature demonstrates that the choice of teaching criticality in a general or subject-specific course is a controversial issue. Around one million Californian college students attend critical thinking courses because of their conviction of the suitability of these courses in helping them to become successful thinkers (Halpern, 1993, p. 239). For this reason, Halpern (1993, p. 239) questions the effectiveness of adopting an explicit and direct approach to teaching criticality. He conducted a review of the empirical literature relating to seven studies that evaluated the efficacy of programmes that teach critical thinking, concluding that formal teaching of criticality through special courses in the classroom is effective in improving students' critical thinking skills. Based on a systematic review of the literature on empirical studies, Bailin et al. (2008) found that general courses on critical thinking are more effective than those courses following an approach that incorporates it within a subject without explicit outcomes for it. In addition, Radulović and Stančić (2017, p. 9) assert that 'the overview and analysis of understanding education for developing critical thinking as the implementation of special programs reveal that it is perceived as a decontextualised activity, reduced to practicing individual intellectual skills'. In other words, teaching criticality in a general course is limited to the teaching of technical skills of analysis and evaluation without consideration of the context and content. However, the integration of criticality in a particular subject also seems to be problematic because, according to Ennis (1997), the transferability of the skills acquired in one subject to other subjects and areas of everyday life is unlikely. Therefore, the teaching of

criticality within a subject allows students to learn it within a context whereas its teaching in a general course seems to prevent the transfer of its skills to various domains and contexts.

The third issue relates to the transferability of critical thinking skills to different domains of life. Abrami et al. (2008, p. 1102) claim that developing students' criticality should not be limited to academic subjects but should also extend to the problems of daily life. The successful transfer of critical thinking skills to different contexts in the real world, rather than limiting its use to the classroom setting and exam situations, should be the aim of the teacher (Halpern, 1993, p. 241). However, some scholars (e.g. McPeck, 1981; Brookfield, 1987; Gelder, 2005) highlight the difficulty of transferring the use of critical thinking skills from one area to another. Brookfield (1987, p. 4) refers to a lack of evidence that reveals the possibility of transferring and applying criticality learnt in educational institutions to other contexts such as the workplace, television or media. Similarly, Gelder, (2005, p. 43) asserts that since critical thinking is viewed as a generic skill that can be applied in different fields and contexts, there is no guarantee that its use can be transferred from one context to another unless it is taught for that particular purpose. The teaching of criticality for the application of its skills in only academic settings, without transferability to other contexts, seems useless.

To sum up, the task of teaching criticality in education, and specifically in the classroom, is not easy. Rather, it faces several challenges and issues. These challenges include the ambiguity of the concept of critical thinking, which leads to a lack of clarity about the necessary skills to teach in the classroom. Confusion about the ideal teaching approach to adopt in the classroom for critical thinking instruction is another challenge. A further challenge is the uncertainty about whether critical thinking skills are transferrable to other domains and contexts.

3.3.2. The Teaching of Critical Thinking

Criticality is considered one of the intellectual skills that some countries and educational institutions strive to incorporate in their teaching. The development of criticality is among the widespread aims that HE institutions seek to achieve in terms of students' learning (Yang et al., 2005; Snider, 2017). Portelli (1994, p. 138) claims that 'in the 1960s, philosophers of education such as Israel Scheffler, John Passmore, Robert Ennis, and Maxine Greene, explicitly attempted to connect the idea of critical thinking with the teaching context'. Siegel (2010, p. 143) lists four reasons for considering critical thinking as a paramount educational ideal. He claims that it is a way of showing respect for students and considering them as persons and subjects; it is

a way in which to prepare them for their adulthood; it is fundamental for subjects such as literature, mathematics and history; and finally it is the way for leading to a democratic life.

According to the literature, a balance between knowledge acquisition and the practice of thinking and cognitive skills in the classroom is essential for critical thinking instruction. In this respect, Benesch (1999, p. 578) highlights that ‘teaching critical thinking is neither an unguided free-for-all nor a didactic lecture but a balance between extended student contributions and gentle challenges by the teacher’. Both the teacher and students are supposed to contribute to the learning process in the classroom by sharing thoughts and raising questions about the content dealt with. Moreover, Burkhalter (2016, p. 5) claims that ‘facts should not never be the end-product of education’. In other words, education should go beyond the mere focus on the learning of facts and previous ready-made thoughts and knowledge to include thinking about these thoughts and understandings in a critical way. In this regard, Garrison (1992) refers to the importance of the interplay between critical thinking and self-directed learning. He claims that self-directed learning ‘should be seen as a collaborative process between teacher and learner’ (1992, p. 141). The interaction between students and the teacher in a learning environment is also necessary in order to ensure the practice of criticality in the classroom. Garrison (1992, p. 142) maintains that ‘the responsibility for knowledge acquisition can be shared by accepting the guidance and support of others; but again, it is ultimately the responsibility of the learner to make sense of new information and develop knowledge structures’. Therefore, education should value the contribution of both the teacher and students in generating and making sense of knowledge.

The practice and integration of critical thinking in teaching is central to education rather than peripheral. Pithers and Soden (2000, p. 241) claim that ‘critical thinking is taught in the course of teaching discipline knowledge’. In other words, criticality is included within the content of the discipline, i.e. used in order to think in a critical way about the content being taught. In the same vein, Elder and Paul (1994, p. 34) claim that:

Critical thinking is not something additional to content, but rather integral to it, something which in fact “defines” the manner in which content is organized, conceptualized, and applied by experts in the field. Content is not fragmented bits and pieces of information (which is the underlying assumption in didactic teaching) but a system with a definite set of logical relationships; an organized structure of concepts, principles, and understandings; a system that requires the asking and answering of a certain

set of questions and problems; and, ultimately, a disciplined mode of thinking.

In this quote, Elder and Paul appear to claim that critical thinking is a tool through which content or knowledge is created, taught and learnt. They highlight the vital role that critical thinking plays in the generation of content. They claim that the generation and learning of content happen thanks to criticality. In other words, content is a combination of thoughts that involves connections and relationships between different information that are created through criticality, rather than separate and isolated information. Therefore, the use of criticality in the classroom in order to understand and create content is mandatory to education rather than optional.

The teaching of critical thinking and construction of meaning and knowledge necessitates an environment that encourages interaction and collaboration between different agents in the classroom. Barnett (1997, p. 16) states that students' application and development of criticality might happen in the presence of and exchange with other students. For instance, dialogue in creating a type of interaction that encourages exchange between the students and the teacher (Freire, 2000, p. 80). Freire (2000, p. 80) maintains that 'the teacher is no longer merely the one-who-teaches, but one who is himself taught in dialogue with the students, who in turn while being taught also teaches'. In other words, the task of teaching is the role of both the teacher and the students, who again contribute to the learning of each other. In this respect, Garrison (1992) refers to the interdependence and interplay between critical thinking and self-directed learning for the generation of meaning and the acquisition of knowledge in the context of adult education. Garrison (1992, p. 139) maintains that creating meaning through critical thinking goes beyond the mere internal reflection of the individual to include sharing that meaning with others in order to justify, confirm and validate it. Therefore, building one's knowledge and meaning is not solely dependent on individual critical reflection, but also requires the sharing of this meaning with others in order to discuss it and arrive at a convincing conclusion.

To conclude, for the integration of criticality in education, it is important to achieve a balance between the acquisition of knowledge and the use of critical thinking. The role of education is not only related to the transmission of facts and teaching of knowledge, but should also allow students to learn how to think critically about this knowledge. Moreover, both the teacher and the students are responsible for constructing knowledge and meaning, an aspect that is central for an environment that encourages the practice of critical thinking.

3.4. Critical Thinking and International Students

The objective of this section is to discuss the relationship between international students and critical thinking. Since I am researching Algerian students in an international university in relation to criticality, it is important to establish an understanding of how international students' critical thinking is viewed. I seek to discuss the deficit model from which international students are approached due to the assumed lack in their critical thinking abilities. I explain on what basis they are regarded as deficient in skills of analysis and evaluation. Moreover, I attempt to establish an understanding of how these students have been "othered" based on their critical thinking.

3.4.1. The Deficit Model: Stereotypes About Lack of Critical Thinking

In this section, I discuss the body of literature that "otherises" international students. I demonstrate how international students are framed within a picture that suggests a deficiency in their thinking. I explain how the differences and difficulties that these students face in Western universities are interpreted as a lack of critical thinking skills. I also discuss how the performance and behaviours of international students in Western universities are explained in terms of deficiency in their thinking. It is important to mention that there is another set of literature (see section 3.6) that critiques and challenges the claims of the literature that is presented in this section.

Many studies that I review in this section specifically concern Chinese students and other students from the Far East because of the large literature that has been published on these students. In explaining the abundance of research on Chinese students in relation to critical thinking, Pu and Evans (2019, p. 51) claim that 'Chinese students make up a large proportion of international students globally and the problems they encounter with the application of critical thinking in their studies have attracted researchers' attention'. The focus of research on Chinese students' experiences of criticality is due to the large number of students studying in Western universities along with the assumed issues they face with criticality. The comments about their supposed deficiencies in criticality are part of a wider discourse that includes international students from other non-Western parts of the world, including students from North Africa and the Arab world.

Based on the literature, the discourse and stereotypes² about Chinese students' deficiency and poor performance in criticality seems to be nurtured by some Western lecturers. Clark and Gieve (2006, p. 63) claim that 'much of the evidence produced for the way Chinese students behave in classroom settings has been drawn from reports and perceptions by Western instructors, thus filtered through their own values, experiences and standards'. Chinese students' performance in the classroom is depicted through the lens of Western teachers. In this respect, Fell and Lukianova (2015, p. 3) note that international students are described by British teachers in his study as producing low-quality work because of their deficiency in criticality, an issue that these British teachers attribute to the students' embedded cultural beliefs and backgrounds. The findings of a study conducted by Nisbah (2012) show that there is a mismatch between British teachers' expectations in this study and the difficulties encountered by international students. Nisbah's findings relate to the teachers reporting on international students' lack of a clear understanding of critical thinking, reliance on the copying and pasting of information without analysis and evaluation, and lack of coherence and structure when presenting their arguments. Therefore, the assumed deficiency in critical thinking abilities relates to the features for which international students are criticised by their Western teachers due to their behaviours in the classroom.

Evidence from the literature demonstrates that international students are criticised for their language, learning approaches and critical thinking abilities. It also shows that these students' behaviours, including passivity, memorisation, non-contribution to classroom discussions, over-dependence on teachers and reproduction of information, are assumed to be signs of their non-criticality. Vandermensbrugge (2004, p. 418) claims that language issues, critical thinking difficulty, use of rote learning and plagiarism are some of the features for which international students have been criticised. Goode (2007) states that international students are addressed from a deficit model because of their tendency to depend on teachers for guidance about the information to learn and the books to consult. Moreover, Ryan and Louie (2007, p. 406) claim that 'Confucian-heritage cultures students are often characterised as passive, dependent, surface/rote learners prone to plagiarism and lacking critical thinking'. Similarly, Nisbah (2012) found that international students had passive learning experiences and focused on the reproduction, collection, and memorisation of information. She also found that the critical-

² Hall (2013, p. 247) states that 'stereotyping reduces people to a few, simple, essential characteristics, which are represented as fixed by nature'.

thinking-related issues that the students experienced in their writing related to a lack of clarity, critical evaluation and supporting evidence, in addition to a lack of drawing conclusions. The various practices and behaviours that international students adopt in Western universities are considered the source and evidence for their deficiencies in their way of learning.

International students' learning differences and the difficulty in adapting to the Western university standards and learning styles have led to the creation of stereotypes about a deficiency in their thinking and learning. For this reason, some studies (e.g. Moore et al., 2003; Hellstén, 2007; Durkin, 2008; Lee, 2012; Fraser and Smails, 2013; Fakunle, et al., 2016) have been conducted to investigate students' experiences of adaptation to the critical thinking practices in Western universities. In a systematic review of the literature on teaching and learning in an international classroom, Safipour et al. (2017) found that international students' unfamiliarity with the new educational environment and their use of learning styles that are no longer valid in the host university are among the practices that lead to the creation of stereotypes about the students. International students are approached in the literature as a homogenous group that is looked at from a deficit perspective because of their difficulties in terms of the language and learning styles (Morrison et al., 2005, p. 328). In addition, they are regarded as problematic and addressed from a deficit perspective due to their distinctive way of producing knowledge in English speaking institutions (Tran, 2013, p. 2). Therefore, the different ways of learning that they apply in Western universities are regarded as a problem in their critical thinking.

To sum up, international students' difficulties and differences in learning styles during their experience in Western universities received much attention and misinterpretation. The behaviours that they adopt in the classroom are considered and interpreted by their Western teachers as a lack of critical thinking skills. Such behaviours include passivity in the classroom, the reproduction of information and dependence on the teacher. In simple terms, they are approached from a deficit perspective that minimises their critical thinking and learning abilities.

3.4.2. Othering of International Students

In this section, I demonstrate how international students have been othered and essentialised because of their tendency to adopt learning styles that are different from those valued in Western universities. I also discuss the issue of making generalisations about the deficiency of

international students because of the culture of learning that they have experienced in their home countries.

Constructions of non-Western students' deficiency in criticality enters a discourse³ of "othering", which represents the Western world and the rest of the world in certain ways. This discourse is created by making comparisons between the assumed superiority of the Western world and the inferiority of the Eastern world. International students are described as inferior when compared to their Western counterparts (Grimshaw, 2011, p. 709). In this respect, Moosavi (2020, p. 2) asserts that the common understanding in the Western academic community about East Asian students' deficiency emerges when they are described as not being critical thinkers in comparison to their Western counterparts. Holliday (2013) considers the assumptions about East Asian students' passivity and lack of criticality as rumours that are nurtured through individuals' attempts to construct their identity (the self) and the identity of other people (other). The stereotypes about non-Western students' deficiency in learning and incompetence in critical thinking skills have been generated from a comparison between Western students and Eastern students. To demonstrate the basis of this comparison, Grimshaw (2011, p. 705) asserts that:

International students are often reduced to stereotypes and contrasted unfavourably with domestic students. Typically, within Western academia discourse "they (international students) are characterised as passive learners, reticent, teacher dependent, lacking in critical thinking skills, rote learning, with a tendency to plagiarise, etc. In contrast, "we" (scholars of the Anglophone West) and "our" (domestic students) are constructed as active, interactive, autonomous, critical, creative, with a stronger sense of scholastic integrity and so on.

Grimshaw demonstrates how international students' performance is minimised in Western academia by attributing to them the inferior learning behaviours and practices discussed, whereas Western students are valued by their lecturers by attributing to them superior learning styles of autonomy and criticality. Song and MacCarthy (2018, p. 359) claim that 'the construction of international students as either requiring assistance or a dumbing down of standards is founded on the same form of culturalism that privileges a static countenance of

³ Hall (1992, p. 86) asserts that "a discourse is a group of statements which provide a language for talking about--i.e. a way of representing--a particular kind of knowledge about a topic". Discourse is also defined as a "set of statements or beliefs which produce knowledge that serves the interests of a particular group or class" (Hall, 1992, p. 87).

Western superiority—a culturalism that levels all heterogeneous temporalities to a linear Western superiority’. The imagined Western superiority is employed as an absolute and rigid reference from which international students are compared and depicted as inferior, deficient and in need of assistance. Floyd (2011, p. 300) asserts that assumptions about students’ lack of criticality in the literature are frequently attributed to Asian students without reference to Western students. The assumed belief about Asian students’ deficiency in criticality without the inclusion of Western students seems to be due to the assumption that Western students are already critical and do not have difficulties with critical thinking.

The culture of international students is viewed as the factor that makes them deficient in criticality. The assumed poor performance of international students is assigned to a whole culture and nation while Western students’ poor performance is explained in terms of individual cases. Floyd (2011, p. 299) asserts that Chinese students’ low performance is attributed to their culture, unlike Australian students’ low performance, which is viewed as an individual issue and exception. Chinese students in particular have been stereotyped as non-critical thinkers due to their cultural tradition of thinking, i.e. Confucianism,⁴ which is assumed to call for a collectivist and authoritative way of learning and to discourage criticality. Clark and Gieve (2006, p. 58) assert that ‘a common explanation for what makes Chinese students as they apparently are, is an appeal to a shared cultural heritage rooted in Confucianism’. The culture of Chinese students is regarded as the reason behind their poor performance in the classroom.

Attributing and making a generalisation about the lack of critical thinking based on the performance of some students constitutes an issue. Holliday (2013) characterises the view of East Asian students’ way of learning as an essentialist view that attributes certain behaviours and practices to an entire culture rather than to specific individuals. This suggests that there is a misconception that international students are considered a homogenous group that is disadvantaged by the tradition of thinking that they experienced in their home country. Moreover, Moosavi (2020) asserts that ‘while some East Asian students may find expressing critical thinking verbally or in written form challenging (like other students), the literature often generalises this as the default characteristic of all or most East Asian students in a way that is supposedly not the case for other students’. The difficulty in the articulation of criticality in a

⁴ According to Nisbett (2003, p. 6) the chief moral system of China-Confucianism-was essentially an elaboration of the obligations that obtained between emperor and subject, parent and child, husband and wife, older brother and younger brother, and between friend and friend.

written or spoken form by some students is not an issue that is applicable and generalisable to all other students. Moreover, the power of the stereotypes and the discourse about non-Western students' lack of criticality sometimes leads students to stereotype themselves as non-critical thinkers. In this regard, Ryan and Louie (2007, pp. 406-407) claim that 'such characterisations are so powerful that CHC students often internalise these constructions themselves, describing themselves as 'passive' and accepting this as a negative attribute'. In other words, the power of those characteristics and constructions about Confucian heritage culture (CHC) students leads to self-othering in the sense that students view themselves in the same way as depicted by those characteristics and discourse.

Culture is not the only factor that influences students' critical thinking. Holliday (2013, p. 2) adds that 'the influence or the impact of a particular nation's culture on individuals' lives is certainly present but not all the time'. From their review of the literature, Tian and Low (2011) argue that culture cannot be considered the only factor affecting students' critical thinking ability, noting that criticality is also influenced by the learning settings that these students have experienced. In the same vein, in certain instances, culture might play a role in determining the behaviours and ways of learning of individuals, but other factors can also impact their critical thinking. Some of these factors include cultural resources such as education, religion, language and government (cited by Holliday, 2013, p. 2), so international students might be hindered or influenced not only by their culture but also by educational, religious and linguistic factors.

To summarise, international students are othered by generating stereotypes about their inferiority in comparison to Western students. They are assigned inferior learning styles and behaviours, whereas their Western counterparts are assigned superior learning styles. The culture of international students is seen as the reason behind their poor performance and behaviours in the classroom. However, linguistic, religious and educational factors also play a role in students' low performance in terms of criticality.

3.4.3. Local Knowledge, Neo-colonialism, Decolonisation and Decentring

The purpose of this section is to define and discuss some relevant terms to the study. These terms are as follows: local knowledge, neo-colonialism, decolonisation and decentring. In this section, I aim to demonstrate the relationship between these terms and the othering of international/Algerian students in a Western scholarly discourse.

The concepts of local knowledge, neo-colonialism, decolonisation and decentring are among the practices that have a connection with the spread discourse about the othering and essentialising of international students. These latter are reduced to an essentialist view that Holliday (2013, p. 68) explains as the idea of attributing a specific behaviour of one individual to a whole country or culture. International students are assigned inferior learning styles and viewed as deficient in critical thinking skills because of their culture such as Confucianism with East Asian students. Rather, their Western counterparts are attributed superior learning styles of criticality and creativity.

First, the term local knowledge is defined by Kharisma et al. (2018, p. 3) as ‘the knowledge that people in given communities or organisations have accumulated over time through direct experience and interaction with society and environment’. In other words, local knowledge refers to the thoughts and ideas acquired by individuals within a particular society. Canagarajah, (2002, p. 251) also defines local knowledge as a ‘process of negotiating dominant discourses and engaging in an ongoing construction of relevant knowledge in the context of our history and social practice’. Therefore, local knowledge refers to the construction of certain thoughts and understandings by individuals living and interacting within a particular society. This idea of local knowledge seems to relate to the practice that Holliday (2013, p. 53) calls small culture formation where Self and Other are employed in this practice. Holliday (2013, p. 53) asserts that:

For any social group to form, hold together and survive, it needs to construct for itself a sense that it is different to others. It needs to convince itself that it has practices, values and, especially in the cause of professional groups, expertise which are special. These attributes make the group worth joining, attract the loyalty of its members, and also provide it with a standing in the eyes of others.

Holliday explains how a particular community creates a good reputation and status by attributing to itself principles and values that are special. The purpose of this good self-image is to create a status within others and invite them to become members of that community. Therefore, the relationship between local knowledge and small culture formation is that a particular social group construct knowledge about their community by assigning superior qualities and values. For instance, critical thinking was considered a social practice that is developed only through immersion in the Western world (see chapter 2, section 2.8).

Second, neo-colonialism is, nowadays, employed as a new and serious form of imperialism (Nkrumah, 1965, p. 4). Nkrumah (1965, p. 4) claims that the country experiencing neo-colonialism is still dependent economically and politically as well as ruled from outside despite that it is theoretically independent. An example of this is the dominance of the Eurocentric perspective in the curricula of former colonies. Wa Thiong'o (1986, p.166) claims that the practice of neo-colonialism can be found in the content, presentation and mechanisms that are employed to select texts for a syllabus. Wa Thiong'o (1986, p. 95) maintains that 'African children who encountered literature in colonial schools and universities were thus experiencing the world as defined and reflected in the European experience of history. Their entire way of looking at the world, even the world of the immediate environment, was Eurocentric'. Despite independence, African curricula are still considered an area of dominance where neo-colonialism is exercised in the sense that students perceive the world from the European approach. This is because the educational institutions in African countries are presenting to students material which is Eurocentric.

Third, the term decolonisation according to Jansen (2019, p. 52), 'first gained prominence in the anticolonial struggle, in which the straightforward goal was the removal of the European colonial authority from the occupied territories'. Decolonisation is a movement that seeks to liberate colonised lands from the European coloniser. In addition, the meaning of decolonisation is broadened to include the idea of dealing with the remnants of colonialism that persisted after the coloniser left, such as the persistence of European or Western knowledge in the curricula of previous colonies (Jansen, 2019, p.52). Thus, curriculum is an area of focus of decolonisation i.e. removing aspects of the European or Western colonial authority from curricula.

Fourth, the concept of decentring is defined by Safran and Segal (1990, p. 117) as the alteration of one's experience by looking at this experience from an outsider perspective, a process which enables people to make a distinction between an actual situation and the reaction they bring to it. They add that 'by developing the capacity to observe oneself and one's reactions, one begins to distinguish between reality and reality as one constructs it' (p. 117). In other words, self-observation is a process enabling people to make a difference between the actual reality and the reality as they construct and view it. Safran and Segal (1990, p. 117) maintain that 'stepping outside of one's current experience fosters a recognition that the reality of the moment is not absolute, immutable, or unalterable, but something that is being constructed'. Thus, the idea of decentring by observing one's experience from outside is an incentive to develop an awareness that reality is constructed and liable to change.

In the light of this discussion, a connection can be drawn between the terms of local knowledge, neo-colonialism, decolonisation and decentring with the othering of international students. The superiority of the Western world is an image that is constructed by attributing to it special values. In this case, considering critical thinking as a Western concept is an example of the special practices that are assigned to the Western world. This perceived superiority of the Western world attracts international students to come to study in Western countries in order to develop for instance, criticality. In other words, non-Western students are assumed to lack critical thinking skills and they can only develop through immersion in the Western world. In addition, some countries are still adopting a European or a Western perspective to the content and presentation of their curricula. Such practice leads to the idealisation of the West and Western values and knowledge which make them superior to non-Western countries.

Decolonising the curriculum as well as adopting a decentred view towards one's experience are important in changing the widespread thinking about the superiority of the Western countries and the inferiority of the non-Western countries. The ability of international students to look at their experiences from an outsider perspective is an opportunity to change their views about the reality that is being constructed about them. In this way, they might be able to recognise that the widespread discourse about their lack of critical thinking skills because of the behaviours they demonstrate in the Western universities – memorisation, reproduction of knowledge, copy paste phenomenon and dependence on the teacher – is not the reality, it is only a discourse which is constructed about them and the superiority of the Western world.

3.5. The Practice of Critical Thinking in North African Countries and the Arab World

The aim of this section is to discuss, from the literature, the status of criticality in North African countries and the Middle Eastern world. The reason for discussing this area of the literature is to demonstrate the practice of critical thinking in these countries, as well as to consider the gap in the literature, i.e. explain why it is important to explore Algerian students' perspective towards critical thinking. Since Algeria is a multicultural and multilingual country that includes both Berbers and Arabs, it is important to discuss the nature of criticality in North African countries as well as in the Middle Eastern and Arab world.

3.5.1. Criticality in the Moroccan Context

In this section, I discuss the research that has been conducted with North African students and the practice of critical thinking in some North African countries such as Morocco. I explain the nature and status of criticality in the educational systems of some African countries.

In the last six years from 2017 to 2021, research about critical thinking in the Moroccan context has received much attention from scholars (Amrous and Nejmaoui, 2016; Chouari and Nachit, 2016; Mrah, 2017; Benjelloun and El Allame, 2019; Es-Salhi and Elfatihi, 2019; Jebbour, 2019; Laabidi, 2019; Nejmaoui, 2019; Ghazlane et al., 2020; Rouijel and Bouziane, 2020; Hellalet, 2021; Laabidi, 2021). These studies have explored the status and practice of critical thinking in Moroccan educational systems, as well as Moroccan students' perspectives. Chouari (2016, p. 459) asserts that the educational reform that Moroccan HE saw in 2014 gave the opportunity for universities to integrate an independent course in the curriculum for teaching critical thinking. The interest in researching criticality in the Moroccan context might be due to this introduction of a critical thinking subject to the Moroccan curriculum in recent years. To explore Moroccan students' stances and perceptions towards this course about critical thinking, Chouari (2016) conducted a semi-structured interview with ten students from the department of English studies. He found that the students were unfamiliar with the subject of critical thinking, but found it useful for their learning. He also found that the participants were unsatisfied with the course because of the incompatibility between the theory and practice of criticality, in addition to the nature and types of activities, which did not present real-life situations.

The manifestation of criticality in Moroccan school textbooks has caused a controversy in relation to two studies (Mrah, 2017; Jebbour, 2019), the findings of which have caused disagreement. The first study suggested that the textbooks did not incorporate critical thinking skills whereas the second revealed that the textbooks did incorporate some skills. Mrah (2017) and Jebbour (2019) investigated the nature and practice of critical thinking in Moroccan coursebooks. Mrah (2017) carried out a study in order to evaluate the effectiveness of textbooks of eleventh- and twelfth-grade Moroccan students in addressing critical thinking and problem-solving. He used content analysis to analyse ELT textbook, with a checklist guided by Bloom's taxonomy (1956) of learning objectives, which served as criteria for the evaluation process.

Mrah (2017) found that the textbooks did not provide sufficient tasks to encourage the use of creative thinking. He claims, that ‘based on the findings, *Ticket to English* series do not effectively help learners become critical thinkers’ (2017, p. 238). In contrast, the findings of Jebbour’s study revealed opposing results to those of Mrah’s study. Jebbour (2019) explored the status of criticality in an English coursebook in Moroccan high schools using content analysis. Jebbour found that the textbook manifested some skills of critical thinking including knowledge, comprehension, understanding, analysis and evaluation with no mention or manifestation of synthesis. Jebbour also found that the textbooks focused on developing dispositions such as inquisitiveness and open-mindedness along with the use of activities such as open-ended questions, collaborative work and debate.

Based on various studies, Moroccan teachers would seem to be aware of the meaning of critical thinking and its significance in education. In a quantitative study that explored 423 Moroccan English language high school teachers’ perceptions towards critical thinking through a survey questionnaire, Laabidi (2021, p. 64) found that the ‘respondents displayed strong approval for the integration of critical thinking in the curriculum’, with a need for training for teachers. He found that the teachers showed an awareness of the importance of criticality in making changes in their teaching and students’ learning. Rouijel and Bouziane (2020) carried out a questionnaire with 90 educators from different educational levels - middle, secondary and HE - and found that the teachers rejected the idea that critical thinking is a Western practice. Their findings also demonstrated that the participants showed agreement on what constitutes criticality, which might suggest that they received the same guidelines in their training (Rouijel and Bouziane, 2020). The use of questionnaires was not suitable for an in-depth investigation of teachers’ perceptions, however; rather, interviews would have been beneficial in obtaining rich and detailed data about the participants’ attitudes.

Despite teachers’ awareness of the importance of criticality and the necessity of incorporating it in the classroom, its teaching in the Moroccan context is not straightforward, due to certain obstacles. Chouari and Nachit (2016) conducted a semi-structured interview with one teacher who taught critical thinking at a Moroccan university. They found that the teacher encountered two major difficulties: the focus of the educational system on memorisation, and students’ resistance to the essence of criticality and their unwillingness to question their established religious and cultural beliefs. In this regard, Chouari and Nachit (2016, p. 33) claim that ‘in dealing with different issues such as religion and taboos, students often become reluctant or

unwilling to venture in areas where religion, culture, and matters of belief(s) are put under scrutiny'. The other factors hindering the integration of critical thinking in Moroccan schools relate to pedagogical and administrative issues. In a survey questionnaire with 423 teachers in several Moroccan high, Laabidi (2019) found that time constraints, a lack of sufficient teacher training, large class sizes, a lack of resources, students' focus merely on marks and a lack of motivation to use critical thinking, a focus on grammar and transmission of content, the absence of critical thinking activities in textbooks and the focus on the comprehension of texts are among the many factors that hinder the effective teaching of criticality in the classroom.

The construction of an argument in writing constitutes an issue that characterises Moroccan students' writing. Hellalet (2021) conducted a study in a Moroccan university in order to test students' critical thinking in terms of expressing their opinions in written argumentative essays. She used Bloom's taxonomy in her analysis, with a focus on the skills of explanation, analysis, evaluation and creation. Hellalet found that the participants' essays did not contain thesis statements, and she attributed this to the indirectness of the Arabic rhetoric and the fear that the teacher might disagree with the position that is made explicit in the thesis statement. The participants instead focused on the accuracy of the language over the content, i.e. they neglected the communicative nature of writing (Hellalet, 2021). Hellalet (2021, p. 190) states that 'semester 6 university students encounter difficulties when it comes to their ability to have a stand, support it with solid arguments and find a suitable rhetorical pattern to use to organize their ideas and come up with a pertinent analysis of the arguments'. Amrous and Nejmaoui (2016) conducted a study in order to explore the nature of critical thinking skills among 60 Moroccan university students from different academic levels. They employed the Ennis-Weir critical thinking essay test to examine students' evaluative abilities and argument construction in essay writing. Amrous and Nejmaoui (2016) found that the general status of criticality between EFL students was low, and that they put more emphasis on developing more the construction rather than the evaluation of arguments because they had been trained in their previous schooling to write essays rather than evaluate arguments.

Nejamoui (2019) conducted an experimental study in order to test the effect of teaching critical thinking on the writing of 36 Moroccan EFL university students. The experimental group had been taught criticality in writing lessons, unlike the control group. He used an argumentative essay to measure the level of EFL learners' critical thinking skills. Nejmaoui found in the pre-test that both the experimental and control groups showed low levels of criticality in their

essays, with mean score 10,72 and 13,11 respectively. In the post-test, the experimental group, with a mean score of 18,83, performed better than the control group, with a mean score of 11,33. For this reason, Nejmaoui (2019) states that the findings suggest that an explicit teaching of criticality is effective in developing students' use of critical thinking in writing.

3.5.2. The Educational System and the Practice of Critical Thinking in Algeria

Since the participants of this study are Algerian students, it is important to discuss the topics of education and critical thinking in Algeria as well as present the Algerian educational perspectives and context that situate this study. Thus, the aim of this section is to introduce the educational system in Algeria along with the practice of critical thinking in different educational institutions. I discuss the position of criticality along with the teaching and learning practices that are adopted in Algerian schools and universities to implement criticality in the classroom. Moreover, I demonstrate the sparse attention that Algerian students' perspective towards critical thinking has received within research.

In the beginning of 2000s, the Algerian education has undergone several changes. These changes include adopting a new approach for the teaching of languages in schools which is the CBLT (Competency-Based Language Teaching), as well as implementing the system of LMD (Licence/Bachelor, Master and Doctorate) at the level of university. The purpose of introducing CBLT in Algeria is to 'install competencies in the learner and help him develop his own autonomy and critical thinking' (Bouhadiba, 2015, p. 7). In addition, Abdaoui and Grine (2020, p. 392) claim that the government introduced the LMD system at university following the Bologna process in order to adapt to the socio-economic market. This system is a learner-centred approach where learners are active rather than passive recipients of knowledge, they learn through interaction and they do research and presentations (Abdaoui and Grine, 2020, p. 392). The practices of the LMD system appear to involve the integration of criticality in education because they encourage students' autonomy and collaboration between students. The CBLT and LMD system seek to foster in learners the skills and practices that value their contribution such as autonomy and critical thinking. Therefore, the above-mentioned reforms reveal the efforts made in order to achieve higher results in terms of students' learning and criticality.

In recent years, there is a large body of literature (Melouah, 2017; Bougherara, 2019; Abdaoui and Grine, 2020; Djouima, 2020; Achoura and Merrouche, 2021; Baghoussi, 2021;

Benmouhoub, 2022; Ouhiba, 2022; Hadj Said, 2023; Gasmi and Dib, 2023) investigating the position and practice of critical thinking in Algerian schools and universities, an aspect that shows the growing interest in criticality. This body of literature ranges from studies that explore the perceptions of teachers towards critical thinking and its practice in the classroom, the representation of criticality in EFL textbooks and the effect of certain methods in developing this skill.

The importance of critical thinking and integrating it into teaching is recognised by Algerian teachers and students. By conducting an online questionnaire with 14 English language teachers, Benmouhoub (2022, p. 28) found that the participants agree on the importance of criticality, that teachers introduce the notion of critical thinking in the classroom, and that ‘students find criticality as a beneficial skill that is taught to them explicitly’. In her study, Djouima (2020) found that teachers are aware of critical thinking skills and the importance of developing it in learners through activities such as *group work, problem-solving, effective feedback, summarising* and *peer assessment*. The findings of the study conducted by Achoura and Merrouche (2021) revealed that the participants’ views show a positive attitude towards teaching and including critical thinking skills in the classroom by incorporating learners’ real life experiences, targeting the development of learners’ criticality and encouraging students to articulate and defend their views and bringing topics that arise conflicting debates between their views. Thus, Algerian teachers showed their awareness about the concept of critical thinking and the importance of its teaching in the classroom through various methods.

The classroom and teacher practices that are adopted in Algerian education do not encourage the use of critical thinking. Achoura and Merrouche (2021) conducted a study using a questionnaire and a classroom observation with EFL teachers. The findings of the classroom observation revealed the absence of using critical thinking skills in the classroom with a percentage of 71,72% of ‘never observed’ and the non-occurrence of the ‘always observed’ and ‘almost always observed’. In her study, Melouah (2017, p. 9871) found that education in Algeria, according to some participants, does not encourage the practice of critical thinking and that little efforts have been made to make learners’ development of criticality an easy task. By using a teacher trainer classroom observation along with interviews with 30 active secondary school teachers of English, Baghoussi (2021) found that the teaching practices exercised in the Algerian classroom are not helpful in fostering learners’ criticality because of the dominance of teacher talk, the focus on the transmission of content, the focus on grammar teaching and the questions that elicit lower-order thinking skills rather than higher-order thinking skills. Abdaoui

and Grine (2020) claimed that although the LMD system requires learners-centredness, the teacher-centred approach is the one adopted in the classroom with students' independence on teachers' knowledge. Djouima (2020) conducted a questionnaire with 20 secondary school teachers from 13 different districts in Algeria to explore whether teachers practices are conducive to developing learners' criticality. She found that the primary focus in the lesson presentation and teachers' exam questions is on the lower-order thinking skills whereas criticality is sometimes, present in the textbook of third year secondary school, but shortage of time does not allow for an effective use of it. Thus, the various teacher and classroom practices give little attention to the teaching of critical thinking because of the focus on the teaching of lower-order thinking skills, content and grammar.

The elements and representation of critical thinking in Algerian textbooks are rarely present. Hadj Said (2023) conducted a semi-structured questionnaire to explore EFL teachers' perceptions towards the integration of elements of critical thinking in an Algerian secondary school EFL textbook. The findings of Hadj Said's study showed contradictory views because half of the teachers find that the textbook helps to arise critical thinking while the other half does not believe in this view. Hadj Said (2023) also found that activities such as role play and puzzle games that require the use of critical thinking are limited in the textbook, and that questions focus on the skills of understanding and evaluating while giving little attention to the skills of analysis and application. To explore the representation of critical thinking in an Algerian English language textbook for third year secondary school students and explore teachers' perceptions towards the role of the textbook in developing learners' critical thinking, Gasmi and Dib (2023) used content analysis methodology and interviews. Gasmi and Dib (2023) found that teachers were not positive about pupils' development of critical thinking skills from the textbook. In addition, they found that the textbook does not contain sufficient questions that elicit the use of criticality –the focus is on clarification and sometimes analytic questions, the questions are easily spotted in and answered from the text and do not require the use of critical thinking despite that they are open questions. They also found that group work and pair work are emphasised while problem-solving tasks are neglected. Therefore, the activities and questions of some Algerian school textbooks do not encourage the use and teaching of criticality

The little attention given to the teaching of critical thinking in the Algerian context is due to several educational and pedagogical reasons. In her study, Baghoussi (2021) found that teacher's reluctance to adopt strategies that develop learners' critical thinking is related to time

constraints and the focus of teachers on finishing the programme before the Baccalaureate exam in the case of third year secondary school students. In addition, the overcrowded classes do not encourage teachers to adopt group works, and thus teachers focus on indoctrination (Baghoussi, 2021, p. 107). Achoura and Merrouche (2021, p. 744) assert that the absence of criticality in the classroom is due to the focus on the teaching of language forms and grammar rather than criticality. Based on their analysis of the textbook, Gasmi and Dib (2023, p. 625) believe that pupils' non-development of critical thinking skills is related to the focus on the use of the English language rather than the use of their thinking skills. Similarly, the focus of teaching and learning of languages in the Algerian context on the memorisation of grammatical rules and language structure does not achieve one of the purposes of the CBLT which is fostering learners' critical thinking and creative mind (Bouhadiba, 2015, p. 8). Therefore, the large number of students in a class, rushing to complete the curriculum, lack of time, and the focus on learning and using the language are among the factors that hinder the teaching of criticality in the Algerian educational context.

The above discussion that deals with the position and practice of critical thinking within the Algerian educational system demonstrates that little efforts have been made to teach criticality. Despite the introduction of the CBLT and LMD system that require the use of criticality and despite teachers' positive attitudes towards the implementation of criticality in their teaching, the actual practices implemented in the classroom do not encourage students to use critical thinking skills. There are several reasons that hinder teachers from implementing critical thinking in their teaching. These reasons include lack of time, the overcrowded classes, the focus on teaching language structure and grammar and completing the programme. The discussion also demonstrates that several studies have been conducted recently in order to explore the position of criticality within the Algerian education as well as investigate the perceptions of teachers towards critical thinking. However, very little research is done on the perceptions and views of Algerian students i.e. students' voices are ignored. For this reason, this research is an attempt to provide Algerian students with an opportunity to articulate their thoughts about the topic of criticality.

3.5.3. Criticality in the Middle Eastern World

The perspective of Middle Eastern and specifically Arab students in relation to critical thinking has also been explored in some studies (Allamnakhrah, 2013; Rapanta, 2013; Al-Dumairi and Al-Jabari, 2015; AL-Kindi and Al-Mekhlafi, 2017; Al-Qahtani, 2019; Bahatheg, 2019;

AlMahrooqi and Denman, 2020). These studies have revealed that little attention is given to critical thinking in Arab countries, despite lecturers' awareness of the significance of this concept. Based on the findings of these studies, various factors are thought to influence the criticality of Arab students, including the teacher, a lack of training and the adopted pedagogy, in addition to social and cultural norms.

Arab students demonstrate low performance of critical thinking, especially in writing and the construction of arguments. Bataineh and Zghoul (2006) investigated the level of criticality of 47 Jordanian graduate TEFL (Teaching English as a Foreign Language) students at Yarmouk University by using the Cornell Critical Thinking Test, Level Z. They found that students demonstrated low performance in terms of critical thinking abilities. This low performance, according to Bataineh and Zghoul (2006, p. 40), was caused by the limited attention to the practice of critical thinking in education, in addition to the teacher' dependence on methods that are centred around the teacher, ignoring those methods such as classroom discussion and argument that encourage interaction between students and the teacher. The focus on traditional teaching methods and pedagogical practices that encourage lower- rather than higher-order thinking skills characterise the system of education in certain Arab countries. Rapanta (2013) conducted a study with 95 female Emirati university students from both business and education subjects, exploring their performance in argument construction. A teaching and modelling seminar was introduced to enable students to recognise different aspects of an argument. Rapanta found that the students performed well in providing reasons for their claims and constructing valid objections. However, building a valid argument was one of the weaknesses because of their dependence on repetition of old thoughts and knowledge and making invalid statements.

Students' low and poor performance is sometimes falsely attributed to students' deficiency in critical thinking skills. Al-Dumairi and Al-Jabari (2015) conducted a study that explored the implementation of a writing course, where students were presented with methods of writing, writing skills and different types of essays. On the basis of the findings of a writing test and a questionnaire with a group of second-year Arab university students in Palestine, in relation to their EFL writing performance, Al-Dumairi and Al-Jabari (2015) argued that students' low performance was two-fold – there were linguistic issues as well as critical thinking issues – concluding that the students' lack of critical thinking skills was the reason behind their low performance in EFL writing. This conclusion does not appear to logically follow from the

findings. Other interpretations could have been generated, such as students' poor writing performance at university might be caused - as suggested in their findings - by their lack of training at high school or the teacher's focus on the accuracy of the written texts in terms of vocabulary, spelling and grammar, rather than criticality. However, the authors explained students' low performance in writing in terms of a lack of critical thinking rather than using more logical and complex explanations.

Evidence shows that the teacher and society in the Arab world are among the factors that hinder students' practice and development of critical thinking, in addition to the focus of textbooks on lower-order thinking skills. Al-Kindi -and Al-Mekhlafi-(2017) used an observation form with 12 post-basic schools, as well as questionnaires with 30 teachers, in order to investigate the problems resulting from the teaching of criticality in Omani EFL classrooms. Their findings suggest that teachers should be considerate of their behaviours in order to assist students in developing the skill of critical thinking. Allamnakhrah (2013) conducted a qualitative study using two focus group sessions with 12 participants from two Saudi universities to explore the position of criticality in secondary pre-service teacher education programmes. Allamnakhrah (2013) found that the teachers had a good mastery of the meaning of critical thinking, which they perceived as an important skill in educational, professional and personal life. He also found that the factors that hindered the learning of criticality in the classroom included lecturers who did not encourage criticality in students; a society that does not allow children to challenge elder people, and therefore students who preferred easy learning styles; and an educational system that does not give room for the practice of criticality. AlQahtani (2019) also conducted a study in order to analyse the extent to which critical thinking is incorporated in Saudi English textbooks and the curriculum. He used content analysis and questionnaires with teachers and found that the textbook activities focused more on lower-order thinking skills with little emphasis on higher-thinking skills. He also found that teachers referred to the possibility that students encounter difficulties and challenges that hinder them from the application of criticality. However, Al-Qahtani could have used interviews rather than questionnaires to explore those barriers in more depth.

To conclude, Middle Eastern and specifically Arab students might perform poorly in critical thinking and critical writing. Their poor performance is misinterpreted as a lack of criticality. However, several factors are assumed to be behind students' performance and their non-application and development of higher-order thinking skills. These factors include the teacher,

society's norms and regulations, and the focus of the educational system and textbooks on the teaching of lower-order thinking skills.

3.6. International Students' Criticality: A Different View

The objective of this section is to present the emerging literature that reconsiders international students' experiences of criticality from a different perspective. This literature challenges the stereotypes about students' deficiency in critical thinking skills. The reason for discussing this area is because the current research contributes to this body of literature by challenging the deficit model encountered by international students based on the findings of this study.

In the following sub-sections, I discuss some of the possible explanations that have been generated for international students' performance in Western universities. I first introduce the emergence of a different view towards international students' criticality. I then explain how these students possess different learning styles rather than them being deficient in critical thinking skills. I finally demonstrate how internationalisation constitutes an issue and a reason behind international students' performance in the classroom.

3.6.1. A New Approach to Understanding International Students' Critical Thinking

The literature (e.g. Littlewood, 2000; Stapleton, 2002; Oda, 2008; Rear, 2017; Heng, 2018; Moosavi, 2020; Wu, 2020) reveals the existence of an emerging view that challenges and critiques the constructions about international students' deficiency in critical thinking in Western universities. This body of research that questions the stereotypes about international students constitutes a novel area of intercultural studies (Wu, 2015, p. 754). Its main principle consists of questioning the established thinking about international students' deficiency and rejecting the stereotypes about their lack of criticality. Stapleton (2002, p. 251) claims that 'since [the] 1980s, theoretical constructs about Asians and others have come under criticism by postmodernists who believe that these cultural patterns are simply essentialisations created to hold power over non-Western people'. In other words, the movement of postmodernism considers the claims and stereotypes about non-Western students' assumed inability to think critically as a form of discourse that aims to determine the superiority of Western countries over other countries. Rear (2017) critiques this discourse about Asian students' passivity and lack of criticality, and refers to the lack of evidence that demonstrates the negative impact of culture on the use of criticality by Asian students.

Evidence suggests that Asian students reject the grand narratives and views about their non-criticality and dependence on the teacher. Two studies conducted by Littlewood (2000) and Stapleton (2002) demonstrate how Asian students' attitudes oppose the imagined beliefs about their tendency to depend on authority and avoid criticality in their writing. In his study, Littlewood (2000) conducted a questionnaire with 2,307 students, in secondary and tertiary education, from eight Asian countries and three European countries. His participants were asked to respond to 12 statements, with an emphasis on three statements in relation to the teacher's role as the unquestionable authority, the deliverer of knowledge and the evaluator of students' learning. In Stapleton's study (2002), 70 Japanese students in a Japanese university replied to a questionnaire and ten follow-up interviews were conducted about their attitudes towards their writing achievements in terms of harmony, individual voice, clarity and critical thinking. Littlewood (2000) found that the participants disagreed with the statements about obeying authority and would have preferred to take an independent position over their learning. Similarly, Stapleton (2002) found that the theoretical constructs about Asian students' dependence on indirect, inductive and circular approaches in their writing were no longer valid because of students' willingness to adopt a multiplicity of rhetorical patterns that value the individual's voice and critical thinking in their writing.

Littlewood and Stapleton's studies are insightful because they serve as a starting point in relation to the different attitudes that Asian students hold towards critical thinking and the status of authority. However, a richer and deeper understanding of the participants' attitudes towards the topic of dependence on authority could have been obtained if Littlewood had employed interviews. In Stapleton's study, the analysis of the participants' written work could have been more powerful in demonstrating how the changes in their perceptions were displayed and reflected through actual samples of their writing.

The experiences of international students in Western universities should be considered as complex rather than looked at from a deficiency perspective. In this respect, Holliday (2013, p. 64) states that the idea of developing students' sense of critique and presenting positions in discussions as an aspect with which East Asian students struggle, because of their tendency to adapt to a more authoritative way of learning, involves more complexity than it would appear to at the surface level. In her qualitative study with a group of female Emirati students, investigating their perceptions towards their academic writing, Yamchi (2015) found that there was more complexity in their experiences because of the challenges that they encountered

while studying abroad. These challenges concluded their unfamiliarity with the Western university conventions and; their tendency to remain silent, in addition to their low performance in academic writing caused by the difficulty of using a foreign language to express their thinking properly.

The contributions of East Asian and specifically, Chinese societies and traditions of thoughts to the development of humanity seems to suggest the existence of criticality in these traditions and cultures. The presence of criticality in East Asian countries can be noted in the development that they have achieved in their society in various fields. Moosavi (2020, p. 14) declares that the development that East Asian countries have seen recently in the fields of the economy and politics is an indicator of their use and presence of critical thinking. To defy and challenge the claims about Chinese students' deficiency in their reasoning or thinking, Tan (2017, p. 7) asserts that 'it is untenable for a people who had developed a secular and observational view of the world and contributed to engineering and mathematical advances to be deficient in critical thinking, as alleged by the missionaries'. The existence of criticality in East Asian countries can be captured and reflected in the advances and accomplishments that they have achieved throughout time.

Evidence from the literature shows that international students' difficulty in adapting to the new way of learning in Western universities does not necessarily suggest a deficiency or a problem in their reasoning. Sometimes, it simply means that the students need the necessary time and opportunities for integration in their new environment. In this regard, Wu (2015, p. 764) asserts that:

When given sufficient time and the freedom to take risks in experimenting with newly adopted learning behaviours, they would finally integrate these learning skills and develop more effective learning techniques. However, such transformation in learning is not an automatic process. Students need a "safe" cross-cultural learning environment that allows for mutual trust and tolerance of "slow learning" to reach the stage of effective learning.

Wu encourages Western lecturers to be flexible and tolerant with international students' learning by giving them the sufficient time to familiarise themselves with, experiment with and learn to employ the new learning approaches. Oda (2008) claims that non-Western ESL (English as a Second Language) students adopt a discreet and implicit way of being critical. He adds that 'in order for them to become conversant in direct, straightforward, and deductive

styles of writing and communication, the non-Western students should be given sufficient opportunities and time for training and practicing to use such a particular mode of thought' (p.168). To adapt to the Western direct style of argument, both time and training are necessary to achieve effective results. Goode (2007, p. 595) asserts that 'in many of the interviews there is a recognition of a "trajectory" in doctoral study; students are "initially" dependent, won't challenge supervisors "until they get to know you better", may not ask for clarification "when they first begin" and developing criticality is a "very slow process"'. Students, in the early stages of their PhD experience, take time to familiarise themselves with the supervisor through behaviours such as dependence on their supervisors, non-questioning habits and challenging attitudes. Oda (2008, p. 167) claims that Japanese teachers are patient with students' performance because 'even if the students do not manifest their strengths at one point, it does not mean that their strengths are non-existent forever; it only means that the students need appropriate opportunities and sufficient time in order for them to exert their full potential'. Since learning occurs over time, international students need to be given the time and opportunities in order to develop the new learning style before making judgments about their deficiency in thinking.

3.6.2. Discrepancies Rather Than Deficiency

The aim of this section is to discuss how the differences in the educational practices between the host universities and international students' home universities are the reason behind their poor performance in criticality. I explain how international students are disadvantaged by the differences in pedagogy and their need to adapt to the new standards and requirements of the host university.

The discussion of the literature below suggests that the difficulties that international students encounter in Western universities in terms of engaging critically in various activities are partly caused by the discrepancies in the pedagogical practices between their home and host university. International students may under-perform in assessments not because of their deficiency in criticality but because of their unfamiliarity with the new cultural practices (Turner, 2006, p. 7). In trying to understand Chinese students' experiences with criticality, Lucas (2019) states that their struggle to apply critical thinking is caused by differences in the educational practices and learning methods and their lack of knowledge about topics addressed in the Western university. Similarly, Wu (2015) found that Chinese students were challenged by the differences between their home country and British universities in terms of teaching and

learning, assessment techniques and group learning activities. Other differences relate to the role played by the teacher and students, and the need to adapt to the new role of the student that is practised in British universities (Wu, 2015, p. 760). In addition, Moore et al. (2003) found that students encounter difficulties with the new content and methods and are recommended to pursue the induction throughout the programme rather than limiting it to the first few days or weeks. This discussion suggests that international students are challenged more by the differences in pedagogy of the host university in terms of teaching methods, content and the teacher and students' role than by critical thinking.

International students' different learning styles and ways of thinking and writing are other elements that explain their performance abroad. The discrepancy in the rhetorical style that lies beneath the directness of Western students and the indirectness of non-Western students is an aspect due to which Eastern students are viewed as deficient in critical thinking skills (Oda, 2008, p. 155). In other words, the distinct and indirect approach of learning that international students adopt in Western universities has been misinterpreted as an inability to engage in criticality. However, Oda (2008, p. 155) argues that non-Western students' behaviours of passivity and an indirect style of writing are not evidence of a lack of critical thinking. They simply mean that the students have a different way of approaching learning and knowledge in comparison to the Western approach. For this reason, Ballard (1995, p. 152) claims that 'we must keep in mind that the obvious, yet often overlooked, recognition that "logic" and "reason" take different shapes in different contexts and according to variations in values, assumptions and rhetoric'. There exist several ways of reasoning that are determined by certain norms and rhetorical principles; therefore, international students who apply distinct approaches to learning and ways of reasoning are not necessarily deficient in criticality. Rather, they possess and use a different way of thinking and approaching the world.

As already mentioned in the previous paragraph, logic and reason take various forms depending on certain values. For instance, the indirectness of East Asian and specifically Chinese students is rooted in their attempt to conform to their cultural and social norms in order to ensure harmony. In this respect, Wu (2015, p. 762) explains that 'the Chinese approach to judging and evaluating others' work is subtle and indirect, in keeping with Chinese cultural values of harmony and respect for authority'. In other words, Chinese students adopt an implicit way of approaching knowledge to avoid being offensive or aggressive, which are aspects or behaviours that are not compatible with their culture. The study conducted by Durkin (2008) with 43 East

Asian students, investigating their adaptation to Western conventions with regard to critical thinking, revealed students' reluctance to adapt to the British approach of argument, which they regarded as an aggressive way of searching for the truth and considered a useless approach in their home country. This discussion revealed the existence of a hidden and logical interpretation that considers the nature of the learning approaches that overseas students adopt in the classroom and which are relative to certain valued cultural practices in their community.

The differences in the language and the topics covered in the Western university and the home university of international students also influence students' performance in critical thinking. Wu (2020) conducted a longitudinal ethnographic study of almost one year with 11 Chinese students in a Canadian high school using multiple data-collection tools. He found that insufficient language competence and a lack of contextual knowledge of the host educational institution as well as socio-cultural discourses, were among the factors that impacted the learning and critical thinking of Chinese students. Despite the fact that this study was carried out with high school students, it reveals that aspects of language and knowledge of topics are vital in the task of critical thinking. The difficulty of Chinese students with engaging in unfamiliar knowledge, their difficulty in expressing themselves and articulating their thinking properly in a foreign language, and their non-agency in stating explicitly how they wish to learn and think are among the factors that explain their silence and passivity in the classroom (Wu, 2020, p. 2). Similarly, Yates and Nguyen (2012, p. 29) found that a lack of knowledge was one of the aspects that hindered Vietnamese students from contributing to classroom discussions. Thus, the behaviours of international students in the classroom, such as passivity, silence and the difficulty in showing their criticality, can be seen to be caused by differences in language and knowledge between the home and host universities.

Thinking and writing critically in a foreign language are regarded some of the issues that impact international students' experience of criticality (Floyd, 2011; Yates and Nguyen, 2012; Zhou et al., 2015; Safipour et al., 2017; Liang and Fung, 2021). Rear (2017) asserts that the necessity of writing critically and building an argument in a foreign language are some of the challenging factors that Asian students encounter. Moreover, Safipour et al. (2017) found that the language barrier does not allow or encourage international students to speak and express themselves properly in writing. Floyd (2011) highlights the difficulty of thinking in a second language when compared to thinking in the first language due to reading comprehension issues and a lack of sufficient vocabulary to understand texts, in addition to the long time that students take

to comprehend texts in their second language. Proficiency and mastery of a foreign or second language is crucial and determinant of the nature and degree of involvement in critical thinking. In their study, Zhou et al. (2015, p. 89) found that:

Students' overall command of English, including the number of vocabulary and the literal understanding of the reading text, influences critical thinking ability directly. Understanding the reading materials is prior to reading critically and logically. In other words, students are capable of analyzing, inferring, evaluating and reflecting the reading text only when they can fully and truly understand the literal meaning.

In this quotation, Zhou et al. emphasise the role of text comprehension in engaging in the task of critical thinking. In addition, understanding the content of the material written in a foreign language is among the primary steps that students need to achieve in order to proceed to think critically about the text. For this reason, Liang and Fung (2021, p. 2) assert that low performance in critical thinking might be the result of a lack of fluency and command of a language. Zhou et al. (2015, p. 87) again refer to the difficulty of integrating and teaching critical thinking in an EFL class because of the teacher's focus on vocabulary comprehension and grammatical structures, with an ignorance of students' thoughts and ideas of the content that they are learning. In other words, the teaching of criticality is neglected for other reasons, such as the teaching of the vocabulary and the language system of the foreign language. In their study, Liang and Fung (2021) found that students employed their critical thinking ability in an explicit way in the exploratory talks where they used their first language (Cantonese). In contrast, these same students found difficulties in completing the WebQuest –an online technique used for learning- because it was written in the English language. Although this research was conducted with primary school pupils, the findings indicate that a mastery of the foreign language plays a role in students' critical thinking performance.

The previous learning experiences and long-established learning styles that international students have experienced in their home country seems to influence their contribution in the international university. In their study with Vietnamese students, Yates and Nguyen (2012) found that cultural values acquired from their previous learning experiences had an impact on their performance and silence in the classroom. Such values include 'the obedience by juniors to seniors, the importance of modesty and reserved speech, the need not to stand out from the crowd in formal situations and a preference for indirectness with those in authority' (Yates and

Nguyen, 2012, p. 28), in addition to the difference in status between teacher and students and social distance.

To conclude, international students' difficulties and poor performance in the host university can be seen to be caused by the discrepancies in the pedagogical practices and learning styles valued and practised in the home and host universities. These discrepancies lie in the role of the students and teacher, the topics and knowledge tackled, the need to express one's thoughts in a different language and the directness or indirectness in writing and presenting arguments.

3.6.3. A Problem of Internationalisation

The purpose of this section is to discuss how a failure in truly internationalising HE might be one of the other issues that creates difficulties for international students in Western universities. The lack of success of international universities in taking into consideration foreign students' differences might be the reason behind students finding it challenging to adapt to the new requirements of the host university, especially in relation to criticality. In addition, critical thinking can be meaningful for international students when the university practices are internationalised and take an inclusive and intercultural approach to learning.

Evidence from the literature suggests that the lack of awareness of international students' distinct backgrounds, learning and thinking differences is among the problems of internationalisation and international universities. Song and McCarthy (2018) assert that there is a failure of Western universities to value the cultural and learning differences of international students, who are viewed as deficient rather than different. International students are imagined to be deficient when their approaches to learning are not compatible to the Western university's standards and culture of learning and thinking. In other words, their distinct learning styles are considered as problems that they need to abandon in order to later adapt and conform to the Western style of learning. Safipour et al. (2017, p. 818) assert that 'some of the negative experiences or stereotypes toward Asian students can be explained by the lack of knowledge about the existence of different pedagogical cultures than the western one'. Western teachers' lack of awareness about the diversity in thinking traditions and learning styles of various nations and cultures leads to a lack of consideration of international students' contribution to the university, and therefore they are stereotyped as problematic. The deficient view of international students emerges from the international university's non-consideration of students' differences and contribution to the university.

The Western universities that do not consider an intercultural approach to learning in the curriculum seem to create difficulties for international students in adapting to the new style of learning. In other words, the curricula of Western universities that are not inclusive of international students' diverse learning styles and backgrounds constitute a problem for these students. In this regard, Song and McCarthy (2018) claim that Western countries do not take into consideration their international students' different learning styles and academic differences by adjusting the curriculum to meet their needs. In the same vein, Ryan and Louie (2007, p. 406) assert that the internationalisation of the curriculum in universities, which is attracted by the essence of globalisation, does not take into account 'the appropriateness of conventional Western pedagogical approaches to contemporary, more globalised and culturally interdependent context for both domestic and international students'. HE institutions fail to achieve a true internationalisation that values a recent and multicultural approach to learning, in order to meet the needs of not only home but also international students. International students should actually be valued, because they bring richness and diversity to the university in terms of the different knowledge, background and learning styles, which benefit the international university's development. For this reason, Vandermensbrugghe (2004, p. 417) refers to the necessity of viewing international students as contributors to the university rather than as students who are deficient and disadvantaged by their language issues and unawareness of Australian universities' norms and standards. The consideration of international students' backgrounds and learning styles in international university curricula and practices is an aspect that encourages diversity and a multicultural approach, and therefore achieves an inclusive approach to internationalisation.

An appropriate approach towards internationalisation is one that is inclusive and encompassing of the differences of students in terms of linguistic, cultural and educational backgrounds. In this respect, Wu (2020, p. 12) asserts that the results of his study reveal the necessity for both instructors and international students to draw the relationship between learning and linguistic, social and cultural factors in order to ensure that the practice of critical thinking is significant for the students. It is about embracing the differences of international students and seeking to create a pedagogy and curricula that take into consideration their social, linguistic and cultural backgrounds. To achieve this purpose, Oda (2008, p. 169) suggests that ESL teachers develop an awareness of topics of interest for ESL students in order to 'be more effective and ideal in bringing out the non-Western students' potential as critical thinkers', in addition to considering

the needs of international students and providing the necessary academic assistance. Grimshaw (2011, p. 710) proposes a shift in the attitudes and perceptions of all those people who interact with international students and tend to contribute to their experiences. The focus should be not only on the consideration of students' differences and changing pedagogical practices but also on changing the educators' perceptions towards international students.

To sum up, the difficulties that international students encounter abroad can be seen to be due to the lack of consideration of inclusive curricula that consider the multilingual and intercultural aspects of their experiences. To achieve the essence of internationalisation, HE institutions should strive to construct multicultural curricula that value the cultural and linguistic features of and include topics of interest for international students. Western teachers need to develop an awareness of the various traditions of thought and cultures of learning, as well as change their view that international students are deficient.

3.7. Conclusion

One of the areas of research addressed in this chapter relates to the teaching and development of students' critical thinking. Three issues make the incorporation of critical thinking in education and the curriculum a challenging task. The first issue relates to the ambiguity of the concept of criticality and the lack of clear guidelines and concrete practices for its teaching. The second issue refers to the confusion about the ideal teaching approach to adopt in the classroom for the effective integration and teaching of critical thinking. The third issue relates to the unlikelihood of the transferability of critical thinking skills from one context to another.

International students, in relation to their difficulty in adapting to the new requirements and standards of Western universities, are viewed as having a deficiency in their thinking. There is an abundance of research that explores the relationship between East Asian students and critical thinking. Therefore, there has been an established discourse that depicts international students as deficient and lacking critical thinking skills because of the learning styles and behaviours that they adopt in the classroom and employ in their assignments. These behaviours include memorisation, reproduction of ideas, passivity in the classroom and the absence of questioning habits and contributions to classroom discussions. Such behaviours have been interpreted, especially by Western teachers, as evidence of a deficiency in criticality. These stereotypes have mainly related to East Asian students, particularly Chinese students.

The literature on critical thinking focuses largely on students from East Asian countries, with some studies on Arab students. The status and practice of critical thinking in the Middle Eastern world and North African countries have also been explored. Despite the awareness of curriculum designers and teachers in relation to the meaning and significance of critical thinking for students' learning, its integration in education is hindered by several obstacles. In Arab countries, students struggle with writing and the construction of arguments. Research in North African countries in relation to criticality has revealed that there is little focus on the integration of higher-order thinking skills in textbooks and the classroom. An interest in researching the position of critical thinking in the Moroccan context has received much attention in the research. However, the Algerian and Tunisian contexts in relation to criticality do not constitute a widely researched area. For this reason, the aim of this study was to address this area of research by investigating Algerian students' perceptions in relation to criticality. The method of conducting this study will be elaborated on the next chapter, which contains a discussion and explanation of the entire methodology that was employed to conduct this study. However, there is little - at least, published - research that has been conducted to investigate the perceptions of Algerian students in relation to critical thinking. The purpose of this study is therefore to address this gap by looking at the perspective of Algerian students towards their understanding of criticality.

The stereotypes and the discourse that have been generated about international students' lack of critical thinking is challenged by recent literature. This literature encourages to look at these students as different rather than deficient. Their poor performance in the Western classroom can be interpreted in terms of numerous factors. Such factors include differences in educational practices between the home and host universities, the difficulty of expressing criticality in a foreign language, a lack of knowledge about the standards of Western universities and unfamiliarity with the topics addressed in Western HE. In addition, the inappropriate internationalisation of universities causes students to encounter difficulties because of their differences, which are not taken into consideration. These differences should be regarded as a contribution to the international university, rather than as a problem to avoid.

Chapter 4: Research Methodology and Design

4.1. Introduction

The objective of this study is to explore the nature of critical thinking through the lens of Algerian doctoral students enrolled in one of the UK universities. In this research, I seek to look at the participants' understanding of critical thinking and the way in which they develop their critical thinking abilities in both their home country and during their journey of living and studying in the UK. I equally aim to investigate, according to their views, what constitute the helpful and challenging factors that influence their personal journey towards developing their criticality. The three principal research questions that have driven this study are as follows:

1. What do Algerian students understand critical thinking to be?
2. How do Algerian PhD students in the UK develop critical thinking?
3. What are the factors that influence the participants in developing themselves as critical thinkers?

To answer these research questions, I designed and applied a research methodology that will be described in detail throughout this chapter. This fourth chapter is an attempt to draw a picture of the methodology employed and the procedures followed in order to conduct this study. I strive to build a description and a grounded explanation towards adopting certain positions and employing a specific research approach and data-collection methods. The focus of this chapter is also to explain in an exhaustive manner the entire process and the various steps followed to conduct this study. This chapter is, therefore, structured around the following sections:

- A discussion of the research philosophy, which entails the philosophical underpinnings of my view of the self, the world and the nature of knowledge, in addition to clarifying how these philosophical assumptions contributed to decisions about the research methodology.
- A descriptive and explanatory account of my choice of qualitative research approach for this research, by clarifying the nature of the study and how it fits with the qualitative approach.
- An explanation of the research design and the rationale behind employing semi-structured interviews as the data-collection instrument, in addition to an explanation of the use of vignettes.

- A detailed description of the data collection phase in terms of the selection and recruitment of the participants, together with a description of the interview questions and the procedures of data collection.
- An account of the data-analysis phase and an explanation of the reasons for choosing thematic analysis, in addition to describing the different steps involved in analysing the data.

4.2. Research Philosophy

This section covers an explanation of some of the philosophical assumptions and underpinnings in relation to the world, that I have adopted and developed for the purpose of this research. These assumptions relate to what Kivunja and Kuyini (2017) refer to as the research paradigm or what Aliyu et al. (2015) term the research philosophy. It is worth mentioning that the two expressions “research philosophy” and “research paradigm” are used interchangeably throughout this study to denote the same meaning. According to Aliyu et al. (2015), a research philosophy consists of the ‘beliefs, values and principles underlying a detailed study’. In more specific terms, Kivunja and Kuyini (2017, p. 26) define a research paradigm as ‘the abstract beliefs and principles that shape how a researcher sees the world, and how she interprets and acts within that world’. Therefore, the research philosophy is concerned with the entire philosophical orientation of the researcher in relation to the nature of the world.

A research paradigm plays a salient role in underlying the different philosophical assumptions governing a specific study (Hathaway, 1995; King and Horrocks, 2010; Kivunja and Kuyini, 2017). A paradigm aims to identify the position of the researcher philosophically, and serves in making choices about the methodology and methods to adopt in a particular research study (Kivunja, and Kuyini, 2017, p. 26). It serves as a guide that shapes the entire process of the study, in which subsequent decisions about certain aspects and procedures of the research are made accordingly. In this respect, Hathaway (1995, p. 541) summarises the function of a paradigm in research by claiming that ‘paradigms dictate what researchers consider data, what their role in the investigation will be, what they consider knowledge, how they view reality, and how they can access that reality’. Thus, a research philosophy constitutes a thread-line that, once identified, serves as a reference for making decisions about future actions in the research, such as the appropriate methodology and the data-collection tools, in addition to the researcher’s role and beliefs about the nature of knowledge and how to find it.

The significance of philosophical underpinnings is apparent in diverse areas of research, namely the nature of knowledge, the research questions, the research approach and the data-collection instruments. Having a view on the nature of social reality is crucial in determining what constitutes appropriate and suitable knowledge in research (King and Horrocks, 2010, p. 8). In addition, the ideas that the researcher holds about the nature of reality and knowledge are vital in constructing the research questions, as well as in making decisions about the methods to use (Hughes and Huby, 2004, p. 36). The research philosophy assists the researcher not only in designing the research questions, but also in identifying the type of data to be collected, the knowledge to be generated about the phenomenon and the suitable methods for the collection of relevant data that might answer the research questions.

4.2.1. My Ontological and Epistemological Underpinnings

Ontology and epistemology are two areas that are emphasised in the research philosophy through which I developed my personal assumptions and beliefs for this study. The first aspect of research philosophy, ontology, refers to questions that investigate those matters of existence and reality that shape the researcher's position in research (Kivunja and Kuyini, 2017, p. 27). More specifically, Jackson (2013, p. 52) defines ontology in relation to the field of education as 'the philosophical study of the nature of educational reality and how there may be different perceptions of what is known'. The role of ontology is to allow researchers to consider issues related to existence and reality and how people come to view and perceive this reality differently.

The first aspect of the research philosophy, namely the ontological assumptions that I adopted in this study, owes something to the relativist ontology that considers society as a product of the social interactions between people (King and Horrocks, 2010, p. 9). Embracing such a stance towards the nature of reality explains my choice of a qualitative research design because, according to Krauss (2005, p. 760), qualitative research 'is based on a relativistic, constructivist ontology that posits that there is no objective reality. Rather, there are multiple realities constructed by human beings who experience a phenomenon of interest [to the researcher]'. Similarly, Krauss (2005, p. 670) highlights that the ontological assumptions that inform qualitative researchers are related to the belief that multiple realities exist because of the different points of view from which phenomena are experienced. Therefore, my philosophical position about reality indicates that there is not only one fixed and pre-existing reality that is

independent from individuals and ready to be discovered by the world. Rather, there are different and multiple realities in relation to the topic of this study.

Since criticality is a concept that is understood and experienced differently by different people (see chapter 2, section 2.3), adopting the relativist ontology and the idea of multiple realities in this study is relevant. It is important to note that reality is not objective and does not exist in isolation from individuals, it instead exists in their subjective experiences and is constructed through interaction and exchange with other people. The subjective nature of reality lies in the experiences of people who experience different phenomena from different backgrounds, perspectives and ways of viewing and experiencing the world. People, as individual beings, are different and approach the world with diverse views and attitudes depending on their beliefs and perspectives. These different realities might emerge from the discrepancies in the cultural, educational, economic and religious backgrounds that shape people's lives and ways of thinking about different phenomena in the world. Investigating the commonalities as well as the differences of individuals in relation to the lived experience of a phenomenon is considered the task of the qualitative researcher (King and Horrocks, 2010, p. 27). Kuzmanić (2009, p. 44) asserts that 'each of the participants is considered to have his or her own perspective and social knowledge; however, they have to share some sort of common ground'. In addition, Hathaway (1995, p. 544) states that 'reality is constructed by those participating in it, and understanding the reality experienced by the participants guides the interpretive researcher'. Therefore, my role as a researcher is to socialise with the participants in order to construct their reality about the topic of criticality, as well as draw interpretations about these realities.

The second aspect of research philosophy, the philosophy of knowledge or epistemology, relates to what is considered appropriate knowledge and how this knowledge can be generated. King and Horrocks (2010, p. 8) refer to epistemology as 'the philosophical theory of knowledge ... a means of establishing what counts as knowledge'. Epistemology addresses those issues that deal with what is viewed as knowledge and the consideration of the methods of finding and transmitting it to the audience (Kivunja and Kuyini, 2017, p. 27). From these statements, epistemology is about the stances and beliefs that the researcher holds about the nature of knowledge and how this knowledge is obtained from the world. My epistemological assumptions about the nature of knowledge that inform this study are based on the idea that knowledge of the world resides in the subjective experiences of people. This knowledge of the

outside world is constructed through individuals' communication and exchange in a social and interactive event.

Since I believe that reality exists in the subjective experiences of people, and that knowledge of this reality is built through social interaction with the participants of this research, an interpretive position is adopted in order to explain this knowledge. On the importance of interpretivism, Hammersley (2013, p. 26) asserts that:

Interpretivists argued that in studying the social world it is essential to draw upon our human capacity to fellow human beings "from the inside" -through empathy shared experience and culture, etc - rather than solely from the outside in the way that we are forced to try to explain the behaviour of physical world.

Hammersley considers interpretivism a significant aspect to adopt in a qualitative research study in order to explain the world of the researched participants. The researcher's capacity to interpret and explain the meaning of the data collected from the participants is sustained by shared principles such as experience and culture. Human beings are capable of interpreting what is going on around them by trying to provide explanations for the behaviours or phenomena that they encounter in the world through making connections. My task as a researcher in this study is to interpret the perceptions of the participants in relation to critical thinking, especially given that I have experienced the same educational system and came from the same cultural background as the participants.

In summary, my ontological assumptions consist of the idea that the participants may possess different understandings of the notion of critical thinking and may have diverse experiences of developing it. My epistemological assumptions refer to the fact that knowledge of the participants' perceptions can be obtained through my interaction with them. Therefore, my objective as a qualitative researcher is to depict, explain and interpret the complexity in the multiple realities that the participants bring to the topic under study in terms of the differences and the commonalities between their beliefs and views.

4.2.2. The Contribution of Ontology and Epistemology to my Methodological Choices

Ontology, epistemology and methodology are connected because they all inform and shape the entire philosophy of the research. Krauss (2005, p. 758) states that 'epistemology is intimately related to ontology and methodology; as ontology involves the philosophy of reality,

epistemology addresses how we come to know that reality while methodology identifies the particular practices used to attain knowledge of it'. The research paradigm is sequential because each element of it follows on from the others in the sense that ontology, once identified, will be addressed by epistemology, which in turn will be addressed by the methodology.

The different philosophical assumptions about the nature of reality influence the resultant choices of research methodology and process. Some authors (e.g. Krauss, 2005; King and Horrocks, 2010; Jackson, 2013) highlight the link between ontology and epistemology, as well as the role of the former in identifying the nature of the latter, and the impact that they both have in choosing the research methodology. Jackson (2013, p. 52) asserts that the choice of research methodology is made once the researcher has identified his position towards the nature of reality which is determined by whether reality is viewed as external and independent from individuals or constructed from an individual's social experiences and perceptions. Having a view on the nature of social reality is important in comprehending the design and process of conducting the study (Kraus, 2005, p. 759) and in considering what constitutes appropriate knowledge in the research (King and Horrocks, 2010, p. 8).

The multiple realities and understandings of the notion of critical thinking can be constructed from the subjective experiences of people. The phenomenological or subjective world of people constitutes the central source for the emergence and development of meaning (Krauss, 2005, p. 363). These subjective experiences of individuals are considered as a place where knowledge could emerge. For this reason, I decided to investigate and gain knowledge about the topic of criticality from the experiences and perceptions of the participants through the interactions and exchanges that happen between the researcher and the participants. To gain knowledge of the world of the participants in relation to understanding and developing critical thinking, talking to them appears to be an appropriate technique. Their subjective experiences are then interpreted through the lens of the researcher via interpretivism. Thus, I have adopted an interpretive framework in order to analyse the data collected from the participants in this study. Jackson (2013, p. 54) claims that 'an ontological view of knowledge as subject to interpretation, means epistemologically, that knowledge is arrived at through sense-making and meaning'. My task is to go beyond the mere description of the data to making interpretations and generating meaning.

As a summary to my philosophical underpinnings, I believe that reality is found in the subjective world of the participants, which suggests the idea of multiple realities. Knowledge about this reality and their experiences is gained through interaction with the participants. For this reason, I employed interviews as the main data collection-instrument in this study, in order to obtain a deep understanding of their perceptions in relation to critical thinking. This research philosophy thus, allowed me to identify an appropriate research approach, namely the qualitative approach, which fitted perfectly with the nature of the study, as it also helped me to choose suitable methods, i.e. interviews, with which to gather data from the participants.

4.3. Research Approach: The Rationale for Using Qualitative Research

This study, which deals with the nature of criticality from the perspective of the participants, adopts a qualitative research design. The choice of the qualitative approach and its principles to inform the design of this study was driven by the purpose of this research and my philosophical underpinnings. Creswell and Creswell (2018, p. 5) claim that the researcher's explanation of their choice of a particular research approach, be it qualitative, quantitative or mixed method, is defined by philosophical ideas. A qualitative rather than quantitative research approach is adopted because this research strives to explore the participants' subjective views about the topic, rather than measure their critical thinking abilities or their developmental level of criticality. My belief in multiple realities, along with the aim of this research, which investigates the participants' subjective views and perceptions, determined my choice of a qualitative research approach. To explain the principle of the qualitative approach, Hammersley (2013, p. 12) claims that it is a:

Form of social inquiry that tends to adopt a flexible and data- driven research design, to use relatively unstructured data, to emphasize the essential role of subjectivity in the research process, to study a small number of naturally occurring cases in detail, and to use verbal rather than statistical forms of analysis.

According to this quotation, three other elements, in addition to my philosophical assumptions, informed the use of qualitative research. The first element refers to the use of small rather than large samples of participants, which is the case in this research, with 11 participants. The second element relates to the focus on subjectivity over objectivity, an element that is emphasised in this study by exploring the participants' personal views and perceptions. Hammersley (2013, p. 51) points to the significant role of investigating the experiences and attitudes of ignored individuals. Researchers use a qualitative approach in their research in order to give the

opportunity for the participants to speak about their lived experiences, as well as reduce the power dynamics between the researcher and those being researched (Creswell, 2007, p. 40). Indeed, the aim of this study is to make the students' voices heard, allow them to express themselves and delve into detail to gain an understanding of their practice of criticality, rather than assuming stereotypes about their inability to think critically. The use of verbal rather than statistical data is the third element that supports the use of qualitative research in this study, because I used interviews to collect the data.

The exploratory nature of the qualitative approach fits well with the purpose of this study, which seeks to explore new insights and perspectives into looking at criticality. Qualitative research is therefore adopted because it 'is characteristically exploratory, fluid and flexible, data-driven and context-sensitive' (Mason, 2002, p. 24). In other words, the flexibility of the research design, the generation of knowledge from data not theory, and a dependence on context are among the criteria of qualitative research. Hammersley (2013, p. 12) asserts that the focus of qualitative research is not to confirm and test already determined and established assumptions; rather, its role is to generate new descriptions and explanations of the phenomenon. Qualitative research is suitable for research that considers new perspectives and unexplored areas of the phenomenon under study, upon confirming already existing theories and beliefs about it. Likewise, Creswell and Creswell (2018, p. 19) claim that 'qualitative research is especially useful when the researcher does not know the important variables to examine'. In the case of this research, the purpose is to explore criticality through the lens of Algerian PhD students in the UK, an area of research that has not been extensively addressed. In addition, the focus is on working on the data collected from the participants, rather than trying to force categories and themes to confirm existing theories.

The flexibility of the qualitative approach in terms of the research design and process is one of the other features that triggered its use in this study. Mason (2002, p. 24) highlights that 'in qualitative research, decisions about design and strategy are ongoing and are grounded in the practice, process and context of the research itself'. The research design is developed throughout the research process, rather than by relying on a rigid plan. It is subject to modifications depending on the development of the topic and the progress in the data collection. Despite the flexibility of qualitative research, it is important to 'produce a research design at the start of the process' (Mason, 2002, p. 24). In the case of this study, I developed a provisional plan for the methodology at the beginning, but the flexibility of qualitative research

allowed me to make some changes. For instance, my initial plan was to conduct six interviews with the participants along with focus group interviews. After the first phase of data collection and analysis, I decided to conduct follow-up interviews with the same participants and other interviews with different participants, to gain richer data about the initial emerging themes. I also chose to eliminate the focus group interviews because the semi-structured interviews had generated enough data. The qualitative approach thus gives the researcher the flexibility for future actions that are shaped and triggered by the needs and development of the research.

To summarise, the choice of qualitative research over other approaches is defined by its principles, some of which were compatible with the purpose and characteristics of this research. Some of these principles include the focus on the subjective experiences of individuals, its exploratory nature, the flexibility of the research design, being data-driven, and the use of a small number of participants.

4.4. The Rationale for Data-Collection Methods

In this section, I discuss the data-collection instruments I employed in order to gather data from the participants. I explain the reasons for choosing semi-structured interviews, in addition to clarifying the inclusion of vignettes in the interview guide. I also present the content of the interview guide by describing the questions I asked the participants and the vignettes they were expected to comment on.

4.4.1. Interviews as the Main Data-Collection Instrument

Qualitative interviews are used in this study as the main data-collection instrument, in order to understand the world and the stories of the participants and gain an insight into their beliefs about critical thinking. Speaking with people in order to delve into their social experiences is consistent with the ontological beliefs of the social constructive nature of reality and human behaviour (Horrocks and King, 2010, p. 10). Indeed, my ontological assumptions informed my choice of using interviews, which provided an opportunity to have exchanges with the participants in order to capture and construct knowledge about their views of the topic under study.

On their definition of a research interview, Kvale and Brinkmann (2009, p. 2) assert that ‘it is an inter-view, where knowledge is constructed in the inter-action between the interviewer and

the interviewee. An interview is literally an *inter view*, an inter-change of views between two persons conversing about a theme of mutual interest'. Based on this definition, interviews fit perfectly with my epistemological assumptions about the idea that knowledge is constructed through the interaction between the researcher and participants. In addition, Gill et al. (2008, p. 291) state that conducting interviews is appropriate in seeking the experiences, views, and motivations of the participants in relation to a particular phenomenon, and they are also suitable when there is a lack of knowledge or more detailed information about a specific topic. In this study, I used interviews to interact with the participants and construct an understanding of their critical thinking perceptions and views about developing this skill.

The purpose of using semi-structured interviews is to ensure both guidance and flexibility for the participants at the same time. Semi-structured interviews are guided by some questions, but they are flexible in terms of the questions' order and the possibility of asking additional questions that can be generated from the interview setting (Lichtman, 2014, p. 248). The choice of semi-structured interviews rather than structured or unstructured interviews owes something to the degree of flexibility allowed for the participants and the degree of guidance and intervention of the interviewer. Structured interviews are 'passive recordings of people's opinions and attitudes' (Brinkmann, 2018, p. 579), and they limit the participants through the pre-determined and rigid questions, which do not encourage the introduction of new thoughts about the topic. I did not use unstructured interviews because they allow too much flexibility, which might lead the participants to talk about irrelevant ideas. For this reason, semi-structured interviews were employed because of the balance between the questions of the interviewer and the interviewees' responses. The questions guide the interviewees to keep the 'conversation on issues that he or she [researcher] deems important in relation to the research topic' (Brinkmann, 2018, p. 579) but, at the same time, there is room for elaboration and follow-up questions.

In an interview setting, both the researcher and the interviewee communicate together within the interview context to create an understanding of the topic under investigation. Interviews are not places where knowledge is discovered; however, knowledge and meaning are constructed through the active exchange between the interviewer and the interviewee in the interview setting, rather than from the mere idea of asking and answering the questions (Holstein and Gubrium, 1997, p. 113). Kvale and Brinkmann (2009, p. 17) refer to the active process of interviewing and creating knowledge of a specific topic through the interaction between interviewer and interviewee in the interview setting. Similarly, Miller and Glassner

(1997, p. 99) claim that the ‘interview is obviously and exclusively an interaction between the interviewer and interview subject in which both participants and researcher create and construct narrative versions of the social world’. Therefore, knowledge of a topic is not obtained from the participants’ mere responses to the questions; rather, it is constructed through the active exchange between the researcher and the participants in the interview setting. Brinkmann (2018, p. 579) claims that semi-structured interviews ‘can make better use of knowledge-producing potentials of dialogues by allowing much more leeway for following up on whatever angles are deemed important by the interviewee’. The co-construction of knowledge and meaning between the interviewer and interviewees can be better achieved using semi-structured interviews through the follow-up questions the researcher asks based on the participants’ answers.

The total number of interviews conducted in this study was fourteen: six in the first round and three follow-up interviews, in addition to five other interviews in the second round. All the interviews were audio-recorded using my phone and lasted between half an hour and two hours. They were each transcribed after they took place, to avoid having many interviews to transcribe at the same time. It is important to mention that I lost one participant, Fadia’s interview recording at the end of the interview period. However, I took notes during and after the interview, and the data from this interview was used only in one instance in the data chapters.

As an overview, the use of interviews, and specifically semi-structured interviews, is suitable in exploring the subjective and personal views of the participants in relation to the topic of criticality. They allow the construction of meaning and the understanding of the world of the participants through the active interaction between the interviewer and interviewees.

4.4.2. The Rationale for the Use of Vignettes in Interviews

In the interview guide, I integrated some vignettes into the interview questions. Typical interviews in qualitative research are based mainly on questions and follow-up questions about the topic. In this study, however, I employed vignettes because they are useful in gaining an insight into the beliefs of the interviewees in relation to the topic of critical thinking. Azman and Mahadhir (2017, p. 28) note that the vignette technique has mainly been employed and known within quantitative research designs; however, researchers have discovered that the way in which it is used does not elicit rich data, which has pushed them to turn its use towards qualitative designs. Vignettes are widely used by the scholar Adrian Holliday (2013) in his

different works such as in his book 'Understanding Intercultural Communication: Negotiating a Grammar of Culture'. Edwards and Holland (2013, p. 57) define vignettes as 'short stories or comic strips with a purpose; about characters in particular hypothetical but realistic circumstances or dilemmas that are relevant to the research inquiry'. In other words, a vignette refers to a representation of a situation – a scenario about a lived experience or a hypothetical but authentic event that is related to the topic of the study. It is important to mention that I integrated the vignettes within the interview guide rather than employed them as a separate data-collection instrument.

Several reasons influenced my decision for integrating vignettes in the interview guide. The first reason relates to the nature of the current study, which looks at the beliefs and perceptions of the participants in relation to criticality, and vignettes are ideal for those studies that look at the views and beliefs of people (Edwards and Holland, 2013, p. 57). Azman and Mahadhir (2017, p. 28) claim that 'the employment of vignettes as a data elicitation technique encourages articulation of perceptions, opinions, beliefs and attitudes from participants as they respond to or comment on the concrete scenarios and situations as depicted'. The purpose of presenting the scenarios in the vignettes is to allow the participants to comment on them, and therefore obtain an understanding of their thoughts towards certain elements of the research topic in an indirect and implicit way. The vignettes elicit information about their beliefs, feelings, perceptions and attitudes about the scenarios presented in the vignettes, as well as answering the questions related to them. The participants, in this way, are given the opportunity to present their views about the situation in general and particularly in relation to criticality.

The second reason is that vignettes may serve as a stimulus for the participants to talk about their experiences. This technique can stimulate their memories and motivate them to reflect on their previous experiences and similar situations, and introduce their thoughts about them. In addition, referring to their personal experiences serves as examples and evidence of the points that they make in the interviews. While one of the participants could not clearly remember her previous academic experience at university at the beginning of the interview, reading the vignettes allowed her to remember. In response to the first vignette, one participant, Chahra, commented as follows: 'I have experienced exactly what it has been said here word by word ... I think this basically summarises how the educational system in Algeria works'. Her initial comment to the second vignette was 'I have experienced this as well; I think that this

girl [in the vignette] and I share, I think we share the same background, the same method of teaching'. She also said the following about the third vignette: 'Oh my God, it resembles my experience, this is what we used to do at, I would say, at higher education'. These instances demonstrate the role of vignettes in stimulating the interviewees to think about their experience and articulate their thoughts about these encounters in relation to the research topic.

The third reason for employing vignettes relates to their innovative nature in terms of the method of approaching the participants, i.e. an approach that is far from the usual and typical method of asking questions one after another. The integration of the vignettes within the interview creates variation in the method of approaching the interviewees, helping them to be engaged in the discussion and preventing them from becoming bored after listening to the same questions. Unlike direct questions, vignettes are indirect ways of gaining information about participants' beliefs by merely asking them to think about, make notes and comment on the vignettes. Their responses to the scenarios help in determining their beliefs and the meaning that they attribute to the situations, especially in relation to the topic.

4.4.3. Design and Description of the Interview Questions and Vignettes

The interview guide was divided into four parts, which included questions that sought to address the research questions (see Appendix 2). In other words, the research questions in this study informed the design of the questions in the interviews. The first part covered questions about the academic experience of the participants in terms of how they have been taught and how they have been learning, describing their role and the teacher's role, in addition to the activities in which they have been involved during their educational experience, mostly at university. The purpose of these questions was to understand the educational background and experience of the participants and uncover, from their accounts, any references to the practice of criticality. The second part contained questions relating to the way in which they define critical thinking and questions about their beliefs about what people do when they are engaged in the task of critical thinking, in addition to asking them to give and describe a situation from their experience in which they used criticality. The aim of these questions was to understand what constitute critical thinking practices by allowing the participants to talk about situations where they are applied. The third part referred to presenting situations that helped the participants to develop their criticality. These questions enabled me to determine the situations, circumstances and conditions that shaped and assisted the participants in fostering their criticality.

The fourth part of the interview guide comprised the vignettes. I generated three vignettes reporting a range of different but related scenarios depicting certain learning situations and methods of teaching (see Appendix 3). As asserted by Hughes and Huby (2004, p. 40), ‘continuous narrative vignettes, for example, which build upon previous events can be economical in terms of time as contextual material need not to be applied for each scenario’. The vignettes represent a sequence of stories about teaching and learning in the classroom. The first vignette, accompanied by a picture, introduced the scenario of a teaching situation where the teacher delivers a lesson through lecturing while students listen and take notes. The second vignette represented the situation of a student who has some ideas to share in the classroom but feels reluctant because of fear of negative feedback from their classmates and teacher. The last vignette described a situation relating to the ‘copy and paste’ phenomenon used by a student in essay-writing. Each vignette was accompanied by questions about the participants’ thoughts and comments about the scenarios, especially in regard to criticality. Based on their responses, I asked them more follow-up questions to allow them to expand on their ideas and enable me to reach a deeper understanding about their views.

Two aspects informed the construction of the vignettes: my personal lived experience and various informal conversations with Algerian PhD students. The scenarios had been created based on my experience, along with my conversations with Algerian students about the teaching and learning approach experienced in Algeria. The purpose of presenting the participants with such scenarios was to understand the nature and position of critical thinking in those situations that they probably have experienced; it is about exploring the practice of their criticality in the presented scenarios.

4.5. Data-Collection Procedures

The purpose of this section is to describe in detail the procedures of data-collection. These procedures involve going through the ethical procedures and consideration, the piloting of the interview questions, the recruitment of the participants, describing the implementation of the interview guide and specifically the vignettes in addition to carrying out the follow-up interviews.

4.5.1. Ethical Considerations in Research

My engagement as a researcher within the academic community at my university of study allowed me to notice the careful consideration that is given to research ethics. According

to Farrimond (2013, p. 13), research ethics refer to the 'ethical norms, codes and regulation which govern our current research practices as part of an academic/scientific professional community'. Considering research ethics is one of the crucial steps that ensures that all research is conducted within ethical and accepted norms. Farrimond (2013, p. 11) claims that research ethics have become included among the required skills for research, especially in social research, in which the researcher needs to make an ethics application to find out whether the study fulfils the ethical considerations that the institutions have established. The purpose of conforming to ethics requirements is to ensure 'doing good and avoiding harm ... through the application of appropriate of ethical principles' (Orb et al., 2000, p. 93). Research should be conducted within ethical norms that avoid harm to the researcher, participants, data and findings of the study.

Ethics involve two aspects: the procedural ethics, which deals with the application to obtain approval from an ethics committee, and ethics in practice, which are concerned with those dilemmas that occur during the research process (Guillemin and Gillam, 2004, p. 263). For this study, I submitted an ethics application with all the required documents to the ethics committee of my university of study. Applying for ethics approval involves completing certain forms that explain the topic and objectives of the study, the methodology and the possible issues that might occur in the research, and therefore highlight the ethical considerations that should be taken to manage and deal with these issues. Creswell and Creswell (2018, p. 90) state that the researcher should identify in advance the ethical issues that might be engendered from the research and, most importantly, cite them in the ethics application. Thus, approval from the ethics committee to conduct the study is decided based on the feasibility of the research and the procedures taken to avoid any unethical issues with either the researcher, the participants or the research process.

The research equally involves the ethics in practice dimension, which concerns the ethical considerations taken with regard to the issues that might emerge in the research. Accordingly, all research that investigates humans, animals or even documents related to humans is subject to conforming to ethical considerations and principles (Guillemin and Gillam, 2004, p. 262). This qualitative research investigates the experiences of Algerian students in relation to the topic under study. The researcher should ensure that no harm will happen to him/herself or the participants, although as asserted by Jelsma and Clow (2005, p. 3), qualitative research is very unlikely to cause physical harm for the participants being studied. The nature of this study would not seem to cause any type of harm for my participants. However, when conducting an

interview with one of the participants, she seemed to be sensitive about a particular aspect of the interview. She talked about a situation that had happened to her in the classroom when she shared her idea and the teacher laughed at her. She showed discomfort while narrating this experience and she told me that remembering it devastated her. To avoid any emotional harm, I requested her not to go any further in talking about this situation.

Other ethical considerations I took involved obtaining informed consent from the participants, which Farrimond (2013, p. 109) refers to as the idea of making an independent rather than forced decision about their participation in the study, based on sufficient information communicated about the study. For this reason, my first email to the participants is attached, along with the participants' information sheet (see Appendix 1), which contains sections on the background and procedures of the study and participants' criteria for participation in addition to aspects related to confidentiality, freedom of participation and withdrawal from the study. Most of the provisional participants I contacted agreed to take part in the study, but no consent form was signed before the day of the interview. The reason behind this was to avoid putting any pressure on the participants to think that they had signed the consent form and did not have the right to withdraw. On the day of the meeting and before starting the interview, I asked them once again whether they still wished to be a participant in my study, to ensure that they were willing rather than feeling forced to participate in the research. I obtained their written consent only after confirming that they still intended to take part.

Anonymity and confidentiality are two other aspects that I took seriously to assure the participants that their participation was anonymous and all the information that they provide would be protected and kept confidential. All explanations of these two elements were provided in the participant information sheet and I repeated them again verbally in the moments before conducting the interview. Anonymity means that all information that might identify or allow people to recognise the participants should be removed (Farrimond, 2013, p. 128). To achieve the anonymity of the participants, I have replaced their real names with pseudonyms and kept their faculty or school of study confidential, in addition to storing the data collected in a secure location that can only be accessed by the researcher. Concerning the dissemination of the data, I assured the participants that the information and data that they provided would only be used for academic and research purposes and would be included in my thesis.

Making the participants feel valued rather than considered as only a means to an end, i.e. using them merely to achieve the purpose of collecting data, is one of the other goals that I tried to achieve. It is true that the primary objective of recruiting the participants is to gather data from them; however, it appears unethical to make them feel that they are only objects. Rather, the purpose of this research is to communicate their views and beliefs about criticality and make their voices heard.

Three participants found that the interview setting as a beneficial exchange for their respective research because they could learn something from it. In one of the interviews, the participant Samir seemed comfortable, and we took 40 minutes talking about different aspects of the research before the start of the interview. I avoided interrupting him in order not to cause him a feeling of discomfort or of treating him as just a tool for achieving my desired goal of collecting data. We discussed issues about methodology and research; Samir was explaining to me his research topic and objectives and the possible methodology to employ. Since he was a first year PhD student at the time of the interview, he was seeking advice and asking questions about the methodology that I employed in my study in order to gain an insight. At the beginning of the interview, the participant Sonia, who was nearing the phase of data collection in her own research, said overtly that the interview setting was an opportunity for her to learn some things about research and data collection. While reading the consent form to sign it, she said that ‘this will help me to know and discover how to do things in my research too’. She considered the interview a chance to discover the procedures of doing an interview. At the end of the interview, she asked me to look at her plan for the methodology chapter. She also talked about her ontological and epistemological beliefs and asked me to send her some references by email. In the follow-up interview with another participant, Salwa, and in the middle of answering a question, she said that ‘I am really learning from this interview’ because her PhD topic was closely related to my research topic. I noticed that my questions were triggering her curiosity and she was thinking deeply about them.

To conclude, ethics are not limited to the formalities of applying to the ethics committee to obtain approval to conduct the study. They go beyond that to include maintaining ethical considerations in practice and ensuring that no harm will happen to either the researcher or the participants. Other considerations involve obtaining informed consent from the participants, protecting their anonymity and ensuring the confidentiality of the data.

4.5.2. Piloting the Interview Questions

After gaining approval from the ethics committee to conduct the study, refining the questions of the interviews and writing the vignettes, I decided to conduct a ‘mock interview’ to test the questions and vignettes in terms of comprehension, clarity, adequacy and wording. The two persons with whom I had the mock interviews were not among the participants of the study. I contacted my friend in Algeria, explained to her the purpose of the mock interview and asked her whether she would agree to take part in the interview, and she accepted my request. I carried out the interview with her through Skype and it took around an hour, with some interruptions. Since my plan was to conduct all the interviews in a face-to-face setting, I decided to conduct another mock interview with a fellow colleague face to face. I also explained to her the aim of carrying out the interview and she easily agreed to take part.

The mock interviews were beneficial because they raised my awareness about some aspects of the interview that I should take into consideration in the official interviews. The first aspect related to the content and questions of the interview. The pilot interviews allowed me to reflect on the questions and therefore modify, omit or add other questions. Some questions seem to be ambiguous and vague and others repetitive. For this reason, they were either omitted or modified to simplify the wording and ensure that they were comprehensible to the interviewees. For instance, the following two questions were removed from the interview guide because they were irrelevant and ambiguous:

- What are the features and characteristics that should be present in an individual to be considered as a critical thinker?
- What factors and qualities do you rely on in engaging in critical thinking?

One question was modified from ‘Think back about instances where you used critical thinking and tell me about the aspects and behaviours you applied’ to ‘Can you think of a situation or example in which you used critical thinking and tell me about it?’, followed by another related question: ‘Could you please describe the part of the situation that you consider as critical thinking?’ Other questions were added to the interview guide, especially the follow-up questions, which were limited in the first version of the interview.

The second beneficial aspect refers to the importance of asking probing questions. Such questions stimulate the interviewees to provide extensive descriptions and details about their experiences and beliefs, rather than depending merely on the already prepared questions. The

mock interviews were an opportunity to practise the skills of interviewing and actively listening to the interviewees, in order to ask more follow-up questions based on their responses.

4.5.3. Describing and Recruiting the Participants

There are several Algerian students who have been funded by the Algerian government to carry out their postgraduate studies in UK universities. The participants in this study were a small group of these students in one UK university who completed a six-month PhD pre-session programme at Canterbury Christ Church University as preparation for the International English Language Testing System (IELTS) test and secure a PhD placement. The following table represents general information about the participants' educational status (Table 2). Their real names have been substituted with pseudonyms for anonymity purposes.

Name of Participants	Gender	Degree Obtained in Algeria	Discipline of Study	Year of PhD	Date of the Interview
1.Samir	Male	MA	Applied Linguistics	1 st year	14 November 2018
2.Salwa	Female	MA	Education	2 nd year	16 November 2018 Follow-up interview: 21 July 2019
3.Linda	Female	MA	Education	2 nd year	18 November 2018
4.Chahra	Female	MA	Politics	4 th year	19 November 2018 Follow-up interview: 10 July 2019
5.Meriem	Female	MA	Applied Linguistics	2 nd year	26 November 2018

6.Samia	Female	MA	Applied Linguistics	2 nd year	30 November 2018 Follow-up interview: 26 July 2019
7.Lamia	Female	MA	Applied Linguistics	1 st year	22 July 2019
8.Walid	Male	MA	Applied Linguistics	2 nd year	25 July 2019
9.Warda	Female	MA	Applied Linguistics	1 st year	26 July 2019
10.Fadia	Female	MA	Applied Linguistics	2 nd year	26 July 2019
11.Sabrina	Female	MA	Applied Linguistics	2 nd year	30 July 2019

Table 2 Participants' Profile and Educational Status

The number of participants was 11 Algerian doctoral students in the UK. They all had their BA and MA in different disciplines from different Algerian universities. At the time of the study, they were doing their PhD in a UK university and came from different disciplines such as education, politics and applied linguistics. They were interviewed at different stages of their PhD journey: first, second and fourth year. Some of the characteristics for recruiting the participants included being an Algerian student and doing a PhD in the UK. The choice of Algerian students over other international students was determined by the limited studies that investigate Algerian students' perspective of critical thinking (see Chapter 1, section 1.4.1). The recruitment of more female than male students was not deliberate but defined by the small number of Algerian male students in that UK university.

Despite my familiarity with the participants, I took the necessary measurements and ethical considerations when approaching them. I contacted them by email rather than asking them face to face, to give them time to think and make a decision about their participation. Asking them face to face might have caused feelings of embarrassment if they refused my request. I tried to be brief in the email and attached the participant information sheet, containing the purpose of

the research, the procedures of participation and all the ethical considerations, to give them sufficient time to read and understand the requirements of their participation.

In the first phase of data collection, I contacted seven potential participants, who all responded to my email and showed an interest in participating in the study. However, one of the participants who responded to my first email and agreed to participate in the study did not respond to my second email suggesting a date for conducting the interview. I kept contact with the remaining six participants and decided upon the date, time and place of the interviews. All the interviews were conducted on different dates to allow some time for the transcription of the audio recordings. They were also carried out at a time and place that were convenient for the participants, to ensure their comfort and preserve their anonymity.

4.5.4. Implementation of the Vignettes

To provide a more concrete and detailed account of how I employed the vignettes in the interviews, it is important to note that I started by asking the questions in the first three parts of the interview guide (see Appendix 2). The fourth part was a combination of three vignettes with some questions related to them. I first told the participants that in this part of the interview, they were supposed to read and comment on the vignettes one by one. I then asked them to read the first vignette and gave them a notebook to use if they wished to write their initial thoughts while reading. After finishing the reading, a general question about their beliefs in relation to the scenario was asked, along with another specific question about the relation of the situation presented in the vignette to critical thinking. The way in which the participants were expected to respond to the vignettes was defined by the researcher, as well as by the purpose and perspective that the study sought to address. Hughes and Huby (2004, p. 43) claim that responses to vignettes can be addressed from the perspective of the characters in the vignette, people in general or the participants. Since the aim of this research is to explore the participants' views and attitudes towards the topic, I asked them to present their own personal beliefs rather than other people's possible views. After answering the main questions about the vignettes, some follow-up questions were asked based on the interviewees' answers.

Although the vignettes presented complete scenarios, they sometimes lacked the contextual information that some participants sought to be provide with while commenting on them. Hughes and Huby (2004, p. 45) claim that 'vignettes cannot contain all the necessary information that participants may wish to draw on in responding to vignette events because,

ultimately, vignette context is selective'. In addition, the participants' manner of responding and interpreting to the seemingly hypothetical situations presented in vignettes, particularly when complete information about the situation is missing, might generate valuable and useful data (Hughes and Huby, 2004, p. 46). The participants might imagine and create a context for the situation that enables the researcher to consider what aspects the participants believe are important to the topic. The type of responses that the interviewees might give can relate to the situation described by Barter and Renold (2000, p. 309), where 'responses [to vignettes] are often characterised by the "it depends" answer, which provides the situated context for the participants to offer and define central influencing factors'. The ambiguous situations motivate the respondents to create for themselves a context in which they feel able to comment on the scenarios. This aspect occurred in one of the interviews, where the participant replied to these vignettes using the expression "it depends on the context" and the preposition "if" to generate a context for the scenario presented in the vignette.

After commenting on and answering the questions linked to the vignettes, I asked the participants some more questions in relation to describing a situation from their experience that either helped them in or hindered them from developing their criticality. Based on the scenarios of the vignettes, the participants could reflect on their experiences and think of similar and different situations that happened to them in relation to critical thinking.

4.5.5. The Purpose of Follow-Up and Second Round Interviews

After the first phase of data collection in October and November 2018 and the data analysis, I decided to carry out follow-up interviews. These interviews were conducted seven months after the initial interviews, i.e. July 2019. I conducted three follow-up interviews with the same participants and five interviews with new participants.

People's tendency to change their thinking, in addition to my reflections on the initial findings, triggered me to conduct follow-up interviews with the same participants. Since change and development through time are aspects of human nature, the follow-up interviews were an attempt to explore the participants' perceptions about criticality again, some months after the first initial interviews, and find out whether they still held the same or different beliefs and understandings in regard to the topic. In addition, the initial interviews allowed me to ask open-ended and probing questions in order to delve into more detail about the participants' answers. Sometimes, however, it is difficult for the researcher to notice some of these ideas and reflect

on certain answers at the time of the interview. After an analysis of the first round of interviews, I was able to spot some important ideas that I was eager to investigate in more detail in the follow-up interviews. Polkinghorne (2005, p. 142) claims that ‘too often, interview-produced data contain only initial reflections without explorations into the depth and breadth of the experience. In order to obtain interview data of sufficient quality to produce worthwhile findings, researchers need to engage with the participants in more than a one-shot’. It is important to conduct more than one interview with the participants in order to gain rich and meaningful data about their perceptions. Therefore, the follow-up interviews allowed me to explore unclear ideas and discuss some of the emerging themes.

Although the findings cannot be generalised to a wider community, more interviews were necessary to gain as much data as possible about the participants’ diverse views of critical thinking. The aim of conducting the second round of interviews with new participants was to obtain more rich data in regard to various perspectives of looking at criticality. I noticed from the initial data analysis that certain ideas were not well-developed and little was said about them. For this reason, the second round of interviews served to enrich the data and gain a multiplicity of realities, thus achieving depth.

The questions in the follow-up and second round interviews were designed based on the initial analysis of the first six interviews (see Appendix 4). Some questions were generated because of the ambiguity of certain ideas presented in the initial interviews, which I decided to investigate in more detail. To ask these questions, I tried first to provide a context for what the interviewee said in the previous interview, in order to remind them of what they had said. The other questions were mainly about presenting a particular finding to the participants and asking them to comment on it, to find out what they thought about it and whether they held the same or different beliefs in comparison to the other participants. I was careful about the order of asking some questions and I began with the questions that I had generated from their initial interviews. I then proceeded with the questions where the participants were expected to comment on some findings. The reason behind this structure was to avoid influencing their thinking and answers through the findings presented to them.

4.6. The Process of Data Analysis

Data analysis was obviously the next step following the phase of data collection. In this phase, my role as a researcher was to draw interpretations and figure out the meaning that the

participants attempted to communicate about criticality. Boeije (2009, p. 94) states that the purpose of data analysis is generating findings and interpretations from the raw data by classifying, labelling and connecting data. Thus, analysis involves the transformation of raw data into findings through several processes. These processes involve the division, naming, categorisation and interpretation of the data in order to generate an understanding of the research topic, based on the commonalities and discrepancies in the participants' views.

4.6.1. Analysing While Transcribing the Interviews

In this study, the process of analysis began in the early stages of obtaining the data. I started to notice some patterns from the data at the time of interviewing the participants and transcribing the interview recordings. Nowell et al. (2017, p. 5) assert that 'if data were collected through interactive means, researchers will come to the analysis with some prior knowledge of the data and possibly some initial analytic interests or thoughts'. In this research, the interactive nature of the interviews enabled me to gain familiarity with the data and develop a general idea of some possible patterns and codes. In addition, Castleberry and Nolen (2018, p. 808) claim that 'the closeness to the data that you achieve during this process [transcription] can jumpstart the other steps of the data analysis process'. Although the manual transcription of the interview recordings was time-consuming, it was not a wasted effort. It allowed me to familiarise myself with and gain an understanding of the data, as well as start the analysis by capturing and making links between some codes and themes before the detailed data analysis. Thus, the stages of interviewing and transcribing the interviews provided an opportunity to understand the data and notice, in advance, some of the emerging themes through a surface-level rather than thorough and deep analysis.

Since I recorded my thoughts and reflections in memos, I will highlight some of the initial ideas and potential codes that I identified during the phase of interview transcription. Some of the codes were generated because of their clarity or because the interviewees mentioned them overtly as aspects related to criticality. One of the common ideas that several participants agreed upon was the idea of the 'teacher' as one of the factors that impacts directly or on students' critical thinking development. According to the participants, the behaviours and practices of the teacher are influential in the integration of criticality in education. These practices involve adopting a role of authority in the classroom and a lack of encouragement of students to be critical, in addition to the use of exam questions that require memorisation rather than questions that trigger students' critical qualities. The large number of students in a

classroom was highlighted by some interviewees as among the factors that prevent students from practising their critical thinking skills. The interviewees valued the importance of having a small number of students in a classroom to allow enough time and opportunities for discussion and exchange of ideas and opinions. They also claimed that a lack of confidence prevented them from making their voices heard, expressing their views and demonstrating their criticality explicitly.

Overall, the process of interviewing the participants and transcribing the audio-recordings involved an early data analysis stage. This phase allowed the generation of some initial codes and themes in relation to the topic under study. The identification of more codes and the generation of themes was achieved through a detailed and deeper analysis of the data.

4.6.2. Organising and Understanding the Data

The organisation of the data is significant because it renders the data-analysis phase an easy task, especially in relation to the retrieval of the files. I created one folder under the title ‘data analysis’ that included other sub-folders, in which each sub-folder contained the name of the participant, his/her audio-recorded interview and the transcription of the interview, along with an empty Word file. The purpose of the Word file was to record any notes about my actual thoughts and ideas while reading and analysing the data.

To gain a good understanding of the data, I began by reading the entire interviews individually, with an attempt to figure out and summarise the general idea and story that each interviewee was trying to disseminate about criticality. After that, I reread the interviews for a second time and selected the pertinent points in relation to the research questions, named each point and sometimes merely summarised the general idea conveyed. At the same time, I wrote an elaboration and interpretation of the participants’ account in each segment, explaining the initial codes in a more detailed way and clarifying how they related to the topic of the study. This phase helped me to take a close look at the data, gain a general understanding of the interviews and extract some of the apparent and initial codes.

4.6.3. The Coding and Generation of Themes

The detailed data analysis involved the use of thematic analysis. Braun and Clarke (2006, p. 79) define thematic analysis as a ‘method for identifying, analysing and reporting patterns (themes) within data’. The analysis of the data of this research involved the process of

thoroughly coding the interview data and generating themes based on the combination of related codes. After reading and selecting the most relevant points from the interview transcripts, I coded them and generated as many potential codes as possible in order not to overlook any important ideas. According to Castleberry and Nolen (2018, p. 809), a code 'serves as a tag used to retrieve and categorise similar data so that the researcher can pull out and examine all of the data across the dataset associated with that code'. In other words, the code refers to the label assigned to different chunks of data that share the same idea, and these are captured in the code with a few words. Although codes can be assigned to different sizes of data chunks, they always convey a meaning (Castleberry and Nolen, 2018, p. 809). In some instances, I attributed a code to a whole paragraph, and in other instances, I coded a line or a small phrase according to the meaning conveyed in each segment. Sometimes, I used the words of the participants as codes - a type of code referred to as in-vivo codes. This kind of code enables the researcher to capture the participants' understanding and way of describing the topic under study by voicing their thoughts (Castleberry and Nolen, 2018, p. 809). The use of in-vivo codes can be beneficial when the participants' words convey a stronger meaning than the researcher's words would.

Since the aim of this research is to explore new insights rather than confirm existing theories about criticality, I followed an inductive rather than deductive method of analysis. Nowell et al. (2017, p. 8) state that inductive analysis 'is a process of coding the data without trying to fit it into a pre-existing coding frame or the researcher's analytic preconceptions'. Indeed, no specific theories or pre-existing frameworks were used in advance for analysis. Rather, I approached the data with an open mind and attempted to avoid bringing my own assumptions and preconceived ideas about the topic to the data-analysis phase. This research is data-driven because the codes and themes have been generated from the data rather than from already established theories. Therefore, the inductive analysis allows for new and unexpected ideas to emerge, instead of forcing the data to fit into existing frameworks.

After the coding process, the initial codes were combined to form themes or categories that depicted findings about the topic. In Table 3, I demonstrate how some of the themes were generated based on the combination of codes. The step of grouping the codes into themes is not a straightforward task, especially when trying to classify the different themes into appropriate and consistent themes for different data chapters. I also struggled to categorise certain extracts of data into one clear theme because the participants sometimes related

different and relevant ideas in one data extract when talking about a particular aspect of the topic. To avoid this confusion, I focused on the principal thought that the participants tried to convey in the extract, rather than focusing on the other supporting details.

Themes	Codes
Classroom dynamics	Classroom arrangement. Number of students in a classroom. Relationship between teacher and students.
Individual's voice and position: thinking differently from the other	Agreeing and disagreeing. Positioning at the middle of the spectrum. Holding and defending positions. Individual's voice.
Natural thinking and part of human beings	All individuals are critical beings. Criticality as an inevitable aspect of human existence. Criticality as part of everyday life. Criticality as part of human beings. Natural thinking.
Critical as an abstract mental process	Abstract and practical. Hardly identifiable. Mental process.
Being critical is diverse	Being critical takes different forms. Showing disinterest: A form of criticality. Silence as a form of criticality. Writing is the manifestation of the thinking process. Thinking process is reflected in writing. Critical thinking is diverse. Written assignments are the product of thinking.
Pausing to think	Individual's reaction to what is being received. Not accepting immediately what we receive. Being sceptical. Nothing is innocent.

Table 3 The Coding Process and Generation of Themes

Despite the organisation of the sub-themes under three main themes, forming the three data chapters of this research, I continued to modify the placement and name of some themes and sub-themes while writing about the data in order to construct a coherent story. The first data chapter deals with the participants' understanding of the notion of critical thinking. The second data chapter is concerned with their and perceptions of developing criticality. The third data chapter is about the factors that influence the participants' practice and development of criticality.

4.7. Challenges and Complexities of the Research: Data Collection and Reflexivity

The aim of this section is to highlight the challenges that I encountered when conducting the study. I discuss issues related to designing the interview questions, data collection and my insider position to the participants. I also discuss the challenges I faced while trying to manage reflexivity in relation to my role as a researcher and avoid the impact of this position on the research process.

The first challenge relates to the issue of designing the questions of the interviews. The challenge resides in my fear to generate guiding questions that can be influenced by my pre-conceived ideas and assumptions about critical thinking. For this reason, I attempted to ask general questions such as 'can you tell me about your academic experience in studying in HE?', an indirect question that seeks to generate answers that demonstrate their experience of criticality. I also asked them "can you think of a situation where you used critical thinking and tell me about it' as a way to extract their way of conceptualising the notion of criticality. In order to also avoid imposing my own assumptions about the participants' familiarity of the concept of critical thinking, I first asked them if they have already heard of this concept in order to later proceed to ask questions about their conceptualisation of this concept. Such general questions are an indirect way of eliciting answers about the practice and the participants' understanding of critical thinking.

The second challenge which is concerned with the data collection phase relates to the difficulty of conducting follow-up interviews with some participants. In the initial data collection phase, I conducted interviews with six participants. After almost 8 months, I conducted follow-up interviews with only three participants, and I could not interview again the three remaining participants. This is due to time constraints because the participants, on their part, were also occupied with doing their PhD and data collection. Doing more follow-up interviews with the

same participants and inviting them to look at the coded data of their interviews is one of the factors that could have ensured the trustworthiness and credibility of the study and findings. However, the unavailability of the participants hindered this aspect.

The third challenge relates to the impact of my role as a researcher on the research process and my use of reflexivity to manage the different issues that are engendered from this influence. My contribution as a researcher is undetachable from the research because I had been ‘actively involved in the research process’ (Palaganas et al., 2017, p. 427). My influence on the different stages of this study involves making decisions about data-collection methods and the choice of interview questions, in addition to the selection of data extracts and their interpretation. For this reason, it is important to exercise reflexivity. Hamdan (2009, p. 379) asserts that ‘employing reflexivity throughout the research process entails the researcher paying close attention to his or her own involvement in all aspect of the process and being prepared to assess the impact of that involvement on the research’. Despite this, my involvement in making decisions about the choice of methodology and the research design were defined by the nature and purpose this study.

The fourth challenge refers to my insider position in relation to the participants and the exercise of reflexivity to manage this issue. The nature of my insider position in this study had an influence on the way the participants responded to the interview questions. My role in this study was determined by ‘whether the researcher is part of the researched and shares the participants’ experience’ (Berger, 2015, p. 219). According to Greene (2014, p. 2), ‘insider research is undertaken by members of the same group, who share characteristics (cultural, biological, occupational, etc.)’. The fact that I am an Algerian student and researcher who is researching other Algerian students makes me in an insider position to the participants because we share and experienced the same educational system, culture and society as well as we had been enrolled in the same PhD programme in the UK. The influence of my insider position was apparent in some aspects of the research. It is true that this position enabled me to easily understand and interpret some of the data. However, the participants’ use of phrases such as ‘you know’ to imply that I knew what they wished to say without needing to elaborate was an aspect that was not beneficial, because the participants may not have shared relevant ideas because of their belief that I was already aware of them. To stimulate the participants to elaborate more, I asked them probing questions.

To avoid the impact of my insider position to the data analysis by imposing my own assumptions and biases about criticality, I tried to state my beliefs about critical thinking explicitly in the introduction, in order to acknowledge these beliefs and avoid their influence in the analysis phase. For this reason, Curtin and Fossey (2007) claim that to prevent the impact of the researcher on the findings and focus on the participants' perspective, researchers ought to make their pre-conceived ideas explicit. For this reason, I read the interviews several times to understand the general story told by the participants, in order to learn from them rather than imposing certain ideas about what they were saying (see chapter, section 4.6.2).

My insider position might have also influenced the data analysis in the sense that I might not have noticed ideas that someone approaching the data from an outsider position would notice. The challenge was in approaching the interview data as a stranger i.e. it was a hard task to put aside my shared knowledge and experience with the participants in order to interpret the data from an outsider position. In response to the questions about general background information about their academic experience (see appendix 2), the participants were talking about obvious information and practices of teaching and learning in the Algerian context, that as an Algerian and insider researcher has already experienced and know. For this reason, it was difficult to code some data and there were several moments of confusion where I was asking questions such as 'what is new about this data?', 'what does the participants actually mean in relation to critical thinking?', 'how can I code the data without imposing my own assumptions?' I needed to look at the data from an outsider perspective in order to be able to extract codes and themes that can bring something new to the study. I also needed to avoid imposing my own pre-conceived ideas about the topic. For this reason, I tried to exercise reflexivity by making my own assumptions explicit, putting aside my own experience and focusing only on what the participants are saying.

4.8. Credibility, Transferability, Dependability and Confirmability of the Research and Generalisability of the Findings

Trustworthiness is one of the aspects that I hoped to establish throughout this qualitative study. Thus, the aim of this section is to discuss the four elements of trustworthiness, including credibility, transferability, dependability and confirmability that I sought to achieve in the research. Murrow (2005, p. 254) assert that 'qualitative researchers address a number of important issues to accomplish the goal of managing subjectivity, including making their implicit assumptions and biases overt to themselves and others, reflexivity and representation'.

For this reason, I explain how I considered various practices, followed appropriate procedures and reported the necessary details in this thesis in order to ensure the transparency and trustworthiness of this research. In this section, I also aim to discuss the issue of the generalisability and transferability of the findings.

Thick description is employed in this thesis to achieve the credibility, transferability and dependability of the study. To ensure credibility, I attempted to provide a detailed description of the procedures followed to collect and analyse data because according to Shenton (2004, p. 69), one of the factors ensuring the aspect of credibility is thick description. The detailed information about the study ensures that the study is trustworthy and reliable. Thick description is also used to achieve the element of transferability that is defined by Shenton, (2004, p. 70) as the idea of conducting the same research with the same methodology in a different context. In other words, providing sufficient information about the research design as well as data collection and analysis enables other researcher to repeat the study in different settings using the same methods and procedures. According to Stahl and King (2020, p. 27), the element of transferability can be achieved through thick description that needs to include details and information about *the field worksite, organisations and participants, methods, time frames for the data collection*. For this reason, I provided a detailed description of the methodology (see section 4.3 and section 4.4), participants and data collection procedures (see section 4.5). The element of dependability can also be established by providing an elaborated description of the different procedures of the study so that other researchers can replicate it Shenton (2004, p. 70) and ‘allow the reader to assess the extent to which proper research practices have been followed (Shenton, 2004, p. 71). To achieve dependability, *the research design and its implementation, the operational detail of data collection, reflective appraisal of the project* should be included (Shenton, 2004).

Triangulation is also another factor that helps achieve credibility and which means ‘using several sources of information or procedure from the field to repeatedly establish identifiable patters’ (Stahl and King, 2020, p. 26). Despite that interviews are the only data-collection tool employed in this study, I conducted follow-up interviews with the same initial participants, along with a second round of interviews with different participants as a way of confirming the findings. These interviews allowed me to highlight the commonalities and differences in the participants’ views, as well as confirm the findings obtained from the initial data analysis of the first round of interviews. One of the other practices that helped to establish credibility

involves *iterative questioning* (Shenton, 2004, p.67). I used iterative questioning or probing questions in order to stimulate the participants to elucidate on and confirm their answers. The purpose of iterative questioning is asking the participants to elaborate about ideas that they have already mentioned in order to notice the connection between the data as well as ignore data where falsehoods occur (Shenton, 2004, p. 67). As can be seen in Appendix 4, I tried to provide the participants with extracts from their previous interviews and ask them to comment and elaborate on the issue discussed in the extract as a way of checking and confirming their answers.

To achieve the confirmability of the findings, I employed reflexivity in order to reflect on my assumptions and pre-conceived ideas. Shenton (2004, p. 72) claims that ‘steps must be taken to help ensure as far as possible that the work’s findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher’ in order to establish the element of confirmability. For this reason, I tried to make my own assumptions and preconceived ideas about the topic explicit from the early stages of the research process, an aspect that helps to avoid the influence of my pre-conceived ideas about the topic and avoid imposing certain themes to the data (see chapter 1, section 1.4.2). In addition, I attempted to present findings that are repeated by several participants, an aspect which can be manifested in the number of interview extracts in each finding (see chapter 5, sections 5.2.1.1 and 5.3.1.2, chapter 6, sections 6.2 and 6.4.2, chapter 7, sections 7.2.1 and 7.4.2)

The generalisation of the findings of this qualitative study to a wider community or population is not the purpose of this research. According to Lewis and Ritchie (2003, p. 263), generalisation is about ‘whether the findings from a study based on a sample can be said to be of relevance beyond the sample and context of the research itself’. It is important to claim that the findings of this study do not represent all Algerian students, but they represent only the group of participants being studied in this research. Clack et al. (2021, p. 364) assert that ‘qualitative research often involves the intensive study of a small group, where depth is emphasised rather than breadth’. Thus, this research explores a small sample of participants in order to achieve an in-depth understanding of the topic under investigation.

In this study, the aspect of generalisation is applied to the topic under investigation. Unlike quantitative research that focuses on generalisation to a population, qualitative research focuses on generalisation to the phenomenon under study (Levitt, 2021). According to Levitt (2021, p. 99) ‘qualitative generalisation is based upon an attempt to match the variation in the data with

the experience and practice of the phenomenon under study'. In other words, generalisation in qualitative research is achieved when various aspects and characteristics of the phenomenon are investigated. For this reason, I conducted in this study, interviews with six participants as a first phase of data collection. Based on the data analysis of these interviews, I generated questions that are explored through follow-up interviews in order to find out about issues and themes that were not well-elaborated in the first interviews (see appendix 4). Such an iterative process, according to Levitt (2021, p. 100), focuses 'not on the characteristics of the population or people and representing their diversity in a sample but on reflecting the characteristics of the phenomenon within the data so as to support their description in the findings'. The follow-up and second round of interviews were beneficial in terms of enriching the data and reaching an inclusive description of the phenomenon with its various elements. Therefore, the purpose of qualitative generalisation is attaining diversity in terms of the factors that characterises the topic and the way it is conceptualised and understood.

4.9. Conclusion

In this chapter, my methodological choices have been informed by the purpose and nature of the study, as well as by my ontological and epistemological underpinnings. The purpose of this study is to explore Algerian students' perspectives towards critical thinking, an area of research that has received little attention in the literature. This research seeks to investigate the subjective beliefs of the participants, rather than test their critical thinking ability and level. In addition, my ontological beliefs relate to the idea of multiple realities and the concept that reality is relative and found in the subjective experiences of individuals, rather than existing objectively in the world of the participants. Therefore, a qualitative research design was adopted in order to answer the research questions because it fits well with the aim of this study and my beliefs about reality.

Since my epistemological assumptions suggest that knowledge is gained through interaction and exchange between people, a semi-structured interview was used as the main data-collection instrument. Speaking with the participants through guiding and follow-up questions is an appropriate way to construct an understanding about criticality through the exchange between the interviewer and interviewees. The interview guide comprised open-ended questions that covered issues about the participants' definition and development of critical thinking and the factors influencing criticality. The interviews also included three vignettes representing

imagined scenarios that the participants were expected to comment on in order to deduce their attitudes towards the situations and criticality.

The phase of data collection involved several processes, including going through the ethics procedures, the piloting of interview questions, recruiting the participants and finally conducting the interviews. Applying to and getting approval from the ethics committee, as well as piloting the interview questions, were among the necessary stages before gathering data from the participants. This phase also involved the recruitment of 11 Algerian PhD students in the UK from different disciplines such as education, applied linguistics and politics. The number of interviews conducted with the participants was 14. The initial phase of data collection involved interviews with six participants. Based on a quick analysis of these interviews, follow-up interviews were carried out with the same participants plus five different participants after around seven months.

A thematic analysis was employed in this research to analyse the data collected from the participants. The data analysis started from the early stages of interviewing and the transcription of the interview recordings. The detailed data analysis involved a coding process that led to the generation of several codes, which were later categorised into themes. These themes were arranged into three different data chapters that address the research questions. The next three chapters are thus a first chapter on the participants' understanding of criticality, a second chapter on the participants' perceptions of developing their critical thinking skills and a third chapter on factors influencing the practice of criticality in education.

Chapter 5: Critical Thinking: Between a Mental Process and a Product

5.1. Introduction

In the next two sections, I will present two different introductions. The objective of the first introduction is to establish the main ideas of the three data chapters of this study and draw a general picture of the findings before proceeding to their interpretation and to more specific details about them. The objective of the second introduction is to introduce the content and structure of this first data chapter.

5.1.1. Introduction to the Data Chapters

The purpose of this introduction is presenting, in advance, an overview of the major findings of each data chapter before discussing them separately. The first chapter addresses the first research question about the participants' understanding of the notion of critical thinking. Criticality is perceived by the participants as a two-sided practice: a mental process and an external product. According to the findings, the mental process refers to the thinking which takes place within one's mind without an explicit and concrete sign of it in the outside world. The external product is the result of the internal processes and practices of the mind manifested explicitly through various forms. The major finding of this chapter can be summarised and explained in the following diagram:

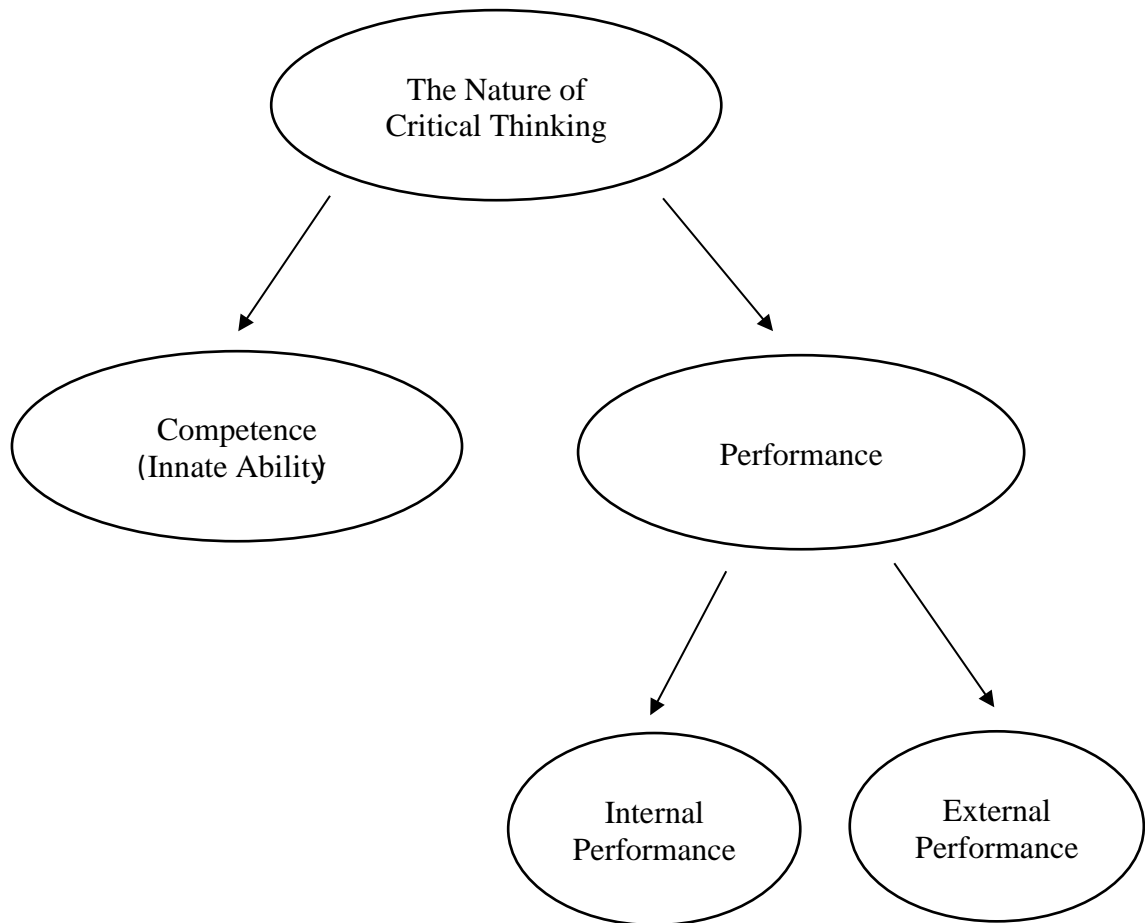


Figure 2 Two-Sided Critical Thinking

In this diagram, I summarised the principal finding of the first data chapter. This finding consists of the participants' definition of critical thinking which is described as comprising two sides. The first side relates to the aspect of competence in which the participants believe that they possess an innate ability to think critically that is embedded in them. The second side refers to the aspect of performance related to how criticality is demonstrated in practice. According to the data, this element of performance is divided into two parts: the internal performance and external performance. The internal performance is linked to performing the myriad practices and skills of critical thinking within the mind without showing them explicitly to the outside world. The external performance is about displaying criticality to the external world through different observable and explicit ways.

The second data chapter deals with the second research question about the participants' experiences and beliefs about developing themselves as critical thinkers. According to the participants' accounts, fostering criticality does not happen in a short period of time. It is rather a lifelong learning process that begins from early childhood under the guidance of the

surrounding people such as family members, neighbours and teachers. After that, children gradually detach from the assistance of these people especially in the adulthood period to become independent, take control of their own thinking and therefore, develop higher-order thinking skills. A summary of the main finding of this chapter can be captured in the diagram below:

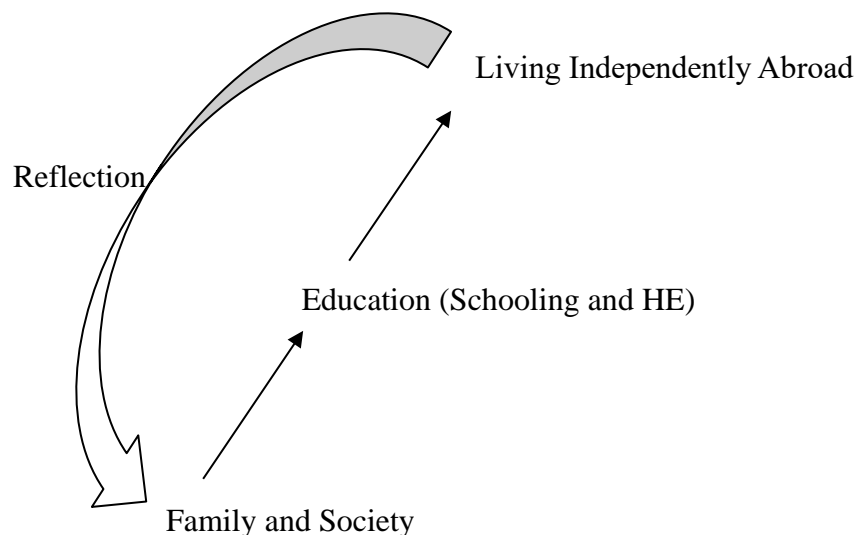


Figure 3 Developing Critical Thinking

The major finding displayed in this diagram is that the development of critical thinking skills is a process that starts from childhood and continues throughout the participants' lives. High levels of criticality, based on the data, seem to be achieved through a gradual and progressive detachment from the control of family and society's thinking, i.e. when moving to a more independent way of thinking. The participants' experiences revealed that the use of critical thinking is common in stages of autonomy such as conducting a PhD and living independently abroad. Such moments of acting independently appear to be among the incidents that allowed the participants to gain autonomy in their thinking and therefore reflect on and question the thinking and practices that they acquired in childhood.

The third and last data chapter tackles the third research question which is concerned with the factors and circumstances that influence the participants' development of critical thinking positively or negatively. The findings showed that several factors interfere in the journey to fostering criticality. These factors are mostly educational and pedagogical elements including classroom dynamics, curriculum, students' attitudes towards the nature of knowledge, students'

perceptions towards their role and teacher's role in addition to the idea of thinking critically in a foreign language. These various factors are portrayed in this diagram:

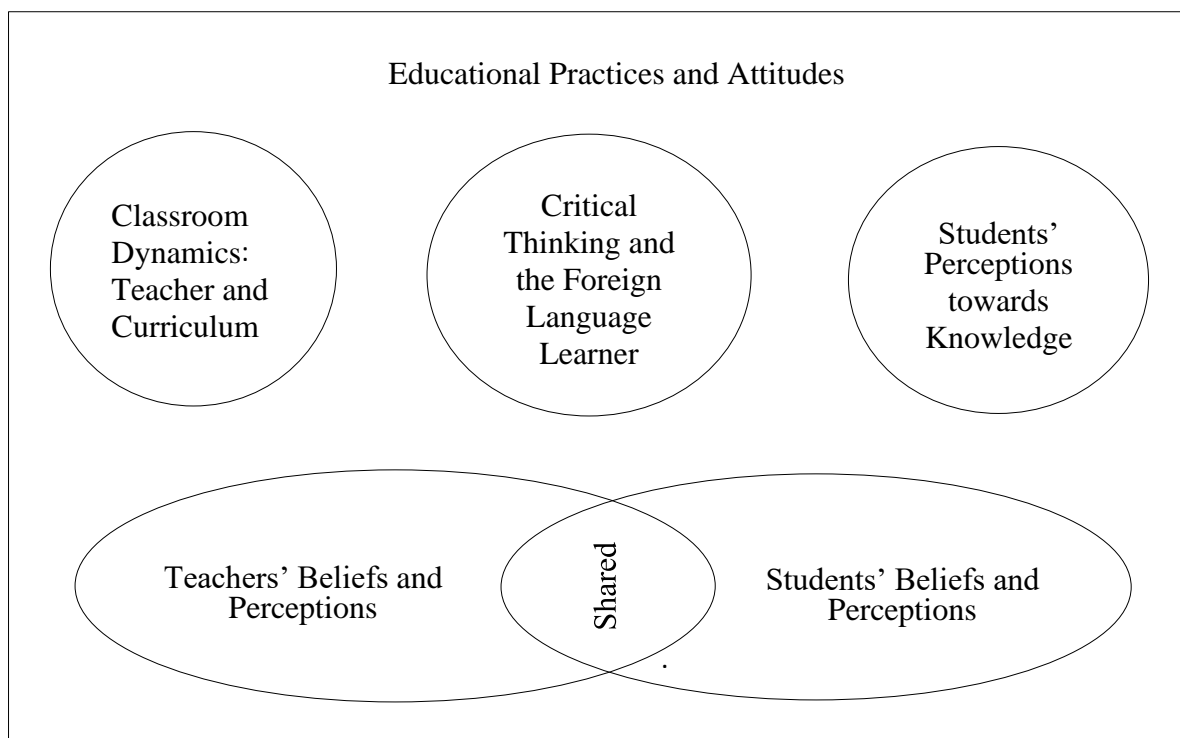


Figure 4 Pedagogical Practices for a Critical Thinking Environment

The above diagram shows, based on the findings, the importance of different educational factors in the integration of critical thinking in education and in ensuring a suitable atmosphere for encouraging its practice in the classroom. Incorporating criticality in the classroom is not an individual effort from the part of teachers or students but it involves a combination and an interplay between various components. Some of the components encompass classroom dynamics and practices, the availability of library resources, the focus of the curriculum, the importance of acquiring background knowledge, in addition to the importance of teachers and students' perceptions about themselves and each other. The teacher and students need to possess similar understandings of each other's roles to avoid a mismatch in their expectations about learning.

5.1.2. Introduction to the Chapter

This chapter addresses the data about the first research question that deals with the construction of critical thinking from the perspective of some Algerian doctoral students in a UK university. The participants displayed a distinctive understanding of what critical thinking is, an understanding which challenges the stereotypes about non-Western students' lack of criticality.

Based on the data, thinking critically involves both an internal and external side. Criticality is considered by the participants as a personal and individual-related practice, an inborn ability and a way of naturally thinking about the world. The findings displayed the diversity in the way that the participants demonstrate their criticality to the outside world which is shaped by the context and situations in which they are involved. This chapter is divided into two main parts which are the following:

- In the first part, the participants talked about how critical thinking is a mental and a personal practice that differs from one individual to another through the opinions and positions they take towards certain matters. They also considered criticality as an innate trait that is part of the self and a natural thinking that is shown through some examples they gave about natural and everyday life situations.
- In the second part, the participants referred to the diversity in the way critical thinking can be demonstrated which according to them, is dependent on the situations and people with whom they are involved. Context is seen an influential factor concerning the actions and forms they choose to manifest their criticality.

5.2. Critical Thinking: A Personal and Mental Process

5.2.1. Critical Thinking is Personal

Critical thinking is understood by some participants as a personal-related practice that is dependent on individuals and determined by their own views about the world and their way of thinking which is typical to them. In other words, every participant's critical thinking is unique because of the perspective from which they approach the world and the idea that criticality is about holding opinions from their personal standpoints. In addition, the participants considered criticality as part of them, and it is shaped by their lived experiences that make it a personal practice.

5.2.1.1. Individual-Related Practice

According to some participants, the act of thinking critically is distinct from one individual to another. The data revealed the existence of certain elements that determine the uniqueness of every individual's critical thinking. These elements involve the various perspectives from which to look at the world, the background knowledge that the participants possess in relation

to the issue under discussion in addition to the environment in which the participants are involved. In this regard, Samia talks about the specificity of every individual's critical thinking.

There is no one who comes to you and says: today, I'm going to teach you how to be critical. Even though people do it, it doesn't work, maybe you get inspired by what they say but you cannot apply it because everyone is different, we are all critical in different ways, you're not critical the way I'm critical and vice versa.

(Interview 11, Samia, 26th July 2019)

In asking Samia about her understanding of critical thinking, she explains that it is dependent on individuals and some other factors.

That's a tough question, I don't know to be honest, that's very relative, it depends on individuals, it depends on how people think... it depends on the situation, it depends on your own sort of opinions.

(Interview 06, Samia, 30th November 2018)

In the same vein, Salwa regards her personal background as one of the elements that makes her criticality different from other people.

Criticality is something that has levels, we are not critical in the same level ... it doesn't mean that I am more critical than you but our criticality is very different, this is the word different from each other ... my criticality is different from your criticality because of my own package, my own background, that background influences what I am doing now ... It's because you are a person, and I am a person.

(Interview 08, Salwa, 21st July 2019)

Walid notes that people are critical differently and at various degrees due to some influencing factors.

I do believe that some people are more critical than others whether by nature, or whether because they have more knowledge or whether because they have better understanding of the world and how the world works or something, but I think everybody possesses certain level of critical thinking.

(Interview 10, Walid, 25th July 2019)

In the above extracts, Samia, Salwa and Walid emphasise the specificity and uniqueness of every individual's critical thinking. They seem to suggest that the way of being critical is not a

universal practice, it is rather an individual-related practice because it is exercised differently from one person to another. According to the data presented in the extracts, the differences in the participants' criticality is determined by some individual-related factors. Samia seems to suggest that critical thinking takes various forms, is not a definite and static practice that is not liable to change.

According to the participants, the individual nature of their critical thinking is defined by some contextual factors such as the participants' mode of thinking and the situation where criticality occurs. Samia associates the differences in people's criticality to their individual differences, personal opinions, ways of thinking and the context in which they are involved. According to Salwa, individual differences in addition to her 'background' and 'package' are some of the factors that shape her typical criticality and define her thinking and actions in the world. In addition, Walid appears to claim that an individual's low performance in critical thinking is not an indication of their lack of criticality, but it might be due to a lack of comprehension of the world and the necessary knowledge about the topic under discussion. This idea relates to the literature that demonstrates the importance of background knowledge in the task of critical thinking (see chapter 2, section 2.7). The degree of an individual's knowledge and comprehension of a topic plays a vital role in their way of thinking critically in particular topics.

Samia mentions a different angle of criticality – the development of herself as a critical thinker – which she also regards as an individual effort that is not necessarily dependent on or triggered by the environment.

Now that I'm doing PhD in the British university and trying to meet the standards, it doesn't mean that they made me critical. Well, part of it yes, we cannot ignore the fact that I'm becoming and I'm developing my criticality but it's not because I'm in the UK, it just happens because I'm in the UK. Let's suppose I went to China, to Brazil or stayed in Algeria, I would have developed critical thinking as well.

(Interview 11, Samia, 26th July 2019)

In this extract, Samia seems to assert that criticality is not a social practice that is developed only when growing in a particular society. Rather, developing her critical thinking happens despite the environment or society in which she is engaged in. She suggests that her experience of fostering herself as a critical thinker in the UK enters within a natural and a continuous process of developing this criticality throughout time rather than considering it as a starting

point for its use and development. In this way, she shows rejection towards the views that consider critical thinking as a social practice that can only be learnt in Western countries (see chapter 2, section 2.8).

According to this discussion, criticality is a personal and individual-related practice which is distinct between people, and which is independent of the place. It is shaped by the participants' individual differences, package and knowledge of the world, personal opinions and context. For this reason, Burkhalter (2016, p. 49) asserts that 'it seems pretty obvious that everybody thinks. But not everyone thinks the way *you* think. Even people from your own culture can vary widely in how they approach a problem or learning situation'. Burkhalter's claims comply with the idea discussed above that critical thinking differs between individuals and every person possesses a typical way of thinking critically. The discussion also demonstrates that the discrepancies between people's critical thinking are defined by their way of thinking, background knowledge and understanding of the world in addition to the situations and context in which they are involved.

5.2.1.2. Individual's Voice and Position: Thinking Differently from One Another

Some participants regard their critical thinking as the idea of holding personal opinions, positioning oneself within others' viewpoints and showing one's voice in different topics. From their responses, there exist various ways of holding viewpoints as a part of criticality. Particularly, Lamia believes that critical thinking is about having and defending point of views from one's personal perspective.

I think that critical thinking is to give students the opportunity to activate his or her capacities to think about something from his or her point of view. So, he needs to think and rethink about something and give what he thinks.

(Interview 09, Lamia, 22nd July 2019)

Samir, Salwa and Warda consider criticality as the idea of giving a position by agreeing or disagreeing about a particular subject.

Criticality ... I mean about agreeing and disagreeing.

(Interview 01, Samir, 13th November 2018)

[Criticality is to] ... decide whether he [a particular individual] agrees with what they [other individuals] say or he doesn't agree. If he doesn't agree, he needs to have why he doesn't agree, he needs to back up his position by supporting his saying.

(Interview 02, Salwa, 16th November 2018)

This is critical thinking because you are going to give an argument why you are agreeing and disagreeing at the same time ... you are going to agree or disagree, giving arguments and trying to defend your position and your standpoint.

(Interview 10, Warda, 26th July 2019)

These participants associate criticality to the idea of thinking and presenting opinions from one's personal viewpoint rather than others' perspectives. Lamia seems to imply that criticality involves the autonomy in thinking for oneself rather than letting others think for herself. She also seems to suggest that criticality of students is triggered and manifested overtly when they are invited and encouraged to present their perspective of looking at a particular topic. According to her, since criticality is about one's opinion, not showing it does not necessarily mean a lack of critical thinking.

Samir and Salwa relate criticality to the idea of 'agreeing' or 'disagreeing' as one of the essences of taking a position from one's standpoint. However, Salwa and Warda highlight the importance of providing one's reasons and evidence for holding a particular viewpoint. In other words, critical thinking is not the mere idea of holding an opinion, but it also involves the consideration of the reasons that support that opinion.

Unlike the previous participants who consider agreeing and disagreeing as the common positions they hold, Meriem and Warda regard critical thinking as making a compromise and building an argument based on the two positions of agreeing and disagreeing.

Sometimes, I come to synthesize and make a compromise between both [agreeing and disagreeing], this is the usual position I take... This is my perspective; I always make myself at the middle of the spectrum. I don't like to be on a polarized extreme whether I totally disagree or totally agree, but I put myself open to both situations and make myself flexible depending on the context. I mean it is true depending on a particular context and could be wrong depending on particular context.

(Interview 05, Meriem, 26th November 2018)

Meriem's perspective of critical thinking while holding opinions consists of being neutral by standing at the 'middle of the spectrum' i.e. building her argument based on the two positions of agreeing and disagreeing. Meriem relates criticality to 'open-mindedness' as an aspect that enables her to consider various angles of the topic under consideration. In addition, she seems to imply that context is an important factor that allows her to be 'flexible' about her opinions. It can be understood from Meriem's claims that taking the middle position instead of standing on a 'polarized extreme' allows her to avoid functioning from only one side which might overlook relevant insights and perspectives.

Some other participants view criticality as involving their personal voice and contribution that emerge from their own perspective and way of thinking. In asking Linda to give and describe a situation where she used critical thinking, she talked about a classroom discussion where she shared her opinion and contributed to the discussion.

... I do remember that I participated in that topic and I felt finally, my voice is being heard by the others and people are impressed by what I'm saying.

(Interview 03, Linda, 18th November 2018)

Likewise, Chahra refers explicitly to her understanding of critical thinking in relation to personal voice.

One of the most important elements in how to think critically is to try to make your voice heard.

(Interview 04, Chahra, 19th November 2018)

Samia also highlights the importance of holding to her personal 'touch' with regards to others' contribution to her learning.

I don't like to do what people say, just because they said it. I always think where I stand in all of that... you try to get ideas from people, to learn from them but not necessarily do what they say because at the end it's them and it's you. I always like to have my own touch in the things I'm doing, and I think this is may be criticality in itself. You're not just taking things for granted, you're just trying to work out your way and find your own path.

(Interview 06, Samia, 30th November 2018)

The three participants Linda, Chahra and Samia seem to suggest that critical thinking refers to their personal contribution and one's voice by having and sharing their personal thoughts. In

talking about criticality, Samia attributes the importance of figuring out her personal position in contrast to people's different perspectives in whatever she does as part of criticality. Samia does not ignore the importance and the possibility of learning from others' opinions. However, she points to the idea that critical thinking is the act of being cautious to not consume blindly others' thoughts. She also suggests that criticality is attempting to always figure out her personal 'touch' as well as positioning herself within others' thinking.

Chahra exemplifies a situation of critical thinking with her experience of personal voice in writing. She relates criticality in writing to the voice of the writer that should be established throughout the text. She talks about her supervisor's feedback on the absence of her voice in her PhD work.

I remember in my first year [in a PhD programme], I was really struggling with this [reading, writing, and thinking critically]... my supervisor used to read my stuff after I submit, and he says: I know what you mean here but it sounds very clear to me, but what the point? what do you want to say here? what do you want to argue here? I used to struggle with that. The only thing he could help me with, he said: ok, I need your voice, I can't see your voice in your writing, and you need to bring that in.

(Interview 04, Chahra, 19th November 2018)

In this extract, Chahra relates her struggle and the absence of criticality in her writing to the absence and lack of her personal voice. She also appears to imply that feedback from her supervisor was sufficient to raise her awareness about the weaknesses in her writing and allowed her to demonstrate her critical thinking through personal voice. She believes that her supervisor feedback raised her awareness about the fact that personal voice is among the aspects that make writing critical. According to Chahra, her supervisor's comments seem to refer to the importance of having a purpose and a particular argument in writing that is informed by her one's personal voice. It also appears that having a specific 'argument' or a 'point' to communicate makes the writing more directed and focused on the relevant knowledge that support the argument rather than focusing on everything in the literature.

To sum up, critical thinking, as discussed in this section, is related to the opinion, position, voice and contribution of the participants towards certain subjects. It means that criticality is about having a personal voice and perspective among others' perspectives. These findings conform with Lucas's findings (2019) that also suggest that critical thinking refers to an independent thinking that is reflected in the individual positions and voice that people take

towards certain matters. In other words, it is not about adopting others' positions; it is rather trying to determine their personal position and attitudes. These findings are also emphasised by Pu and Evans (2019, p. 53) who claim that 'to demonstrate critical thinking in a thesis, in its literature review chapter for instance, not only involves applying critical thinking skills to a collection of written materials, but also entails positioning oneself among a group of authors who are established members of the academic community'. They suggest that criticality is not limited to the mere application of skills of analysis, synthesis and evaluation, but it is also related to the positioning that the individual takes towards a particular material or view.

5.2.2. Critical Thinking as a Process

Critical thinking is considered by some participants as a process that involves two steps. The first step relates to the idea of pausing to think about the stimulus or the received information. The second step refers to the act of thinking deeply rather than focusing on the surface level of the presented information.

5.2.2.1. Pausing to Think

According to the data, pausing to think is considered as the first action that a critical thinker is supposed to do. It is the interval between the reception of information and the decision taken about it. It refers to the moment of stopping in order to think carefully about the information and therefore, take cautious and informed judgement about it.

In the interview, Warda relates critical thinking to the nature of reaction or the manner of responding to a specific stimulus i.e. information or idea. However, she did not indicate the possible way or ways that could be forms of responding critically. A possible interpretation might be that people would react in two distinct ways when receiving information, they either jump directly to make quick conclusions or they choose to pause in order to think and decide what to believe or do. This latter reaction is viewed by two participants as the reaction that implies the idea of thinking critically. For instance, Meriem believes that:

In critical thinking, the fact that being critical is not accepting everything we read, we see or hear... nothing is innocent.

(Interview 05, Meriem, 26th November 2018)

Samir refers to the idea of not accepting information received from the teacher at university.

In higher education, I was not accepting things as they are especially in linguistics or they give us a definition of something, and teachers will expect *to give them back their goods*. So, I didn't do that, honestly.

(Interview 01, Samir, 13th November 2018)

According to Meriem, criticality involves the reaction that should be adopted when receiving a particular information which is not taking any information for granted. The idea of 'not accepting' straightforwardly any information, as suggested by the two participants, involves an aspect of critical thinking. In her idea of 'nothing is innocent', Meriem seems to suggest that there is the necessity to be sceptical and suspicious, the idea which might underlie the existence of hidden meanings that critical thinkers should seek to unravel. This finding relates to the definition of McPeck (1981) who notes the importance of reflective scepticism when engaging in a particular matter. Therefore, the two ideas of not accepting and being sceptical do not necessarily indicate a form of direct rejection. They rather imply the need for reluctance and taking the time to pause in order to think carefully and critically.

In conclusion, pausing to think appears to be the very initial step that is involved in the process of thinking critically. This can be manifested in the actions of not accepting immediately anything at face value and being sceptical of the received information. In this way, there will be time to think on the possible implications of the information in order to later decide on what to believe or do.

5.2.2.2. Ability to Think Thoroughly about the Deep Level of Information

According to the data, critical thinking involves a deep and extensive rather than superficial thinking. In other words, criticality refers to the ability to go beyond the surface level of information in order to delve more deeply into hidden meanings and unmentioned information. Samir asserts that thinking extensively is an important aspect in the practice of critical thinking.

You have to think well, this is it ... you have to think, think twice.

(Interview 01, Samir, 13th November 2018)

In giving an example about himself using critical thinking, Samir claims that criticality, based on his friend's words, is about being involved in good thinking.

... he [his friend] said that what I like about you [Name of the participant] ... he [his friend] didn't say you are critical ... he [his friend] said you think well before you engage.

(Interview 01, Samir, 13th November 2018)

Samir seems to suggest that the meaning of critical thinking can be conveyed by the actual activities that a particular person is doing. He relates criticality with extensive thinking because it involves thinking 'twice' which means that it requires thinking and rethinking again before making judgements and rushing to conclusions. In asking the participant Fadia to describe a situation where she used critical thinking, she thought for a while and then commented that all the examples that she could think about were those of over-thinking. For this reason, I asked her if overthinking means critical thinking, she responded negatively and she added that overthinking might be related to criticality. The relationship between these two practices – criticality and overthinking to - is not made clear by Fadia, but the relation might be that they both involve an extensive thinking. This finding relates to the definition of Dewey (1910) that considers reflective thinking as the idea of making a decision after further inquiry.

Samir also associates criticality to good thinking before taking any decision or action on a specific matter as part of being critical. However, Samir was not clear about might be considered as good or bad thinking. A possible explanation about what Samir might consider as good thinking in criticality can be found in the following quotation where he claims that critical thinking is about looking at the deep rather than the surface level of information.

What it is special about this criticality is that you see things beyond the box, beyond their actual nature because they are like this and you just look at it.

(Interview 01, Samir, 13th November 2018)

In addition, Samir talks about the importance of exploring the context of information in critical thinking.

If I say all students are brilliant and that's it, very subjective ... are you sure all? Where the context, we should consider the who, the what, the when, the why, we should consider all the factors that influence or influencing what you're reading about.

(Interview 01, Samir, 13th November 2018)

Similarly, Meriem refers to the need to consider the context in order to find out about the hidden messages.

It is not just accepting things as are happening haphazardly, but they are like stated ideologies behind, and in order to do this, we need to interrogate the time, the place.

(Interview 05, Meriem, 26th November 2018)

Samir relates the peculiarity of critical thinking to the ability to go beyond the ‘actual nature’ of information i.e. trying to look at the unstated information and read between the lines rather than focusing on the surface side of the information that is expressed in simple words. From the data of both Samir and Meriem, it seems that taking into consideration the whole context that surrounds the presented information is crucial in achieving the purpose of possibly understanding the gist and the reason behind it. Particularly, Meriem suggests that the ‘stated ideologies’ that underlie a particular information can be achieved through questioning the context in which it appeared. Samir views critical thinking in reading as looking at the context in order to develop an awareness of the elements that could impact the reader understanding of the material. According to the two participants, this is through questioning the ‘time’, ‘place’, the ‘why’, the ‘what’ and the ‘who’ in order to decipher the intended meaning. Thus, it can be said critical thinking helps to deal with the level of information and details that are not communicated to the reader.

There are three participants who presented different situations where they used critical thinking. In these instances, critical thinking is viewed by these participants as a way that enables them to look at the hidden meaning and generate deep understandings and interpretations about the information. In this respect, Sabrina relates critical thinking used in the data analysis of her research to the interpretations that she brings to the data.

If my supervisor tells me [the name of the participant] you have to be more critical here, I think he means, if I can compare to when I was in higher school, there is analyse and interpret. So, analyse is just what you see, when you interpret, is going deep. One of my participants tells me something: Algeria is bad, we are the third world and here [UK] it's better. I don't take it for granted, I look for other reasons why they said that. I think this is what critical thinking means to me.

(Interview 14, Sabrina, 30th July 2019)

Warda refers to the significance of using critical thinking in reaching the deep meaning that is conveyed in a particular text.

... you have to analyse them [questions] critically ... I was just like answering from what I'm reading, the words that I'm reading but not the meaning, so I ignored the meaning and I focused on simple ideas and tried to answer, so I noticed that there was something happening that I couldn't reach in that poem, I couldn't reach it because I did not use my critical thinking, just consuming what he is saying, I didn't think about his position or his ideas ... for example, the poem is about love, but finally if you do not use your own critical thinking, you will say yeah it's about love but finally if you use critical thinking, you will find it's about nature ... may be this exam pushed more think about what means critical thinking in reading.

(Interview 12, Warda, 26th July 2019)

Salwa refers to the multiple interpretations that can be achieved about the same text while dealing with its deep side.

A quotation can be understood differently ... I mean the meaning is hidden. When the meaning is at the surface level everybody could arrive to the same interpretation or to the same understanding, but when the meaning is under or between the lines, here the teacher should be open to different answers of her students.

(Interview 02, Salwa, 16th November 2018)

These three participants suggest that the focus of critical thinking is revealing the hidden and unstated meanings of information rather than focusing on the surface meaning. Specifically, Sabrina regards 'analysis' in data analysis as distinct from interpretation and refers to the mere consideration of 'what you see' at the surface level of information. The same idea is mentioned by Warda who claims that the limitation of readers' vision to only the simple ideas stated in the text that are 'consumed' without taking the context into consideration may lead readers to fail in reaching the meaning conveyed.

In this respect, Salwa believes that considering the surface level of information leads to the same meaning by different people. On the contrary, Salwa asserts that people could arrive at divergent explanations and interpretations of a particular text when 'the meaning is between the lines.' This is related to the idea of Sabrina who attributed the aspect of interpretation to critical thinking that attempts to 'go deep' to reach the hidden level of meaning in the information and generate possible explanations. Thus, it can be claimed that critical thinking

is concerned with revealing the deep meaning and hidden messages that particular information, knowledge or actions might imply.

According to the above discussion, critical thinking follows a process. This process starts the time individuals receive a particular information and the reaction they carry towards it. The first step of engaging in critical thinking is the idea of pausing in order to think which is defined by the two actions of not accepting any information directly and developing an uncertainty about it. This step is then followed by a second step which is the actual act of thinking deeply, extensively and well in order to finally make a decision or judgement. In the second step of thinking, many practices are involved in order to achieve good thinking, among them analysing, interpreting, thinking outside the box and considering reasons.

5.2.3. Critical Thinking as Part of the Self

Some participants view critical thinking as an entity which is part of them and an inborn disposition that happens within their minds. As it will be shown in this section, the participants talk about critical thinking in two different ways. The first one is related to the invisible nature and abstract process that occurs within the mind while performing critical thinking. The second one is linked to the idea that criticality is something that they are born with which makes its use in everyday life as a natural way of thinking about the world.

5.2.3.1. An Abstract Mental Practice

Critical thinking is seen by some participants as an abstract practice and a mental process that happens inside one's mind without a concrete observation of it in the external world. Although the idea of viewing criticality as a mental practice is as an obvious matter, this section is relevant because it is part of the whole argument that I am making in this chapter. The data that will be discussed below explain how the participants are internally doing the process of critical thinking without demonstrating it explicitly in spoken or written format.

Some participants consider criticality as an abstract process, others view it as a mental process and some others believe that it is both an abstract and a mental process. While talking about critical thinking, Samia seems to struggle very hard to explain how it is both an abstract as well as a physical practice at the same time.

... because this concept [critical thinking] ... you see them but at the same time you can't touch ... I was really struggling with trying to define it

because literally criticality is always there. I can't see it ... you can sense it ... you can point at it, but you cannot maybe touch it. I think criticality is abstract but at the same time has an effect which is practical in literally everything we do.

(Interview 06, Samia, 30th November 2018)

Similarly, Salwa refers to the abstract nature of critical thinking and relates it to the difficulty of measuring it.

... criticality is something abstract and we don't have consensus on what criticality is ... if criticality is measurable then it would be easy to apply it wherever you go regardless the environment, the culture. But, if the concept is abstract, so it's very difficult.

(Interview 02, Salwa, 16th November 2018)

Samia views critical thinking as a two-sided practice that involves both an 'abstract' and 'practical' parts. Samia appears to imply that the abstract nature of critical thinking makes it hard to spot. According to her, the absence of explicit or concrete signs of criticality is not an indication of an absence of it, it might only mean that it is not manifested explicitly and concretely because it is 'always there' in an abstract and invisible manner. In the same line of thought, Salwa appears to mean that the abstract nature of critical thinking is a factor that led to the lack of consensus in its definition as well as the impossibility of measuring it. In addition, Salwa seems to propose that criticality cannot be measured or assessed because the different practices of criticality are exercised in an abstract and an observed way.

Some other participants regard critical thinking as a mental process. In this respect, Warda illustrates how criticality happens in her mind while trying to process ideas.

My critical thinking is just a mental process: I can say this, but my teacher will not like this idea, so I just avoid it, let it for yourself [speaking to herself]. I was critical, but I was trying to show it ... I was critical for myself, just a mental process, it's in my imagination ... an idea came, and the others went, but I couldn't write it for many reasons.

(Interview 12, Warda, 26th July 2019)

Warda describes criticality as a mental process and an internal dialogue that happens within her mind. As reported by Warda, criticality is the process of wondering and deciding between different ideas in her mind in order to figure out her position without an explicit manifestation

of this process. She also seems to suggest that her critical side and the activities that happen internally are not always demonstrated publicly. In addition, she appears to claim that her inability to share her critical thoughts in her assignments does not mean that she does not think critically. It only means that she decided to not show her criticality that took place internally because of some teachers' rejection of her personal ideas and viewpoints.

The discussion of the above data suggests that the abstract and mental nature of critical thinking make it difficult to observe unless it is demonstrated explicitly. In other words, lack of signs of criticality is not a sign of absence of criticality because it might happen internally without an explicit demonstration of it.

5.2.3.2. Part of Being Human

Some participants consider critical thinking as an innate and inseparable characteristic of all human beings. From examples of their personal experiences, criticality is viewed by some participants as the thinking that they engage with in their everyday life in either conscious or unconscious way. They also regard it as part of being human with which they are born. Samia refers to the inseparability of critical thinking from human beings and its consistent use in everyday and academic life.

I think all the time we are engaged critically ... I think we are all critical in whatever, wherever we do ... I think even if I was not doing PhD and just any person in society would be still critical ... we really develop criticality in literally every bit of thing we do.

(Interview 06, Samia, 30th November 2018)

Samia, throughout the interview, was speaking about criticality in everyday life, and when I asked her about using it in an academic context, she responded as follows "maybe it's in me, it's already in me". Samia appears to suggest that criticality is an aspect which is part of her, and which is widely employed and transferred to different domains. She maintains that:

It [critical thinking]'s part of us and may be intuition yeah, so I think it's a matter of developing it rather than, it's there, and it develops, and it gets shaped by your life journey.

(Interview 11, Samia, 26th July 2019)

Samir notes the persistent use of criticality in academic, social and everyday life settings.

I wanna stress a very important point, that critical thinking exists always and is there everywhere and in every decision that we make on a daily basis and education whether higher education or pre-higher education.

(Interview 01, Samir, 13th November 2018)

Lamia refers to the central role of critical thinking in social life.

I think that no one can live without critical thinking in social life especially you know because sometimes we need to analyse some situations to get the truth.

(Interview 09, Lamia, 22nd July 2019)

Linda believes that all individuals possess criticality.

Critical thinking is, I believe that everybody has this skill. So, we're using it in our everyday life, in our discussions, we judge something, it's always with us. So, you can find it wherever you go and in wherever you do.

(Interview 3, Linda, 19th November 2018)

In these extracts, the three participants emphasise the presence of criticality within every individual. According to Samia, criticality is a practice which is not only exercised by a particular group of people – academics – but people 'are all critical' regardless of their background, status and role in society. She claims that criticality is an indispensable part in individuals' lives. Again, Samia seems to propose that her critical thinking is an in-born characteristic and part of being human that is influenced by the external environment that surrounds her. She appears to assert that her experience in life and the different situations she experiences influenced her criticality. According to Samir, people lead a life which is centred on critical thinking that allows them to make careful and cautious decisions about different situations in their social and educational lives. Linda seems to suggest that criticality is an embedded entity within human beings which is transferrable to different situations and domains.

Some other participants presented accounts of their use of critical thinking in various situations of their everyday lives which they considered as a natural way of thinking. In other words, the consistent need and use of critical thinking in everyday life situations make it part of human beings. In this respect, Salwa refers to the need to maintain a critical attitude in everyday life.

I could have used critical thinking in the kitchen, in my room, or with my family members while discussing with them because criticality should be

maintained in every aspect of your life and it should be demonstrated in every discussion or in every debate you engage in.

(Interview 02, Salwa, 16th November 2018)

Walid talks about a situation on the use of criticality that seems at first glance, to involve simple thinking but which in fact, is rooted in deep and complex thinking.

I think everybody possesses certain level of critical thinking and everybody uses it on a daily basis in every single decision that we make. For example, we watch the TV and they say there is a heatwave coming tomorrow, so be prepared. Basically, and I think everything that you do after you hear that includes some sort of critical thinking ... For example, you would know that you would wear light coloured clothes and you would use sunscreen to protect your skin or maybe you try to minimize the time that you spend out of your house or outside of work. So, all these decisions for me are like the incarnation of critical thinking ... it seems very easy and very simple but I think so many processes are involved in that, for example, you wear a light coloured clothes because you know they don't absorb the sunlight they reflect which protects you and makes your body less hot.

(Interview 10, Walid, 25th July 2019)

The extracts presented by Salwa and Walid demonstrate the central role of critical thinking in their lives and reveal some of the areas of everyday life where they are supposed to apply their criticality. Apart from academic settings, the participants apply their critical thinking in areas such as 'kitchen', 'discussion' or 'debate' where different opinions can raise as well as responding to information received on TV. According to these two participants, these instances involve a certain level of criticality with regards to what to do. Salwa was not clear in how critical thinking can be used in the kitchen or her bedroom. She might mean to be critical in terms of making decisions about the ingredients and the way to prepare a dish, as well as being selective of the material and furniture of her bedroom for the purpose of displaying her personality and lifestyle.

In the second extract presented by Walid, the situation of the announcement of a heatwave might seem simple and straightforward. However, critical thinking is implied, as described by Walid, in the small details that are considered as mere natural thinking rather than complex thinking. Walid seems to suggest that the thinking critically about the activities of everyday life gives the impression that it is 'easy' and 'simple', but which is in fact subject to deep and complex contemplation. He also appears to propose that there are hidden layers of criticality in the routinised activities of everyday life. He exemplifies such a claim with the use of sunscreen,

wearing light coloured clothes, and staying at home as a reaction to the announcement of a heatwave, actions which seem simple and do not necessitate much thinking or critical thinking. In other words, such precautions are taken unconsciously and automatically despite the fact that they are rooted in critical thinking. For instance, wearing light coloured clothes might be rooted in the thinking that they do not absorb sunlight, and that sunscreen protects the skin from burning.

In summary, some participants refer to the centrality of the skill of critical thinking to human life i.e. criticality is part of being human. The use of criticality is not limited to academic and educational settings, but it is also used in social life as well as other areas of the participants' lives. Despite the simplicity of certain situations, they in fact require and imply the use of criticality.

5.2.3.3. Natural Thinking

Some participants view critical thinking as a natural way of thinking about the world and life. In this respect, Walid considers thinking critically about everyday life situations as happening naturally without measurement or assessment.

I think critical thinking is a mindset and it is a skill, I think in education it is a skill but in general it is a mindset. It's a way of thinking, it's just like your nature ... in life, no one is there to assess you, no one is there to judge your decisions, it's just like the way you think and the way you like to do things ... It's a way of thinking, it's just like your nature, you question things, or you don't take things at face value ... it's just the way the human brain work ... in real life it just like normal thinking.

(Interview 10, Walid, 25th July 2019)

Likewise, Samia refers to criticality as human nature.

It [critical thinking] happens throughout our lives, sometimes we're conscious about it and sometimes we're not conscious about it, we're just doing it because this is, I would say human nature.

(Interview 11, Samia, 26th July 2019)

Both Walid and Samia seems to suggest that criticality used in everyday life is considered human nature and a way of dealing with life. Walid associates the unconscious nature of using critical thinking in everyday life as the aspect that makes it a natural way of thinking that happens randomly and automatically. In addition, Walid appears to convey the idea that the

absence of judgement and evaluation on people's critical thinking in everyday life is the aspect that makes criticality a natural way of thinking. According to him, critical thinking is considered a 'mindset' that refers to the way individuals perceive the world around them and how they go through to live it. Samia appears to claim that criticality happens naturally in people's lives despite the degree of consciousness about it.

To sum up, the data propose that critical thinking is practice that happens naturally in people's everyday life situations. The criticality applied in everyday life is described by the participants as human nature because it is a natural thinking which occurs unconsciously and is not assessed. This finding conforms to Holliday's explanation of the non-essentialist view about the criticality of international students. In this respect, Holliday (2013, p. 68) asserts that 'critical thinking is a natural part of human existence. While it may not be encouraged in some circumstances, this does not mean that people do not possess the ability'. Criticality exists within individuals despite the place or circumstances because it is a natural way of being human.

5.3. Critical Thinking as a Product: Manifestation of Criticality

5.3.1. Being Critical is Diverse

The data from the participants' interviews revealed that the articulation of critical thinking takes various forms and differs from one person to another depending on certain contextual factors. Some participants consider writing as one of the common forms where critical thinking can be demonstrated especially in education. Other participants refer to other forms of manifesting criticality including ways of behaving, silence, students' resistance, compliance and lack of interest to studies.

5.3.1.1. Critical Thinking in Writing

Some participants refer to writing as one of the forms where students are expected to employ and demonstrate their critical thinking in education. For example, Chahra claims that her thinking process and mental practices are reflected in her writing.

... I think that they [thinking and writing] are interrelated, and I think in a way critical thinking informs critical writing ... you have to read it [content] first, assess it, question it, think critically about it and try to put the ideas that you have thought about into paper and this is where critical thinking comes in ... writing critically was the easiest part because you are in a way trying

to write up the things that you have in your mind and by only stretching it and justify and by adding references to justify it, to show that it is academically justifiable, [that] I'm not making my own claim, it's not subjective or anything.

(Interview 04, Chahra, 10th July. 2019)

Similarly, Walid views writing as the result and manifestation of the thinking process that occurs in one's mind.

It [critical thinking] shows in assignments throughout the quality of your work basically, which includes so many things like the quality of the sources that you use, the selection process that you went through, I mean the argument you selected, just the way you chose to present your essay or the information you collected, I think the whole thing, I think every aspect of doing an assignment includes some sort of critical thinking.

(Interview 10, Walid, 25th July 2019)

Both Chahra and Walid consider writing as the concrete embodiment of the thinking process or the product of critical thinking. Particularly, Chahra associates critical thinking with critical writing in the sense that the thinking process determines the nature and quality of writing. According to Chahra, writing is the mere reflection and articulation of her ideas that she has already thought about. She considers critical thinking in writing as the idea of thinking about the content, structure and method of presenting the written work. She regards writing as the final product that reveals the various operations of criticality applied before the writing phase such as 'reading', 'assessing' and 'questioning'. According to Walid, criticality in writing can be noticed through the nature of the sources and argument introduced, the structure of the writing as well as the presentation of the argument.

To sum up, writing is seen by these two participants as the mirror that reflects the critical thinking practices that took place before the writing process itself. This criticality can be captured in written products through various elements such as: the quality of the resources employed, and the structure of the argument presented. Thus, writing is among the forms that are used in academic settings in order to demonstrate critical thinking.

5.3.1.2. Forms of Demonstrating Criticality: Silence and Compliance

Some participants point to the diversity of forms they use in order to demonstrate their criticality. They refer to silence and compliance as two forms that they sometimes use, and thus imply criticality. In this regard, Salwa highlights the diversity of articulating criticality.

... there is not only one way to reach criticality but there are multiple ways.
(Interview 08, Salwa, 21st July 2019)

Samia also notes the existence of various ways of showing critical thinking and emphasises the influence of context in defining the type of form to adopt in different situations.

I think there is no specific way of being critical ... For me, when I'm critical sometimes even by being silent ... I mean criticality could be, being resistant ... contributing to a discussion, challenging someone, not saying anything, may be the way you even look, you behave, could reflect some sort of criticality. But now it depends on the situation, it depends on the persons, people you're involved with ... I would say may be the context and the place of where we are, plays a role in how this kind of criticality is shaped.

(Interview 06, Samia, 30th November 2018)

According to Salwa and Samia criticality is not a rigid practice that is manifested through one common, shared and universal form that when this form is not applied, it means that critical thinking has not taken place. Salwa and Samia seem to refer to the existence of various forms of showing criticality. Being critical, according to Samia, through numerous ways can be captured in actions, behaviours and ways of being. She attributes resistance, silence, defying someone in addition to other behaviours as some instances of critical thinking. The forms through which criticality is articulated do not constitute a definite and static list from which to choose in order to be critical. Rather, Samia asserts that context is a defining factor in the articulation of critical thinking. She suggests that the different features that surround a situation influence the type of forms to choose in order to manifest criticality.

Some other participants suggest that behaviours such as lack of interest and memorisation can be forms of critical thinking rather than problems in students' thinking and learning. In this regard, Samia relates students' reluctance to proceed critically while reading particular texts to the lack of interest which she considers as a form of criticality.

I guess if they [students] are not interested, if they are not liking what they are doing, if they are doing these things because they are obliged to do them,

I think that they would follow the flow and even not bother thinking, but I wouldn't say they are not thinking because of the fact that you reject. The fact that you're not interested in something, it shows that you're engaged critically with it otherwise how can you say that you're not interested, there must be a reason behind it, so you're being critical.

(Interview 06, Samia, 30th November 2018)

Both Meriem, Samia and Warda appear to associate students' use of memorisation to critical thinking and consider it as a strategy that helps them to survive in an educational environment that favours such practice.

Students memorise and those who memorise get higher grades rather than lower grades. This process certainly hinders the notion of critical thinking, but this doesn't allow us to say that they are not critical thinkers ... and this happened to me, I memorised in order to get good grades, but this doesn't mean that I'm not critical thinker. Inside me I don't believe what I'm writing, but I'm writing it to get good grades.

(Interview 05, Meriem, 26th November 2018)

It depends on the person and how can you learn by heart, how can you employ learning by heart in succeeding ... I would say that's criticality because you're playing as well with the system in order to survive, you're learning by heart, who wants to learn by heart oh my god especially us history, cultural studies, we do it because we know how the system works, you have to do it to survive.

(Interview 11, Samia, 26th July 2019)

In talking about her experience of studying at university, Warda claims that she had to change her preferred way of learning in order to obtain good grades, and therefore succeed. She also underlines her flexibility in critical thinking which is determined by previous situations and experiences.

... I change it [critical thinking] because I found that what I'm reading or learning at home from researching myself didn't work at the university, so I tried to become someone else and starting from my second year, I was just taking what the teacher says and I got 18 and 17 and 19, but in my first year I was getting only 14, 12, 11 things like that.

(Interview 12, Warda, 26th July 2019)

According to Samia, lack of interest to some educational and teaching practices as well as non-engagement in studies are forms of critical thinking that students take towards these teaching

practices. Samia seems to propose that some teaching practices trigger criticality more than the context of teaching itself. She suggests that lack of interest does not necessarily signify an absence of thinking, it is rather a critical action taken by students towards the educational system that does not meet their needs. According to Samia, despite that some behaviours may not externally signify an act of criticality, they involve hidden and internal sense of critical thinking.

Meriem and Samia appear to suggest that compliance to particular practices is a form that involves critical thinking. They propose that memorisation is taken as a form of compliance to teachers' method of teaching, an aspect that enables them to succeed. According to Meriem, the idea of 'I memorized in order to get good grades' shows her awareness of the teacher's expectations and she considers students' use of memorisation as involving critical thinking because it is a way of 'playing with the system' in order to 'survive'.

Warda appears to propose that her compliance to the requirements of the educational system by memorising and reproducing teachers' knowledge in exams is a form of criticality that she employed as a mere strategy to succeed. The critical side of Warda in the example she presented seems to emerge from her reflection and critical thinking that raised her awareness about the non-adequacy of the learning styles she adopted in her early stages at university. Warda's example suggests that criticality is not applied only on the academic knowledge but also on the educational system she experienced. This finding is related to Barnett's model (1997) that highlights the scope of criticality which is not limited to only knowledge but goes beyond to include the self and the world (see chapter 2, section, 2.6).

One of the other forms of showing critical thinking that is emphasised in one of the interviews is silence. Meriem refers to silence as another way of being critical.

... even if we are inside like disagreeing or angry about the behaviour they [parents] did, you could not say to them and challenge them what you have did is wrong and you should not have done like that, we don't.

(Interview 5, Meriem, 26th November 2018)

In response to the way some teachers teach and more specifically, those who do not accept new contributions from students, Samia says the following:

Here [referring to the first vignette] you're in a way denying students abilities and potential into contributing to knowledge in general, so you're just making them receptive in a way. You want them of course to just be receptive, but they might be critical in a way they resist in a way which is not really explicit. I mean I don't agree with that, but again if I had a lecturer like this one in the picture and my sort of success gonna depend on the grades, I would follow his methodology just to get the grade, a good grade.

(Interview 06, Samia, 30th November 2018)

Similarly, Warda talks about the manifestation of critical thinking that cannot always be apparent to others especially to the teacher.

When the teacher gives something and, in the exam, ... even I answer like my teacher wants but I still think oh I can say this thing, but I didn't say them because of the marks, I need to get my mark.

(Interview 12, Warda, 26th July 2019)

According to Meriem, mere silence and not showing any explicit opposition is not necessarily a sign of lack of critical thinking. She seems to suggest that criticality is still present because a thinking process happened inside her mind without making it explicitly visible. In the interview, she also relates her non-contribution in the classroom to her family upbringing that values respecting others especially authority and old people. She appears to mean that criticality is compensated through silence as an ideal response in situations where elder people are involved. Samia seems to propose that students can still be critical despite the circumstances and the method of teaching applied by the teacher. She seems to consider that some students' behaviour of trying to conform to teachers' expectations and adhere to his method of teaching as a form of resistance and critical action. Warda seems to claim that she can still be critical despite that she does not introduce her personal ideas in exams.

Warda appears to suggest that she does not usually articulate her position and thoughts that do not satisfy teachers' expectations.

When you are not demonstrating it [critical thinking] as if you are not critical and sometimes when you accept something, you didn't say, you didn't react to something, some teachers consider it as if you are just consuming, you are just saying things, reproducing what he says and when you give things that are different, they say why? and when you don't give [different information] they say: you are not critical, you are passive student.

(Interview 12, Warda, 26th July 2019)

Warda seems to assert that teachers' perceptions and evaluation of students' critical thinking abilities based on their performance in the classroom is not always valid. She also seems to propose that students' behaviours in the classroom such as passivity, reproduction of information and absence of an explicit evidence of criticality is not an indication of lack of critical thinking. However, she relates the lack of articulation of critical thinking to the teacher i.e. teachers' expectations from students in relation to classroom discussions, written assignments and exams are confusing and unclear.

In the light of this discussion, the manifestation of critical thinking is diverse and does not only occur through in definite and static forms. It rather takes various forms that determined by context. Sometimes, the participants tend to be critical of the teaching practices applied in the classroom rather than the knowledge and content of discipline. The discussion also demonstrates that practices such as memorisation, lack of interest, silence and compliance are themselves forms of showing criticality rather than behaviours on which the participants are criticised for their lack of critical thinking. The participants adopted these behaviours for some reasons: silence for their upbringing that values the authority and knowledge of elder people and memorisation in order to play with the educational system, get good grades and therefore succeed.

5.3.2. Thinking Critically about Established Thinking and the Self

Some participants refer to the application of their criticality to various areas of their lives including their selves and their thinking. They consider reflection and questioning as two aspects of criticality that enable them to lead a critical attitude towards previous situations, established thinking as well as acquired habits and behaviours. Two participants exemplify their use of criticality in these areas by reflecting on and critiquing their previous ways of thinking. In this regard, Salwa talks about her way of thinking that she acquired from her mom which she no longer finds valid.

I used to think in a way and then I said no it's not this way, it's not the right way to think. Why? because I felt that it is a kind of stupid ... let me give you an example ... I don't know whether it has relation to criticality or not. Back home, women I mean moms who are now 40, 45, they have that assumption that you don't need to colour your hair before getting married ... when I was there living with them, I was not aware that this way of thinking is stupid ... what's the relationship between colouring your hair and getting married ... and now because I am in a different environment and I

started to think differently, and the evidence of that is that I coloured my hair many times before getting married and nothing happens.

(Interview 08, Salwa, 21st, July 2019)

In a similar vein, Sabrina reflects on the way her society functions and criticises some of its practices.

I think society doesn't help [with criticality] because when you are in a society, I think like Algeria I'm not making a statement, but it's my personal experience, like it is a judgmental society, you are free but not free enough (laughing) you are free to do whatever you want but you are always be judged by people. There are norms, if you don't respect one of these norms, these social norms you become odd or weird to people and they start talking about you ... there is this pressure about society.

(Interview 14, Sabrina, 30th July 2019)

In the above extracts, both Salwa and Sabrina seem to present actual instances where they think they applied critical thinking on their previous thinking habits they acquired from their society. These instances show the awareness of the two participants of the influence of their family and society on their personal thinking and therefore they took a critical stance towards this thinking. Sabrina shows a critical attitude towards her society's thinking which limits her freedom and way of being in the world. According to Salwa, experiencing a different environment is an important factor in critical thinking that enabled her to discover new and different ways of thinking, and therefore reflect about her own thinking. Salwa's example involves reflection and thinking critically upon previous thinking habits, an aspect that helped to bring change to her actual way of not only thinking but also being i.e. taking critical actions in the world. This idea conforms with Brookfield's claim (1987, p. 1) that critical thinking is about 'calling into question the assumptions underlying our customary, habitual ways of thinking and acting and then being ready to think and act differently on the basis of this critical questioning'. In other words, developing an awareness about the influence of social context and environment on people's beliefs, attitudes and actions is considered an aspect of critical thinking that bring change of individuals' thinking and being in the world.

Salwa talks about the idea of hair-colouring as perceived by her mom and society and then went to make a critique of it. In this example, she was engaged in the task of thinking with concepts as referred by Elder and Paul (2001, p. 42) who claim that 'to become a proficient critical thinker, they must become the master of their conceptualizations'. They maintain that

in order to involve in critical thinking and develop personal freedom, people need to distinguish the meaning of concepts as they are in the natural language as well as their meaning as they are embedded and acquired in one's social conditioning and indoctrination. To explain the relationship between Salwa's personal experience in relation to Elder and Paul's idea of thinking with concepts, at the beginning, Salwa was socially conditioned into conforming to the thinking and conception of her own society about hair-colouring that is associated with a bride or a married woman. However, she showed reflection and a critical attitude towards this thinking and practice which allowed her to make change in her way of thinking, being and acting in the world.

Questioning the self is another area that one participant considers as part her of criticality. The questioning of the self relates to asking questions and interrogating one's existence and role in the world. In this respect, Samia refers to questioning in relation to individuals' identity and existence in the world.

At some point of my life, I started thinking who I am in this world, what I want to do, what is my role in society, and this helped me work out my way. What things I want to do, what things I don't want to do which change with time, sometimes I think I fit in this ... I think the fact of questioning who you are in this world, what you are gonna do, why and how ... because you're trying to position yourself in this big world and have may be status or may be discovering the self, a good and concrete way of being critical which is again reflected on your actions in society.

(Interview 06, Samia, 30th November 2018)

Samia's claims seem to propose that her criticality and questioning attitude are not restricted to academic knowledge but also occur within herself i.e. questioning her existence in the world. Samia refers to the questioning that is not confined to the interrogation of knowledge, theories, information, sources that are external to the individuals. Rather, she points to thinking critically and questioning the self in the world as an act of criticality. She also appears to claim that the criticality that is led through questioning of the self can be manifested in individuals' actions in society. In other words, criticality involves not only a thinking process but also actions that might bring change to the individuals' lives.

Another area where one participant appeared to be critical is about the nature of knowledge learnt in formal education and the contribution it has in relation to real life and future learning. In this respect, Meriem says the following:

I have the feeling that the academic knowledge is not going to help me to survive in a real world. It's just academic for academic, for doing dissertations or may be the fault is on me, I could not relate it to the everyday situations.

(Interview 05, Meriem, 26th November 2018)

Meriem adds that education needs to address the areas that will help students to survive in the real world.

We could not test knowledge through grades but the way they survive in real life situations, in a way they relate what they have read and apply to their life, to succeed in their life, this is what we need from the education.

(Interview 05, Meriem, 26th November 2018)

Meriem questions the relevance of formal education and particularly academic knowledge in assisting her future and everyday life. She seems to be critical of the practices of education and the nature of learning that she experienced in her previous education. In this respect, Meriem believes that the role of education should address the needs of students with regards to the knowledge and the necessary skills that help them to 'survive' and 'succeed' in real life. Here, Meriem is also being critical about the failure of education in teaching her the necessary knowledge and skills that go beyond the academic setting and will be useful for everyday life situations. Therefore, Meriem showed her critical side in relation to the educational system and its practices.

To conclude, the discussion of the data presented above demonstrates that the practice of critical thinking is not limited to academic knowledge. The participants can employ their criticality outside the educational institutions such as their existence in the world and the established thinking that they acquired from their family and society. Their critical thinking can occur in areas of life where the teacher is not present to assess it. Thus, the use of criticality by students might not be captured or applied towards the knowledge of the discipline of their study, but they might use this criticality in areas of their lives. They might also demonstrate a critical attitude towards the educational system and its practices rather than the knowledge of the discipline being studied.

5.4. The issue of Questioning Religion

Three participants talked about the issue of questioning and leading a critical attitude towards one's religious beliefs. Particularly, Chahra, Sabrina and Salwa consider religion as an area that they avoid to apply criticality on and where questioning is unlikely to occur. They refer to the preferability of not questioning their own religious beliefs and convictions. In trying to provide a situation where questioning is not possible, Chahra claims as follows:

... there are some exceptions [where questioning is not applicable] especially in relation to me. For example, if you are a religious person, you don't question ... you will necessarily question, but you will find an answer to that. Because you believe in something, you can't question it.

(Interview 04, Chahra, 19th November 2018)

The same idea is developed by Sabrina who talked about the preferability of not interrogating her religion.

Religion, sometimes you do something, no haram, why? Because someone said it's haram. So, there are things like you are Muslim ... you have to eat hallal meat, these are in the Coran. Sometimes, I don't think it's good to question the Coran (laughing).

(Interview 14, Sabrina, 30th July 2019)

Salwa exemplified the unlikelihood of questioning the authority of the teacher in the classroom to the idea of not questioning the Coran.

In the primary school ... middle and secondary school, we have learnt to see the teacher as the model. The whole truth is from the teacher, what the teacher says is like Coran, you cannot question it.

(Interview 02, Salwa, 16th November 2018)

In the follow-up interview, Salwa explains her position towards the idea of not questioning the Coran.

Religion, I don't want to be critical because everything that was done by the prophet or was told in Coran, I think that's reasonable because each day science proves something that was mentioned in the Coran, so many years in Coran.

(Interview 08, Salwa, 21st July 2019)

The participants Chahra, Salwa and Sabrina share the common belief in relation their unwillingness to question their religion. Chahra shows her hesitation about the possibility of questioning one's religion and this can be seen in these phrases 'if you are a religious person, you don't question', 'you will necessary question' and finally, 'you can't question it'. She appears to suggest that questioning can be conducted on her religion, but she will arrive at conclusions and answers that conform with her existing beliefs. In the second quotation of Sabrina, she suggests that things that are obvious and clearly stated in the Coran could not be questioned because they come from a divine source. Salwa's comparison of teacher's knowledge, as practiced in primary school, to the Coran that cannot be questioned shows her position in relation to religion.

The data discussed in this section about the participants' rejection or preference not to question or be critical about their religious beliefs and the Coran shows indirectly their possible understanding of questioning. This understanding consists of the idea of viewing questioning as being uncertain and doubtful or finding the faults and mistakes in something. It is true that the purpose of questioning is to avoid falling in the trap of deception and corruption. However, questioning does not necessarily suggest being suspicious. It might relate to the idea of trying to ask questions that guide individuals in their reasoning.

5.5. Conclusion

This chapter addressed the analysis of the interview data in relation to the understanding and conceptualisation that the participants brought to the notion of critical thinking. According to the findings, criticality is viewed by the participants as a practice that involves two facets - a mental process and a product. The first facet relates to the idea that critical thinking is a mental as well as an abstract process that happens within one's mind without concrete sign of it. This abstract nature makes criticality a private practice that cannot be observed or captured by the external world. The second facet of criticality refers to the product of the thinking process i.e. the demonstration of criticality through various forms. The data showed that the manifestation of critical thinking is diverse, not definite and may take various forms.

The distinction between critical thinking as a mental process and a product will be explained in terms of the distinction between competence and performance made by Chomsky in the field of language learning (see chapter 8, section, 8.2.1). First, the findings that suggest that critical thinking is part of every individual and that it is human nature seems to relate to the competence

aspect proposed by Chomsky. It means that the participants possess the ability and competence to think critically because they perceive criticality as an ability that is part of them and a natural way of thinking about the world.

Second, the product of criticality relates to the performance aspect which, according to the interview data, is diverse and manifested through numerous forms. It is the consequence or the external articulation of the thinking process and practices that happened in the mind. This performance, based on the data, is influenced and determined by context as well as participants' profile. In other words, the participants and the situation in which they are involved define the form or the way they choose to display their criticality. This idea complies with Brookfield's idea (1987, p. 6) who claim that the manifestation of criticality is dependent on the context in which it occurs. He maintains that evidence of critical thinking can be manifested in writing, talking or actions. The participants' responses revealed some other ways of being critical. Some examples include showing lack of interest to a specific matter, compliance as well as actions such as silence that result from an internal and critical reflection which is not always apparent to the outside world. Therefore, ways of being critical and forms of displaying criticality are numerous and indefinite depending on context and individuals.

The discussion of the data also revealed the different areas where criticality can be applied. These areas include the self, previous established thinking, society' thinking and practices, as well as educational system practices. The participants' use of critical thinking is not restricted to the academic knowledge, but they also led a critical attitude towards different aspects of their lives.

The understanding achieved about the nature of critical thinking, based on the discussion of the data in this chapter, explains that criticality is a practice that cannot always be observed even though it is taking place. Criticality is an internal process that occurs in the mind and therefore, cannot appear to the external world until it is demonstrated through a specific form. Manifesting criticality is dependent on individuals themselves and the context in which they are involved. In education, writing, speaking and engaging in classroom discussions are the common forms through which criticality is articulated and assessed. Therefore, the absence of explicit signs of critical thinking in writing and speaking does not necessarily imply students' lack of higher-order thinking skills because they might be thinking critically but not articulating this criticality explicitly. However, some factors might hinder students from applying and displaying their criticality such as writing in a foreign language (see chapter 7).

Chapter 6: A Route for Autonomous Learning as a Route for Critical Thinking

6.1. Introduction

This chapter deals with the analysis of the interview data that address the second research question about the participants' perceptions towards developing their critical thinking. I discuss their accounts in relation to the various educational and everyday life situations that influenced and shaped their criticality. According to the data, a progressive process of becoming autonomous over the participants' lives and thinking through detachment from others' control and guidance plays a vital role in taking independent judgments and decisions, and therefore developing critical thinking. In simple terms, a gradual detachment from previous assistance and thinking allows to move from a dependent to an independent way of learning and thinking. Through the discussion of the interview data, I explain how an independent way of learning and living is viewed by the participants as an important element for the development of higher-order thinking skills. This way of fostering critical thinking will be interpreted according to Vygotsky's socio-cultural theory of learning (see chapter 8, section 8.2.2). This data chapter includes the following sections:

- A discussion of the influence of family upbringing and society's thinking on implementing certain beliefs and thoughts in children, and thus shaping their thinking and behaviours.
- An explanation of how the participants consider schooling as the basis for HE thanks to its role in preparing them through the acquisition of knowledge of the world and basics of learning.
- A discussion of the nature of learning that the participants experienced in HE which is described by some participants as a hierarchical process towards achieving independent learning while others portrayed it as an autonomous learning.
- The centrality of critical thinking to the PhD journey that encourages independence.
- The importance of living alone in the UK far from family as an opportunity for some participants to live independently and boost their criticality.

6.2. The Role of Family and Society in Children's Learning

According to some participants, family upbringing and society's thinking are among the factors that contributed to their way of thinking especially in their early childhood. In other words, the people from their surrounding environment especially their parents shaped the participants' thinking in a way or another. The data revealed that the influence of these people on the participants is apparent in their way of thinking, behaviours, learning habits and especially in their critical thinking development at certain instances of their lives. Five participants mention the impact that the family environment had on their learning and behaviours as children. In this respect, Salwa talks about the effect of children's exposure to their parents' background and the different materials that they are presented with, on their attitudes and thinking.

It [critical thinking] starts may be when you are raised with your parents as a child ... the way we raise children is very different, and parents are very different as well, whether they are illiterate, whether they are educated, whether they are for example doctors, they have high level degree. All of these have relation, a link to the development of the thinking of the child ... the thinking is different, and whether these parents use different technology, or they expose his child to different books to read, they develop his thinking ... the way they [children] develop thinking is different ... here I am talking only about the impact, the influence of their parents' background ... apart from brothers, neighbours.

(Interview 08, Salwa, 21st July 2019)

According to Salwa, the formation of children's thinking starts from the early stages of childhood. Salwa seems to suggest that children's thinking is the reflection of their parents' thinking because they acquire their way of thinking and behaviours from their parents. In other words, children discover and learn about the world through the lens and perspective of their parents. Children are assisted by their parents in their early stages of leaning about the world. This idea can be explained in terms of Vygotsky's sociocultural theory (see chapter 2, section 2.9.2) that children are in need for assistance in order to discover about the world. Salwa maintains that the discrepancies in children's thinking are widened when their circle of interaction is expanded to include other members such as 'brothers' and 'neighbours'. The differences in their thinking, according to Salwa, results from three aspects which are the differences in the environment they were raised in, the people they interacted with and the material they were exposed to.

The centrality of parents in building children's thinking is apparent in Salwa's claims. According to her, both parents' educational level and background as well as children's exposure to different materials including 'books' and 'technology' are areas that influence children's thinking. It is important to note that books and technology might allow children to experience other ways of thinking and gain diverse perspectives of looking at the world. However, Salwa appears to indicate that the impact of parents' thinking is still inevitable especially when the choice of the books is made by the parents themselves.

Some other participants refer to areas where they had been influenced as children by their parents' way of thinking. According to the examples they presented, the impact of their parents' upbringing on their thinking is either positive or negative on their future behaviours and actions. For instance, Samir notes the role of his parents in teaching him to be critical about money management.

My mother, my dad helped me to think critically when it comes to money. Thinking critically is not related to studies only ... even you girls if you buy like make up like seventy pounds, I'm sure you will not do it. Some people will say, you are stingy, not stingy, critical thinker, sensible, my friend said it, I'm sensible not stingy.

(Interview 01, Samir, 13th November 2018)

Meriem states that certain practices acquired from family can negatively influence children's beliefs and behaviours especially in the classroom.

... the cultural background that some countries have, for instance, we have this upbringing that we got from the home, that you need not to back talk to your mum or back talk to your dad and this could have an effect also, and you draw the inference and bring this upbringing to the classroom and in the same way you could not challenge or say to the teacher you're wrong ... even if we are inside ... disagreeing or angry about the behaviour they did.

(Interview 05, Meriem, 26th November 2018)

These two extracts demonstrates that the thinking and behaviours acquired from parents or family environment are influential for the participants' social and educational lives i.e. these behaviours act in favour or against the participants' performance in future activities of their lives. According to Samir, the use of criticality is not limited merely to studies, but it is also be applied and developed through everyday life situations thanks to the guidance of his parents. Developing criticality in everyday life, according to Samir, relates to the idea of being sensible. Thus, such practices might have served this participant to develop a certain criticality by

learning to take responsibility and decisions as well as become autonomous from early stages of childhood.

According to Meriem, the influence of society on her criticality is apparent in some of the behaviours she adopts in the classroom. She seems to claim that her non-demonstration of criticality in the classroom is not direct evidence of her non-criticality, it is only a behaviour adopted in order to conform to the moral values she acquired in her society i.e. showing respect by not contradicting elder people's views and thinking. In other words, students who have been brought up in a family where the position of elderly people is highly valued and what they say is unquestionable, would find it difficult to express their thoughts explicitly in the classroom. Meriem associates this taught behaviour to the passive role she adopts in the classroom despite the disagreement she might carry 'inside' towards teachers' knowledge and reasoning. Therefore, the participant's poor performance in criticality in the classroom is sometimes hindered by some family upbringing behaviours and values.

Some participants note the existence of a certain degree of critical thinking within children which is determined by their age and capacities. In this regard, Samia refers explicitly to children's ability to engage and develop criticality at an early age.

I believe that children and even may be babies have critical thinking but in their capacity and world.

(Interview 06, Samia, 30th November 2018)

The same idea is reiterated by Walid.

I think at younger age, I believe that critical thinking is always there, and it started at a very young age, like as young as you can imagine, like as a baby barely speaking.

(Interview 10, Walid, 25th July 2019)

Both Samia and Walid seem to suggest that the development and use of critical thinking starts from the early stages of childhood. However, the two participants did not specify the nature of the criticality that children involve in. Samia believes that the 'capacity' and 'world' of children determine the degree and type of criticality in which they engage. She probably suggests that each phase defines the nature of critical thinking individuals experience or develop. She might

also mean that the criticality applied in childhood is different from the one applied in adulthood depending on some influencing factors.

Apart from the influence of a small community such as family on children's thinking, one participant notes the impact of a bigger community which is the society on the individual's thinking. Sabrina states that the thinking of people of her community is influenced by the beliefs and practices of the society where they grew up, which therefore becomes a cyclical process that is transmitted from one person to another. She talks about the impact of growing up in a closed community in limiting the thinking of individuals.

... I think it's because of society, it is the lack of openness, I think when you don't travel and you stay in one place, you think always in the same thing, the same way ... I think being open helps to be critical because you are looking at the world entirely without having some social barriers or religious [barriers] ... I think it's social, I think it has to do with the environment we grow up in.

(Interview 14, Sabrina, 30th July 2019)

Again, Sabrina maintains that certain social factors lead to the spread of false rumours that result from people's uncritical reactions towards particular information.

There is this pressure about society ... because they [people of a particular society] all live together. When someone says something, then it goes, it spreads, the people start talking and talking and talking and talking especially when it's a closed community ... in my home town, a closed community where I live for example in my neighbourhood, then he [a father] goes to a café and he talks with other guys and these guys go home to talk to their wives and children and these children meet at school ... sometimes people cannot be critical. I think these things happen because people are not critical. There is no one to say: "no, I don't want to believe this, who told you this? I saw on TV, but is it true?" Then, you have to question ... I think our people are not critical, I'm making a big statement, or I think they grow up being afraid or respecting their fathers so much.

(Interview 14, Sabrina, 30th July 2019)

In both extracts, individuals' thinking is shaped by the social norms and standards of their community. According to Sabrina, experiencing particular ways of thinking, behaving and acting in a particular society contribute to the thinking of the participant. In other words, the thinking of the participant is the product and the reflection of the society she grew up. This idea is related to what Paul and Elder (2020, p. 41) call sociocentric thinking in which individuals

acquire biases and preconceived ideas without questioning and analysis. In other words, it is about adopting the thinking of one's society without critical examination.

According to Sabrina, functioning from only one perspective and the lack of openness to different cultures and ways of thinking is an aspect that do not encourage the development of criticality. Sabrina's belief on the importance of openness to other societies for criticality might be shaped by her experience in the UK, an aspect that might have raised her awareness about the significant role of open-mindedness to the practice of critical thinking. She adds that criticality can occur when eliminating the embedded 'social' and 'religious' norms acquired from one's society. Sabrina seems to suggest that the non-development of questioning habits is the result of some social values such as the respect of elder people's knowledge and authority.

According to the discussion, the learning and thinking of the participants have been influenced by the people they interacted with especially in early childhood. The influence of family and society on the participants' thinking is apparent i.e. they acquired the thinking and the way of behaving of their family and society. However, this influence does not deny the existence of criticality within the participants in their early childhood. Sometimes they learn behaviours and practices that become the basic and ideal norms that they adopt in their future actions in life. However, these norms are not always questioned by members of the community as they are deeply embedded in them. At last, it can also be said that the behaviours and norms that children acquire from their family and society can sometimes act in favour or against their learning in the future.

6.3. Previous Schooling: The Basis for Higher Education

Some participants consider previous schooling i.e. primary, middle and secondary schools, as a preparation phase for HE. For them, previous schooling is the stage that enabled them to become knowledgeable and well-informed about the world and different subjects before moving to university. In addition, these participants did not deny the existence of critical thinking in these stages of education despite that schooling, according to them, focused more on knowledge acquisition. Three participants note the significance of schooling in shaping their learning and enabling them to create a repository of knowledge that enable them to engage in critical thinking in HE. In this respect, Salwa comments on the role of teachers in previous schooling in building her learning.

... at least, I got the basics for thinking because we cannot ignore that they [teachers in previous schooling] trained us to comprehend things, to understand things, to transfer knowledge, but I think that they developed in us the rehearsal more especially during the very early stages of learning even at university.

(Interview 08, Salwa, 21st July 2019)

Samia considers previous schooling as the stage of education that assisted her to achieve her actual position in HE.

If I didn't go through the other stages in education, I wouldn't get to the stage where I am now in higher education. So, maybe primary, middle and secondary school, they all build in a way your learning process.

(Interview 06, Samia, 30th November 2018)

Walid views previous schooling as an important factor in developing his critical thinking at university.

I think my pre-higher education period is very important, and I think although it didn't focus on critical thinking that much but still it's very important for me to develop critical thinking in higher education ... I think our needs at that point [previous schooling] is more oriented towards knowledge, I need more knowledge, I need to understand the world, I need to understand for example, in science I want to know how my immune system works, in geography I want to know where Algeria is situated and then I think these needs need to be met at younger age which is basically knowledge or exposure to things in general. That doesn't deny the existence of critical thinking.

(Interview 10, Walid, 25th July 2019)

As suggested by these participants, the role of schooling appears to be on equipping students with the necessary knowledge and understanding of the world in order to be able to engage in criticality, and therefore make informed decisions at the level of HE. Salwa claims that schoolteachers are among the other members that contributed to the formation and development of the participants' skill of criticality. Despite the little focus of schooling on criticality, it helped Salwa to build the 'basics' of learning and criticality in terms of the comprehension of knowledge.

According to Walid's experience, the focus of schooling was on the lower-order thinking skills of acquisition and comprehension of knowledge with little emphasis on higher-order thinking

skills. Walid seems to suggest that students' learning needs that are more oriented towards knowledge acquisition defines the nature of learning encouraged at school. Walid considers schooling as the phase where he was trained to develop his baggage and background knowledge of the world before engaging in the task of critical thinking. This finding conforms with the idea developed in the literature about the importance of possessing background knowledge of particular topic and the world in order to be able to exercise criticality and questioning properly and when necessary (see chapter 2, section 2.7).

As mentioned by both Salwa and Walid, despite that critical thinking has not received much attention in previous schooling where the emphasis was on the 'rehearsal' and memorization of knowledge and information rather than on the production of new knowledge, it still contributed to their learning and thinking development. For this reason, Egege and Kutieleh (2004, p. 77) claim that 'critical thinking is considered the most distinguishing feature separating university academic standards from secondary schools and the one academic area not overtly addressed at high school'. In other words, criticality is addressed at HE than at schooling where attention is focused on knowledge acquisition and understanding.

The methods of teaching and learning that the participants experienced in their previous schooling, according to the data below, appear to have an influence on the participants' future learning and thinking in HE. This influence consists of students' tendency to apply acquired learning habits and practices from school, at the university level. However, the idea is that these practices may no longer be valid at the stage of HE where different styles of learning are required. In this regard, Salwa notes the effect of previous learning habits on her future learning.

They [students] have been raised thinking in this way. It is the thinking habit they have, you have grown up by this habit you have learnt while you were in the primary school, in the secondary school, it is a very big problem ... because critical thinking can start from the early age. It can be started from the primary school and if you are not taught or if you did not learn critical thinking in the primary school ... you cannot change the learning habit without training.

(Interview 02, Salwa, 16th November 2018)

Samir refers to the failure of schooling in improving his skills from the early stages of education.

... because we are at university, there are some teachers who are contributors, who contribute to your knowledge ... your own skills, who help you build hidden talents. In secondary school, I never had the chance to show like my abilities, my skills, my talents, passion ... I mean I always was passionate about acting, but I discovered this potential when I went to university.

(Interview 01, Samir, 13th November 2018)

Samir points to the failure of previous schooling in developing appropriate and necessary skills that help him to succeed at university. A possible interpretation that I can draw from both my personal experience and from previous findings in this section in relation to this issue, might relate to the more emphasis on knowledge acquisition and ignoring the need to develop students' abilities and skills of learning. Salwa appears to claim that developing students' critical thinking should be addressed from an early stage because it requires time and effort in order to become competent and achieve high levels of criticality.

Lamia refers to the necessity of initiating students to use and exercise their critical thinking from schooling. According to her experience, fostering her criticality started from the early stages of middle school. In this respect, Lamia considers the type of exam activities given in middle school as a source that triggered her to use criticality.

I think the critical thinking for me began from that time [middle school] ... when it comes to middle school with this complex situation [she means a problem-situation and essay writing] in each module, I think that critical thinking is a little bit was used by students ... that was to give the student a description and ask him to think about other solutions like in Physics, because I was scientific, we were not asked to write an essay, we were given a situation and the teacher asks you to find a solution of that situation ... in the middle and secondary school there were situations that push you to do your critical thinking, there is no other solution especially us, the scientific stream, if you don't use your mind you will not find the solution ... in the first years of middle school when they gave us that complex situation, the application in the first stages were very complicated because it was new, we need to learn how to activate the critical thinking ... but by time and by practice it was easier.

(Interview 09, Lamia, 22nd July 2019)

Lamia seems to convey the idea that developing criticality can happen at any stage and phase of education. According to her experience, it seems that the type of activities that are provided to students play a crucial role in terms of the nature of skills they develop. According to Lamia, the engagement in activities such as problem-solving is one of the factors that stimulated and

encouraged her to apply and develop critical thinking. She seems to suggest that the appropriate activities that require criticality are those that necessitates the use of the mind to solve a problem and find a solution rather than those that are based on memorisation of information. Lamia also refers to the activity of essay writing which is typical to the literary stream in the Algerian educational system, but she did not show how critical thinking can be applied in this type of assignment. From my personal experience, students are in need to think critically in order to select the relevant information to include in the essay in addition to its organisation in a way that coherently presents the argument. It can be said that these two activities involve critical thinking because of the nature of the required practices to accomplish them and these encompass the idea of taking decisions on the methods to use, the possible solutions as well as being selective in terms of the appropriate information that support one's claims and argument. Like Salwa, Lamia also suggests that applying critical thinking skills in specific activities and assignments requires both time and repeated practice so that the skills become manageable and easy to use.

In addition, Samia believes that critical thinking is shaped and defined by the different educational levels or stages that students go through in their life.

you acquire the skills depending on ... the level, when you are in primary school, you're critical may be when your criticality is different from your in secondary and high school ... I think it has to do with the degrees ... because we get mature, our criticality develops because the more you get higher in terms of schooling and education, the more you start developing more kind of skills ... criticality is shaped and developed throughout time and throughout the stages that we go through, I would say that our criticality might be different from when we were babies, when we go on primary school, when go to high school.

(Interview 11, Samia, 26th July 2019)

In this extract, Samia seems to suggest that the nature of criticality that students acquire in different stages of their education is 'different' from one stage or one degree to another which might mean that it changes according to the context. She also believed that 'maturity', growing up in age and the evolution in terms of education ensures the development of critical thinking and the achievement of higher order-thinking skills. It can be claimed that developing a different knowledge in a particular context as well as developing an awareness through time can change the nature of criticality they exercise.

To sum up, it can be deduced from this section that previous schooling contributes to building students' background knowledge of different aspects and areas of the world. This phase is significant for students because it prepares them in terms of making them knowledgeable enough to engage in criticality and make informed decisions. It is also found that children can foster criticality from early phases of education especially if provided with the appropriate conditions that activities that encourage the application of those skills.

6.4. Learning in Higher Education: Hierarchical and Autonomous

Some participants highlight the nature of learning that they experienced in HE in terms of the different ways of teaching and learning. According to them, their experience of learning in HE can be classified into two different methods. The first method is related to the view that the university followed a hierarchical process of learning, whereas the second method is associated with the focus of HE on autonomous learning especially when compared to their previous schooling.

6.4.1. Learning as a Hierarchical Process

Some participants described the type of learning they experienced in HE as a hierarchical process that follows some steps. According to the data, this hierarchical process of learning starts from a total dependence on the teacher which then moves to an autonomous way learning with little guidance from the teacher. In this respect, Meriem associates each degree at the university level with the type of learning she experienced.

During the Licence degree, it's up to the teacher to make too much work than the students because we [students] are just fresh and need to build up our academic profile ... at the Master level, it's up to us to synthesise the different sources and at the level of PhD, we need to generate, not only synthesise ... when I was in Licence, usually the teacher is up to him to do the tasks, to transmit the knowledge. What we [students] need is just memorise and then give back to the teacher the product; and the process slightly changed when I was in Master degree since it's up to them [students] to do the lessons and the teacher has, I can say no role in the classroom. Moving to the PhD, there is much more difference maybe because of the different cultural background we are in [she means being in the UK], where the learning is absolutely my own task. So, it is up to me to search for the research topic, to search for methodology by my own with a slight contribution of the supervisor.

(Interview 5, Meriem, 26th November 2018)

Warda expresses her critique and dissatisfaction towards the way of learning she encountered during her studies at university in her home country.

When I arrived at university in my first year, I found that students are supposed just to take the input of the teacher, just take it and reproduce it in the exams ... I said maybe it's my first year and they are trying to familiarise me with the modules and the subjects but unfortunately, even in the second and the third year, I experienced the same thing. I am a person that cannot learn by heart, I experienced many difficulties. For example, in the exams, I feel obliged to reproduce what the teacher has given me ... studies in higher education, I was expecting something as more research and doing projects and works like an autonomous process.

(Interview 12, Warda, 26th July 2019)

Salwa refers to the role of writing a Master dissertation in helping her to foster some skills of critical thinking.

Writing a dissertation itself makes me develop some skills of critical thinking because critical thinking has so many skills ... I was synthesizing literature, I wouldn't say creating something because I don't believe that I've created something in my Master degree, I would say that I have developed critical thinking in terms of analysis and synthesis.

(Interview 02, Salwa, 16th November 2018)

In these extracts, Meriem and Warda describe their learning experience in HE in terms of a gradual process from a dependent to an independent way of learning. They associate this learning process to three different elements which are students' needs, the degree they are enrolled in and the extent of teacher's contribution to it. According to them, one of the incentives for their total dependence on the teacher in the early stages at university i.e. bachelor's degree, is their newness to this academic setting and lack of familiarity with HE requirements and standards. They seem to suggest that this stage is essential before engaging in critical thinking because of their need to become knowledgeable and well-informed about the content of the discipline. Thus, these two participants seem to convey the idea that the first years at university focus on the lower-order thinking skills of knowledge acquisition and comprehension which are considered basic but essential steps for the practice of critical thinking.

Meriem appears to claim that students are given some freedom and agency in the classroom and therefore, they started using some skills of critical thinking when they progress in their

level of studies i.e. Master degree. Salwa seems to suggest that her Master degree in terms of writing a dissertation is a stage that enabled her to practice and develop some skills of critical thinking. However, she also appears to claim that the creation of new knowledge was not achieved while writing her Master dissertation.

According to Meriem, total autonomy over her learning is achieved at an advanced level of education i.e. Doctorate, where the use of critical thinking is not restricted to analysis and synthesis but also to the generation of new knowledge. Meriem appears to associate the degree of independence she gained while working on her PhD thesis to the fact of being in the UK. Meriem's idea is not necessarily valid because this thinking might have been influenced by her previous experience of writing a Master dissertation where her supervisor, as she mentioned in the interview, was authoritative even about the choice of the topic of her dissertation. In addition, the nature and requirements of the PhD might be the factors necessitating autonomy rather than the fact of being in the UK.

From the discussion of the data, it can be concluded that the learning process these participants experienced is seen as a gradual process from a dependent towards an independent way of learning. First, the focus of early years of university is on the acquisition and comprehension of knowledge in order to familiarise students with the content of the discipline and make them well-informed as an important factor for the engagement in criticality. Progress from Bachelor to Master was the stage where the participants gained some independence and started using some skills of critical thinking. The PhD degree is the stage where total autonomy and use of criticality from students are required.

6.4.2. Higher Education for an Autonomous Learning

Some participants view HE as the stage where exposure to a different level of education and learning is expected. According to them, the specificity of HE can be found in the knowledge to be learnt, the learning methods and the roles played by both the teacher and students. For example, two participants associated autonomous learning with their experience of studying at university. In this respect, Walid regards HE as the appropriate place where autonomous learning and skills development can occur.

I think higher education is very different than any other kind of education that I had before for example, secondary or middle school or elementary school, in the sense that it [higher education] helps you, it supports you, it helps you to become more independent, encourages you to improve certain

skills instead of just maybe memorizing or just being passively accumulating knowledge ... I think higher education helps you become autonomous and discover certain skills that work for you or that help you learn ... In higher education, I would say you are on your own, so the teachers and lecturers are there to guide you, but you have to do things on your own, so final decisions are yours to make.

(Interview 10, Walid, 25th July 2019)

Again, Walid talks about the role of project works and oral presentations at HE in developing students' autonomy.

In higher education, we started doing presentations and I think that's very important for you to become independent or autonomous in the sense that you make your own research, and you take responsibility of whatever happens in that presentation, you take decisions, and you will be graded upon those decisions. I think these are important skills or very important experiences to go through for you to become an autonomous learner in general.

(Interview 10, Walid, 25th July 2019)

Walid relates the specificity of HE to the nature of learning it seeks to achieve in students which is an autonomous way of learning, in addition to the development of students' learning skills that allow them to function independently. Similarly, the participant Fadia associates her experience of HE with autonomy and the idea of taking control of her learning through reading books and deciding for herself rather than relying on the teacher. Walid seems to associate HE, when compared to schooling, with practices that encourage students' autonomy and skills. According to Walid, autonomy in learning at university is achieved through the type of practices and activities exercised such as: oral presentations, doing research, having the freedom to make decisions, and the little guidance provided by the teacher.

Samir talks about the role of students at university in comparison to previous schooling.

They [students] are in higher education not in secondary school, they no longer copy paste ... but we are a step ahead, you no longer think inside the box, but it's high time you think outside the box, you come out of the box and show your abilities, maybe we didn't have the right to do that in secondary school limited by teachers, but here we are no longer constrained, you let your students discover their abilities, their skills, their potentials.

(Interview 01, Samir, 14th November 2018)

Samir seems to propose that HE is a different level of education that does not involve the same learning strategies and ways of thinking experienced in previous education; but it requires the application of different learning styles. According to Walid, among the characteristics that define the specificity of HE is the shift of focus from the teacher to students i.e. students are given the freedom and opportunity to shape their learning. Walid considers HE as the place where the act of thinking critically is encouraged in terms of trying to think differently and deviate from established thinking and norms.

Samir notes the role of HE in developing his skills that focus on his thinking as an individual rather than adopting an already existing knowledge without any active contribution to this knowledge.

I don't take anything for granted, this is a feature or let's say a new skill that I've been building since I came to university, not in the UK but first university back in Algeria and I build it even more here [UK] thanks to my supervisor because my supervisor back in Algeria, in general they do not help you discover your hidden skill, they don't help you develop this criticality even though they know but they never do.

(Interview 01, Samir, 14th November 2018)

Samir considered critical thinking as a 'new' skill that he could develop starting from his experience at HE in his home country, which then flourished during his experience of doing PhD in the UK. In addition, criticality seems to be developed and built through time thanks to the support of the lecturer or supervisor. According to him, despite the awareness of teachers on the need to develop students' critical thinking skills, they do not strive to achieve this goal.

Similarly, Walid considers HE as the appropriate and ideal place where critical thinking can be fully exercised and applied.

I think the focus on critical thinking is better situated in higher education where you have a better understanding of the world and also it has to do with your maturity as a person, I mean you're basically 18 or 19 years old and above, for example me I'm 27 years old, I assume that I have a better understanding of the world because of my age, because of the experiences that I have had throughout the years, so now I see as high time for me to have better skills of thinking critically.

(Interview 10, Walid, 21st July 2019)

In this extract, Walid associates the practice of criticality to HE. He refers to ‘age’ and ‘maturity’ as two factors that play a role in the development of his critical thinking. According to Walid, the use of criticality in HE is appropriate when an understanding of the world is achieved. In other words, he can independently approach knowledge and make autonomous decisions on his learning when he possesses sufficient knowledge of the world.

In the light of this discussion, it can be concluded that different students experienced diverse ways of teaching and learning depending on the practices of the university they come from with some interference of personal or individual-related factors. For some participants, HE is the appropriate place for the development of an autonomous way of learning. This independence in learning seems to allow them to acquire and foster certain skills that will support them to function in this environment and facilitate their learning in education. Critical thinking is one of these skills that higher education addressed because of the nature of learning that is involved at this level of education. For one participant, however, this was not the case because of the teaching method and her lack of motivation to conduct her studies in the English discipline.

6.4.3. The Centrality of Critical Thinking to PhD

According to the findings, the idea of critical thinking is at the centre of the PhD journey can be explained in terms of the practices and requirements that the degree demands while conducting and writing the thesis. Criticality is needed throughout the PhD journey in every action and decision of the researcher. Decisions involve the choice of the topic, selection, analysis and synthesis of the literature, the choice of data collection methods, data analysis and interpretation of the findings. In this respect, Sabrina considers that the largest part of her criticality was developed thanks to doing a PhD degree.

I think doing a PhD, it's like 70% extra of critical thinking, may be throughout all my life, like I started my PhD at 23 [she refers to her age] so I had 30% critical thinking in 23 years but now in 3 years I have developed the 70%, like the rest because of the PhD, PhD pushes you to be critical.

(Interview 14, Sabrina, 30th July 2019)

Sabrina considers doing a PhD as an opportunity to achieve high levels of criticality. This is attributed, according to her, to the essence of the PhD that drives her to use this skill and therefore, be a critical thinker. A possible interpretation refers to the requirements of the PhD degree which include the need to make a new contribution to the field of study, writing a critical

literature review, making decisions about the methodology, bringing a critical view towards the data collected.

Lamia refers to the need for higher level critical thinking skills in the PhD degree than in doing the Master dissertation.

The criticality here [UK], we need a high level in order to write a thesis ... because this is PhD, because my supervisor always tell me criticality in Bachelor, Master or PhD is not the same ... what we were doing in Master, you speak about your topic by bringing for example a quotation of an author and you write that quotation and you write the description of it below. This is what we did in our university, but when coming here with my supervisor, she said to me don't say like this. For example, I say someone said and I provide the description and I bring another quotation of another person, and my supervisor tells me this is not PhD, PhD should not be written in this way.

(Interview 09, Lamia, 22nd July 2019)

Walid notes the role of the activities and practices involved in PhD in making critical thinking an important and central element.

I think the nature of my degree makes critical thinking at the central point, I'm doing a PhD by research, that means no classes, that means I have to look for knowledge myself and I have to select what knowledge to include in my research and I have to make decisions, very difficult decisions if you ask me about what methodologies I'm using, what research tools I'm using, what epistemologies go with what I have mentioned before. I think doing research or writing a thesis is the culmination of critical thinking, it's like all what you have learnt throughout your life coming together in a form of thesis, or a written form of something.

(Interview 10, Walid, 25th July 2019)

In these extracts, Lamia and Walid considers conducting a PhD as an appropriate place where critical thinking can be used. Lamia views the degree of criticality required in PhD as 'high level' as well as different especially when compared to the degrees of BA and MA. Lamia did not show explicitly the difference between writing a Master dissertation and a PhD thesis. However, this seems to be implied in her talk about MA that is limited to the reporting and description of the literature which is not the case of the PhD that necessitates a critical analysis and synthesis of the literature. In addition, Walid considers the autonomy and the independent character of doing PhD makes critical thinking a 'central' element. This is attributed to the independence of learning and the search for knowledge that is involved at this level of education, besides the need to make decisions in many areas of the research.

According to these participants, two views can be drawn about critical thinking in relation to the PhD experience. On the one hand, writing the PhD thesis, according to Walid, is deemed to be the ‘culmination’ of the criticality learnt during an individual’s life. In other words, the writing of the PhD thesis is the outcome of criticality because it is an opportunity that allows students to apply and display the skills they have learnt during their everyday and educational lives. On the other hand, PhD is viewed as a place where criticality of the individual flourishes and reaches high levels. This might mean that the fact of doing a PhD enables students to improve their critical thinking skills because of the nature of the practices and decisions they are supposed to take. Most importantly, criticality is, in both ways, needed and present in the PhD journey which allows students to demonstrate, practice as well as develop higher-order thinking skills.

Meriem notes that autonomy is one of the characteristics of the PhD degree. She views and believes that PhD is a lonely process.

Here in the UK, the PhD is research-based ... so, it’s up to me as a researcher to do the work, to search for different kind of information ... it’s a lonely process, it is up to me to struggle in this journey. As I said the supervisor is there I don’t know, just to give you a slight contribution. So, it is up to me to choose which approach to go for, which direction that I need to go for and the supervisor never gives you some hints on what to do.

(Interview 05, Meriem, 26th November 2018)

In this extract, Meriem believes that the research-based nature of the PhD project makes it an independent task with limited guidance from the supervisor. According to her, the different tasks that she is supposed to accomplish in a PhD seem to encourage her to make independent decisions. The guidance of the supervisor, as she mentions is very limited, the aspect which enables her to independently conduct her research.

To conclude, the nature of PhD in terms of the autonomous learning it involves and the necessity to take cautious and careful decisions on different aspects of the research makes the role of critical thinking pivotal. In addition, the whole journey and the writing of the PhD thesis is an opportunity to use and demonstrate one’s achieved skills of critical thinking as it is an opportunity to develop higher levels of it. This might mean that it is the nature of the degree of the PhD that makes the participants develop critical thinking rather than the fact of being in the UK. In addition, it seems that PhD is another level of HE where the participants enjoy a degree

of autonomy in learning and conducting the project where they become detached from the total guidance of the teacher or supervisor.

6.5. Living Alone Abroad: An Opportunity to Become Independent

According to some participants, living abroad and specifically in the UK far from family and the people who supported them in their previous experiences of childhood and schooling is considered an ideal period for developing autonomy, and therefore fostering their criticality. In other words, this period of detachment from the assistance of others and moving to dependence on the self in terms of learning and thinking about the world is a crucial phase in the development of critical thinking of the participants. Two participants regard their experience of living alone in the UK as an opportunity that allowed them to lead an autonomous way of life far from the control of others' thinking. In this regard, Lamia views her experience of living alone as a stimulus that pushed her to use and activate her critical side.

I think most of the time we need to use critical thinking, especially we [Algerian students] who are abroad, we are alone. And sometimes, your critical thinking will not help you only as a person, you need to ask and *consult* like your mom, your sister, like people you trust of course.

(Interview 09, Lamia, 22nd July 2019)

Salwa notes the difference between her experience of living in Algeria and the UK in terms of independence and responsibility.

When I was in Algeria, my role was easy I think ... My role was only or solely going to the university, attending lectures, doing some research and everything and going back home. When I go back home, I have no responsibilities ... But coming to the UK, I find that as if you're living alone, you need to take care of yourself, your health, your mental being, what you eat, what you dress, at what time you sleep, at what time you wake up and everything. So, you are fully responsible about yourself and not only about yourself, about sometimes the environment you are living in ... So, my role here in the UK is totally different ... I became very autonomous, very independent, decision maker and sometimes decision maker without having a chance to be guided. What I mean is you take decisions without the guidance of anybody.

(Interview 02, Salwa, 16th November 2018)

Lamia relates the necessity of using her critical thinking while being in the UK to the idea of both 'being abroad' and 'living alone'. In other words, taking control of their learning and life

is an opportunity that allowed them to use their thinking without the interference and guidance of others and therefore, develop skills and making independent decisions. Salwa also considers her experience of living alone in the UK as a motive that permitted her to move from a life that is mostly dependent on the guidance and support of her family to a totally independent life. Although she did not refer explicitly to the role of critical thinking in this experience, it still can be understood and deduced from her idea of taking responsibility over her life in terms of making decisions independently.

Unlike Salwa who totally gave up on the guidance of her parents at this stage, Lamia believes that despite gaining independence over her life, the support and the critical side of her family are still significant in decision-making. Lamia seems to not be able to develop a complete independence because she considered the critical thinking of her family members is still crucial in her life and the decisions she makes. She also appears to suggest that the involvement in critical thinking between different people about a certain matter brings efficient results. A possible explanation is that Lamia's occasional reliance on her family might be because of her parents' expertise in dealing with life and being able to make wise and informed decisions in relation to various issues. In this regard, Mercer (2000, p. 1) refers to the importance of collective thinking or thinking together through language to make sense of the world. Good thinking is not always achieved by thinking independently from others, but it can happen by thinking in group in order to consider different perspectives and viewpoints.

The discussion of this section suggests that growing up in age, becoming mature and most importantly living alone far from the assistance of family seems to be one of the factors that allows them to become autonomous, take control of their lives and therefore, develop critical thinking skills. However, it appears that the guidance and assistance of others to the individuals' learning can be present even at advanced stages of their lives. The idea of living independently makes the role of critical thinking crucial because of the autonomy in living that the participant is expected to carry out.

6.6. Conclusion

The data discussed in this chapter relate to the perceptions of the participants towards developing their criticality throughout the various stages of their lives. The findings revealed that the early stages of the participants' childhood and schooling constitute a preparation phase in terms of acquiring and comprehending knowledge of the world. In other words, the learning

of the participants especially in their childhood started from their close surrounding including family, neighbours, friends and teachers, who contributed to their knowledge as children and influenced their way of thinking. In this way, the participants acquired and understood knowledge of the world from the perspective and thinking of other individuals. The environment in which they grew up influenced them by instilling in them certain ways of thinking, behaviours, traditions and practices.

According to the findings, having an opportunity to live alone far from the guidance of family is seen by the participants as a way that enabled the participants to lead an independent life and use their criticality. Living alone allowed them to gain autonomy about their way of thinking and deciding for themselves rather than relying on others to decide or think for them. In this respect, Brookfield (1987, p. 1) claims that critical thinking is associated with the democracy of making decisions on individual's life as well as the thinking that contributes to the individual's life. In other words, autonomy is the aspect that enables individuals to stand for their own lives through critical thinking rather than be dependent on others. Thus, independence and detachment from the control of others constituted one of the important elements for the use and development of the participants' critical thinking.

Although critical thinking, according to the data, is an aspect which is present in all the stages of the participants' life, the stage of HE is viewed as the ideal place where critical thinking is encouraged and used more. In this regard, Lipman (2003, p.) claims that 'critical thinking is closely aligned with the higher in higher education – as a core element of 'graduateness' and a cornerstone of the mission of higher education institutions'. Indeed, the participants emphasised the idea that the practice of critical thinking is more apparent in HE. However, it is important to highlight that the participants' use of critical thinking, according to their accounts, is also apparent in their experience in middle school but with limited use when compared to HE.

According to the data discussed in this chapter, developing critical thinking seems to follow a gradual process of detaching from primary sources such as family and society's thinking and moving to a more independent way of shaping one's thinking. This way of developing critical thinking will be explained in terms of Vygotsky's socio-cultural theory (see Chapter 8, section 8.3.2). At their early age, the participants were influenced by the thinking of their surrounding environment which means that they were guided by other individuals in the process of gaining

knowledge of the world. However, becoming autonomous over their thinking through time allowed them to make independent decisions about their own learning, and therefore enhance their higher-order thinking skills.

From a summary of the data analysed in this chapter, two factors were influential in the participants' development of critical thinking. These factors consist of gaining knowledge and familiarity about the world as well as gaining autonomy over one's thinking and life. The first factor which relates to acquiring knowledge of the world is highlighted in the first stages of childhood in which the participants acquire the thinking of the society where they live. They become embedded in that society where they adopt certain beliefs and attitudes without critical consideration. The second factor is linked to gaining autonomy over their lives and thinking rather than depending on others especially parents to think for them. Therefore, these two elements are significant in engaging critically about the world and one's life.

Chapter 7: The Teaching of Criticality through Pedagogical and Classroom Practices

7.1. Introduction

The third research question dealing with the factors that impact the participants' development of criticality is addressed in this chapter. Among the aims of this research is investigating the aspects that influence the practice of critical thinking, either in academic settings or everyday life situations, from the participants' experiences and standpoint. The analysis of the interview data revealed that the pedagogical practices adopted in some educational institutions are one of the prevailing factors that either encourage or hinder the participants' journey to enhancing and using criticality. Some of these practices involve classroom dynamics, the focus on the completion of the curriculum, students' perceptions towards the nature of knowledge in addition to students' expectation to express their criticality in a foreign language. This chapter comprises the following sections:

- The influence of the adopted pedagogy in education in terms of classroom dynamics, library resources and the focus of the curriculum.
- The impact of teacher practices and behaviours on students' beliefs about learning and knowledge.
- The influence of students' attitudes about the nature of knowledge and their way of approaching learning on their use of critical thinking, in addition to the significance of possessing and comprehending background knowledge about a particular topic in the act of thinking critically.
- The difficulty of students in expressing their criticality when using a foreign language.

7.2. The Pedagogy of Teaching for Critical Thinking

Some participants highlight the importance of the pedagogy adopted in education as an essential element that defines the practice of critical thinking in the classroom. They refer to various educational and pedagogical practices that demonstrate the position of criticality and the nature of learning exercised in the classroom. Some of these educational practices involve classroom dynamics, the availability of library resources and the focus of the curriculum.

7.2.1. Classroom Dynamics

According to the findings, classroom dynamics refer to the different workings and principles that govern the classroom. These workings relate to the practices exercised by students and teachers and the nature of the behaviours promoted and encouraged in the classroom. According to some participants, the classroom organisation, the number of students in a class along with the type of the relationship between the teacher and students are influential factors for the practice of criticality. Based on the data, classroom arrangement refers to the manner students are positioned in relation to each other and the teacher. For example, Meriem talks about the type of the classroom arrangement that she experienced during her studies in her home country and the impact it might have had on her use of criticality. In commenting on the first vignette, she claims the following:

The classroom arrangement ... this army arrangement like one after the other, and this one single way interaction which is student and teacher, neglecting different other ways of collaboration. We could have students students, students-teacher and other students, kind of circles, but it's just one way direction ... and the teacher is in control of the power, he's the most powerful and is the source of knowledge, transmitting [knowledge] to the students ... classroom arrangement could have a great role on critical thinking and certainly this way [pointing to the image in the vignette] I think is not much helpful for the students to be critiquing.

(Interview 05, Meriem, 26th November 2019)

Unlike Meriem who refers to the problem of classroom arrangement that she describes as the 'army arrangement' in promoting criticality, Chahra suggests a type of classroom arrangement that she thinks is helpful in generating discussion and interaction between students.

If I'm teaching Politics, instead of giving them [students] handouts ... I would for example, make them sit in a round table ... I will divide them into groups ... I will name the groups ... for example, the first one will be the United States, the other one is the USSR, the other ones are the opposition side ... I will try to bring them into the bargaining table, tell them: ok you need to stop the war, what's happening in Syria ... What is the first thing you will do in order to stop the war? You bring all the conflicting sides in the same table and you are impersonating them ... you need to discuss the problem in order to find the solution.

(Interview 04, Chahra, 19th November 2019)

In the above two extracts, Meriem and Chahra highlight the influence and role of classroom arrangement towards students' learning and critical thinking. They value the importance of discussion, interaction and exchange of thoughts between students and teacher in the classroom. For this reason, they suggest using classroom arrangements that encourage different types of interaction, collaboration and the sharing of ideas between different agents in the classroom rather than relying on a one-way interaction. They also seem to claim that constructing knowledge is the task of everyone in the classroom and not merely the teacher.

According to Meriem, an 'army arrangement' is a classroom arrangement where students sit 'one after the other' facing the teacher. Meriem appears to suggest that such an arrangement does not encourage students to use of critical thinking because of a number of reasons – the lack of convenient interaction, it generates certain beliefs in students and the teacher. She seems to suggest that the 'single way interaction' that results from the army arrangement do not encourage students to share their thinking and do not value students' contribution to discussions. In other words, the thoughts and ideas of students are not taken into consideration. She also associates the army arrangement with the belief that the teacher is the one in power. She seems to claim that the design of the classroom around the army arrangement creates a feeling of superiority of the teacher by engendering a form of 'power' in the teacher who become the authority and the only 'source of knowledge' and students become only vessels that need to be filled. Therefore, Meriem appears to assert that this type of atmosphere does not value students' contribution and it instils in them certain attitudes about the superiority of their teacher and their inferiority as students, an aspect which might not allow them to question the teacher's knowledge, and thus their contribution is not valued.

Chahra suggests several practices which could be helpful in creating an atmosphere that triggers students to use critical thinking. She first highlights the need to focus on problem-solving situations that are led by a particular question or stimulus rather than the transmission of knowledge and information. She seems to suggest that the use of 'group works' with positioning students into circles in a round table allow eye contact, and thus encourage communication and discussion between different students. In this way, students might notice differences in opinions and develop a sense of communication and promote a way of being critical about other people's claims. The problem-solving situation given by Chahra on the issue of stopping war in Syria is a real-life problem that might encourage students to develop criticality not only about the academic knowledge but also about real-life issues. Chahra

highlights the idea of ‘impersonating’ the members of the groups, an aspect that appears to develop in students one of intellectual virtues of critical thinking which is intellectual empathy. According to Paul and Elder (2020), intellectual empathy is ‘having a consciousness of the need to imaginatively put oneself in the place of others in order to genuinely understand them’. In this way, students can think of not only their way of approaching a problem but also how others deal with the issue.

In relation to the aspect of classroom dynamics, two participants refer to the number of students in the class as one of the other possible issues that influence the practice of criticality in students. In this respect, Salwa asserts the following:

If we apply the competency-Based approach ... then critical thinking would emerge because the competency-based approach asks for a small number of students in the class.

(Interview 02, Salwa, 16th November 2018)

The same idea is mentioned by Linda who talks about the suitable number of students in a class for the practice of critical thinking.

The number of students, this is the first thing ... it should be no more than fifteen or sixteen.

(Interview 03, Linda, 18th November 2018)

Based on her experience, Sabrina refers to the negative effect that large classes had on her inability to contribute to discussions.

When I was in Algeria, it was a bit difficult to participate because I was in a class with at least 100 students. I felt I was a passive student. For the first three years, it was ok because we had what we call TD classes, but for M1 and M2 it was only lectures. So, I don’t feel it helped me in any way, but I think the modules were quite interesting ... I didn’t feel this criticality because we were so many students and I didn’t have many classes and it was more lectures.

(Interview 14, Sabrina, 30th July 2019)

The participants Salwa, Linda and Sabrina agree on the idea that the number of students in a class is among the factors that are necessary to consider in order to create an environment where critical thinking can be exercised. According to these participants, having a ‘small number of students’ in a class is an opportunity for each student to share explicitly his/her

thoughts in classroom discussions. Sabrina seems to attribute her ‘passivity’ and lack of participation to classroom discussions during her experience in her home country to the large number of students. She also considers lecturing as an approach that does not support the teaching and use of criticality due to the large number of students it involves.

Under the idea of classroom workings and dynamics, two participants talk about the influence of the nature of the relationship between the teacher and students on criticality. This aspect refers to the manner students and teacher treat and view each other’s role in the classroom. In speaking about the factors that encourage criticality in the classroom, Meriem asserts the following:

... and there is equal power distribution between the teacher and the students to the point that it is very difficult to distinguish who is the teacher and who is the students.

(Interview 05, Meriem, 26th November 2018)

Linda refers to some of the teacher-related factors that encouraged her to engage in discussions in the classroom and share her critical positions.

... the teacher is kind or friendly and very aimable, you feel like I can talk with him, there is no distance I would say, he’s close to us, he treats us like as if we are a family, so I think these conditions would help a student to overcome that barrier, this feeling of I don’t belong to this, that’s not me ... you need to feel you are somehow valued, your presence counts for them.

(Interview 03, Linda, 18th November 2018)

The two participants associate the use of critical thinking with the nature of the relationship between the different agents in the classroom and how the teacher treats students. According to Meriem, critical thinking can be achieved and practised in the classroom when there is an ‘equal power distribution’ that enables both students and teacher to contribute to the topic of the lesson and classroom discussions. She seems to claim that this idea of equal power distribution helps to avoid the idea that the teacher is the one who teaches by transmitting knowledge to students, and that students are the ones who need learn and be filled with information. Linda asserts that student’ presence should be valued in the sense that they can make valuable contribution to the discussion rather than viewing them as empty vessels that need to be taught and filled by the teacher. Therefore, this way of perceiving and exercising

teacher-students relationship gives students the freedom to express their thoughts and take parts in classroom discussions.

To conclude, the analysis of the data above demonstrates that the participants value some pedagogical practices that encourage the use of critical thinking in the classroom. These practices involve the focus on the classroom arrangements that facilitate communication and interaction between students and teacher. Limiting the number of students in a class is another practice that appears to create an atmosphere that encourages discussion by giving the opportunity to all the students to participate and communicate their thoughts. The last suggested practice by the participants is the relationship between the teacher and students that should value and not undermine the contribution of students.

7.2.2. The Availability of Library Resources

This section deals with a discussion of the interview data about the importance of library resources where the participants can obtain different books and articles. According to some participants, the limited accessibility or the lack of sufficient library resources do not permit them to produce critical works based on evidence that supports their thinking and argument. Four participants refer to the issue of the unavailability of library resources during their experience in Algeria as an issue that negatively influenced their practice of criticality. In describing the process of doing project works and how critical thinking is involved, Meriem says as follows:

Normally, I should have gone to the library, but the library back in Algeria is poor, so I concerned myself just to the net, I used different data basis, articles, hack someone's site in order to bring books.

(Interview 05, Meriem, 26th November 2018)

In talking about the factors that might not encourage their use of critical thinking, Samir and Salwa highlight the difference in the accessibility to the library sources between Algeria and the UK based on their personal experience.

In terms of library, we have whatever you want here [UK], books, most of them are available. In Algeria one of them is available I would say 1%, here [UK] everything is great.

(Interview 01, Samir, 13th November 2018)

... what is very interesting is I find myself very amazed by the body of literature here in the UK and the availability of the sources, everything is available in front of you. You just need to read and read.

(Interview 02, Salwa, 16th November 2018)

Linda points at the importance of library resources in helping students to learn autonomously.

Here [UK] we have library, so I think the only thing that is completely different from Algeria is that here we have books, you can download articles ... online books. So, here in terms of facilities it's much better. You can learn by yourself because everything is available, but still sometimes you can like look for particular books and you don't find them here, but in Algeria we don't have books, we don't have anything. So, if you want to read a book you have to go and buy.

(Interview 03, Linda, 18th November 2018)

The four participants appear to suggest that insufficiency of library resources is one of the factors that hinders their critical thinking. According to Meriem, the quality of her written assignments might be poor and might not sufficiently be critical due to the lack of library resources. She seems to suggest that writing good-quality project works is so demanding since she was pushed to double her effort in order to obtain books illegally from websites. Samir, Salwa and Linda appear to mean that their critical thinking in the UK is facilitated by the availability of library resources when compared to their home country.

In summary, the availability of facilities such as library sources helps the participants to focus on their learning, accomplish their assignments and produce critical works. It also gives them the opportunity to develop their critical thinking by learning and making independent decisions of the authors and sources to consult and to include in their works.

7.2.3. The Focus on the Completion of the Curriculum

According to some participants, the curriculum that is designed for a particular discipline in terms of the content is another factor that determines the position of criticality in teaching. Based on the interview data, teachers' urgent need to finish the content of a discipline within a limited period influences the use of critical thinking. In this regard, Meriem says the following:

The curriculum also could have an effect, if for instance, the teacher is confined to complete this curriculum within particular amount of time.

(Interview 05, Meriem, 26th November 2018)

Linda refers to the impact of focusing merely on the transmission of knowledge in limiting the time for debate and discussion.

... I don't know if they [teachers] are doing what they think it's right ... or the teacher is maybe free to do wherever he thinks a good way to deliver the lecture and they do that just because it's better for them, it saves time ... because we do have a lot of things, we studied a lot of things and sometimes one hour, one hour and half is not sufficient. So, they just try to give you all the information in the right time, so you don't have that time to talk and have that debate.

(Interview 03, Linda, 18th November 2018)

According to Meriem, the focus on the completion of the curriculum might influence criticality practiced in the classroom. She appears to claim that criticality is hindered by the focus on finishing the content of the discipline rather than the focus on the way of approaching this content. Linda considers shortage of time along with the need to finish the programme as factors that diminish from the use of critical thinking in the classroom. Again, Linda seems to assert that the criticality that can be emerged from discussions between different agents in the classroom is compromised for the sake of knowledge transmission and curriculum completion.

Chahra refers to the commitment of teachers to the pre-designed curriculum.

... curriculum design, I'm not expert, but as far as I know ... the ministry of education, they design some sort of curriculum in which the teacher is obliged to some extent do works according to what it has been decided there.

(Interview 04, Chahra, 19th November 2018)

Warda highlights the issue of teachers being forced to follow the curriculum.

For example, we had modules and I remember we had one session a week and even if it's a core module, you are going just to study for one session a week, two hours. So, the teacher does not have the time in that hour to give you discussion and critical thinking and debates ... if he gives the opportunity to discuss, his job will not get done ... if he gives you time for critical thinking or to proceed critically or, if you give birth to that debate or that discussion in the classroom, it can take you ages to finish ... there is power on him or her, you should finish the curriculum and may be that one reason, you have to finish, you have to give the lesson, so there is power, there is a question of power here.

(Interview 12, Warda, 26th July 2019)

The lack of flexibility in the curriculum is one of the problems that one participant referred to in the interview. In this respect, Meriem asserts that:

The curriculum should not be designed in a way that is straightforward, but flexible and it is up to the teacher and the students to make some alterations, changes. The curriculum in itself should not be designed on a top-down policy, but it should be emerged in itself during the collaboration between teachers and students and depending on the students' needs, individual needs, not the outside or political needs.

(Interview 05, Meriem, 26th November 2018)

Chahra seems to suggest that the curriculum limits teachers' freedom in adopting some practices in the classroom i.e. integrating activities that involve criticality. According to Warda, the curriculum does not allow sufficient time for criticality and discussion in the classroom because of teachers' need to finish the programme. According to her, the pressure on the teacher to complete the programme of a discipline by merely focusing on the transmission of knowledge to students, in addition to the lack of time to integrate critical thinking-related activities are all aspects that do not encourage criticality in the classroom. Warda again seems to suggest that the activities involving criticality such as classroom discussions are time consuming and therefore, they are avoided by teachers. To encourage and apply criticality in education, Meriem suggests designing flexible rather than rigid curricula that limit teachers' freedom. According to her, curricula should be the product of the interaction between teachers and students in order to meet students' needs.

To sum up, the issue of trying to follow the instructions of the curriculum and specifically completing the content of the discipline of study in a limited period constitutes an issue for the practice of critical thinking. In this way, critical thinking is neglected for the sake of finishing the programme through indoctrination and knowledge transmission. This is an issue that does not allow teachers to incorporate practices that meet students' needs and does not allow time for discussions in the classroom where students can articulate their criticality and share their thoughts.

7.3. The Teacher

Some participants consider the role that the teacher plays in the classroom as one of the aspects that impacts students' perceptions towards learning, understanding of criticality and way of

approaching knowledge. According to Warda, the impact of some of her teachers was apparent in her understanding of the meaning of critiquing and being critical.

... When they say critique or critical, I say they [teachers] mean they have to criticise someone and I noticed something, when you try to be critical in the secondary school, for example you give an idea and you try to defend it, the teacher will consider it as if you are attacking him as a person. So, this changed my understanding of critical thinking or the word critique or critical thinking. So, I say that he is taking it personally, so critical thinking means that I'm attacking him, it's negative ... May be how the teachers reacted in the secondary school when you try to give your idea changed my understanding of critical thinking, but even at university ... for example in lessons, you try to give your idea and the teacher will give you a bad mark in the exam, it depends on the nature of the teacher.

(Interview 12, Warda 26th July 2019)

Chahra talks about the influence of her teacher and supervisor's reactions and comments on the aspect of critical thinking.

She [her teacher in her previous university] literally said that I have never heard of it [idea]. Just the fact that she didn't hear this before, she in a way considered that what I am saying is wrong and she didn't like it and based on that, she gave me a bad mark ... I think maybe I had it [critical thinking] at that time and because of her, the way she reflected about my research my assignment at that time, she in a way trumped my criticality.

(Interview 07, Chahra, 10th July 2019)

I think that one of the ways that got me to think critically, of course for me there are stages to the fact that my supervisor started to highlight the weaknesses that are very clear in relation to my research. The first solution to this problem is to highlight where is the problem? And how you would want to address it ...

(Interview 07, Chahra, 10th July 2019)

According to the participants' experiences, the teacher had either a positive or a negative impact on the participants' way of understanding and using critical thinking. Warda seems to associate her misconception of the notion of critical thinking to the negative reaction of her teacher towards her contribution in the classroom. According to Warda, developing the understanding that being critical is negative is the result of her teachers' practices and unwillingness to accept her critical thoughts. Similarly, Chahra seems to claim that her criticality was hindered by her teacher's attribution of bad marks to her personal ideas. Nevertheless, her other teacher,

according to Chahra, played a positive role about her critical thinking. She attributes the application of criticality in her PhD research to her supervisor's feedback that raised her awareness about the weaknesses in terms of criticality in her writing.

Some participants highlight the influence of teachers' beliefs about their role as well as the influence of their views towards students' abilities and role in the classroom. More specifically, Salwa talks about teachers' perceptions about their task in comparison to the role of students.

They [teachers] think that they are knowledge holders, they think that they know everything, and the students are there to just throw them or to pour them, you sponge, And you pour water, that water is kind of their knowledge and they hold it, they know everything and the student does not know anything, and he's there in the lecture in order to act as a sponge. some teachers do believe in this way even in the higher education even professors, even doctors. Why I'm giving example of doctor and professor? Simply because they are supposed to know a lot, they are supposed to have read and be aware that the students are not empty minded, even if they lack knowledge, they do have something in their mind, they do have an input to give to the lecture.

(Interview 02, Salwa, 16th November 2018)

Linda talks about students' feeling of inferiority that is triggered by the behaviours and practices of the teacher.

... here [commenting on the second vignette] for example, the student feels like far away from the level of the teacher, so there is a gap there, but when the teacher is very modest, you will feel like no matter how different you are and even in terms of the level, your views are welcomed.

(Interview 03, Linda, 18th November 2018)

Salwa and Linda consider the behaviours of and the way teachers perceive and treat their students as influential factors. According to Salwa, teachers' perceptions about themselves as the authority and the repository of knowledge and that students are empty-minded are perceptions that are not conducive to an environment that encourage the use of critical thinking. Such perceptions lead students to diminish from their critical thinking abilities and not share their thoughts in the classroom. Rather, positive attitudes about students' abilities is essential in creating the confidence that will push them to contribute to discussions. According to Linda's experience, teachers' behaviours have a remarkable impact on students' feelings and performance in the classroom. Linda suggests that a behaviour of modesty from the teacher is

crucial in avoiding to create in students a feeling of inferiority that might not encourage them to value their contribution and criticality.

The two participants Samia and Samir refer to the positive impact of teacher in raising students' awareness about the role of students and teachers. According to their experience, the influence of the teacher is not always negative. For example, Samia claims that some of her teachers acknowledge the need of students to do further research outside the classroom.

So back home, my previous lecturers say that we are here to give you some knowledge and it's your role to expand that knowledge, we're not here to give you everything, but at the same time sometimes, you can tell that they want you to write or discuss what they want, if you try and draw upon other things from different to what they said, they might think either saying nonsense, you are not knowing what you say or you are challenging them. So, it depends on the profile and the personality of the lecturer.

(Interview 06, Samia, 30th November 2018)

Samir also refers to his teacher's acceptance of students' feedback towards her performance.

She [his teacher] triggered me to correct her many times because she told me that she's easy going and she does not mind when people correct her.

(Interview 01, Samir, 13th November 2018)

Samia and Salwa highlight the existence of some teachers who influenced them positively about their learning. According to Samia, certain teachers raised students' awareness about their role as teachers, as well as the role of students i.e. the teacher acts as a guide and students are supposed to autonomously do research outside the classroom. Samir appears to suggest that his teacher openness and acceptance of comments towards her performance from students are important factors that generate positive attitudes about learning. The behaviour of Samir's teacher could develop in students some perceptions such as the teacher is not the truth holder, students and teachers can learn from each other, as well as students' contributions and thoughts are valuable. Therefore, these perceptions seem to create a secure environment where students can demonstrate their criticality and share ideas in the classroom without hesitation or fear.

The discussion of the data demonstrates that teachers' beliefs and behaviours in the classroom are influential factors for the practice of criticality. Teachers might create positive or negative attitudes on students. Teachers' views that they are the authority in the classroom, truth holders and that students are empty vessels that need to be fed with their knowledge are not helpful in

the practice of critical thinking. In addition, teachers' non-acceptance of the participants' contribution and ideas create in them a feeling of inferiority. Teachers' influence on students' perceptions could also be positive by spreading positive practices and behaviours, for instance, feedback about students' performance in their assignments and acceptance of students' contribution and ideas.

7.4. Students' Perceptions about Knowledge

Some participants refer to the influence of students' perceptions about the nature of knowledge on their way of learning and behaving in the classroom. In other words, the different ways that the participants view and approach the world and how they obtain this knowledge about the world have an impact on how they act in the classroom. In addition, some participants refer to the important role of possessing background knowledge of a particular subject in the act of thinking critically.

7.4.1. The Perceived Nature of Knowledge

According to some participants, the nature of their perceptions towards knowledge influences their way of viewing learning and approaching this knowledge. These perceptions also identify the role of both the teacher and students in the classroom. Chahra talks about the view of knowledge that she developed based on the practices exercised and encouraged during her experience in education. She attributes her struggle of doing PhD to her previous beliefs and understanding of the nature of knowledge.

It is like knowledge $1+1=2$... you don't go out of this box, so we were taught in this specific way and that's why I struggled throughout my PhD journey ... [Rather] the truth is not definite, is not ultimate, but it is relative. And I think this is one of the aspects that got me to think critically.

(Interview 07, Chahra, 10th July 2019)

Chahra again refers to the copy paste phenomenon and how it could affect students' writing and beliefs about the nature of knowledge.

The first thing that would affect the students ... they will not read thoroughly, the second thing is if they did read this piece of information that they copied and pasted, it's only one opinion of that aspect they wanted to study. By doing that they will take for granted that piece of information without thinking critically about it ... they look at that knowledge from only one perspective and once they are encountered with another information related to the same

topic, they will immediately assume: ok this is wrong because I know the proper information and this is improper information, and this is basically the opposite of what critical thinking means, because critical thinking first makes you question every bit of information and try to be open to all the other possibilities and the interpretations related to that topic.

(Interview 04, Chahra, 19th November 2018)

Similarly, Meriem notes that students' perceptions of knowledge are defined by the manner in which the teacher approaches this knowledge.

When you give the learners, the students this particular knowledge and [tell them] you need to put it in your bank (pointing to her head) and here, it is going to affect your behaviour or practices whether in learning or outside. You believe that this is the only way to go through it and there are no other ways ... kind of limiting your perspectives, other perspectives could be possible but if the teacher makes it very clear that this is only one version of knowledge and you could have others multi-million others, here we are going to program ourselves to behave and operate in unlimited ways ... you can see the difference between this and this, compare between this and this ...

(Interview 05, Meriem, 26th November 2018)

In addition, Meriem claims that certain practices influence students' attitudes towards knowledge.

The attitude could affect your way, for instance if your attitude is that there is this only one quantifiable, measurable way to get to answer my question and this of course is going to hamper your critical thinking, but if ... this attitude that knowledge it could be anything you get through negotiation, through interrogation, through collaboration ... I think this attitude could help.

(Interview 05, Meriem, 26th November 2018)

Chahra and Meriem seem to suggest that their beliefs and attitudes about the nature of knowledge influence the practice of criticality as well as identify the manner of engaging with this knowledge. According to Chahra, viewing knowledge as definite, static and not liable to change are all perceptions that suggest that there is only one absolute truth that cannot be questioned and thus, do not encourage the participant to use criticality. In opposition, Chahra appears to propose that one of the factors that triggered her to employ critical thinking is the development of appropriate and correct attitudes towards knowledge i.e. viewing knowledge as 'relative' and 'not definite'. According to Chahra, practices such as copy and paste

phenomenon develops in students' perceptions about the existence of one version of knowledge and that other versions are not correct. Chahra seems to suggest that such perceptions about the nature of knowledge denies the essence of critical thinking.

The beliefs about how knowledge is generated is important for the practice of critical thinking. Meriem suggests that knowledge is not generated from one specific author and applied or adopted by other people. Rather, it is obtained through negotiation and discussion between different authors or individuals. In this respect, Meriem notes the relevance of interaction and exchange in the classroom in generating meaning through negotiation.

The classroom that in a way generate knowledge towards different discussions and different patterns of discussions between the teacher-students, students-students, I mean a kind of negotiation rather than transmission ... that knowledge could be anything that you get through negotiation, through interrogation, through collaboration ... there is a kind of top down policy here and coercion proposed by the government or national policy makers, they kind of frame the knowledge and this is may be the case in Algeria, but here in the UK, I've heard that there is a kind of spider collaboration, that teachers are completely independent from the department and from the government as a whole, So knowledge is in collaboration with different teachers as well as between the teacher and students.

(Interview 05, Meriem, 26th November 2018)

According to Meriem, learning and obtaining knowledge should be the result of 'collaboration' and 'negotiation' between the different agents in the classroom rather than through the transmission of an already existing body of knowledge. Meriem seems to claim that such beliefs lead students to share their thoughts explicitly and contribute to discussions. She also claims that teaching should not follow a 'top-down policy' that seeks to force students to adopt a particular body of knowledge transmitted by the teacher or produced by certain authors. This idea is confirmed by Paul (1990) who claim that knowledge is not the mere collection of information from one person to another, but it is constructed, comprehended and evaluated by thought.

To conclude, the above discussion reveals that the way knowledge is perceived by the participants influences their practice of critical thinking. Criticality is encouraged and used when appropriate perceptions about the nature and construction of knowledge are developed in the participants' mind. Attitudes that knowledge is static and definite, as well as practices such as the presentation of one version of knowledge without the consideration of multiple

perspectives of looking at a particular topic impacts negatively the participants' use of critical thinking. The discussion also demonstrates the importance of developing an understanding and attitude that knowledge is constructed through negotiation and interaction between different agents in the classroom. In this manner, students will have the confidence to share their critical thoughts.

7.4.2. Acquisition and Understanding of Background Knowledge

According to the views of some participants, background knowledge of a particular topic seems to be one of the other crucial factors in the practice of critical thinking. The acquisition and understanding of the knowledge of a topic is considered important in the task of thinking critically and effectively. In this respect, Salwa views knowledge and being well-informed as the basis and the route to critical thinking.

Reading for knowledge, learning for knowledge or learning to understand or learning to apply, you are in a very low thinking process. I'm not saying that they are not important, they are the basics, you cannot move without doing this skill ... the teacher has to deliver knowledge because we cannot do something without delivering the knowledge, but the teacher has to be creative as well ... being knowledgeable ... you cannot disagree with somebody and you don't know why you disagree.

(Interview 02, Salwa, 16th November 2018)

Walid talks about the interdependence between critical thinking and knowledge.

I relate critical thinking to knowledge, and I think both of them are important to each other especially knowledge to critical thinking. I think you can't be a critical thinker without knowledge, but I think knowledge will make absolutely better decisions, and for me better decisions, you're a better critical thinker.

(Interview 10, Walid, 25th July 2019)

Samir refers to the role of education in teaching students the necessary skills and knowledge.

The teacher needs to be knowledge-transmitter, but not just knowledge transmitter ... I would say the responsibility of teachers, they should make sure that all their students have those skills, you think critically, you write critically, you read critically ... I would say their responsibility in higher education is that they should spread knowledge of course, teach their students how to face problems in real life.

(Interview 01, Samir, 14th November 2019)

According to Salwa, despite that knowledge acquisition and comprehension are lower-order thinking skills, they are crucial for critical thinking. Salwa seems to suggest that criticality and making well-founded arguments are achieved when being well-informed and knowledgeable about a particular topic. Samir highlights the need of education to transmit and teach knowledge for students but also refers to the necessity of going beyond knowledge transmission in HE to teach students skills that help them in their studies and real-life situations. The need of knowledge for critical thinking, according to Walid, might suggest that critical thinking can be applied successfully in the presence of sufficient knowledge about the subject under discussion. Walid seems to propose that individuals need to become well-informed in order to take informed decisions that emerge from knowledge rather than mere opinions. In other words, good performance in criticality is sometimes determined by the nature of knowledge possessed about a particular topic.

There are other participants who talked about their experiences with regards to the need for background knowledge in proceeding critically about the different situations they mentioned. They highlight the importance of possessing and understanding knowledge that is presented to them to be able to think critically. In this regard, Chahra refers to the reading and understanding of specific information as primary steps that precede the task of questioning this knowledge.

Usually when I read pieces of information or, and I try to relate it to my research, the first thing I do is I read it, I try to grasp that information not necessary take it for granted, just to grasp it, to read it and reread it again and then I start to question it, question the writer himself, his background, and then I try to reflect on what has been said about it in other books articles in anything.

(Interview 04, Chahra, 19th November 2018)

Warda also considers understanding the topic of discussion as an important factor in being able to think critically.

when I started to attend what [Name of two lecturers] said in my pre-sessional, I couldn't understand what they said because they were giving me input that I considered as a noise ... I noticed something and they always related their experiences to academia to explain things ... I'm a critical person, I like reading critically and exploring things critically, but I couldn't understand.

(Interview 12, Warda, 26th July 2019)

Meriem refers to the necessity of acquiring knowledge and becoming well-informed about the viewpoints of others before writing an essay.

I just give you an example when I write essays about a particular topic or issue, I would see or look for the different point of views that have been said on this topic, those who supported, those who are against it.

(Interview 05, Meriem 26th November 2018)

According to their personal experience, Chahra, Warda and Meriem highlight the need to acquire as well as understand the knowledge of a particular subject in order to engage in criticality. The idea of 'read and rereading again' referred by Chahra appears to suggest the necessity to first familiarise oneself with the information and try to grasp its meaning before going further into questioning and thinking critically about it. Building her own argument, according to Meriem, requires the need to understand and become informed of others' views. According to Warda's experience, the lack of background knowledge about a particular topic seems senseless for the act of thinking critically. In other words, lack of sufficient knowledge and familiarity about topics of discussion do not encourage in the engagement in the task of criticality.

The significance of being knowledgeable and well-informed about the issue under discussion in order to think critically is also supported by the experience of Chahra. Chahra talks about her experience and struggle of thinking critically in the early stages of her PhD, the aspect which impacted the quality of her writing. She attributes this struggle to her lack of knowledge and newness to the discipline she was enrolled in during her doctorate studies. Accordingly, she refers to the influence of her unfamiliarity with her discipline on her thinking, and therefore on writing critically.

When I used to read books on my research, I used to say: I didn't know this, ... and just try to summarize what's in there and try to put it in a paper without saying this is important in relation to my research questions and how this is justifies my methodology ... for example, if I hold a book or an article, the staff I'm reading I don't think about it. I just take it for granted. I just read and say ... this is a new information, or I didn't know before, I immediately believe it, I don't question it, I don't question it but at the same time I consider it this is the ultimate truth ... I have been registered in a discipline that is wholly different from the discipline that I used to study. So, that's why I think in a way it makes it even worse to think critically, so, there are some staff that I did not know about discipline that I had to know or I must know

in order to proceed in writing and thinking about PhD research. So, I think once I solved that problem, the writing critically was the easiest part.

(Interview 07, Chahra, 10th July 2019)

According to Chahra, her poor-quality written works in terms of criticality is caused by her lack of previous knowledge and expertise about the content of her discipline. She seems to imply that her uncritical works was not due to a deficiency in critical thinking, but due to her unfamiliarity and little background knowledge about her topic. This idea conforms to Yates and Nguyen's findings (2012) that demonstrated that the lack of background knowledge is a factor that does not encourage students to contribute to classroom discussions. In other words, developing knowledge and awareness about the content of a discipline, the existing debates in a field and the leading authors is one of the essential elements that helps in the act of thinking critically in that particular field.

According to the above discussion, background knowledge constitutes one of the vital elements that determines the quality of critical thinking of individuals. The discussion demonstrates the strong relationship between critical thinking and knowledge because critical thinking does not happen without background knowledge. This finding complies with the literature that shows the relationship between criticality and background knowledge (see chapter 2, section 2.7). Individuals need knowledge and information about a particular topic in order to take informed decisions and have a foundation to construct one's argument. As a result, it can be claimed that students' non-contribution to classroom discussions is sometimes caused by their unfamiliarity about the subjects under consideration rather than due to a lack of critical thinking abilities.

7.5. Thinking Critically and the Foreign Language Learner

Some participants refer to the difficulty of applying or articulating their critical thinking in a foreign language and specifically in the English language. They talk about the impact of using a foreign language in the manifestation of their criticality in written and spoken forms. According to some participants, the reading and comprehension of texts written in a foreign language is time consuming when compared to reading in their native language, the aspect that influence the manifestation of their criticality in a negative way. In this respect, Salwa highlights the importance of understanding the meaning of texts written in a foreign language as a necessary step that precedes the engagement in the task of critical thinking.

It [understanding the language] helps. I'm speaking about my experience,

I'm trying to be critical in the English language, the texts that are written in the English language. So, you need to be fluent in the language. It is the same thing with somebody who is fluent in Arabic or French language and can be critical in that language ... I cannot be critical of something that I don't understand ... that's why Bloom's taxonomy is very important, it starts with understanding and comprehension, if you don't understand or comprehend, you cannot go to the higher level.

(Interview 08, Salwa, 21st July 2019)

Meriem asserts that the act of thinking critically in a foreign language is challenging and time consuming.

As a foreign language learner where English is meant to be back home as a second language or even the third language, so this is going to affect my critical thinking. For instance, when I read articles, I struggle at the level of language, to understand what they are trying to mean by this material ... I'm at the bottom of critical thinking, I'm struggling to understand the language, let's alone critiquing it ... it's very hard. I mean maybe I will use different ways in order to translate that knowledge but it's going to take time, so we are disadvantaged in the aspect of language in critical thinking because we are just trying to find clarification or explanation rather than critiquing.

(Interview 05, Meriem, 26th November 2018)

Both Salwa and Meriem associate the difficulty of exercising critical thinking to the use of a foreign language. They seem to suggest that a good mastery of the foreign language is crucial in understanding the material written in this foreign language in order to engage in criticality. According to Salwa, thinking critically about a text written in foreign language is achieved only through an understanding and comprehension of the content. People need to be 'fluent' in whatever language in order to be able to proceed critically about the material being presented. In a similar vein, Meriem suggests that foreign language learners are at some extent 'disadvantaged' because of their tendency to focus more on the understanding of the language over the critiquing and analysis of the content and ideas. The focus on trying to understand the language is demanding for the foreign language learner, which leaves them little time to focus on the critical thinking side of texts. Thus, foreign language learners' poor performance in criticality is not due to a lack of critical thinking, but due to language issues.

Some other participants refer to the issue of teacher's feedback that focuses on language mistakes rather than on content and critical thinking-related issues in students' written

assignments. Samir talks about his teacher's feedback which was more oriented towards the language accuracy and ignoring his ideas and thoughts.

... she said [teacher]: very odd word that I've never come across ... a quote, I paraphrased it in my own way and then I built on it. [She did not say]: he tried to elucidate, to explicate and to even further explain what the writer said in his own words. So, she didn't say by the way thank you, I could spot some elements of criticality in your essay or in your thesis, she just focused on the difficult words.

(Interview 01, Samir, 13th November 2018)

Walid asserts that criticality should be the centre of feedback especially if the language is accurate.

I think that most people who have an ok English, they will be alright with grammar and with the technical staff but the major issue or the thing that you will be seriously criticised for in your work is of course the lack of criticality in your writing and the lack of voice, and the act of just reporting.

(Interview 10, Walid, 25th July 2019)

Sabrina talks about her fear of receiving negative feedback about her language in sharing ideas and speaking in the classroom.

I think it's being afraid of being judged about my English because we have this, each time someone speaks and there is a group of people laughing at other people because they don't pronounce well ... I think it can be among the factors that may hinder showing criticality, not being, or exhibiting or displaying your criticality.

(Interview 14, Sabrina, 30th July 2019)

The participants suggest that the feedback that they receive on their performance in the English language influence their critical thinking. Not receiving feedback on their performance in terms of critical thinking in their written assignments reduces from their awareness on the need to conduct a more critical analysis and hinders them from developing their critical writing. According to Samir and Walid, teachers' feedback on the presence or the absence of criticality in students' works helps to raise their awareness about the need to conduct a more critical analysis and thus develop their writing in the future. They seem to propose that the feedback on the accuracy of the language in terms of the grammar and vocabulary of the text should not overweight the feedback on the content and criticality. In a study conducted by Zhou et al. (2015) with non-English majors in a reading class in a Chinese university, found that their

critical thinking ability is weak due to teachers' over-emphasis on the surface level and literal reading of texts and ignoring the deep level of texts that involves critical thinking.

Sabrina appears to attribute her non-contribution to classroom discussions and topics to the fear of negative feedback from especially peers about her language mistakes. She seems to suggest that she prefers to keep silent and do not share her ideas and criticality in order not to be laughed at her English language performance and avoid losing face.

In the light of this discussion, critical thinking of the participants who are foreign language learners is influenced by the foreign language. This influence consists of the difficulty in comprehending texts easily which is time consuming and therefore, critical thinking is not emphasised. This finding conforms with Liang and Fung's findings (2021) that suggest that the participants' critical thinking is facilitated when using their native language when compared to using a foreign language. Teachers' feedback and comments on the participants' language mistakes in their written works over critical thinking-related issues is problematic. In this way, the participants are not stimulated to demonstrate critical thinking i.e. their focus is around language accuracy rather than producing critical ideas. The influence of language on the critical thinking when the participants choose to remain silent and not demonstrate their critical side because of fear of negative feedback. Thus, foreign language learners are disadvantaged when they are required to use critical thinking in a foreign language.

7.6. Conclusion

This chapter deals with a discussion of the interview data about the participants' perceptions in relation to the aspects that encourage or hamper their development of criticality. The findings demonstrated that teaching and fostering the participants' critical thinking is influenced by some educational and pedagogical factors. In other words, the pedagogy adopted by the educational system seems to be the prevailing source that defines the nature of learning and practices that encourage or hinder critical thinking in the classroom. The findings revealed that the teaching of criticality in education necessitates a suitable environment that triggers its use in the classroom in terms of practices, atmosphere and beliefs. According to the participants, the classroom dynamics, for example, in terms of the number of students in a class and the classroom arrangement are among factors that determine whether criticality is integrated in the classroom or not.

According to the findings, the position of criticality in education can be reflected by the nature of teaching practices exercised in the classroom. These practices involve the approach of teaching, the relationship between the teacher and students as well as their beliefs and attitudes towards each other's role. Such practices are among the factors that the participants identified as influencing the way critical thinking is approached in education. For instance, some participants consider the number of students in the class and the way the students are arranged in the classroom as impacting the use of criticality. In other terms, having many students in a class does not create opportunities for all the students to participate in discussions, and therefore they do not train themselves to use their critical thinking skills. The classroom arrangement which is also described by one participant as the army arrangement of students - one student behind the other facing the teacher - reflects the type of learning that is encouraged which is the mere transmission of knowledge to students.

Other elements that the participants considered as influencing their criticality involve the lack or limited access to library resources, teacher's focus on finishing the content of the discipline, teachers' feedback on students' thoughts, in addition to the importance of possessing and understanding knowledge in order to be able to think critically. The lack of resources from which to access books and articles and gain knowledge on different disciplines is an element that the participants consider as preventing them from producing critical works. The focus of teachers on completing the programme of the discipline over focusing on activities that trigger critical thinking is also problematic. Moreover, the participants' critical thinking is influenced negatively by the teachers who do not encourage them while introducing their ideas and thinking in the classroom and written assignments. Another factor that impacts the act of thinking critically is background knowledge i.e. the lack of an understanding of the knowledge of a particular topic does not help in the practice of critical thinking.

The practice of critical thinking goes beyond the employment of certain teaching methods and practices to include other factors that relate to teachers and students' perceptions towards their role and their beliefs about the nature of knowledge in addition to a language-related issue. The findings revealed the importance and necessity of developing a certain compatibility between teachers and students' beliefs in relation to their roles in the classroom along with their perceptions towards how knowledge is constructed. The discrepancies in the expectations of students and teachers towards each other's role determine the role they play in the classroom. The participants' tendency to think or express themselves critically in a foreign language

constitutes a problem. They are disadvantaged when they are faced with the task of thinking critically in the English language because of their need to deeply understand texts before thinking critically about them, which is according to them, is time consuming when compared to using their native language. In addition, the focus of teachers

Chapter 8: Discussion of the Findings

8.1. Introduction

The objective of this chapter is to discuss and explain the findings generated from the previous data chapters in relation to the topic of this study. In this chapter, I demonstrate the relationship between the different findings, interpret them according to certain concepts and theoretical models and establish a connection with previous empirical studies in certain instances. The discussion is built around five main themes that answer the research questions. These themes relate to the following elements of this chapter:

- An interpretation of the two-sided view of critical thinking according to Chomsky's distinction between competence and performance, as well as a reassessment of the literature in the light of this understanding.
- An illustration of the relevance of Vygotsky's sociocultural theory and Bloom's taxonomy of educational objectives in explaining the way in which criticality is fostered and experienced by the participants.
- An explanation of how the scaffolding of children's thinking, through various social and cultural norms, is influential in the manifestation of criticality.
- A discussion of how the integration of critical thinking within education is more concerned with the types of valued practices and behaviours in the classroom, in addition to the nature of perceptions developed about learning.
- A reference, based on the findings, to the existence of various areas where criticality can occur.

8.2. Research Questions: Revisited

The purpose of the sub-sections within this section is to introduce the main findings and explain how they answer the research questions. The questions that have driven this research are restated below:

1. What do Algerian students understand critical thinking to be?
2. How do Algerian PhD students in the UK develop critical thinking?
3. What are the factors that influence the participants in developing themselves as critical thinkers?

The first research question is answered through the participants' distinct understanding of criticality throughout sections 8.3.1 and 8.3.5, with some instances in section 8.3.3. The second research question is answered by the findings that deal with the way in which the participants develop criticality, as indicated in sections 8.3.2 and 8.3.3. In section 8.3.4, I answer the third research question, discussing the factors that impacted the participants' journey of critical thinking development.

8.2.1. Internal and External Performance: Between Overt and Covert Critical Thinkers

The aim of this section is to explain the findings in relation to the participants' understanding of critical thinking as possessing two facets, namely process and product. This understanding of process and product is almost compatible with the distinction that Chomsky made between competence and performance in the field of language learning. In the findings of this research, the distinction is made between critical thinking competence and critical thinking performance, in which this latter aspect is divided, based on the findings, into internal critical thinking performance and external critical thinking performance. In this section, I clarify how Chomsky's model is employed to interpret the findings in relation to the conceptualisation of criticality and explain how it was adapted to fit the purpose of the research findings.

The first aspect of critical thinking refers to what I call critical thinking competence, a term that is generated and derived from Chomsky's model. As explained previously, language competence refers to the individual's knowledge about the language system (see chapter 2, section 2.2.1). The participants regarded criticality as being part of every individual; it is human nature to think critically and it is a natural way of dealing with everyday life situations (see chapter 5, sections 5.2.3.2 and 5.2.3.3). Thus, competence in critical thinking, based on the findings, indicates that criticality is within the individual and relates to the participants' tendency to adopt a critical stance towards everyday life. These findings suggest that the participants possess the disposition to think critically and tend to use criticality naturally by thinking and making decisions in various areas of life. The fact that people apply criticality in numerous areas of their lives, as shown in the findings, seems to suggest that they already possess the competence and a certain degree of criticality.

The second aspect of critical thinking, in this research, is what I refer to as critical thinking performance. This aspect is explained in accordance with Chomsky's idea of performance

being understood as the use of language in actual situations (see chapter 2, section 2.9.1). Critical thinking performance refers to the application and articulation of critical thinking in either an explicit or an implicit form. Based on the findings, which imply that the participants' criticality has two facets - a process and a product - critical thinking performance is divided into an internal critical thinking performance and an external critical thinking performance. It is worth mentioning that this differentiation was not made in Chomsky's model. Rather, I have adapted this model to fit the findings of this study. The aspect of internal critical thinking performance is added to the model to explain that criticality involves a process of thinking critically (internal performance) that is distinct from the product of critical thinking (external performance).

The internal performance of critical thinking refers to the idea or process of thinking critically within one's mind, without an explicit sign of it in the external world. People who limit themselves to internal critical thinking performance can be referred to as covert critical thinkers. The findings suggest that criticality involves an internal practice because it is an abstract and mental practice that is not observable to the external world (see chapter 5, section 5.2.3.1). The findings also propose that critical thinking is a process because it involves first the act of pausing to think, which is then followed by the act of thinking extensively and deeply about the received information (see chapter 5, section 5.2.2). Therefore, internal critical thinking performance involves all the practices of pausing and thinking deeply that individuals perform without an explicit demonstration. On a similar note, Ballard (1995, p. 155) asserts that 'the critical questioning which takes place within the student's mind is the essential initial step for any critical thinking'. Indeed, thinking and raising questions within one's mind without an explicit demonstration can be considered one of the aspects of internal critical thinking performance.

The external performance of critical thinking constitutes the product that results from the process of thinking critically. In other words, it is the articulation of the internal critical thinking performance in a visible and concrete way through various forms and behaviours. Individuals who choose to go beyond the internal process of criticality to reach the external performance can be called overt critical thinkers. According to the findings, people can be critical in different ways and express their criticality through numerous forms (see chapter 5, section 5.3.1). Critical thinking can be displayed through writing, as the common and agreed-upon form that is used in education (see chapter 5, section 5.3.1.1). The findings revealed that there are several

other forms of articulating criticality, but these are dependent on individuals' personal choice and cultural beliefs. Some of these forms include being critical by being silent and being critical by conforming to certain ideas and practices, in addition to certain ways of behaving and dressing (see chapter 5, section 5.3.1.2). The participants considered these forms of silence in the classroom or compliance to teachers' expectations, in terms of the memorisation and reproduction of information in exam situations, as forms that involved a critical standpoint from their part, rather than areas to be criticised for their non-criticality (see chapter 5, section 5.3.1.2). Thus, external critical thinking performance as the product of criticality can take different forms.

The findings discussed in this section in relation to the definition of criticality challenge the deficit model from which international or non-Western students are approached in terms of their assumed deficiency in critical thinking, passivity in the classroom and memorisation (see chapter 3, section 3.4.1). It is understood from the findings that international students might be evaluated for their non-criticality based on certain classroom behaviours that do not always reflect their actual critical thinking competence and internal performance. For instance, Oda (2008, p. 169) suggests the need for 'ESL teachers to attend more to the process, rather than the outcome, of students' learning'. Since criticality involves an internal performance, this means that students might be thinking critically without making it explicit. Criticality in students may only be observed in overt critical thinkers, unlike covert critical thinkers, who prefer to remain silent. Therefore, students' passivity, silence and acceptance of the teacher's knowledge without questioning cannot be regarded as evidence of their deficiency in criticality.

8.2.2. Students' Development of Critical Thinking Through the Lens of Vygotsky's Sociocultural Theory and Bloom's Taxonomy

The purpose of this section is to discuss the findings about students' perceptions of developing critical thinking according to two theoretical models: Vygotsky's sociocultural theory and Bloom's taxonomy of educational objectives. Vygotsky's sociocultural theory and some of its components, such as scaffolding and MKO, help to shed light on the findings relating to the methods of enhancing criticality. Students' development of criticality will also be interpreted according to Bloom's taxonomy of educational objectives, in relation to lower- and higher-order educational objectives.

As discussed in chapter 6, the findings revealed that the participants' development of criticality follows a process of moving from a dependent to an independent state of living and thinking. This process involves the different stages of the participants' experience, including society and family upbringing, schooling and HE, as well as living alone and studying in a UK university (see chapter 6). Based on the findings, each stage played a crucial role in shaping and influencing the learning and thinking of the participants. From the findings, the participants' dependence is apparent in the early stages of childhood, where they received guidance from a variety of people (see chapter 6, sections 6.2 and 6.3). The development of their independence in thinking and acting is apparent in the later stages of their experiences, where they were expected to make personal decisions about their lives (see chapter 6, sections 6.4.2 and 6.5). In these stages, the findings suggest that higher-order thinking skills are cultivated more once guidance is minimised or removed -that is, when students achieve autonomy over their learning, thinking and life in general.

Children's interactions with and dependence on variety of people help them to learn and understand the world. The relationship between the findings about critical thinking development and Vygotsky's sociocultural theory relates to the role of the guidance of more knowledgeable others (MKOs) in learning and thinking critically. MKO refers to adult individuals who have more experience and knowledge of the world (see chapter 2, section 2.9.2). The findings reveal the impact of family members, society and schooling on the participants' thinking in their childhood (see chapter 6, sections 6.2 and 6.3). Thus, parents, siblings and teachers are all considered as MKOs and are believed to possess the knowledge and experience that aid children's thinking through acquiring an understanding of the world and how to act upon it. In addition, the participants referred to the importance of knowledge acquisition and comprehension for the act of thinking critically (see chapter 7, section 7.4.2). In the study conducted by Wood et al. (1976, p. 94) with children aged between three and five years old, they found that 'comprehension precedes production' and that 'it is easier for him [child] to recognise what "looks right" than to carry out a program of action to produce it'. In the very early stages of childhood, comprehension and understanding of the world are among the primary and necessary steps that children need to go through before thinking and acting upon it. Therefore, the assistance of a MKO, particularly family and society, in order to develop knowledge and understanding of the world or a particular subject is crucial for critical thinking.

The influence of society's thinking on the participants in their childhood was apparent in certain instances of their own thinking. In other words, the thinking of children is influenced by the thinking of other people surrounding them and MKOs, who instill in them certain beliefs, ways of thinking and practices that are typical to their society. Examples of these beliefs and practices include respecting and not questioning older people (see chapter 6, section 6.2) and the association of hair colouring with a bride (see chapter 5, section 5.3.2). When growing up, children's thinking shifts from an individual thinking that occurs in the early stages of childhood to a social thinking (Wells, 1999) and a collective thinking that results from their interaction with members of their community (Mercer, 2000, p. 132). A possible interpretation of children's individual and collective thinking relates to the idea that in the very early stages of childhood, children think for themselves and start to raise questions about the world around them. This individual thinking seems to transform to a collective and social thinking when they learn and receive answers to their questions from the surrounding environment.

The participants' development of higher levels of criticality, based on the findings, was achieved when they developed some independence over their thinking and learning. As suggested in the sociocultural theory, children need scaffolding to learn a particular task, and this scaffolding can be removed once they develop the necessary competence to accomplish the task without assistance (see chapter 2, section 2.9.2). In the findings of this research, the guidance of MKOs, such as parents and teachers, serves as a scaffolding for the participants to build and improve their thinking. According to the findings, this scaffolding was sometimes helpful for critical thinking development and sometimes unhelpful.

According to the findings, detachment from the scaffolding to achieve autonomy and develop critical thinking is crucial. In other words, criticality is enhanced more and achieves higher levels when independence is gained over one's life and learning, i.e. when one is detached from the control and influence of one's parents, society and teachers (see chapter 6, sections 6.4.2, 6.4.3 and 6.5). HE was seen by the participants as the place where their critical thinking skills thrived thanks to the autonomous learning that they experienced while doing project work; the sufficient space allowed them to think outside the box and discouraged the "copy and paste phenomenon" (see chapter 6, section 6.4.2). This autonomy was also captured in their PhD journey, wherein the student is expected to conduct the entire study independently with little guidance from their supervisor (see chapter 6, section 6.3.4). Another area of autonomy that encouraged the development of the participants' criticality was found in the phase of living

independently, far away from their family (see chapter 6, section 6.5). These three stages of the participants' lives were characterised by the practice of autonomy, which gave them space to think for themselves, make decisions independently and avoid others thinking for them. Since criticality was viewed by the participants as the idea of holding personal views, voice and opinions (see chapter 5, section 5.2.1.2), this means that a certain degree of autonomy is required to take personal positions and think critically about certain matters in one's life. Hence, the detachment from the scaffolding and the guidance of a MKO is an opportunity to enjoy autonomy and therefore cultivate critical thinking skills.

The existence of a small discrepancy between the sociocultural theory and students' development of criticality can be noticed from this discussion, as shown in the findings of this research. The discrepancy lies at the stage of removing the scaffolding. Unlike Vygotsky's theory, which suggests that scaffolding and the guidance that children receive from MKOs can only be removed when they develop a certain level of competence to perform a particular task, the findings of this study propose a distinct interpretation. This interpretation relates to the idea that criticality is enhanced more when individuals gain autonomy over their thinking and lives. The scaffolding needs to be removed to allow the participants to gain autonomy and hence to allow critical thinking to thrive. Despite the significant role of the MKO in building the participants' thinking, the findings stress the importance of autonomy for learning and developing criticality, an aspect that is not highlighted in Vygotsky's sociocultural theory. The difference between scaffolding in the sociocultural theory and scaffolding in the findings in relation to the participants' development of criticality can be summarised as follows: the former claims that scaffolding is removed only when children develop the competence to accomplish a task independently, whereas the latter suggests that scaffolding needs to be detached in order to enable the participants to become independent and enhance their critical thinking.

The findings about developing criticality in relation to the participants' experiences and perceptions can also be explained according to Bloom's taxonomy of educational objectives. This taxonomy ranges from low-level objectives of remembering, understanding and applying to high-level objectives of analysing, evaluating and creating (see chapter 2, section 2.4.1). The first three objectives serve as a foundation for the last three objectives, where criticality is believed to occur. This idea of the necessity to accomplish the first educational objectives in the pyramid in order to achieve the three top objectives is noticeable, from the research findings, at two levels: the macro level and the micro level.

According to the findings, the development of critical thinking occurs at the broad or macro level, which refers to the participants' journey of moving from childhood to their adulthood (see chapter 6). The findings can be interpreted in terms of Bloom's taxonomy of educational objectives, revealing that the participants' criticality is nurtured more in adulthood after they have acquired an understanding of the world in their childhood. The first three objectives of the taxonomy, including remembering, understanding and applying, seem to be addressed in the participants' early childhood and youth period. Children's newness to the world requires them to first acquire and comprehend knowledge of the world before proceeding to make a critique of it. The findings also showed that acquiring knowledge is vital in order for critical thinking to take place (see chapter 7, section 7.4.2). The understanding and application of knowledge of the world, according to the findings, was gained in the participants' childhood through the guidance of their family members and teachers (see chapter 6, sections 6.2 and 6.3). However, the last three objectives of the taxonomy, which involve analysing, evaluating and creating, appear from the findings to be enhanced in more advanced stages of the participants' lives. These stages involve learning at HE, conducting a PhD and living abroad, far from the thoughts of the family and society with which they have grown up (see chapter 6, sections 6.4.1, 6.4.2 and 6.5). After gaining an understanding of the world, the participants seem to start thinking critically about their own thinking and existence in the world. Examples include questioning themselves and their society, in addition to reflecting about their previous established thinking and practices (see chapter 5, section 5.3.2).

The occurrence of critical thinking development at the narrow or micro level is found in the learning that the participants experienced in the context of HE (see chapter 6, section 6.4.1). Learning at HE is believed to be hierarchical because it starts from the basic educational objectives of acquiring and understanding knowledge of the discipline through the guidance of the teacher, before proceeding to more advanced stages of synthesising, evaluating and creating knowledge of the discipline (see chapter 6, section 6.4.1). At the early stages of university, students are new to the setting and might be unfamiliar with the discipline, which makes the teacher's guidance an important factor in enabling students to later take informed and critical positions. In advanced stages, they apply skills of critical thinking, namely analysis, synthesis and creation.

To summarise, the discussion in this section demonstrates the way in which criticality is developed by the participants and the interplay between the diverse factors that contribute to

this development. These encompass the significance of the MKO, scaffolding, background knowledge, time and autonomy. Children are guided (scaffolded) through the interaction with members of the community in which they are embedded, including their parents and teachers (MKOs). The relevance of these two elements consists of the need for knowledge acquisition and comprehension, which act as the basis of critical thinking. Criticality is enhanced through a gradual separation from guidance to an autonomous way of thinking and learning. This autonomy allows critical thinking to thrive within individuals, thanks to the freedom in thinking, living and learning. The process of first building knowledge and then moving progressively to apply higher-order thinking skills demonstrates the role of time in enhancing criticality. It is a lifelong learning process that does not happen at only one specific point in time; rather, it is shaped and influenced by various phases and factors. Gelder (2005, p. 42) asserts that the development of students' critical thinking requires the necessary time and effort because it develops throughout their life rather than in one course at school. In other words, enhancing critical thinking skills is a lifetime process that requires both time and effort. To expect immediate and surprising results over short periods of time is an overoptimistic desire. In the same vein, Halpern (1993, p. 240) points to the idea that thinking skills cannot be developed mainly through taking short courses because, according to him, 'cognitive growth is a gradual and cumulative process'. It is a continuous process that is scaffolded and shaped by every stage in one's life. Figure 4 depicts the interplay between time and autonomy as well as knowledge acquisition and comprehension in the development of participants' criticality.

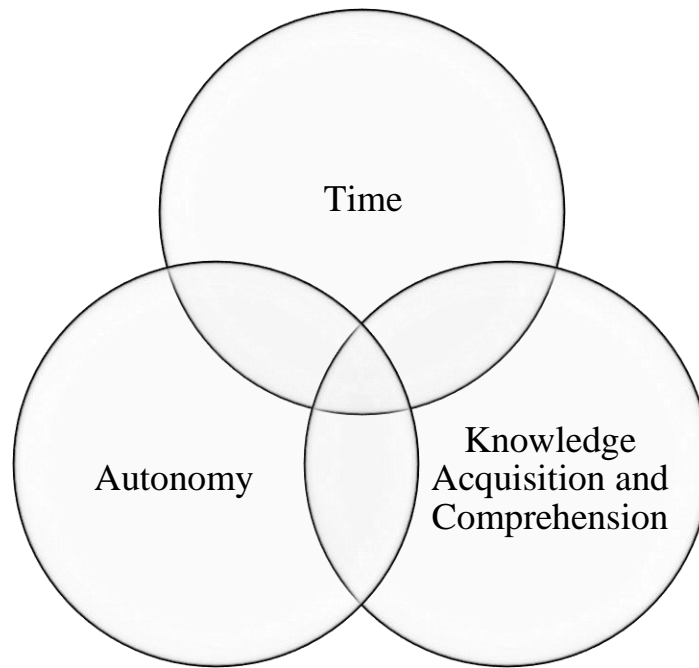


Figure 5 Interactional Factors for the Participants' Development of Criticality

The above figure is a manifestation of the importance of three different factors on the participants' development of criticality. The aspect of autonomy, the influence of time and the importance of acquiring and understanding knowledge are considered crucial in the use and the development of the participants as critical thinkers. Autonomy consists of the need of the participants to take independence in their thinking in order to practice their ability to think and decide for oneself. In addition, critical thinkers require time to develop a sense of criticality about their learning and life. They develop the skills of critical thinking throughout their lives and through practice and time rather than at one point in time and place. Possessing and understanding knowledge of a particular domain is another factor that is vital in engaging in the task of thinking critically about it. The lack of sufficient knowledge does not contribute to a clear and a well-reasoned thinking about a specific subject.

8.2.3. Manifestation of Critical Thinking: The Impact of Scaffolding on the Acquisition of Cultural Behaviours

The purpose of this section is to discuss the findings about the manifestation of critical thinking according to two already discussed aspects, namely external performance (see chapter 2, section 2.9.1) and scaffolding (see chapter 2, section 2.9.2). I seek to discuss the relationship between scaffolding and external performance and how scaffolding influences the articulation of critical thinking. I discuss the significance of scaffolding in enabling the participants to

acquire a cultural awareness about when it is appropriate or inappropriate to demonstrate one's critical thinking.

The findings revealed that critical thinking is both a personal and an innate practice, as well as culture related. As the findings demonstrated, criticality is personal because it is dependent on the individual (see chapter 5, section 5.2.1.1) and involves the idea of thinking and holding personal positions from one's own perspective (see chapter 5, section 5.2.1.2). In other words, the critical thinking competence or the innate ability of the participants to think critically is considered personal. However, external critical thinking performance, which involves the use of diverse forms of demonstrating criticality, is determined by various cultural and societal norms (see chapter 2, section 2.9.1). In this respect, Ballard (1995, p. 154) asserts that 'the expression and practice of critical thinking and analysis is strongly shaped by culture ... The capacity for critical reflection may be innate; but the ways in which it is practised and expressed are culturally determined'. Indeed, the findings of the study suggest that critical thinking is an innate ability (see chapter 5, sections 5.2.3.2 and 5.2.3.3), in the sense that the participants possess the competence and capacity to think critically. The forms of manifesting criticality, such as silence, are determined by cultural values, e.g. students prefer to remain silent and not challenge teachers (see chapter 5, sections 5.3.1.1 and 5.3.1.2) because of their cultural upbringing, which values and respects older people's knowledge. This relationship between intramental abilities and intermental factors can explain how the participants' criticality is both personal and social (see chapter 2, section 2.9.2). The intramental ability refers to the innate critical thinking ability and the competence of the participants to think critically, whereas the intermental aspect relates to the social influence on the critical thinking performance of the participants.

Scaffolding, in this study, is employed not only to interpret the findings in relation to students' development of criticality, but also to explain how culture determines when it is suitable to be critical or show critical thinking. In other words, it is not just the skill of critical thinking that is scaffolded, but also the understanding of when it is culturally appropriate or inappropriate to voice one's critical opinion. This suggests the existence of behavioural expectations that will be different from one cultural community to another, especially when dealing with the articulation of criticality in educational contexts. Silence is among the behaviours that are employed not because of a lack of criticality but because of the tendency to conform to the values and principles acquired from culture and society (see chapter 5, section 5.3.1.2). The

choice of silence over explicitly demonstrating one's critical side is a cultural behaviour that shows respect for old people such as parents and teachers.

The manifestation of criticality in various ways is not always apparent to other people as implying a critical stance because of the nature of the forms employed. Behaviours such as silence, memorisation and reproduction of the teacher's knowledge (compliance) do not necessarily signify a lack of critical thinking (see chapter 5, section 5.3.1.2). It might be true that these behaviours are not an obvious sign of criticality, but the participants suggest that there is more complexity and hidden understanding in their experiences and behaviours in the classroom. For instance, silence does not necessarily suggest a lack of critical thinking abilities because it is sometimes employed as a way of showing respect for old people and valuing the teacher's knowledge (see chapter 5, section 5.3.1.2). The participants prefer to keep silent rather than disagree with the teacher as a form of respect for his/her wisdom and knowledge. They also memorise and reproduce the teacher's knowledge in exams in order to meet the expectations of the teacher and therefore obtain good grades. Thus, students do not show their criticality explicitly through obvious forms such as writing or speaking in order to comply with their cultural and societal norms. These research findings echo the findings of Wu's study (2015, p. 759), where he claims that 'their [students'] quietness has no direct indication of a lack of interest in participating in discussion... There was a cognition that communication was not just about speaking, but also about what the students were thinking in their minds'. From this discussion, it can be claimed that students' silence and passivity in the classroom is not valid evidence with which to make judgments about students' deficiency in critical thinking. The relationship can be made here with the internal critical thinking performance in the sense that students might be thinking critically and deeply about the teacher's propositions, but they do not display this thinking through a common and agreed form such as speaking or writing.

Compliance is another indirect form that sometimes involves critical thinking that cannot easily be deduced. The findings revealed that the participants think critically about the teacher's knowledge and the exam questions and hold opposing viewpoints to those of their parents or teacher (see chapter 5, section 5.3.1.2). However, compliance with others' views and behaviours is sometimes employed to show respect for the knowledge and wisdom of the person in question or to meet the needs of the student. For example, the participants' use of memorisation and the reproduction of the teacher's knowledge, especially in exams, is not due to their inability to think critically, but for the sake of satisfying the teacher's expectations,

obtaining good grades and succeeding in their studies (see chapter 5, section 5.3.1.2). Thus, students play with the system by memorising purely for the sake of obtaining good marks despite their critical thinking abilities. Their choice of memorisation might come from the participants' critical analysis and awareness about the teacher's approach, which requires and encourages the reproduction of his/her own knowledge. The participants were critical of the teacher's approach to learning rather than critical of the content of the discipline, and therefore took a suitable action - memorisation - in order to meet their needs.

Writing is one of the common forms that are employed in education for the articulation of criticality. The lack of signs of criticality in students' written assignments is generally attributed to a deficiency in critical thinking (see chapter 3, section 3.4.1). However, the findings of this research consider the expectation of international students to express their criticality in a foreign language, they may not be as conversant with the appropriate ways of doing this as their native speaker counterparts, explaining their writing performance (see chapter 7, section 7.5). In this respect, it is a matter of mastering the discourse. According to the findings, English language learners are disadvantaged when compared to native language speakers because of the need for time and extra effort to understand the language, the content and the argument of certain texts (see chapter 7, section 7.5). Their tendency not to express their critical views in the classroom is also due to their reluctance to speak in a foreign language and their fear of making language errors for which they could be laughed at (see chapter 7, section 7.5). Therefore, the participants' low performance in writing might be caused by a language issue rather than a critical thinking deficiency.

The view that restricts the demonstration of critical thinking to particular forms such as writing and speaking seems to play a role in the stereotypes about non-Western students' lack of criticality. As the findings revealed, the external performance of critical thinking can be depicted by but is not limited to writing. Silence and compliance are some of those forms where criticality can implicitly occur. For this reason, the literature should consider a broader cultural perspective of the way in which critical thinking skills are demonstrated, considering different cultural and social backgrounds. The acquisition of these cultural and behavioural forms is determined by the culture in which students are brought up.

The findings discussed in this section challenge the existing literature in relation to non-Western students' deficiency in criticality because of their passivity, memorisation and

dependence on the teacher's knowledge. The participants revealed a rejection of those stereotypes that assume that the above-mentioned behaviours are evidence of a lack of criticality. There is more complexity and hidden understanding in these behaviours than appear at the surface. Cultural factors play an influential role in determining the nature of action or form through which critical thinking can manifest. The articulation or external critical thinking performance is context-dependent rather than universal. In other words, apart from writing and speaking, there is no pre-defined universal set of forms for the manifestation of criticality. Rather, these forms are diverse and applied in a way that conforms to one community's social and cultural norms. The literature thus should take a broad view in regard to the practices and forms of displaying criticality.

8.2.4. A Culture of Learning for the Integration of Critical Thinking in Education

The purpose of this section is to discuss the findings relating to the factors that influence the practice and participants' use of criticality in education. The teaching of criticality might necessitate the usage of certain teaching methods, techniques and classroom activities (see chapter 3, section 3.3.2). The findings of this research, however, highlight the importance of providing a suitable atmosphere, the necessary materials and the development of relevant beliefs about learning and knowledge. They suggest that the teaching of criticality is more about the creation of a culture of learning that encourages its application in the classroom than thinking about a suitable teaching approach to use. In her study, Nisbah (2012) found that parental educational background, authoritative and passive learning environment, weak English language performance, lack of institutional support, negative attitudes towards learning, a lack of critical thinking awareness, a lack of debate and questioning habits are all inhibitors of critical thinking. For this reason, Lipman (2003) claims that 'students would think better if they could be provided with conditions that would encourage the application of their thinking to the world in which they lived'. Therefore, it is important to create an environment that considers issues such as classroom dynamics, the teacher and students' attitudes towards learning and knowledge, students' expectations of expressing criticality in a foreign language, the teacher's practices and the balance between knowledge and critical thinking (see chapter 7).

The types of practices, behaviours and perceptions applied in the classroom determine and signify the nature of the learning that is encouraged. The perceptions about the nature of knowledge and how it is acquired constitute a crucial component for the practice of critical

thinking in education (see chapter 7, section 7.4). The way in which knowledge is perceived by students has an impact on how they approach it, and therefore determines the position of criticality in the classroom. Pu and Evans (2019, p. 52) assert that ‘the manner on which an individual approaches knowledge shows the role they bring to it’. If knowledge is viewed as absolute, not subject to change and generated only by authority, and academic knowledge is viewed as separate from real life, so are all attitudes that are not conducive to the practice of criticality (see chapter 7, section 7.4). Rather, criticality can be encouraged if knowledge is viewed as anything that can be obtained through discussion and negotiation of meaning by different types of interactions such as teacher-student and student-student, and the teacher’s knowledge is viewed as merely a reference and one version of looking at the knowledge rather than a definitive one (see chapter 7, section 7.4). The belief in multiple realities instils in students the attitude of the possibility of challenging, disagreeing and presenting their thoughts and views i.e. expressing their critical side.

The impact of parents on children’s beliefs about the holder of knowledge seems to define children’s behaviour in the classroom. This impact refers to the fact that the participants were not encouraged to express their thoughts or show disagreement towards elders’ views as a form of respect of older people’s knowledge and experience of the world (see chapter 6, section 6.2). Such practices appear to influence students’ attitudes in two ways. The first relates to the view that old people possess more knowledge and experience, and hence their knowledge cannot be questioned. This leads to the second way, which refers to students’ non-contribution to classroom discussions and non-articulation of their thinking because of their perceptions about the teacher as the only repository of absolute truth.

Teachers’ beliefs about their position in the classroom and their practices are regarded as influential for the practice of criticality in education. The participants considered that teachers’ attitudes towards themselves as the owners of knowledge and the idea that students are only recipients of this knowledge are problematic (see chapter 7, section 7.3). Such beliefs might lead the teacher to depend on the transmission of knowledge and do not allow the contribution of students and the presentation of new thoughts. In this way, there will be fewer opportunities for students to share their thoughts and express their disagreement and critical positions. Students might also develop a feeling of inferiority in relation to their teacher, which may make them feel reluctant to either disagree with him/her or share their ideas in the classroom (see chapter 7, section 7.3). In other words, the authoritative role of the teacher in the classroom

may lead students to believe that their thoughts are not valuable when compared to those of the teacher, and therefore feel reluctant to express them explicitly. Thus, the relationship between the teacher and the students, as well as the perceptions that they develop about each other's roles, determines the behaviours and the role that they each play in the learning setting. An equal contribution to the construction of meaning and knowledge between the teacher and students is crucial for the integration of criticality in education (see chapter 7, section 7.2.1). Critical thinking can be encouraged and appropriate perceptions developed when the contribution and presence of both teacher and student are valued.

The teacher's reactions towards students' performance and critical side might impact on students' use of criticality. Such reactions involve feedback on written assignments and the contribution of students in the classroom. The findings of this research demonstrated that the teacher's non-acceptance of students' creative thoughts, new contributions and interpretations of knowledge is impactful in terms of how students approach their learning (see chapter 7, section 7.3.1). Students will be influenced not to express their thoughts if they are not valued by the teacher. The role of the teacher is central in encouraging and enhancing students' critical thinking, through their comments on students' written work in relation to their performance in criticality (see chapter 7, section 7.3). The participants emphasised the need for the teacher's feedback about students' critical thinking performance in their written assignments. Such feedback assists them in developing an awareness about the need to apply criticality or address areas of problems in their writing. However, the findings revealed that the teacher's focus on feedback about vocabulary, spelling and grammatical errors, rather than ideas and how they approach content, is problematic (see chapter 7, section 7.4.2).

The findings suggested that a focus on achieving a balance between knowledge and critical thinking in education would be a reasonable decision. According to the participants, the focus of education must be the acquisition of knowledge and content and the use of criticality to think about this content. The findings showed that the acquisition of knowledge about the discipline or subject under study is essential in both education and critical thinking (see chapter 7, section 7.4.2). The acquisition of knowledge is vital and constitutes the basis of critical thinking. The findings suggest that the teacher's focus on the completion of the curriculum content shows the type of learning that is encouraged, i.e. it prioritises knowledge transmission over thinking (see chapter 7, section 7.2.2). The lack of a rich library from which students can obtain resources on various disciplines and topics (see chapter 7, section 7.2.2) might be the factor that leads

teachers to transmit knowledge to students. However, knowledge acquisition is not sufficient. Policy-makers should consider a pedagogy that encourages the integration of critical thinking skills in the classroom. Enciso et al. (2017, p. 84) assert that ‘spoon-feeding education has to change since students need to acquire knowledge and develop skills and competences for life’. Therefore, education needs to focus on developing both students’ knowledge and the content of the discipline and, most importantly, their critical thinking.

8.2.5. Different Areas of Criticality

The findings revealed the existence of various areas where critical thinking can occur in addition to academic settings, an aspect that challenges the stereotypes about non-Western students’ lack of criticality. These stereotypes are based on teachers’ judgements of students’ academic performance only in an academic setting - the classroom (see chapter 3, section 3.4.1). The literature takes a narrow perspective of assessing the performance of students’ critical thinking by looking at their practices and behaviours in the classroom without considering other non-academic settings. The findings, however, suggest that the application of criticality is found in other areas where the teacher is not present to observe or evaluate students’ performance. These areas include the questioning of the self and the use of criticality in everyday life situations, as well as interrogating one’s previous and established thinking (see chapter 5, sections 5.2.3.2 and 5.3.2). According to the findings, certain beliefs and ways of thinking acquired from a particular community or society are sometimes subject to questioning and critical examination by the participants. As Mercer (2000, p. 142) puts it, ‘as members of a younger generation, we rebel against the learning that elders prescribe, and often question the values inherent in the given knowledge of our community’. Therefore, the thinking, values and principles that are acquired from old people who are more knowledgeable and experienced are sometimes subject to questioning from young people.

The broad scope of applying critical thinking in different areas of academic, social and everyday life can be related to Barnett’s model of critical being. As suggested by Barnett, critical being goes beyond the application of criticality to academic knowledge, instead involving other areas - for instance, the self and taking critical actions in the world (see chapter 2, section 2.4.2). Students cannot be described as not being critical thinkers simply because of their poor performance in the classroom. Their performance in the classroom can be explained in a more complex way than by those stereotypes that undermine their abilities and potential in criticality. Some explanations involve the issue of expressing critical thinking in a foreign

language, in addition to the use of silence and compliance with the teacher's knowledge as cultural behaviours (see section 8.2.3). However, the participants revealed that they engage critically with every aspect of their life. For this reason, students cannot be depicted as lacking critical thinking skills because of their performance in the classroom without the consideration of other areas of their lives where the teacher is not present to observe.

8.3. Conclusion

The discussion developed in this chapter addresses the findings of the research topic of critical thinking. The first area involves the findings in relation to the definition of criticality as encompassing an internal and an external practice. The second area refers to the participants' development of criticality and the importance of the MKO in the early stages of childhood, as well as autonomy in adulthood. The third area relates to the findings about the integration of criticality in education through classroom practices and the possession of appropriate perceptions about knowledge, learning and the teacher.

The research findings challenge the view about non-Western students' inability to think critically. They suggest a different viewpoint of approaching their critical thinking experiences as being established in the three-way distinction between critical thinking competence and internal and external critical thinking performance. The findings suggest that people possess critical thinking competence because criticality is an entity and part of every human being, practised in different activities of everyday life. This critical thinking competence can be embodied in an internal critical thinking performance, in which users can be referred to as covert critical thinkers. It can also occur in an external critical thinking performance, in which users can be called overt critical thinkers. While covert critical thinkers limit their criticality to the mere process of thinking within their minds, overt critical thinkers go beyond thinking internally to achieve an external manifestation of the thinking process. This external manifestation of criticality is determined by cultural factors. For instance, silence is used as a way of showing respect for older people, a practice that is embedded in the participants' community. Compliance with the teacher's knowledge and not questioning it is sometimes employed to value his/her authoritative role and respect his/her status and knowledge. The motivation for compliance is sometimes individual because students might memorise and reproduce the teacher's knowledge in order to obtain good grades.

The participants' specific educational, cultural and social backgrounds and personal motives shaped their way of conceptualising the concept of critical thinking. Their need to conform to certain cultural norms in their society does not necessarily make them less critical in their thinking, but permits them to avoid breaking those norms and practices. These norms include the respect that they dedicate to older people's knowledge and experience of the world. In following these norms, students choose to be silent and comply with the views of their parents or teachers despite their internal critical side. Therefore, critical thinking may manifest itself in a wide variety of ways, and these manifestations may vary within different contexts. Such manifestations include silence, compliance and a lack of interest, in addition to certain ways of dressing and behaving. These are all ways in which critical thinking can be demonstrated, but they are different, behaviourally, from each other. Therefore, critical thinking cannot be regarded as a set of routinised behaviours or as reducible to certain behaviours.

Developing critical thinking is an ongoing and infinite process throughout life. From the findings, there is a distinction between practising criticality at the macro and micro levels. On the one hand, the development of critical thinking about the world, one's life and existence in the world, and one's previous beliefs seems to happen at the macro level. The findings demonstrate the importance of developing an awareness of and sufficient knowledge about the world during childhood and youth in order to be able to question this acquired knowledge and previous thinking about existence and the self. On the other hand, the application and cultivation of critical thinking at the micro level is found in smaller contexts within life. For example, students need to develop knowledge of a particular discipline to be able to critique it and apply criticality to this knowledge. This process suggests that people learn to think critically each time they encounter a new situation where they are expected to apply their critical thinking. As long as people live, experience and encounter new situations in life, they are in a constant state of learning to think critically within these new events.

The development of critical thinking, according to the findings, requires the availability of appropriate factors and practices. These factors include the necessary time, autonomy, knowledge comprehension and understanding and classroom dynamics, in addition to the development of suitable attitudes. Providing the necessary time and space is among the requirements for the development of criticality by enabling people to become knowledgeable and well-informed about the world and thus apply criticality. Autonomy allows individuals to think for themselves and make independent decisions, rather than depend on others to do the

thinking for them. Knowledge acquisition and comprehension enable them to ask appropriate and well-informed questions.

Chapter 9: Implications, Recommendations for Further Research and Conclusions

9.1. Introduction

The purpose of this chapter is to consider some implications for practice and discuss recommendations for further research, in addition to drawing some general conclusions about criticality and ways of thinking about non-Western students' experiences of critical thinking in Western universities. The findings have certain consequences and implications in terms of adopting a different understanding of the concept of criticality and the way of approaching it in theory and practice. This chapter consists of the following:

- Implications of adopting a distinct view towards international students and encouraging a shift in the beliefs regarding their critical thinking.
- A call for the integration of suitable behaviours, practices and perceptions in the classroom for a better practice and teaching of criticality in education.
- An account on the shift in my positionality and beliefs about the nature of critical thinking thanks to reading the literature and conducting this study.
- Recommendations plus emerging questions and issues from this research that can be employed as a starting point for future research.
- General conclusions about the topic of criticality generated by and summarised from the findings of this research.

9.2. Implications of the Study

The objective of this section is to present some of the implications inferred from the findings of this study. The understandings generated from the findings of this study do not stand separate in the field of critical thinking; rather, they have certain implications for future understanding and practice, especially for the academic community. These implications consist of both theoretical implications that call for a change in people's thinking about criticality and practical implications in relation to the necessity to consider some practices in education that ensure the integration of critical thinking in the classroom. The two main implications that I will discuss in this section are the following:

1. A call for the consideration of critical thinking from different cultural perspectives and therefore change in the way of approaching international students' criticality.

2. A proposal for a possible pedagogy that can be incorporated into education, to create a suitable atmosphere where criticality is encouraged and students have more time and enough opportunities to practise their critical thinking skills.

9.2.1. A Different View on Critical Thinking and International Students

This research challenges the widespread stereotypes about non-Western students' inability to think critically and their lack of the necessary cognitive skills for learning. It contributes to the literature challenging the discourse that diminishes international students' ability in criticality (see chapter 3, section 3.7). The specific definition of criticality generated from the findings of this study (see chapter 8, section 8.2.1) is neither generalisable nor representative of other Algerian – let alone non-Algerian – students. However, since the participants brought a different understanding of the concept, this means that it is important to investigate critical thinking from numerous cultural perspectives in order to understand how criticality is understood differently and explore its practices as they are valued in various cultures. The findings also reveal the need for more consideration of learners' different and complex experiences before rushing to conclusions and assumptions about their lack of criticality based on certain behaviours in the classroom.

The notion of critical thinking should be addressed from diverse perspectives and traditions of thought in order to generate a conceptualisation that is inclusive of the various understandings and forms that it may take in different cultures. The discrepancies in the definitions of criticality (see chapter 2, section 2.3) render the investigation of its meaning from the perspective of diverse people and angles a central issue. To understand international students' performance in the classroom, criticality should not always be approached from a Western perspective – i.e. a Western teacher's perspective. Some of the stereotypes about international students' deficiency and poor performance in criticality were initiated by Western lecturers (see chapter 3, section 3.4.1). For this reason, considering and researching the students' perspective should be equally significant. Students should be given the opportunity to express their thoughts and concerns about criticality while studying in a Western university. Teachers' view of international students' critical thinking without the consideration of the students' perspective lacks the necessary depth to explain their performance in the classroom. Therefore, students' experiences should not be depicted and interpreted from merely the teacher's point of view; the students' voices are significant in presenting their personal experiences and giving insights into their different learning styles and abilities.

This study calls for Western lecturers to change their perceptions and thinking of international students' behaviours and poor performance in the classroom as being a deficiency in criticality. A shift in the perspective from which international students have been viewed in terms of their critical thinking abilities is necessary, i.e. moving from the deficit model to an approach that considers international students' differences and complexity in their experiences. The findings suggest looking at international students' different approaches to using and practising criticality which might be shaped by their culture. This approach involves a complexity in the behaviours that students might adopt in the classroom. Learners' behaviours in Western universities, such as passivity, a lack of active contribution in classroom discussions, a dependence on memorisation and the reproduction of ideas, is not evidence of their lack of critical thinking abilities. These behaviours might be explained in terms of a lack of background knowledge on the topic of discussion, the difficulty of expressing criticality in a foreign language or being forms employed in conformity with the cultural norms and beliefs that they have acquired from their societies. Non-Western students might possess the competence to think critically, but their performance in critical thinking does not always reflect this competence. In addition, judgements on international students' lack of criticality based merely on their performance in academic settings is limited. Students could also have applied their criticality in other areas of their lives.

Western lecturers should develop an awareness and understanding about the existence of various cultures of learning and thought in addition to the Western one. They should acknowledge non-Western students' approaches to learning and avoid diminishing their cognitive abilities because of students' tendency to employ learning styles that are not valued in Western universities. Instead of using stereotypes about non-Western students' deficiency in criticality, lecturers should consider the differences in their learning styles. Students' external performance and behaviours in the classroom do not necessarily reflect their actual abilities in critical thinking. Instead of bemoaning international students' deficiency in criticality in their written texts, lecturers should assist students and give them the time to become familiar with the requirements of a Western university.

Western lecturers need to consider the differences in international students as well as create a safe space for them to develop an understanding of the Western university's requirements. As already discussed in the findings, articulating criticality in a foreign language is regarded as one of the issues that international students struggle with (see chapter 7, section 7.5). For this

reason, lecturers should encourage them to speak and share their ideas in the classroom by making them understand that the objective of the discussion relates to ideas and thoughts rather than the accuracy of the language. Moreover, since possessing background knowledge is among the requirements of critical thinking (see chapter 2, section 2.7 and chapter 7, section 7.4.2), Western lecturers should consider including topics of interest for international students. Students might contribute to discussions when they are well-informed and possess knowledge of the topic under discussion, unlike when they are unfamiliar with the topic. The findings revealed that students' thinking is acquired from their society, which values the knowledge and experience of older people and does not encourage them to disagree or introduce different ideas from those of the teacher (see chapter 6, section 6.2). Therefore, lecturers should assist students in their experience by creating a safe space that raises their awareness about the norms of the Western university. They should give them the time to adapt to the new learning styles and Western approach of argumentation and critique in the classroom. They should raise students' awareness that learning and the construction of knowledge are roles of both the teacher and students, and that there is no right or wrong answer.

9.2.2. A Suggested Pedagogy for the Integration of Critical Thinking in Education

In this section, I make some general suggestions about the teaching of critical thinking in education, with further suggestions particularly for the Algerian context. The findings of this research revealed that most of the challenges that influenced the participants' journey of developing themselves as critical thinkers related to the pedagogy that they experienced in Algerian schools and HE (see chapter 7). To provide a small but comprehensive account of what characterises the educational system in Algeria, Rose (2015, p. 3) writes that 'progression from primary to middle school, from middle school to secondary and from secondary to tertiary are all controlled by assessments or exams... Pedagogy is traditional, fact-based and involves much rote learning'. The focus of education on practices such as memorisation of information and transmission of knowledge does not encourage the practice of critical thinking in the classroom. To integrate criticality into teaching, it is important to draw teachers' attention to the need to incorporate a suitable pedagogy that allows students to apply and improve their critical thinking abilities. The teacher needs to integrate some practices and behaviours that pave the way for the incorporation of a culture of critical thinking in the classroom.

Teachers are advised to change their teaching approach to ensure the incorporation of criticality in the classroom. The introduction of special courses in the curriculum for teaching critical thinking skills might necessitate huge efforts and time from curriculum designers and teachers. For this reason, teachers should create a classroom environment that encourages and nurtures a sense of critique and openness to discussion by incorporating simple practices and activities in the classroom. One of these practices involves incorporating group activities in the lesson. In a classroom where the number of students is large, teachers can divide students into small groups of three or four members and ask them to share their thoughts and discuss the topic of the lesson using some guiding questions. Working in groups gives learners the opportunity to share their ideas and contribute to the discussion, which allows them to develop the understanding that the construction of knowledge can be generated through exchange between different people. After ten or 15 minutes of discussion, students can switch between different groups, an aspect that enables them to notice and consider multiple perspectives of the topic and develop the perception that there is not only one version of knowledge.

Teachers should adopt activities where students can work independently to minimise their dependence on the teacher and therefore think for themselves. Since the findings showed that critical thinking achieves higher levels when a certain degree of autonomy over one's life and thinking is reached (see chapter 6), it is recommended that teachers focus on activities where learners work autonomously. For example, project work should be integrated into the curriculum as a learning technique that encourages both knowledge acquisition and students' development of different critical thinking skills. Instead of transmitting knowledge to students through lecturing, the teacher can request students to conduct project work individually or in groups on a particular topic. To accomplish the project, students will go through many activities and practices that involve the use of criticality. Such practices involve thinking, making decisions and being selective with which references and information to include in the project. Students need to explore, analyse and evaluate the existing knowledge about the topic by themselves, rather than receiving it passively from the teacher. Project work involves collaboration between members of the group, which is beneficial in enabling them to exchange ideas and discuss different thoughts. Students will also develop a sense of communication and some critical thinking dispositions such as open-mindedness, tolerance and intellectual empathy.

Sometimes, teachers could adopt a classroom arrangement where interaction between students and the teacher or each other is facilitated. For instance, arranging the classroom in a 'U' shape might enable learners to develop accurate perceptions and beliefs about the nature of learning and knowledge, as well as the teacher and learner's roles. It might allow students to understand that knowledge is constructed through interaction with the teacher and other students – in other words, knowledge can be approached from various perspectives rather than from merely the teacher's perspective. It enables students to eliminate the belief that the teacher is the repository of knowledge and the one who possesses accurate knowledge and the absolute truth. They might equally develop a belief about the existence of multiple versions of knowledge and that knowledge is not already existent in the world, but it is constructed through collaboration and exchange between people.

The nature of the relationship between the teacher and students, in addition to students' attitudes towards learning and knowledge, should be addressed by securing the conditions that encourage critical thinking. Teachers should avoid lecturing and therefore incorporate teaching methods that value the contribution of both the teacher and students. The teacher adopting lecturing as the only teaching approach, without giving students the space to share their thoughts, might create in students a feeling of superiority of the teacher. Teachers, consequently, should allow the contribution of students to the topic by involving them in discussion and asking them to share their opinions and thoughts. The classroom should be a place where both teachers and students share ideas and learn from each other. Students should develop appropriate beliefs about knowledge, learning and their role as well as the role of the teacher. The initiation of more engaging activities namely – classroom discussions, group work and classroom presentations – will allow students to notice their valued contribution to discussions, which might instil in them the belief that the construction of knowledge is the responsibility of everyone in the classroom. In addition, the teacher should raise the awareness of students with regard to the idea that there is no right or wrong answer, an understanding that enables learners to develop the confidence to express their thinking.

The Algerian government, specifically the Ministry of HE and Scientific Research, should consider a budget in order to afford sufficient library resources in terms of books and articles. In this way, students can access the content and major works of their field on their own without the need for the teacher to transmit this whole content in the classroom. Instead of spending the time on transmitting knowledge through lecturing, teachers and students can instead, focus

on the analysis and evaluation of this knowledge or content through discussion in the classroom. Algerian teachers should also raise students' awareness of the existence of the platform SNDL (Système National de Documentation en Ligne), where they have access to different databases that allow them to read and download articles on different topics. In this way, students can obtain the necessary information and data that help them to accomplish their project works.

9.3. The Shift in My Perceptions of Critical Thinking

The objective of this section is to discuss the shift in my thinking and perceptions towards critical thinking and its practice with international students. At the start of this thesis, I provided an account of the assumptions and pre-conceived ideas that I developed about criticality in the early stages of working on my PhD (see chapter 1, section 1.4.2). It is worth noting that my thinking has changed thanks to conducting this research. For this reason, I attempt in this section to highlight the difference in my thinking between the beginning and the end of this research.

As a summary of my initial perceptions, I aligned myself with the propositions of the deficit model from which international students have traditionally been approached. These propositions related to the idea that critical thinking is a typical Western concept that can be developed only through immersion in Western countries. I thought that non-Western students lack the necessary critical thinking skills, and that their behaviours of memorisation, reproduction of information, passivity and non-contribution to classroom discussions are all evidence of their deficiency in criticality. I adopted these assumptions and took them for granted without any careful consideration or questioning.

This study played a pivotal role in changing my perceptions about the nature of criticality and its practice from the perspectives of different people. My extensive reading about this concept and the findings of this research allowed me to gradually develop a different understanding of critical thinking. Currently, I believe that there is more complexity in the understanding of criticality, the way in which people construct it and how they might employ it in various contexts, depending on certain individual, cultural and societal norms. The numerous definitions that I consulted in the literature (see chapter 2, section 2.3), along with the participants' understanding emerging from this study (see chapter 8, section 8.3.1), enlightened my view on the discrepancies in defining criticality. Such discrepancies appear to make the

application and practice of critical thinking different from one person to another, from one society to another and from one culture to another.

The findings of this research helped me to understand the multiplicity of the forms that criticality may take. I understood that evidence of criticality is not only present in writing, speaking and academic settings. In addition, students' behaviours and poor performance in the classroom are not a direct reflection of their actual cognitive capabilities. For instance, an absence of explicit questioning and contribution to discussions is not necessarily a sign of deficiency or lack of critical thinking skills. Rather, students may limit themselves to an internal performance of criticality in the sense that they might engage and think critically within their minds without an explicit demonstration of this. Sometimes, students might choose to manifest their criticality based on forms that are defined by cultural and contextual factors. In other words, the external performance of criticality is not limited to writing or speaking, but it takes various forms. For instance, international students' passivity and little or non-contribution to discussions might be related to their hesitation to express their criticality and share their thinking overtly because of language issues, a lack of sufficient knowledge about the topic of discussion or unfamiliarity with the Western style of argumentation. Moreover, students cannot be considered non-critical thinkers based on judgements about their performance in the classroom because their use of criticality is not bound to formal settings but also involves social and everyday life.

When reflecting about my initial thinking on criticality in the early stages of my PhD, I started to question and look at my reasons for accepting the stereotypes about non-Western students' lack of criticality. I asked myself: Why did I believe those stereotypes? Why did I take what I read for granted? Why didn't I question and be critical of those statements about international students' non-criticality? Thanks to my reflections, I believe that several factors were behind my own thinking and adopting these stereotypes without questioning. These factors range from my lack of sufficient knowledge about criticality, the literature that supports the deficit view of international students' deficiency, in addition to my belief about the superiority of Western education.

My scant knowledge and lack of a complex understanding of critical thinking was an influential factor in adopting the statements about the inability of international students to think critically. My view of criticality as the mere idea of asking questions and not taking everything at face

value made me think that the absence of explicit questioning demonstrates a deficiency in criticality. I thought that students' passivity, memorisation, reproduction of information and lack of questioning in the classroom make them unable to think in a critical way. Another feature that nurtured my assumptions was the discourse and studies that support the idea that critical thinking is only embedded in the Western traditions and that non-Western traditions do not possess and develop critical thinking abilities. I believe that this factor had a remarkable impact on my beliefs about criticality because of taking the suggested claims in such studies at face value. I could have been critical about the claims if I had possessed the sufficient background knowledge about criticality. Holding certain thoughts and expectations about the superiority of Western education seems to be one of the other factors that influenced my thinking. The act of coming to the UK to carry out my doctoral studies reinforced those assumptions and made me accept the proposition that critical thinking is a Western practice.

Thanks to conducting this study in terms of the findings and reading the literature, I could change my view towards criticality especially in relation to international students. Critical thinking can be understood and manifested differently according to individuals and their cultural background.

9.4. Recommendations for Further Research

The aim of this section is to present some recommendations for further research based on the questions and issues emerging from this research. Some aspects that might have been beneficial but were not addressed in this study will be suggested as areas that can be explored in future studies. Some of these aspects include the use of certain data-collection tools, researching the same topic as this study from an outsider perspective and exploring other groups of students from North African countries and the Middle East.

In this study, I employed semi-structured interviews as the only data-collection instrument. The use of other instruments might have generated different types of data that ensure the credibility and confirmability of the findings. My suggestion for further research is to conduct other studies on the topic of criticality using different data-collection tools that might produce different data. For example, researchers could conduct an ethnographic study using participant observation in a classroom to observe students' behaviours and performance, along with conducting interviews with the students in order to explore the observed behaviours. The use of focus group interviews can also be fruitful in generating diverse and opposing points of view

from the participants, which ensures the depth of the data and a multiplicity of perspectives. The interaction between different participants in the group might create conflicting views, new insights and the construction of knowledge in relation to the topic. Studies can also be conducted using discourse analysis by analysing certain parts of students' theses, dissertations or essays. The purpose of this would be to explore their critical writing performance, how they construct an argument and how they demonstrate their critical thinking in writing. Since the findings revealed the importance of time for developing critical thinking, researchers could also conduct a longitudinal study to investigate the participants' stages of enhancing criticality.

The relationship of the researcher with the participants in this study determines another suggested area for future research, namely conducting studies on the same topic but from an outsider perspective. Since both I and the participants are Algerian PhD students, this means that the research topic was approached from an insider perspective. I come from the same society and have experienced the same educational system, which places me in the position of an insider. I might share with the participants some common beliefs and ways of thinking that helped me to easily understand and decipher their claims. Nevertheless, this position might have influenced the participants not to talk about certain aspects that they assumed I already knew. It might also have been influential on me as a researcher because I might have ignored certain crucial elements in the data analysis that an outsider researcher would notice. Therefore, I propose investigating the research topic with the same participants but from an outsider perspective. In this way, the participants might introduce different thoughts and the researcher might obtain different data from the data gathered in this study. The outsider researcher would approach the data from a new and foreign perspective.

This research focused purely on Algerian students without including students from other nearer regions or cultures. Suggestions include conducting studies with other groups of students from various regions in North Africa and the Arab world. Researchers could conduct a study with students in North African countries such as Morocco and Tunisia, as well as Algeria, to explore their understanding of the nature and practice of criticality. The purpose of such studies would be to investigate whether students from these countries possess similar or different perceptions about criticality to the perceptions of the participants from this study.

Since this study dealt with only the students' perspective, other studies could be conducted to research the perspective of international students' supervisors and tutors. These studies might

provide insights into the way Western lecturers perceive international students' critical thinking and performance in the classroom and written assignments. It would be an opportunity to find out whether these lecturers subscribe to the stereotypes about international students' lack of criticality or not.

9.5. Conclusions

Critical thinking has been for so long considered a Western notion that exists in the Western world and can only be acquired in Western educational institutions (see chapter 2, section 2.8). International students studying in Western universities, including in the UK, USA and Australia, have been stereotyped as non-critical thinkers and lacking the skills of analysis, evaluation and questioning because of their culture (see chapter 3, section 3.5). Such stereotypes have been generated based on students' performance in the classroom in terms of their non-contribution to discussions, reproduction rather than creation of new knowledge and their reliance on memorisation and the copy-paste phenomenon (see Chapter 3, section 3.5). However, this study has brought new insights that suggest a different understanding of the research topic.

From the findings of this research, some conclusions can be drawn about the way of understanding critical thinking and approaching international students in Western HE. Criticality is defined differently by different scholars and authors (see chapter 2, section 2.3), and the findings of this study also presented a distinct conceptualisation of criticality (see chapter 8, section 8.2.1). Thus, one of the conclusions relates to the necessity of investigating criticality from various perspectives and traditions of thought in order to understand how it is constructed by different groups of people. This study explored one among many possible understandings. Considering other perspectives leads to the generation of an inclusive conceptualisation that does not disregard one tradition of thought over another, in addition to understanding the different practices and forms of manifesting criticality in different cultures.

Critical thinking seems to be an individual-related practice that is not present in one culture and not in another. Although it first appeared in the Greek tradition, critical thinking is not a culture-specific practice that is typical to a particular nation or tradition of thinking. It is rather an individual-related practice that differs from one person to another and is shaped by various situations and circumstances (see chapter 5, section 5.2.1.1). The poor performance of one student should be assigned to the individual rather than attributing it to an entire nation or

culture. In other words, the non-use of critical thinking skills by an individual should be treated in terms of this specific individual, rather than making a generalisation about the lack of criticality in the culture and society from which the individual comes.

The manifestation of critical thinking seems to be influenced by culture. It might be that critical thinking competence is individual-related but that critical thinking performance is culture-dependent. The articulation of criticality does not involve a set of pre-defined and universal forms that, when not employed, suggest an absence of a thinking process that is happening. However, the choice of a particular form to demonstrate criticality is dependent on certain cultural norms. Forms include, but are not limited to, writing and speaking. There are forms that are determined by cultural and social values such as silence and compliance, in addition to ways of behaving and dressing.

Students' performance in the classroom does not always reflect their actual critical thinking abilities. Students might have the competence and the disposition – that is, the necessary cognitive abilities – to think critically; however, they tend to think critically inside their minds without necessarily showing it in an explicit form. Students cannot be treated as non-critical thinkers just because they fail to appropriately articulate their thoughts in writing and classrooms discussions. Their criticality can still be applied in their everyday life situations, the world, the self and their thinking. Therefore, criticality can be demonstrated through various ways and can occur in different areas of one's life.

The development of criticality seems to be a lifelong learning practice that starts from childhood and continues throughout one's life (see chapter 6). Critical thinking is fostered and shaped throughout the different stages and experiences of one's life rather at one particular point in time. Every individual possesses the latent ability to think critically, which can be seen through children's questions to understand the world and people's constant need to make decisions about everyday life and question one's existence. Criticality is acquired and improved through the diverse situations that people experience in their life journey. It requires time to acquire and develop an understanding of the world and different areas in which one is expected to apply criticality. It also needs the space and autonomy that allow individuals to make independent decisions and hold personal and informed critical positions.

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Appendices

Appendix 01: Participant Information Sheet

Canterbury Christ Church University

Faculty of Arts and Humanities

School of Language Studies and Applied Linguistics

Participant Information Sheet

Title of the Research Project: The Nature and Factors Influencing the Practice of Critical Thinking in Higher Education: Experiences and Perceptions of Algerian PhD Students in the UK.

My name is Thiziri Zidouni. I am conducting my PhD research at Canterbury Christ Church University. For this purpose, I would like to invite you to voluntarily take part in this study. However, before that, please take your time to read the content of the participant information sheet and familiarise yourself with the nature, purpose and procedures of the study.

The Background of the Study:

This research project deals with the experiences and perceptions of a group of Algerian students doing their PhD in the UK, towards the nature of critical thinking and the factors that encourage and prevent its practice. The aims of the current study are the following:

1. Explore the critical thinking-related patterns that are most valuable in higher education.
2. Provide a description and an explanation of the process of becoming a critical thinker and the factors influencing this process in higher education both negatively and positively.

Why have I been invited?

You are chosen to participate in this study because you meet the criteria I set out for the participants of my study. These criteria are listed below:

- To be an Algerian student who did his/her previous higher education studies (Bachelor and Masters' Degrees) in Algeria, and currently doing their PhD in one of the UK universities.
- Studying in the UK.

Do I have to take part in the study?

Your participation in the study is completely voluntary. You are not forced in any way to take part in it. However, if you would like to participate in the study, you are required to sign a consent form that I will provide you later in the first interview. Signing the consent form means that you accept the terms and conditions of the study. Please note that you can withdraw at any stage of the study without feeling obliged to give any reasons for your withdrawal.

What will I be required to do?

In taking part in this study, you will be required:

1. To participate in a face-to-face interview with the researcher. The interview will take place at any time and place is suitable for you.
2. Possibly, you will be interviewed for a second time after around three months from the first interview.

Procedures:

In case you decide to be a participant in this study, there is the possibility that you will be interviewed twice. The first interview will be a semi-structured interview in which you will be asked questions about your experience and perceptions with regards to critical thinking. Conducting the second interview is not certain but it depends on the obtained data from the first interview. In case a second interview is needed, it will take place at least three months after the first interview in order to give you time to reflect about what we talked about in the first interview.

Note that the interviews will be audio recorded and the data you provide in the interviews will be used only for academic and research purposes. They will be used in my PhD thesis.

Will my taking part in the study be confidential?

Taking part in this study will be totally anonymous and all the details that will identify you will be kept aside and will not be used. The transcription of the interview will be shown to you if you wish to change any ideas or omit some details that threaten your confidentiality. The recordings and data collected from you will be kept in a secure and safe place that is far from the reach of others and will be accessed only by the researcher.

What will happen if I do not carry on the study?

In case you decide to withdraw from the study, I will totally respect your decision. All the data and information you provided will be destroyed and your anonymised name will be removed from the study.

If you have any questions or concerns about the nature, procedures or requirements for participation, do not hesitate to contact me to the following email: t.zidouni54@canterbury.ac.uk

Appendix 02: Interview Guide

1. General Background Information about the Participants' Academic Experiences

Topics	Principal Questions	Follow up Questions
General Background Information	<p>1-Can you first tell me about your academic experience in studying in higher education? How has higher education contributed to your learning?</p> <p>2-Based on what you have experienced, what do you believe is your role and your responsibilities as a student at university?</p> <p>3-What about the role and responsibilities of the teacher?</p>	<p>-Would you please describe how the learning and teaching processes happen?</p> <p>-Tell me some of the practices you do at university (What are the assignments and tasks you do for learning? Would you please describe the process you follow to accomplish these assignments?</p> <p>-What kind of things does your teacher/tutor/supervisor do?</p>

2. Understanding the meaning of Critical Thinking

Topics	Principal Questions	Follow up Questions
Understanding the Meaning of Critical Thinking	<p>4-Please tell me, have you already heard of the concept “critical thinking”?</p> <p>-If yes, what do you think individuals do when they are engaged in the task of critical thinking?</p> <p>If no, let me give you a small example...in writing an essay or a literature review for a school or university assignment, do you normally ask questions about what you</p>	<p>-Can you think of a situation or an example in which you used critical thinking and tell me about it?</p> <p>-Would you please describe the part of the situation that you consider as critical thinking?</p>

	read as well as analyse, evaluate and synthesise it, rather than believe and take everything you read at face value? And do you comment and give your point of view and support it by evidence and reasons?
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3. Developing Critical Thinking:

Topics	Principal Questions	Follow up Questions
Process of Developing Critical Thinking	<p>5-Hand the first vignette (vignette 1).</p> <p>6-Would you please walk me through a situation in higher education that encouraged you to use as well as develop your critical thinking?</p> <p>7-Would you please describe in as much detail as possible a typical classroom environment where students can be encouraged to practice and develop their critical thinking?</p>	<p>-What is your view towards the situation presented in the vignette?</p> <p>-What do you think about the situation in relation to critical thinking?</p> <p>-What are the parts of the situation that you believe are helping you to develop your critical thinking?</p> <p>-How or in what way do you think this helps to develop critical thinking?</p>
	<p>8- Hand the second vignette (vignette 2).</p> <p>-What factors and qualities do you rely on in engaging in critical thinking?</p>	<p>-What is your view towards the scenario of the vignette?</p>

	<p>9-Hand the third vignette (vignette 3).</p>	<p>-What are your thoughts about this situation regarding critical thinking?</p>
	<p>10-Would you please walk me through a situation that you think is not helping students to develop critical thinking?</p> <p>11-Would you please describe the factors that you think prevented and did not elicit the practice of critical thinking?</p>	<p>-In what way does this situation affect the practice of critical thinking?</p> <p>-Could you give me some examples of what you are saying?</p>
<p>I have no further questions to ask, is there anything else not addressed in the interview that you think is important and you would like to tell me?</p>		

Appendix 03: Vignettes

Vignette 01

In a classroom full of students, the teacher delivers knowledge and information about the topic of the lesson. The students are listening to the teacher carefully and at the same time taking notes. At the end of the lesson, the teacher asked the students if they have any questions. Some students asked questions about some elements of the lesson and the meaning of unclear concepts. They are also provided with handouts of the lesson in order to memorise their content for the exams.



In the exams, students are supposed to learn by heart the content of the handouts so that they can answer the questions of the exams accordingly and obtain good grades. Students who answered the exam questions according to their own way obtained lower grades because according to the teacher, these students did not give the right answers. On the other hand, the students who answered according to what is written in the handouts obtained good marks.

Vignette 02

During a session in a classroom, Hermione had a different thought about what the teacher has just presented about the topic. In the time of trying to give her opinion, she thought “oh how stupid I am, the teacher knows better than me, how can I contradict what he is saying and give an idea that is different from his own? Or what if I said this silly idea and made a mistake and all my friends laughed at me?” Because of these thoughts, Hermione preferred to keep silent.

Vignette 03

At the end of the session, the teacher asked the students to write an essay about a particular topic as an assignment. Hermione, one of these students, went to the internet and searched for resources on the topic. She read them to understand the topic and after that she copied chunks of information from the articles and books and included them in the essay. She submitted the work, and she obtained a good grade. Every time she is asked to write an essay, she follows the same procedure.

Appendix 04: Follow-up Interview Questions

1-Follow-up Interviews Questions

Samia:

- You have mentioned in our first interview that one of the aspects that characterised your experience of doing PhD in the UK is that you are faced with both the task of conducting your PhD research and at the same time familiarising yourself with the requirements of doing research in the British universities. Would you please tell me more about this and about the requirements that you thought you needed to familiarise yourself with?
- You said that critical thinking is a lifelong learning practice that develops through time and age, and you also mentioned that children are critical but in their modest world. Would you elaborate and say more about this?
- When I asked you to talk about your critical thinking in relation to your academic experience, you said that maybe critical thinking is already in me, does this mean that you already possess critical thinking, and you only transfer its use to different contexts?
- Two participants of my study told me that they faced difficulties in terms of criticality when coming here to the UK. They said that when submitting a work, they always receive feedback from their supervisors about the lack of criticality and personal voice in their writing. What do you think is the problem? One of the participants said that it does not mean that I am not critical, according to you, where does the issue lie?

Chahra:

- As a general summary of what you said about your academic experience in higher education in Algeria, you said that it was mainly exam-based, and you as students, are just studying to pass and that the teacher acts as a transmitter of knowledge. Would you please tell me what this experience has to say about your critical thinking?
- In our first interview, you said that you struggled with critical thinking and critical writing at the start of your PhD, and the supervisor always makes comments on the lack of your personal voice on your works, but through time you could develop your way of thinking critically. This is a summary of the whole idea you talked about in the previous interview. So, what does this experience suggest about you in terms of critical thinking? What was the problem at the beginning of doing your PhD?

- What do you think about the way of developing criticality, what are the factors that influence your journey of developing it?
- Would you please tell me about your experience of using critical thinking in academia and everyday life situations?
- One of my participants said that critical thinking can be about being critical rather than limiting it to the idea of merely thinking critically. She said that by the act of being silent may show a kind of criticality. What do you think?

Salwa:

- You said that your experience of studying in HE was based on lectures and knowledge transmission from the teacher to the students, what does this experience of studying in HE in Algeria have to say about your critical thinking?
- There is one participant who told me that language can have an influence on her critical thinking. What is your opinion?
- From your experience, what do you think influenced you to develop your critical thinking? What is your experience of developing your way of thinking critically either in academia or in everyday life situations?
- What was your experience in terms of criticality when coming to the UK?

2-Second Round of Interview Questions

Similar Questions to the participants

- Would you please walk me through your academic experience of studying in higher education in terms of the teaching and the learning process and how this experience has contributed to your learning?
- Can you think of a situation where you used critical thinking and tell me about it?
- How do you perceive critical thinking? How do you define it?
- How do you think you developed critical thinking? What do you think helped you to develop this criticality either in everyday life or in academia?

Warda:

- Two participants told me that when they came to the UK, they faced difficulties in terms of criticality especially in their writing. They said that when submitting a work, their supervisor always comments on the lack of criticality, critical analysis and personal voice in their work. They said that it does not mean that they are not critical, what do you think might be the problem?

Lamia:

- Would you please comment from your own perspective on the following idea “critical thinking is a skill that you develop in academic settings such as schools or university to use in everyday life or the other way around”. For example, you develop it in academic setting then you use it in everyday life, or the contrary you learn it from everyday life, then you use it in academic settings, or it is both?

Walid:

- There are two participants who said that when coming to the UK, they encountered difficulties in terms of criticality in their writing, each time they submit a work, the supervisor comments on the lack of personal voice and the mere reporting of what other authors said, would you please comment on this and tell me what do you think?

Sabrina:

- Would you please tell me about the transition period of coming here to the UK especially in relation to critical thinking?