Thinking Culturally About Critical Thinking In Cambodia

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Abstract

There is concern in Western, English-speaking universities about the ability of students from some Asian countries to think critically. This concern is often related to students' lack of participation in class discussion. The association of questioning, discussion and debate in Western approaches to critical thinking adds to this perception, and lends itself to the stereotype of the 'passive Asian student.' Research suggests however that there are more diverse factors than a lack of ability to show critical thinking during classroom discussion. Student second language acquisition and confidence in speaking are important, as well as the language used by lecturers and the speed at which it is spoken. Cultural context also plays a part, and students studying in another country may struggle to understand unfamiliar discussion topics or examples. Different cultural understandings of the role of the lecturer, authority and appropriate classroom behaviour are also factors which may lead to international student's reluctance to speak in class.

My research took place in a Cambodian university, with Cambodian students and a teacher from the UK. It began with a question – How do Cambodian students experience courses aimed at developing Western style critical thinking skills? I then focused on three themes: the relationship between cultural context and critical thinking; the relationship between classroom participation and critical thinking; and the improvement of teaching and learning critical thinking through better understanding of those relationships. I created a 'community of critical thinkers' in the classroom. This involved asking 'thought-encouraging' questions in class and techniques such as small group discussion where students were allowed to code-switch between languages in a controlled fashion. Students were encouraged to apply critical thinking to their own culture and society and share examples which could be used for teaching later classes. We also compared Western approaches to critical thinking with a Buddhist approach.

The research focused on the experiences of teaching and learning critical thinking for both teacher and students. A methodology based on ethnology and grounded theory was utilised to collect and analyse data. My results show that given a familiar cultural context, in classes tailored to their level of English language acquisition, students participated in classroom discussion in similar, but not identical ways to their English-

speaking, Western counterparts. Likewise a lack of participation did not necessarily lead to lower marks; a propensity for speaking in class was not always related to receiving a higher mark. I recommend further exploration of different cultural approaches to critical thinking in the classroom, and a re-examination of attitudes towards participation. Not speaking in class can be the result of a range of complex factors and does not mean that students are not engaged in the process of learning. I further suggest the inclusion of different cultural applications of critical thinking when teaching can be beneficial for teachers and both international and national students.

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Chapter One
Introduction

1.1 Research Rationale and Methodology

This thesis is about teaching and learning critical thinking and how this may be affected by culture. The research was carried out in a Cambodian university by a British teacher, and explored how Cambodian students experienced learning 'Western style' critical thinking. There are debates about whether Asian students are less capable of doing critical thinking than their Western counterparts. For those who think they are less capable, this has been linked to cultural and societal roles and practices (Ramanathan and Kaplan, 1996, Fox, 1994), the role of the individual in society (Atkinson, 1997), differences between 'analytic thinking' and 'holistic thinking' (Nisbett, 2003), and attitudes towards conserving or extending knowledge (Ballard and Clanchy 1991). Alternatively, Chan and Yan (2008) claim that although people may think differently, this does not necessarily mean that they cannot think logically or critically. Others suggest that it is language proficiency (Lun *et al.*, 2010), or previous educational environments (Manalo *et al.*, 2013), that influence students' use of critical thinking. The notion that all Asian students are less capable of learning critical thinking than all Western students is clearly problematic, as are the terms Asian and Western. When researchers in this field refer to 'Asian students' they are usually referring to East Asian students, and in particular those coming from the Confucian Heritage countries of China, Japan and Korea. Sometimes 'Asian students' also includes those from South Asian and South East Asian countries such as India, Malaysia, Indonesia and Singapore. The term 'Western' usually refers to students from English-speaking democracies such as the USA, the UK, Australia and New Zealand. I return in more detail to the usage of these terms in Chapter Two, (2.3, p.28).

According to Durkin, within debates about critical thinking there is generally agreement that 'all humans are capable of higher order cognitive skills,' but there is disagreement

about ‘how thoughts are *expressed* in the context of a diversity of cultures and across gender’ (2008, p.42). I assumed that my Cambodian students were capable of learning how to think critically, if I thought that they were incapable it would make no sense to teach them. However, given that I was teaching in a different culture, I wanted to research how cultural values and differences might impact on teaching and learning critical thinking, for both students and teacher.

What exactly critical thinking *is*, continues to be debated. Western approaches have their roots in Ancient Greece via the Socratic Method, and in more recent times in the scientific method, as advocated by Dewey (1933). Walters categorises critical thinking into two waves; the ‘first wave’ generally involves definitions based on ‘logical argumentation’ including ‘inductive and deductive reasoning, fallacy recognition, quantitative and statistical calculation, evidence assessment and problem solving’ (1994, p.4). The ‘second wave’ adds a further human and sometimes moral dimension which ‘seeks in short, to provide a model of critical thinking that takes into account the embodied, historical, and multiconnotated nature of human thought and discourse’ (1994, p.18). My teaching was based primarily on the definition from the course textbook. This was a ‘first wave’ definition, which included cognitive skills such as identifying, analysing and evaluating arguments and truth claims, intellectual dispositions such as overcoming personal prejudices and making ‘reasonable intelligent decisions about what to believe and what to do’ (Bassham *et al*. 2007, p.1). While I see the value in ‘second wave’ definitions, I did not want to impose any particular moral, political or cultural values on my students. That is not to say that morals or politics or personal experiences did not arise in class, but they came up spontaneously during class discussion. While the textbook definition was the mainstay of our understanding of critical thinking, a student also introduced me to a Buddhist version; the *Kalama Sutta*. Here Buddha tells us not to believe anything we are told without applying analysis and reason, including what our ‘teachers and elders’ tell us. Exploring the similarities and differences between these two definitions was a welcome addition to our discussions about critical thinking. Definitions of critical thinking are discussed in more detail below (2.2, p.12).

In some debates about teaching critical thinking, the Socratic method of dialogue and discussion seems to have become conflated with ‘first wave’ definitions, whereby

participating in class discussion and 'doing' critical thinking are one and the same. According to Lun *et al.* (2010, p.604), there is a perception in some Western universities that 'Asian students do not naturally take part in critical thinking because they do not overtly participate in classroom discussions.' This stereotype of the 'quiet Asian student' bears investigation. In the field of Intercultural Communication, East and South East Asian countries are often categorised as 'collectivist' and English-speaking Western countries as 'individualist' (Hofstede, 1986). When these categories are applied to education, they suggest different approaches to knowledge acquisition, the role of the teacher and student participation in the classroom. For example, it is claimed that respect for the teacher's authority is stronger in collectivist countries (Ming Zhang, 2002, p.27). My students were learning in a second language, and this has been shown to impact on students' ability to perform cognitive tasks and think critically (Lun *et al.,* 2010, Manalo *et al*., 2013). Low level of second language acquisition can also lead to a lack of confidence in speaking out in the classroom, (Robertson *et al*., 2000, Liu and Littlewood, 1997). I return to these issues in Chapter Two (2.4, p.31).

My research focused on the experiences of teaching and learning critical thinking for both teacher and students, with myself in an 'insider/outsider' role as teacher and researcher. The research is positioned within sociocultural approaches which 'emphasize the interdependence of social and individual processes in the coconstruction of knowledge' and are 'based on the concept that human activities take place in cultural contexts […] mediated by language and other symbol systems' (John-Steiner and Mahn, 1996, p.191). In short, 'all thinking is essentially social in nature' (Winbourne, 2015, p.23). The acquisition of knowledge, teaching and learning are all culturally situated, and this includes teaching and learning critical thinking. The research drew on two methodologies; ethnography and grounded theory. I used classroom observation, surveys and examples of students work to collect data which was analysed using grounded theory. Research quality is discussed in terms of Lincoln and Guba's (1985) naturalistic criteria, and I examine in detail ethical and cultural issues affecting the research.

1.2 Overview of Cultural and Educational Context

As is well documented the Cambodian education system was devastated by the Khmer Rouge regime (1975-1979). It is estimated that between 1.5 and 2 million people died in this period; nearly a quarter of the population. According to Benveniste *et al*. (2008, p.3), this included '75 percent of teachers, 96 percent of university students and 67 percent of all primary and secondary school pupils.' School buildings were abandoned and 'few books remained' (ibid). Recovery has taken some time, however, according to the Cambodia Education for All 2015 National Review Report 'by school year 2012-2013 almost all teachers at all educational levels were qualified' (2014, p.43). The percentage of children completing primary school in the school year 2004-05 was 46.80% but increased to 87.35% by 2012-13 (2014, p.11). 76.8% of students transitioned from primary to lower secondary school in 2012-13 (2014, p.16) and 70.2% from lower secondary to upper secondary (2014, p.17). There are still challenges; children drop out of school in order to enter the labour market, or because their parents move or emigrate to find work, and there continue to be problems related to poverty and malnutrition (2014, p.54). According to Khieng *et al.* (2015, p.32) in the academic year 2012/13, only '22.7 percent completed upper secondary education.' This impacts in turn on the number of students who go on to higher education.

A low number of students going on to higher education has led to a skills gap, and there is a perception in Cambodia that one of the skills that Cambodian students lack is critical thinking. According to the Cambodia Daily newspaper (22/07/2010), employers found that new graduates were 'sorely lacking in key abilities such as critical thinking' and 'are not used to participating and thinking for themselves.' This is not confined to Cambodia. In the USA 'a survey of business owners […] found that nine out of ten employers judge recent college graduates as poorly prepared for the work force in such areas as critical thinking, communication and problem solving' (The Wall Street Journal,16/01/2015). The Cambodian Ministry of Education, Youth and Sport (MOEYS) Education Strategic Plan for 2014 to 2018, states that a 'major challenge for the coming years will be to address the mismatch between the needs of the labor market in terms of skills, critical thinking ability and knowledge and the current products on the market' (2014, p.35). This will be done by developing a curriculum focused on 'analytical skills, problem solving, group work, communication etc.' (2014, p.37). In

order to accommodate this, some universities have begun to offer courses in critical thinking.

There are many universities in Cambodia, most of them privately owned and run. According to Strangio ‘a majority of tertiary institutions are private and unregulated. There are frequently shortages of computers, libraries are badly stocked and students lack access to important online resources such as academic journals’ (2014, p.147). This was definitely the case at the university where my research was carried out. The main shareholder at the time ran the university to make a profit and had little interest in the quality of education. Teachers were given a syllabus and textbooks to teach the courses, but they wrote their own exams and there were no internal checks in place to see that they were at the same standard. Some of my colleagues gave only multiple choice question exams, even for final year students. The library was very small with few books and no access to online libraries or journals, making it difficult for students to do research.

There is evidence to show that critical thinking can be learned. Halpern cites research from the UK, the USA, Venezuela, and the Netherlands which show that explicit instruction in critical thinking is successful (2014, pp.14-16). According to Bucy (2006, p.222) it is ‘widely accepted that the development of critical thinking skills in students is a top goal of higher education.’ Dwyer *et al*. (2014, p.688) agree that teaching critical thinking is ‘a core area of instruction […] because it endows students with the capability to reason not only academically, but also in social and interpersonal contexts.’ Yang and Gamble suggest that in ‘an age of information overload, twenty-first century learners require the ability to evaluate multiple sources of information, judge the usefulness and reliability of its content, and make decisions about what to believe: abilities classified as critical thinking (CT) skills’ (2013, p.398). There are many good reasons to learn how to think critically in an age of increasing information technology. As Halpern puts it, the ‘twin abilities of knowing how to learn and knowing how to think clearly about the rapidly proliferating information that we must select from are the most important intellectual skills for the 21st century’ (2014, p.3).

Osborn (2004, p.265) states that ‘in recent years there has been a growing tendency to ‘borrow’ educational policies and practices from one national setting where they appear to be effective and to attempt to transplant these into another, with little regard

for the potential significance of the cultural context into which they will be imported.' The syllabus and textbook I was given to teach a class in Logic and Critical Thinking were from the United States of America. Many of the examples used were difficult for us to understand without relevant cultural knowledge of politics, sport or economics in the USA. The equivalent would be teaching a class of students from the UK critical thinking using examples set in rice paddies, involving fortune tellers, ghosts, arranged marriages, trafficking and child labour. Stapleton (2001) found that using familiar contexts and examples in the classroom improved students' skills in critical thinking. This research describes the process of finding examples that my students could understand, and how I used those examples in the classroom.

1.3 Main Research Aim and Questions

The research began with a question - How do Cambodian students experience courses aimed at developing Western style critical thinking skills? From my reading for the literature review this question became focused on three areas; the importance of cultural context when teaching and learning critical thinking, the connection between 'doing' critical thinking and classroom participation, and how knowledge about these might help to improve teaching critical thinking in a cross-cultural situation.

Main Research Aim

How do Cambodian students experience courses aimed at developing Western style critical thinking skills?

Research Questions

1. How do cultural issues such as differences between collectivist and individualist societies, affect the teaching and learning of critical thinking in a Cambodian classroom?

2. Given a familiar cultural context will Cambodian students participate in classroom discussion, and how will this affect their overall marks for the course?

3. How can knowledge of the above be used to improve teaching and learning critical thinking?

1.4 Structure of Thesis

Chapter Two explores definitions of critical thinking and literature related to culture and critical thinking. This includes research into the relationship between classroom participation and critical thinking. Research discourses that encourage the framing of questions about critical thinking in terms of ethnicity are also discussed, and cross-cultural teaching techniques are explored. Chapter Three details the research methodologies, methods, and ethical issues arising from the methodologies and the cross-cultural nature of the research. Chapter Four gives details of the findings of my research and shows that given a relevant cultural context, students participated in classroom discussion and were able to apply critical thinking to their lives and society. I also discuss approaches to teaching critical thinking in a cross-cultural environment, and describe the techniques that I found to be successful. The final chapter summarises the research and recommends further consideration of different cultural expressions of critical thinking, cultural context and the incorporation of these into teaching and learning.

Chapter Two
Literature Review

2.1 Introduction

In order to situate the research within debates in different fields concerned with critical thinking, this literature review covers four areas: definitions of critical thinking; the relationship between critical thinking and culture; perceptions of Asian students and their ability to do critical thinking; and finally teaching and learning critical thinking. The second section positions the research within debates about what academic field critical thinking inhabits, definitions of critical thinking and what it means to be a critical thinker. I begin with an overview of Western approaches. The term 'Western' here, and throughout this thesis, refers to English speaking democracies such as the UK, the USA, Australia and New Zealand. Finally, I discuss the definitions I used in the classroom and my reasons for doing so.

The research is also situated in debates about the relationship between culture and critical thinking. The third section explores research from three fields; teaching English as a Second Language (ESL), Intercultural Communication Theory, and Social Psychology. Debates about critical thinking in ESL arose when teachers began researching and writing about difficulties experienced by some international students in adapting to Western style writing and composition (Atkinson 1997; Ramanathan and Kaplan 1996; Fox, 1994). Intercultural communication theory often categorises people into collectivist and individualist societies (Hofstede, 1986). I explore similarities and differences between Confucian Heritage countries such as China and South Korea, and countries like Cambodia with a Theravada Buddhist tradition. The third field is Social Psychology; most relevant here is research which focuses on cognitive and reasoning processes in culturally different groups of people. The rationale and ethics of grouping people according to their geography or culture is also examined at the end of this section.

The fourth section is concerned with research into Asian students and critical thinking, which has been carried out mainly in Western, English-speaking universities with students from Confucian Heritage countries. I also consider the role that learning in a second language has to play. There is at the time of writing no research on this topic available on Cambodian students in Cambodian universities. This research was also an attempt to explore cross-cultural understandings of critical thinking, and thereby improve the teaching and learning of it. The fifth section returns to intercultural theories regarding education in collectivist and individualist countries, and the implications for teaching in Cambodia. I then explore attitudes towards education and teachers in Cambodia, and compare them with attitudes in the more widely studied Confucian Heritage countries, highlighted in the previous section. In the light of all this, I consider research into methods and techniques of improving the teaching and learning of critical thinking.

2.2 Defining Critical Thinking

Questions regarding definitions of critical thinking, what constitutes 'doing' critical thinking, and how one becomes a critical thinker are discussed by academics in a variety of disciplines. In which discipline critical thinking lies is also debated. According to Lipman 'some versions of critical thinking may seem to be best placed under the rubric of applied philosophy.' This is when philosophy is applied to a field such as education, 'for the purpose of producing students with improved proficiency in reasoning and judgement' (Lipman, 2003, p.43). Lipman put critical thinking firmly in the field of philosophy when he started the Philosophy for Children Movement in the 1970s. He states that 'the disappointing academic performance of a great many students is connected with a shortfall in cognitive skills' and recommends it is 'to philosophy that the major responsibility for the improvement of reasoning should be trusted' (1984, p.51). This is because philosophy is 'the only discipline to provide the criteria – the principles of logic – that make it possible to distinguish better reasoning from worse' (ibid). The relationship of critical thinking to philosophy is an interesting

one; it is debatable whether ‘doing’ critical thinking is the same as ‘doing’ philosophy. Pecorino for example, argues that a rise in critical thinking courses ‘can be attributed to the steady decline in the level of proficiency in the basic communication skills’ (1987, p.142) and that critical thinking courses are not, and should not be a replacement for philosophy courses.

Whether one decides that critical thinking comes under the umbrella of philosophy or communication skills, there is also the question of whether it should be taught as a stand-alone subject, or within a particular discipline or subject area. There is a viewpoint that critical thinking cannot be taught outside of a particular subject, that is to say it must be discipline-specific, and moreover that the learner needs to have a thorough knowledge of that subject and discipline. This position is laid out by McPeck in his 1981 book *Critical Thinking and Education*. McPeck’s position is summed up by Mason thus - ‘His point is that it’s difficult to be a critical thinker in the domain of nuclear physics if one knows very little about [nuclear physics]’ (2007, p.341). Ennis (1992) on the other hand, thinks that critical thinking skills can be learned independently and are transferable to other disciplines, although you need some competence in a discipline before you can apply them to it (cited in Mason, 2007, p.341). Lipman suggests that we need both ‘an independent course in critical thinking and infusion and reinforcement of critical thinking in the separate disciplines’ (2003, p.70). Lipman’s option seems the better one in situations like mine where students may have no previous experience of Western style critical thinking, although while critical thinking was taught (by me) as a subject in itself, I do not know if it was reinforced in other disciplines.

Whether critical thinking is taught as an individual subject or within a discipline, one of the first things to think about for both students and teachers is the definition of the term. Peace suggests that critical thinking ‘is defined more by what it is not than what it is. It is not rote memorization of dates, facts and events’ (2010, p.261). While this may be true for educators like Peace who teaches history, critical thinking is not so easily defined when one considers it alone.

Western critical thinking has its roots in Ancient Greece with Socrates and the Socratic Method; a way of teaching that attempts to reach the truth through question and answer. This is shown in the dialogue with Meno when Socrates questions a boy until he understands a mathematical problem, or rather ‘uncovers’ the answer. For

Socrates knowledge is innate, we are born with it and only need to be 'reminded' to bring out what is already within us (Plato, trans. 1956, p.130). This association of critical thinking with dialogue, discussion and questioning is something that continues to this day in Western thought, for example in Paul's (1982) championing of 'dialogic reasoning' (see below, p.15). In modern times the resurgence of interest in critical thinking can be traced to John Dewey, who in 1933 declared that 'learning to think' is the purpose of education (Halpern, 2014, p.10). Dewey thought that classrooms ought to be places of inquiry and investigation where students could try to work things out for themselves, rather than being told what the result or solution should be. This would result in the students learning to think for themselves. The model he proposed to facilitate this was the scientific method (Lipman, 2003, p.20). While the scientific method is a good starting point, and it formed part of the syllabus for my classes, it does not allow for value-based issues such as the need to consider one's own biases, for example, and reflect on them before making a decision. Neither does it allow for cultural differences which may also play a part in the decision-making process. However, as can be seen from the following definitions, Dewey's ideas have an enduring influence.

Definitions that Walters (1994) categorises as 'first wave' are mainly concerned with thinking skills and cognitive processes (see above, p.5). In 2000, Fischer and Spiker carried out a review of critical thinking literature and found that most definitions of critical thinking in use at the time included 'reasoning/logic, judgment, metacognition, reflection, questioning and mental processes' (cited in Halpern, 2014, p.8). Scriven and Paul's (2003) definition is an example of this:

> Critical thinking is the intellectually disciplined process of actively and skilfully conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from or generated by observation, experience, reflection, reasoning or communication, as a guide to belief or action (cited in Petress, 2004, p.463).

A decade later, a definition from Dwyer *et al*. (2014, p.687) is in a similar vein:

> Critical thinking is a metacognitive process, consisting of a number of sub-skills and dispositions, that, when used appropriately increases

> the chances of producing a logical solution to a problem or a valid conclusion to an argument.

The ‘sub-skills and dispositions’ that Dwyer *et al*. refer to are based mainly on the Delphi Report (Facione, 1990), 'which indicated that analysis, evaluation and inference' are the core skills needed’ (2014, p.688). Paton (2005, p.2), points out that the Delphi Report definition ‘compiled by an expert panel from a variety of disciplines’ is ‘very much in the realm of […] what would be considered to be ‘western’ scientific thinking.’ Dwyer *et al*. add reflective judgment to the Delphi core skills and state that this kind of reflection often means that critical thinkers ‘consider multiple, alternative solutions’ (2014, p.691). I would add that the choice that we finally make from a list of alternative solutions may well be different for people living in different cultures. Once having chosen from alternative solutions we must also be aware that new evidence obtained at a later date may create the need to change a judgment, solution or decision (Dwyer *et al*. p.691). Moreover, the ability to consider evidence that contradicts something we may have previously believed to be true is linked to an ability to reflect on ourselves as an individual, and as the product of a particular culture, place and time (ibid).

The consideration of our own positions, assumptions and world-views is what makes us a ‘strong’ critical thinker according to Paul (1982). If we are a ‘weak’ critical thinker we consider only the positions of others and forget to put ourselves into the picture (1992, p.162). Mason (2007, p.341), describes Paul’s position as one in which ‘dialogue with others who are different, who have different worldviews and *cultural backgrounds*, is an essential feature of critical thinking’ (my italics). In fact doing critical thinking in such a way is, according to Paul, ‘our only defense against closemindedness’ (1992, p.180).

Ennis (2011, p.1) also focuses on critical thinking as providing us with solutions. He gives a pithy definition - 'critical thinking is reasonable and reflective thinking focused on deciding what to believe or do.’ An emphasis on the outcome of critical thinking is also at the heart of Halpern’s definition:

> Critical thinking is the use of those cognitive skills or strategies that increase the probability of a desirable outcome. […]. Decisions as to which outcomes should be desirable are embedded in a system of

> values and may differ from person-to-person, but the idea that critical thinking makes desirable outcomes more likely provides a way of defining critical thinking (2014, p.8).

There was a problem for me in thinking about critical thinking in terms of outcomes as I worked with my Cambodian students; it was not clear to me that what I considered a desirable outcome was the same as what they considered desirable. Desirable is a value-laden term and while Halpern accepts that these 'desirable outcomes' may differ from person to person, in different value systems, and by implication different cultures, it must be considered that a desirable result for me, may be harmful to someone else. Moreover, after thinking critically it may become clear that something I find undesirable may be the right course of action, especially if I consider other people to have equal importance to myself. For example, if I am being forced to marry against my will, and a common outcome of refusing such a marriage is to bring shame or exile on my family, I may well obey and suffer the marriage. The result can hardly be called desirable for me, although it could be considered desirable for my family, or community. Desirable outcomes may be related to what kind of culture we live in; in a collectivist culture the desirable outcome for our family or community may well trump a desirable outcome for ourselves.

While we may have the ability to ponder a variety of solutions to a problem or possible decisions to be made, we also need to want to do so. As Dwyer *et al.* put it, (2014, p. 692) 'it is insufficient for students to only *know how* to think critically – they must also want to think critically.' That is to say they must cultivate a critical thinking disposition, a further common addition to critical thinking definitions. In some definitions this is referred to as an attitude or character. Siegel (1990, p.39) for example, thinks that a critical thinker 'has a certain character as well as certain skills; a character which is inclined to seek, and to base judgment and action upon, reasons.' For Siegel, there is a strong connection between critical thinking and rationality, to do critical thinking means to believe and act upon reasons, and rationality is universal, something that all humans are capable of.

Ennis' work can be seen as a bridge between first and second wave definitions. To first wave thinking skills he adds dispositions such as caring that one's beliefs are true, considering others' points of view, reflecting on one's beliefs, and caring about every

person (2011, pp.1-2). The latter means not confusing other people, being aware of their level of understanding and being concerned for their feelings and welfare 'because critical thinking can be dangerous' if we are not caring(2011, p.2). This 'human' element is developed further by 'second wave' critical thinkers.

While first wave critical thinking focuses ‘on the canons of logical analysis’ (Walters, 1994, p.4), the second wave invites ‘a radical rethinking of what it means to be a reasonable, thoughtful person’ (Phelan, 2001, p.42). Phelan introduces ‘practical wisdom’ as an alternative, as first wave critical thinking is limited in its ability to respond to practical issues such as ‘the death of a child' or 'political conflict' (ibid). Martin (1992) suggests that critical thinking ought to be motivated by concern for a just and humane world, which can be achieved by engaging with others (cited in Mason, 2007, p.343). First wave critical thinking, she suggests, may lead us to a conclusion that may not be morally acceptable, and therefore we need a moral aspect to the process. My students also considered this point when they brought up the Khmer Rouge regime in class, and discussed whether Pol Pot thought he was doing critical thinking. However, this moral aspect is not quite as straightforward as one may wish; what one person feels is a ‘just and humane’ society another may not. For example, I may feel that acceptance of voluntary euthanasia is a good criterion for judging a society humane, while others may think it is the opposite. Moreover, moral judgments like this are often related to the values prevalent in our culture. Definitions like this are related to common debates in the philosophical field of ethics, and suggest that some aspects of critical thinking belong in that discipline rather than within communication skills.

Thayer-Bacon also extends the definition of critical thinking; she calls her version ‘constructive thinking’ which ‘stresses the impossibility of separating the self from the object, the knower from the known’ (2001, p.5). She accepts the influence of culture and politics on the process of creating knowledge, and argues the need to ‘embrace a democratic commitment’ so that we all have ‘equal opportunities to contribute to the constructing of knowledge’ (2001, p.11). This she feels is best done in a ‘radical democratic community-always-in-the-making’ which ‘makes room for underscoring the political, ethical, and educational dimensions of thinking constructively’ (2001, p.23). Similarly Kuhn (2005) argues that ‘teaching for the enhancement of higher order thinking skills is essential for equipping students to participate in and contribute to

modern democratic societies' (cited in Barak and Dori, 2009, p.461). Moves such as these seem to me again to be philosophical ones, this time in the field of political philosophy. I am unsure if such definitions would be appropriate in all situations; not everyone lives in a democracy, nor is it indubitable that democracy is the best way for communities and individuals to thrive. However, it is good to be reminded of the roles that culture and politics play in knowledge acquisition. Knowledge is not something we gain alone, but is rather constructed in communities, whether we as individuals take part in that construction or are excluded. A classroom is also a 'community' and teaching critical thinking can and should take this into account.

Second wave thinkers have sought to put the thinker her/himself back into critical thinking, as critical thinking does not happen in a vacuum but is carried out by a person who is situated geographically, historically, politically, culturally etc. While I agree that all these things may influence the way that we think, and believe the relationship of critical thinking and culture in particular ought to be explored further, I am uncomfortable with some elements of second wave critical thinking definitions. While it is important to remember that we are all geographically and culturally situated, it is also important that we do not make assumptions about what we think the results of critical thinking ought to be. While we may agree that the result ought to be a 'desirable' outcome, we need also to be aware that a 'desirable' outcome may well differ from culture to culture. However, incorporating ideas of caring and respect for each other can help us to think about the effects of doing critical thinking on others, and not just ourselves. In this sense, doing critical thinking can be seen as something that may happen differently in non-Western societies where there is a more collective slant, and a desirable outcome may be one that is desirable for our family, or our society and not just for ourselves.

Literature that examines different cultural approaches to critical thinking often suggests that in fact, other cultures have similar approaches to Western definitions of critical thinking. Paton for example, claims that 'there has been a propensity for critical thought in Chinese culture for at least the last thousand years' (2005, p.4). His definition of critical thought is closely related to the scientific method, and therefore first wave definitions. Chi-Ming Lam (2014) also argues that Confucianism is not less rational than Western styles of critical thinking. The textbooks and guides to critical

thinking that I read for this review of literature were all written in English for an English-speaking audience, so there is an inevitable bias. Without exception they all gave a 'first wave' definition of critical thinking (Boostrom, 1992, Cottrell, 2005, Van Den Brink-Budgen, 2010, Salmon, 2007, Deane and Borg, 2011, Ruggiero, 1996, Diestler 1994, Paul and Elder, 2014, Halpern, 2014). Only two of them mentioned culture. Diestler (1994) uses articles about Asian-Americans and a Mexican student studying in the USA to discuss assumptions related to culture. Paul and Elder discuss cultural associations and assumptions which if 'remain unexamined, unduly influence our thinking and behaviour.' (2014, p.370) They also discuss cultural relativism, and ethical practices (2014, p.278). None of the above books used a 'second wave' definition. The textbook for the course at my Cambodian university also used a purely Western first wave definition:

> More precisely, **critical thinking** is the general term given to a wide range of cognitive skills and intellectual dispositions needed to effectively identify, analyze, and evaluate arguments and truth claims; to discover and overcome personal prejudices and biases; to formulate and present convincing reasons in support of conclusions; and to make reasonable intelligent decisions about what to believe and what to do' (Bassham *et al.* 2007, p.1).

The textbook was the only book on critical thinking available to students in the university library and in class, and for this reason I decided to begin with this definition. The students' level of English was lower than I had expected and I thought it would take some time for them to comprehend the meaning of the various words, and then the definition as a whole. I worried that I might confuse them if I introduced them to too many new concepts at once. I was also wary of introducing second wave definitions, as I did not want to impose my value system on my students. In the event students brought up questions of morality and critical thinking themselves, without any prompting from me. They also introduced me to another definition of critical thinking, which I then incorporated into my classes. This was the Kalama Sutta of Buddha, (translation in O'Leary and Nee, 2001, p.i):

Kalama Sutta

Do not believe in anything (simply) because you have heard it
Do not believe in traditions because they have been handed down for many generations
Do not believe in anything because it is spoken and rumoured by many
Do not believe in anything (simply) because it is found written in your religious books
Do not believe in anything merely on the authority of your teachers and elders
But after observation and analysis when you find that anything agrees with reason and is conducive to the good and benefit of one and all
Then accept it and live up to it

We discussed and compared this definition with the textbook definition at the beginning of each course. The *Kalama Sutta* tells us not just to believe what we are told, but to look for evidence and use reason and analysis to think for ourselves. This was not dissimilar to our textbook definition. However, the most salient difference between this definition and a 'first wave' Western one is that we should use our reason to decide what is for the 'good and benefit of *one and all*' (my italics). This has some resonance with Ennis' (2011) critical thinking dispositions (see above, 2.2, p.16), which suggest that we should have consideration for others. When we do critical thinking using a 'first wave' approach, we start from the point of view of an individual who is considering what to do. This individual may, or may not, consider the effect their decisions or actions may have on other people. The Kalama Sutta however, tells us that we *must* consider the well-being of others when doing critical thinking, and that our decision must benefit everyone, not just ourselves. Our decision-making process starts from the perspective not of 'me' but of 'us.' A definition which is perhaps more suited to collective societies. I discuss our use of definitions in the classroom further in Chapter Four (4.3, p.83).

2.3 Critical Thinking and Culture

There are debates in various fields about whether critical thinking can be learned, as well as about what factors, including culture, influence learning. Researchers in the field of teaching English as a second language (ESL) generated a vigorous debate when they published papers about students who they felt were having problems thinking critically. Atkinson (1997) for example, believes that critical thinking is difficult for Asian students because unlike Western students, they do not learn it naturally and subconsciously from their culture. Critical thinking he suggests 'may be more on the order of a non-overt social practice than a well-defined and teachable pedagogical set of behaviors' and even if it is taught, it 'does not transfer effectively' beyond the context in which it was taught (1997, p.71). Similarly Ramanathan and Kaplan (1996, p.232), claim that 'given their respective socio-cultural and linguistic socialization practices' ESL learners are more likely 'to encounter difficulty when being inducted into CT [sic] courses.' Fox writes sympathetically about working with international students identified as having problems with analytical writing. After some time she 'became convinced that it is the ways students have learned to see the world, to see social relations and identity and the negotiation of social roles, that affect the way they express themselves, both in speaking and in writing' (1994, p. xix). Atkinson (1997) suggests that critical thinking in the West is underpinned by a view of the individual as an independent entity. This means that non-Western students struggle to learn Western style critical thinking (cited in Oda, 2008, p.148). This resonates with Hofstede's categories of individualism/collectivism.

Intercultural Communication Theory grew out of the need 'to apply abstract anthropological concepts to the practical world of foreign service diplomats' in the USA in the years after the second world war (Leeds-Hurwitz, 2014, p.18). It centres on 'the actual communication process between representatives of different cultures' (Hall and Whyte, 1960, p.12). Hofstede's seminal work in this field on cultural difference carried out in 1984, remains useful. Hofstede's cultural dimensions of power-distance tolerance and collectivism/individualism were helpful in trying to understand my students' culture, and are the two dimensions that 'tend to distinguish wealthy, industrialized societies from poor, traditional ones' (1986, p.310). Hofstede describes individualism/collectivism as the following:

> Individualist cultures assume that any person looks primarily after his/her own interest and the interest of his/her immediate family (husband, wife, and children). Collectivist cultures assume that any person through birth and possible later events belongs to one or more tight "in-groups," from which he/she cannot detach him/herself. The "in-group" (whether extended family, clan, or organization) protects the interest of its members, but in turn expects their permanent loyalty. A collectivist society is tightly integrated; an individualist society is loosely integrated (1986, p.307).

Although Cambodia was not one of the countries that Hofstede included in his original study, Blunt and Turner describe Cambodia as 'high collectivism':

> High value [is] given to the needs and interests of the group over the individual. Extended family relations and obligations to kin and ethnic affiliates take precedence over organisational interests. The idea of the 'common good' is defined and understood primarily in terms of kinship (2005, p.78).

Hofstede's power-distance dimension 'defines the extent to which the less powerful persons in society accept inequality in power and consider it normal. Inequality exists in any culture, but the degree of it that is tolerated varies between one culture and another' (1986, p.307).

Hofstede's original framework was criticised for its Western European bias, and in response Chinese researchers created a more Asian-oriented questionnaire that included Confucian-based ideas. This was given to people from 22 different countries (Chinese Culture Connection, 1987). They concluded that Hofstede's dimensions of collectivism/individualism, power-distance tolerance and masculinity/femininity seem to be universal (cited in Martin and Nakagawa, 2010, p.105). The idea of 'Asian values' as opposed to 'Western values' is sometimes used to suggest that Asian countries have something in common, and that something is different to what Western countries have in common. According to Han (2007, p.386), this term was first used by academics in the 1970s and then 'adopted' by politicians in the 1990s to 'articulate forms of values and democracy as a challenge to Western ideology.' These values

were said to be formed from a wide range of Asian traditions and philosophies 'from Confucianism to Islam' (2007, p.386). These values are contested however, and Han concludes ultimately that there does not exist in Asia 'a well-defined set of values, and nor is there any consensus on these' (2007, p.388). Chan (1993) suggests that there are some commonalities, including a 'communitarian sense which teaches that the individual is important as part of a group or society rather than the notion that the individual is the centrepiece of democracy' and 'a greater acceptance of and respect for authority and hierarchy' (cited in Han, 2007, p.388).

If there are commonalities between some Asian countries, there are also differences. For example, Courtney (2012, p.189) states that in Cambodia 'the goal' of Theravada Buddhism is 'to gain enlightenment' while 'the goal of Confucianism […] is often seen as achieving social harmony.' Tan writes that according to Morris (2000) 'Cambodian culture is more individualistic compared to other Asian countries due to Buddhist ideas of individual responsibility for sin and salvation' (2008, p.565). However, as Tan points out this kind of individualism related to spirituality should not be confused with individuality that focuses on rights and political freedoms (ibid). As she puts it, 'individuality in Cambodia exists side by side with the principles of collectivism and harmony' (ibid). The maintenance of social harmony is important in Cambodia, where it is linked to the need to know one's place in the hierarchy. Blunt and Turner note that in Cambodia 'hierarchy is a dominant organisational principle with a long history' (2005, p.78), while Ovesen (1996) describes hierarchy as 'the all-pervasive guiding principle for Khmer social life' (cited in O'Leary and Nee, 2001, p.48). O'Leary and Nee state that everyone 'knows or needs to know their place, relative to others' and that to find that place various indicators of status are used (2001, p.48). According to Ovesen (1996) one's status is 'determined as the sum of a number of dimensions including – apart from chronological age - gender, wealth, knowledge, reputation of the family, political position, employment, the character of the individual, and religious piety' (cited in O'Leary and Nee, 2001, p.48). I return to the question of hierarchy and the ethical implications for my research in Chapter Three (3.5, p.**Error! Bookmark not defined.**), and again in relation to how my students felt about it in Chapter Four (4.4, p. 92).

Fox suggests that the differences in communication that she identified in her international students are connected to differences between collectivist and individualist societies:

> This issue is not about intelligence, not about correctness. It has to do with something deeper and more fundamental, something to do with values and how one conceives of oneself as a human being. Of course, the experience of individualism is not totally foreign to collectivist ways of thinking, for feeling part of a harmonious group and feeling like a separate individual are both worldwide human experiences; it is the *emphasis* that is different, and that emphasis, that difference in perception of what is most valued, results in an entirely different look and feel to the world (1994, p.37).

This emphasis on how one primarily conceives of oneself, as an individual or as a member of a harmonious group, may impact on the decisions we make, and the outcomes that result, as discussed above, (2.2, p.16). However, it must also be remembered that cultures are not static. According to Martin and Nakayama, 'many young Koreans are now embracing more individualistic values, making their own decisions regarding marriage and career, rather than following their family's wishes – a practice unheard of 50 years ago' (2010, p.106). They cite a study by Shim, Kim and Martin (2008) which found that the Korean women they interviewed 'expressed both a strong family orientation and a "relational" concept of self as well as a concept of the autonomous or independent self' (2010, p.106). Similarly Ambler and Witzel, (2000) found that Chinese people were 'not either individualist or collective but both at the same time' (cited in Martin and Nakayama, 2010, p.2016). Cultures are not unchanging monoliths and we should be wary of treating them as such. I return to individualism and collectivism with regards to education below (2.5, p.34).

In the field of Social Psychology, there are also debates about whether culture affects the ability to think critically. One of the most often quoted is Nisbett, who purports to prove that Westerners and East Asians have different thinking patterns in his book *The Geography of Thought* (2003). He writes that he had believed that 'all human groups perceive and reason in the same way' (2003, p.xiii), until an encounter with a student from China made him realize that this was not the case after all. The student, Kaiping

Pen, told him that Chinese people 'search for the relationship between things; and they think you can't understand the part without understanding the whole' whereas Westerners 'focus on salient objects or people instead of the whole picture; and they think they can control events because they know the rules that govern the behaviour of objects' (2003, xiii). Further revelations follow for Nisbett when he realizes that other researchers from disciplines such as social sciences have carried out research in this field and have come to similar conclusions; people from different cultures think in different ways (2003, xvi). Nisbett states that his research shows 'dramatic differences in the nature of Asian and European thought processes' (2003, p.xviii). An example of the kind of research that Nisbett believes shows this difference follows in his own words:

> Li-jun Ji, Zhiyong Zhang, and I […] presented participants with sets of three words (e.g. panda, monkey, banana) and asked them to indicate which two of the three were most closely related. The American participants showed a marked preference for grouping on the basis of common category membership: Panda and monkey fit into the animal category. The Chinese participants stated a preference for grouping on the basis of thematic relationships (e.g., monkey and banana) and justified their answers in terms of relationships: Monkeys eat bananas. (2003, p.140).

From this and similar research, Nisbett surmises that Westerners organize the world into categories and the rules that define those categories, whereas East Asians organize the world into family resemblances, (2003, p.141). This and other research in the field leads him to believe that Western thought looks for rules that apply to the behaviour of objects and people, and uses categories and formal logic to discover and apply these rules. For East Asians the world is more complex and lots of factors are involved in understanding events, but 'formal logic plays little role in problem solving' and a 'person who is too concerned with logic may be considered immature' (2003, p.xvi). Furthermore, according to Nisbett Westerners tend to use 'analytic thinking' and East Asians 'holistic thinking.' This results in differences such as 'Easterners being more inclined to seek the middle way when confronted with apparent contradiction and Westerners being more inclined to insist on the correctness of one

belief vs. another.' (2003, p.45). However, Nisbett goes on to say it is possible to think in more than one way:

> It turns out that Hong Kong citizens can be encouraged to think in either Eastern or Western ways by presenting them with images that suggest one culture or another (2003, p.118).

Moreover, Nisbett 'found it was possible to train people in brief sessions and change not only their thinking habits, but their actual behavior' (2003, p.xv). Given that the citizens of Hong Kong can be said to have a dual heritage to some extent, it is not that surprising that they were able to think in these two different ways. According to Vygotsky, children's 'thought is shaped by the prevalent method of physical and economic survival, by the language and visual symbols used by their people, and by socially ordered ways of parenting' (John-Steiner and Mahn, 1996, p.193). If we are surrounded by critical thinkers, we may only become aware of critical thinking after it has already impacted on our environment and therefore on our development. The way that a critical thinker interacts with a child will almost certainly be different from someone who is afraid to voice a controversial opinion; someone who lived through the Khmer Rouge period for example.

Chan and Yan (2008) claim that although our reasoning strategies are influenced by our social environment and culture, as humans 'we all have some understanding of the principles of logic' (2008, p.65), and therefore we can all learn to think logically and critically. They argue that the 'fact that East Asians tend to be less familiar with abstract, logical reasoning does *not* show that East Asians have a different logic or logical system' (2008, p.70). They state that 'humans are equipped with mechanisms to solve specific reasoning problems [...] that loom large in their daily lives' (2008, p.60). According to them East Asians choose a reasoning strategy that avoids conflict more often than Westerners; this is not surprising in cultures that value harmony, but this does not make it an illogical choice. Lee and Johnson-Laird also agree that 'no robust evidence exists for cultural differences in the underlying cognitive processes of reasoning' (2006, p.463). However, there are differences 'in the characteristic strategies that individuals use to reason' (ibid). This aligns with the idea that the ability to reason is universal, as Siegel (1990) suggests, but the strategies we use, the

decisions we come to, and the outcomes that result may be different in different cultures.

Lun *et al.* carried out research into the relationship between culture and critical thinking because 'the influence of culture on critical thinking and its instruction is not clear' (2010, p.604). Their research tries to 'empirically address whether there is a difference in critical thinking between Asian and Western students' (2010, p.604), including the role of proficiency in English language (2010, p.606). They carried out three studies using critical thinking tests. The first, a pilot study, involved university students from New Zealand and China studying in New Zealand. They used the Halpern Critical Thinking Assessment using Everyday Situations (HCTAES), the Dialectical Self Scale (DSS) and asked students to rate their own proficiency in English. While the results showed that New Zealand students of European origin performed better at the tests, Lun *et al*. hypothesize that lack of English skills could explain this, whereas a cultural difference in critical thinking could not (2010, p.613).

Their following two studies (2a and 2b) used a more culturally diverse set of participants. They were again students from New Zealand, however this time the Asian students were more culturally diverse; the majority were from China (68.6%), followed by India (9.8%), Vietnam (6.9%) and the Philippines (3.9%). The other Asian students were from Cambodia, Indonesia, Japan and Korea. Study 2a utilised the Watson-Glaser Critical Thinking Short Form (WGCTA-SF), the Shipley Institute of Living Scale (SILS), the Dialectical Self Scale (DSS), asked participants to rank their own proficiency in English, and measured how far the Asian students had adopted the cultural norms of New Zealand using the Behavioral Acculturation Scale. Study 2b tested critical thinking and academic performance using a sub group of study 2a, with the addition of the participants' course grades. The results of both studies replicated the results of the first study in that the Asian students did less well at the tests, but again this was hypothesized to be a result of language proficiency. Lun *et al.* conclude that 'critical thinking has a positive effect on academic performance independent of the cultural background of students' (2010, p.613). Although Asian students did less well 'on critical thinking measured by the WGCTA, they were not any different from their New Zealand counterparts in using critical thinking when it is required in a course' (2010, p.613). They state that Asian students are discouraged from expressing critical

thinking in classrooms because they lack language proficiency, or lack confidence in using the language. This indicates that non-participation in the classroom does not necessarily equate to a lack of critical thinking, but is more likely to be related to language proficiency. I return to research related to language proficiency and critical thinking in the next section (2.4, p.32).

In a similar vein Manalo *et al.* (2013) posed the question, 'To what extent do culture-related factors influence university students' critical thinking use?' They surveyed Japanese students studying in Kyoto and Okinawa in Japan, and New Zealand students studying in Auckland. The Japanese students were given the questionnaire in Japanese and the New Zealand students in English, thus eliminating the language barrier. The results of their study found 'little or no difference between the three groups in their academic use of critical thinking' (2013, p.128), although there were other differences between the groups. They concluded that 'culture does not in fact have a direct bearing on students' use of critical thinking' and that 'perhaps the educational environment – and particularly the kinds of skills and values that are nurtured in such an environment – has a greater influence on the use of students' critical thinking' (2013, p.130).

Ryan and Louie (2008, p.77), point out that Western and Asian education systems are often labelled in a system of binary opposites; 'deep/surface', 'adversarial/harmonious' and 'independent/dependent', and these labels are then applied to 'whole populations and communities of practice.' We could add individualist/collectivist to their list. It is understandable that we sometimes need to categorise people according to geographical proximity or similarities in language, culture etc. Lun *et al*. (2010, p.604), write for example about perceptions that 'Asian students' do not participate in class in Western universities. Others prefer to group countries together as in 'East Asia' or more reductively 'Confucian Heritage Countries'. The Global Leadership and Organizational Behavior Effectiveness study (GLOBE), for instance, groups South East Asian countries into 'Confucian Asian' – South Korea, Hong Kong, Singapore, Taiwan, China, Japan - and 'Southern Asian' – The Philippines, Indonesia, Malaysia, Thailand, India, Iran (Center for Creative Leadership, 2012).

While researchers often acknowledge that there are differences between peoples, I suggest that the blanket use of 'Asian' is not always appropriate. I am not arguing that

each nation state should be seen as an entirely separate entity, no state evolves entirely alone without influence from outside. Cambodia for example, was influenced by India, in a process known as 'Indianization, whereby elements of Indian culture were absorbed or chosen by the Cambodian people in a process that lasted for more than a thousand years' (Chandler, 2008, p.15). However, in some cases it is important to be more specific so as to take into account differences. Nisbett's book *The Geography of Thought* (2003), is subtitled 'How Asians and Westerners Think Differently… and Why.' Although the subtitle refers to Asians he makes it clear later on that he is in fact writing about East Asians, and in particular people from China, and the countries 'that were heavily influenced by its culture most notably Japan and Korea' (2003, p.xxii). Nisbett issues an apology 'to those people who will be upset to see billions of people labeled with the single term "East Asian" and treated as if they are identical. I do not mean to suggest that they are even close to being identical.' However he then goes on to assert that in 'a host of social and political ways the cultures in that region are, in some general respects, similar to one another and different from Western countries' and therefore some 'generalizations are justified' (2003, p.xxii). This seems reasonable, how else are we to describe these places? 'Westerners' are often also lumped together despite considerable differences. However, if one applies the critical thinking standards of clarity and precision (Bassham *et al*., 2008, p.2), it would seem prudent where possible to make it clear which people one is referring to, thus avoiding the need for generalisations where possible. The term 'Confucian Heritage Cultures' can be helpful in such cases although it does not acknowledge differences between for example, South Korea and China. There is currently no corresponding term for countries such as Cambodia and Thailand, which do not have a Confucian heritage.

2.4 Asian Students in Western Universities

My research focused on Cambodian students studying critical thinking in a Cambodian university. At the time of writing there has been no research about Cambodian university students studying critical thinking anywhere, therefore this section

concentrates on the available research. Much of this focuses on Chinese students studying in Western institutions. According to the UNESCO Institute of Statistics, in 2016, 53% of all international students were from Asian countries. 712,157 Chinese students were studying abroad, making them the largest group. To give some perspective Indian students were the second largest group with 181,872, and South Koreans the third largest with 116,942. Together these three countries made up one quarter of all international students. The most popular destination for students from all three countries was the USA, followed by Australia for Chinese and Indian students and Japan for South Korean students. The UK, Canada and New Zealand were the remaining top five destinations. Most research is carried out in high income countries with students who have either accessed a scholarship or are wealthy enough to afford to study abroad.

Yang states that the main reasons that lead Chinese students to study in the USA are financial and political; 'the rising disposable income of the middle-class' and 'a government-initiated goal to elevate the nation's GDP and technical prowess with the assistance of returning graduates' (2016, p.2). However, there are also more complex reasons at play. He notes the influence of the family on decision-making, the importance of education in Chinese tradition and the fact that some parents want their children to have educational experiences that they were unable to have before China became more open to the world (2016, p.55). Contributing factors leading to students studying in Australia are a lack of university places in China and a desire to learn another language (Yang, 2007, p.3). Most research centres on these students and their ability to access Western institutions, and is therefore a reflection of a particular group of students; those from certain countries who are able to study abroad. In contrast, Cambodia had 4,221 students studying abroad in 2016; 728 in Australia, 692 in Thailand, 611 in France, 443 in Vietnam, 411 in the USA. There were 71 in the UK (UNESCO Institute for Statistics).

There is concern in some Western institutions about the ability of international students to do critical thinking. Most research in this area comes from countries that have large populations of students from Asia; the USA, Australia, and the UK. In 2016, there were 260,914 Chinese students in the USA, 90,245 in Australia and 86,204 in the UK (UNESCO Institute for Statistics, July 2016). In the USA in 2016, 5.2% of the total

student population were international students (Institute of International Education), whereas in Australia the percentage was much higher; in 2014 they were 24.3% of all students (Australian Education Network, 2014). According to Australian government data, in September 2014 'China and India accounted for 37.3% and 10.0% respectively of enrolments by students in higher education' (Australian Trade and Investment Commission). In the UK in 2016, 20% of students were international with the majority coming from China, followed by Malaysia, the USA and India (UK Council for International Student Affairs).

Asian learners are sometimes described in Western institutions as having 'poor critical thinking and analytical skills' (Lun *et al*., 2010, p.604). Kutieleh and Egege write that in Australia, South East Asian students in particular are 'commonly stereotyped as passive, non-critical rote learning students' (2004, p.1) who 'lack an understanding of analysis and critique' (2004, p.3). In some Western universities there seems to be a perception that 'doing' critical thinking and participating in classroom discussion are connected. According to Lun *et al.* (2010, p.604) academics 'often express that Asian students do not naturally take part in critical thinking *because* they do not overtly participate in classroom discussions' (my italics). For example, American professors who took part in research by Lee and Carrasquillo in the USA, stated that their students from Korea had 'difficulties in openly expressing critical thinking' (2006, p.451). This assumed link between participation and critical thinking is an example of the continuing influence of Socratic dialogue in Western concepts of critical thinking, as discussed above (2.2, p.13).

Confucianism, it is claimed, also has an enduring influence. According to Martin and Nakayama (2010, p. 281) 'scholars have reported […] distrust of talk in Japanese and Chinese cultures influenced by Confucianism and Taoism. Confucius rejected eloquent speaking and instead advocated hesitancy and humble talk in his philosophy of the ideal person.' They compare this with similar attitudes in Finland. Finns are Europeans who are often perceived to be taciturn as 'silence, for Finns, reflects thoughtfulness, appropriate consideration, and intelligence, particularly in public discourse or in educational settings like a classroom' (Martin and Nakayama, 2010, p.280). There does not seem however, to be any concern that Finnish students lack critical thinking abilities. In the 2006 Programme for International Student Assessment

(PISA), Finland was ranked first among the countries who took part in the study, which was measured by combining results in science, mathematics and literacy (OECD, 2007, p.3). Since then Finland has continued to achieve high results, being the top performing country in science in 2012 (OECD, 2014, p.4) and in the top five performing countries in science in 2015 (OECD, 2016, p.4).

Nisbett writes that 'debate is almost as uncommon in modern Asia as in ancient China. In fact, the whole rhetoric of argumentation that is second nature to Westerners is largely absent in Asia' (2003, p.73). This is a big claim to make with regards to ancient and modern societies across whole continents. As evidence, Nisbett (2003, p.211) cites research by Heejung Kim, a Korean graduate studying in the USA, researching why American Asian students were less likely to speak in class. She felt that the demand for students to speak up in class was not helpful for these particular students, and her research showed that speaking out loud when solving problems had no effect on European Americans but made the performance of Asian American worse. Speaking out loud while performing a task is not the same as holding a debate, although it may be true that speaking out in class is more difficult for some students than others. Yi–Ching claims that 'students from a Chinese background do not perform particularly well in verbalised critical thinking' (2009, p.43). This is because students in Confucian Heritage Countries 'have learnt to value diligent study, social harmony, reverence for teachers' authority' and it is this reverence that means that students must behave in a way that is acceptable in a collectivist society (ibid). This means that 'probing and open student–student and teacher–student interactions are not the norm for them, nor is the public questioning of authority' (ibid).

Liu and Littlewood on the other hand, claim that their research findings 'offer strong evidence' that the passive East Asian student is a 'myth' (1997, p.372). They surveyed students in Hong Kong and found that if students did not speak English in class it was not 'because they do not want to' (1997, p.374). In fact some of the reasons the students gave for not participating in the classroom were 'lack of experience in speaking English' (1997, p.375) and 'lack of confidence in speaking English' (1997, p.376). Some students felt that their English must be perfect in order to speak up in class. They also felt that speaking out and making a mistake would make them stand out or that they would be 'making a fool of themselves' (1997, p.376). Finally they

found that asking questions or commenting in was not something that students saw as being linked to academic success, whereas their lecturers did (1997, p.377).

Robertson *et al*. (2000) found similar results when they researched the experiences of international students from Malaysia, Singapore, Vietnam, Korea and Japan studying at an Australian university. They also asked university staff what problems they encountered when teaching international students. One of their findings was that 'staff and students agree that the speed of lecturers' spoken English exacerbates the problem of understanding by international students' (2000, p. 93). The international students saw their lack of confidence with language as the 'source of their problems, forcing them to seek a practical remedy through rote memorization and textbook copying' (2000, p. 93). They also reported other problems such as feeling isolated or homesick, but by the end of the research language 'remained the single greatest unresolved problem' (2000, p.96). The university staff reported similar concerns about the language proficiency of students, but were also concerned about students' lack of participation in the classroom (2000, p.97). Lun *et al.* also suggest that proficiency in language 'has been found to play an important role in students' critical thinking performance' and that working in a second language, whether it be Asian students using English or English speakers using Japanese 'has been shown to have a detrimental effect on one's performance in cognitive tasks' (2010, p.606).

Littlewood surveyed 2,307 students in eight East Asian and three European countries. He found that the stereotype of passive Asian students did not 'reflect the roles they *would like* to adopt in class' (2000, p.33), and in fact 'they wanted to explore knowledge themselves and find their own answers' (2000, p.34). He claims that their behaviour is more a reflection of the 'educational contexts that have been or are provided for them, than of any inherent dispositions of the students themselves' (2000, p.33). A survey of 70 Japanese university students by Stapleton showed similar results and he also concluded that their behaviour did not 'reflect the real desires of the students' (2002, p.255).

Finally, it must be remembered that there are also differences in classroom behaviour between students who come from the same culture and speak the same language. Ryan and Louie remind us that 'the quiet student who has not spoken in class during the semester may be equally capable of achieving a high score for his or her work.

Moreover, this student may have a deeper understanding of the issues discussed than the talkative assertive student' (2008, p. 86). A reminder of the danger of stereotyping any students as 'passive.' According to Ryan and Louie (2008, p.79) some learners internalize these stereotypes and begin to see themselves as passive. Kutieleh and Egege believe that this 'passivity has more to do with what students feel is culturally appropriate' (2004, p.2). They write that there is no evidence that these students are unable to do critical thinking, but that they 'may have a different conception of critical thinking and its application in academia which could place them at a distinct academic disadvantage' (2004, p.3).

2.5 Teaching and Learning Critical Thinking

I begin this section by returning to differences between collectivist and individualist societies in education, and explore further differences between countries which are placed on the collectivist side. Hofstede (1986, p.312) applied collectivism and individualism to education as shown in the table below. The table shows only the categories that were most applicable to my teaching situation. I have removed those that were not relevant and numbered the remaining for ease of reference.

Table 1
Hofstede's Differences in Teacher/Student and Student/Student Interaction Related to the Individualism versus Collectivism Dimension

	Collectivist Societies	Individualist Societies
1	Positive association in society with whatever is rooted in tradition	Positive association in society with whatever is "new"
2	Students expect to learn how to do	Students expect to learn how to learn

3	Individual students will only speak up in class when called upon personally by the teacher	Individual students will speak up in class in response to a general invitation by the teacher
4	Individuals will only speak up in small groups	Individuals will speak up in large groups

The role of tradition in society (Hofstede's first category) includes attitudes towards education, teaching and learning. Some literature suggests that there are strong differences between East and West in this respect. Ming Zhang for example, states that 'in Western culture, the development of learning and extension of knowledge is highly valued and encouraged; while in Eastern culture, the respect of written knowledge and authority is the norm, and critical analysis is not required or encouraged' (2002, p.27). Ballard and Clanchy (1991) summarise the difference as being between conserving knowledge in the East, and extending knowledge in the West. This means that in the West teaching methods are designed to develop students' analytical and critical skills through participation and questioning, whereas in the East students are encouraged to reproduce what the teacher or texts say, by listening in class and following instructions (cited in Ming Zhang, 2002, p.28).

Others suggest that differences in education systems are instrumental, in that they are trying to produce different kinds of citizens. Pyi Phyo Kyaw contrasts the education systems in the UK and Myanmar. She writes that the political situation in the UK develops 'critical citizens' whereas 'the political framework of Myanmar, although moving towards a democratic paradigm, does not provide favourable conditions such as conducive educational programmes and policies for the development of 'critical citizens' and for the freedom to exercise criticality.' Moreover 'at the equivalents to high school and undergraduate levels, […] memorization and regurgitation of text from memorized knowledge are […] rewarded' (2015, p.420). This view of criticality or critical thinking is close to Thayer-Bacon's 'second wave' definition of critical thinking (2.2, p.17), which suggests that critical thinking is best learned in a democracy, or at least in democratic communities.

The education system in Myanmar is similar to that of Cambodia, in that it has its origins in monasteries belonging to the same Theravada Buddhist tradition. Cambodia

is however, nominally a democracy and has been for some time, although according to Blunt and Turner (2005, p.76), in Cambodia 'stabilisation and the consolidation of political power have been the principal concerns of government for more than 20 years. Thus key state actors have had little real interest in democratisation and the creation of a developmental state.' The relationship of religion and state is a complicated one in Cambodia, and one that I touch on briefly here in relationship to education. As in Myanmar, education in Cambodia was traditionally carried out in Wat or temple schools, taught by monks and available only to boys. According to Neau, (2003) Cambodians believed that 'when their children left the monastery, they would become good citizens and would be respected by the whole community because of their education in the spiritual life, religious counselling, and how to live in harmony in society' (cited in Tan, 2008, p.566). Tan writes that the traditional role of education in Cambodia is concerned with 'the betterment of the human condition through moral inculcation' (2008, p.566). This traditional view has been incorporated into a contemporary technocratic view of education, promulgated by the Cambodian government since the 1990s which aims to develop 'human capital for the economic development of Cambodia' (Tan, 2008, p.566). The latter is the result of years of planning 'by Western consultants from international organisations and external donor agencies' (Tan, 2008, 566). Ayres calls it 'an inherited Westernised education system' (cited in Tan, 2008, p.466).

The perception of some Asian students as passive can be examined in relation to Hofstede's category; 'learning how to do', as opposed to 'learning how to learn' (see table, p.34). Ming Zhang confirms that 'in traditional Chinese culture students are expected to listen in class most of the time and follow the instructions issued by the teacher. The teachers are highly respected, and are expected to provide answers to questions' (2002, p.22). According to Oda (2008, p.158) 'common preconceptions about Asian students learning attitudes are that they are attentive and obedient to the opinions of authority figures,' while Ming Zhang (2002, p.27) writes that 'Asian international students have much higher regard for their lecturers than many staff themselves are aware of.' Han Tin claims that 'philosophies such as Buddhism and Confucianism advocate […] the respect and devotion of an individual for their parents and teachers.' Therefore 'in such societies, teachers assume the role of substitute parents. This places a great amount of responsibility on them' (2007, p.114). This

influence is evident in teacher training programmes in Cambodia. In 2005, the Pre-service Training Curriculum for Lower Secondary School Teachers in Cambodia, stated that as well as having good subject knowledge and knowledge of teaching methodology, teachers must also be 'a second parent of the students, a nurse, a consultant of the community with high responsibilities and rights in the local level in order to contribute in development all areas' (MOEYS, 2005, p.6). Han Tin continues that 'the social roles of teachers and students are drawn so rigidly that expecting the latter to participate in dialogue and decision making is often deemed inappropriate' (2007, p.114).

Hofstede's third and fourth categories suggest that students from collectivist societies do not join in dialogue or discussions in class. I return to participation here to examine the implications for teaching. According to Hofstede (see table, p.35), students from collectivist countries will not participate in whole class discussion unless singled out by the teacher, but will speak up in small groups. Ming Zhang (2002, p.24) states that 'Asian international students are described as quiet members of class who seldom participate in discussions' and 'prefer to see their teachers after class if they have questions.' Non-participation in classroom activity may not necessarily be related to an ability to learn critical thinking skills, it may be related to a low level of language acquisition as discussed above (2.4 p.32). Research suggests that cultural context is also important in teaching critical thinking. Chan and Yan for example, believe that teachers need to understand that human reasoning is 'adaptive' and by this they mean that it has evolved to solve problems in different environments and cultures. Therefore 'students' logical reasoning […] has to be trained in a domain-specific or context-sensitive way' (2008, p.73). They suggest that students 'should be taught to be more aware of the natural and cultural contexts in which their thinking styles are embedded, so that they might become more sensitive to their own ways of thinking and thus less likely to misapply them or make hasty judgements based on them' (cited in Mason, 2007, p.346).

Stapleton (2001) carried out research into whether knowledge of socio-cultural context would affect students' performance in critical thinking. He quotes a study by Ramanathan and Kaplan (1996) which observed that many of the topics in popular ESL textbooks used in universities in the USA at the time, such as homosexuality,

freedom of speech, gun control or gender issues were not often topics for public discussion in Japan (2001, p.510). Stapleton found that his Japanese students studying a course in 'English writing' in the USA, had a much deeper understanding, and showed a higher quality of critical thinking and analysis when they wrote about subjects that they were familiar with (2001, p.533). Ramanathan and Kaplan agree that international students, socialised in different cultures may not regard topics discussed in class as 'problems' as problems at all; 'a topic such as gun control may not be seen as a "problem" by individuals from other cultures in which guns are prohibited entirely' (1996, p.239). According to Mayer (1986, p.253), '[t]he key to developing critical thinking lies in creating conditions for participation rather than passivity, and in providing opportunities for emotional engagement with materials' (cited in Albergaria-Almeida *et al.,* 2011 p.177). Yang and Gamble also found that 'issues relevant to daily life are most effective in prompting reflective writing and speaking, since learners already have a perspective to offer, a perspective which can be further challenged and enhanced through the use of activities which question potential biases, alternative interpretations, and the presence of supporting data' (2013, p.409). Browne and Keeley-Vasudeva also suggest that 'personal involvement can provoke students into discussion' (cited in Bucy, 2006, p.222).

It is not only students who need to be aware of the cultural contexts that their thought is embedded in. Teachers of critical thinking also need to think about the socio-cultural context that they operate within. Ryan and Louie suggest teachers 'need to become 'anthropologists' of their own culture in order to understand how the normative assumptions underpinning their teaching practices can be problematic for international students' (Ryan 2000, in Ryan and Louie, 2008, p.87). This can then become a source for 'mutual learning' rather than a 'problem' (2008, p.87).

Some researchers give examples of what they found to be good teaching practice. Here Kutieleh and Egege outline their approach to teaching critical thinking classes:

> The approach we have taken to teaching is closest to Bigg's constructivist approach (Biggs, 1997). It involves making cultural assumptions, attitudes and practices explicit, rather than just presenting them as desirable modes of behaviour that students should adopt or assimilate. This approach enables students to make their

> own judgements about what behaviours they need to incorporate in order to operate successfully in an alien culture (2004, p.6).

This approach was useful for me as I had to make all my assumptions explicit, as did my students, because our assumptions were sometimes completely at odds. Making unwarranted assumptions is a common critical thinking mistake and a barrier to critical thinking that we explored at great length in the classroom (Bassham *et al*., 2008, p.17). Kutieleh and Egege used a three-stage method: first teach the tradition that Western critical thinking comes from, i.e. Ancient Greece; second explain that there are 'culturally different approaches to acquiring knowledge'; and third explain the 'techniques and mechanisms expected within a Western critical thinking approach' (2004, p.6). They felt that their methods were successful, and their research 'shows that it is possible to put critical thinking into a familiar context of general thinking skills that enables the students to make connections between their own cultural, academic or work background and its application in a specific academic context' (2004, p.7). This may be helped by critical thinking textbooks which include examples of different cultural understandings, contexts and applications of critical thinking. As discussed above (2.5, p.18), not many of the English language textbooks on critical thinking I consulted at the time of writing mentioned culture except in passing, or had any discussion of critical thinking from a different cultural perspective. Our class textbook mentioned culture only in relation to barriers to critical thinking; 'cultural relativism' and 'cultural moral relativism'. While these ideas stimulated a lot of interesting debate about whether certain practices in our own and other societies are 'good' or not, the goal of critical thinking is to overcome such barriers.

As well as the books used in the classroom, there is also the learning environment that teachers create. If knowledge is constructed within communities, the classroom is an ideal place to create a community of learners. According to Golding teachers need to provide students with 'an educative environment where they can hone their critical skills, cultivate a critical character, understand the nature of critical thinking and understand the subject matter they are thinking about' (2011, p. 357). Like Kutieleh and Egege he also believes that this includes students knowing 'what is involved in critical thinking and what they have to do to be critical thinkers' (2011, p.360). He calls his strategy to do this '[u]sing thought-encouraging questions in a community of critical

thinking' (2011, p.357). This is modelled on the idea of a 'community of inquiry' which engages in dialogue in order to construct knowledge and understanding (2011, p.359).

The phrase 'community of inquiry' was coined by Charles Sanders Pierce in 1955, and originally referred to 'practitioners of scientific inquiry, all of whom could be considered to form a community in that they were similarly dedicated to the use of like procedures in the pursuit of identical goals' (Lipman, 2003, p.20). This has now been extended to other disciplines and forms of inquiry, scientific or otherwise and is often associated with Matthew Lipman (2.2, p.12). For Lipman the classroom can be converted into a community of inquiry where 'students listen to one another with respect, build on one another's ideas, challenge one another to supply reasons for otherwise unsupported opinions, assist each other in drawing inferences from what has been said, and seek to identify one another's assumptions' (2003, p.20). Lipman describes fifteen features of communities of inquiry, some of which were more pertinent to my situation than others, bearing in mind that he is referring to teaching children. Here I concentrate on his ideas regarding participation and discussion. Regarding discussion, he writes – 'Communities of inquiry encourage but do not require participants to participate verbally and as equals' (2003, p. 95). This is contrary to the idea that participation in discussion is the same as doing critical thinking (see above, 2.5, p.31), however, he also states that '[n]othing improves thinking skills like discussion.' (2003, p.100). Lipman also refers to '[c]hallenging as a procedure' and believes 'that challenging is good but it need not be heated' (2003, p.97).

Golding states that his strategy (2011, p.357) is 'an extension of Paul's (1995) technique of Socratic questioning.' According to Paul and Elder, (2006, p.24) 'Socratic questioning is a discussion' which has four main components. The first is that it is 'led by a person who does nothing but ask questions'; the second 'that it is systematic and disciplined (it is not a free for all)'; the third 'that the leader directs the discussion by the questions that he/she asks'; and the fourth that 'everyone participating is helped to go beneath the surface of what is being discussed, to probe into the complexities of one or more fundamental ideas or questions.' There are clear links between Socratic questioning and critical thinking; by using the Socratic technique the teacher asks questions to lead the student to answers rather than just telling them the answer.

However, it should be remembered that in the *Meno* Socrates was leading the boy to a pre-prepared answer, whereas this is not the aim of critical thinking.

Golding states that the best way to encourage critical thinking in students is 'to turn your cohort of students into a community of critical thinking that approximates an expert community – an educative community of critical thinking' (2011, p.359). This strategy has four steps; the first is to ask 'thought-encouraging questions' such as 'what is an example of that? Or 'how do I know that?' The second is to create 'an educative community of critical thinkers' where students are regularly asked and answer these kind of questions. The third is to for the teacher to 'take a thinking encouraging approach.' This means to be aware that these are open-ended questions and that they are not leading the students to an already prepared answer. The final step is when students ask and answer these questions themselves, and therefore become critical thinkers (2011, p.361). Initially the teacher asks the questions, then hopefully the students ask each other the questions and finally they 'internalise these thinking moves' and ask 'why do I think that?' (2011, p.364). As can be seen Golding's steps are based on asking and answering questions, which reiterates that dialogue, discussion and debate are closely related to the development of critical thinking.

According to Cuccio-Shirripa and Steiner (2000, p.210) 'questioning is one of the thinking processing skills which is structurally embedded in the thinking operation of critical thinking', while Browne and Freedman (2000, p.302) consider that 'the primary behavioral characteristic of critical thinking classrooms' is that 'the room is abuzz with questions.' Albergaria-Almeida *et al.* suggest that the use of questioning in creating critical thinkers is important and although this might cause controversy, 'it is controversy that promotes discussion and reflection, and these are both essential when fostering critical thinking' (2011, p.178).

Debate in the classroom has 'a strong theoretical foundation' dating back to Dewey and his belief that students should be active in the classroom, and take control of their own learning, according to Jagger (2013, p.39). She states that '[r]esearch defines the classroom debate as a powerful tool for promoting classroom interaction and the development of skills such as communication, argument-construction, discussion and critical analysis' (2013, p.39). Nicol and Boyle found that 'dialogue with other students in peer groups was central to the development of [students'] understandings of

concepts and ideas' (2003, p.465). Yang and Gamble's research into introducing critical thinking techniques in EFL classes in Taiwan found that 'debating was one of the most popular and challenging activities' and that student 'feedback on the debates was positive, despite an academic culture often emphasizing passive learning and the avoidance of confrontation' (2013, p.409). Keller, Whitaker and Burke (2001) found that debates encouraged students' interest in a subject (cited in Jagger, 2013, p.39). Scott (2009, p.40), suggests that debate encourages active learning whereas lectures encourage the opposite - passive learning.

Dickson (2004) found that debating contemporary issues encouraged critical thinking (cited in Scott, 2009, p.40). Participation can be encouraged in the classroom by using issues that are familiar to students, which when teaching cross-culturally need to be accessible, as discussed above (2.5, p.38). Debate and discussion can also be useful for team building and fostering a spirit of collaboration in the classroom. According to Scott (2009, p.41), collaboration helps students to retain information, share learning, use evidence, and thereby improve critical thinking. Furthermore, 'debate […] allows students to enhance critical thinking through investigating arguments, engaging in research, gathering information, performing analysis, assessing arguments, questioning assumptions, and demonstrating interpersonal skills' (2009, p.43). While debate can lead to us questioning our own assumptions, it can also lead us to question others, which can cause controversy.

The use of controversy in the classroom and its use as a tool to provoke discussion, is itself controversial. Heejung Kim (2002) claims that speaking aloud is more difficult for Asian American students, while others suggest that classroom participation is not traditional in East Asian, Confucian Heritage countries (Yi-Ching, 2009, Ming Zhang, 2002). On the other hand Mills states that 'provocative techniques directed towards the class force students to examine the grounds of their assumptions, which leads then to the formulation of solid, rational arguments and conclusions with logical foundations' (1998, p.21). Johnson *et al.*, developed a procedure they call '*constructive controversy'* which 'combines cooperative learning (in which students work together in small groups)' with 'structured intellectual conflict (in which students argue the pro and con positions on an issue in order to stimulate problem solving and reasoned judgement' (2000, p.30). Scott (2009, p.40) 'believes that using debate as a teaching tool helps

students develop specific skills (i.e. analysing, synthesizing and evaluating supported arguments). In addition, the debate process incorporates critical thinking and a plethora of other skills including, listening, researching, problem-solving, reasoning, questioning, and communicating.'

Not all students enjoy debate. Scott found that when asked, her students felt that debates helped to add to their subject knowledge and increased their critical thinking skills. They also enjoyed working in teams. However, some students found the process 'challenging' while others did not like speaking in front of other students (2009, p.42). Goodwin (2003) also studied students' perceptions of debate in the classroom in the USA. The majority felt that it was useful for gaining knowledge, analysing arguments, recognising different points of view, and improving critical thinking skills. Some students however, felt that the debate process was unfamiliar and uncomfortable (cited in Scott, 2009, p.41). A reminder that it is not only Asian students who sometimes feel uncomfortable participating in class.

Given that my students were learning in a second language I developed techniques to encourage discussion which allowed them to code-switch to Khmer. There is some debate about code-switching in the classroom. Eldridge defines code-switching as 'the alternation between two (or more) languages' (1996, p.303). He goes on to say that it 'had been assumed that code-switching in the classroom was a counter-productive phenomenon, and the whole focus of discussion centred around ways of preventing it, with almost no consideration of what caused it in the first place' (1996, p.304). Much of the research on code-switching concentrates on bilingual people (Klintborg 1999), or on students learning a foreign language (Milroy and Muyksen 1995, Eldridge, 1996). While my students were not studying the English language in critical thinking class, they were certainly learning new words and concepts. Eldridge is concerned with what happens in a classroom where students are learning English as a second language, and so his emphasis is different to mine. His students mainly code-switched when they did not know a word in English and substituted an equivalent word in their first language. They also code-switched to check instructions for tasks, and for 'comic effect' (1996, pp.305-6). He goes on to write code-switching can perform 'a social function' and he suggests 'it is worth considering what the effects on motivation and attitude might be if teachers attempt to proscribe such behaviour' (1996, p.307). I

found allowing code-switching in a controlled way encouraged my students to participate more fully, and I return to this in more detail in Chapter Four, (4.5, p.108).

2.6 Concluding Remarks

In conclusion I summarise the literature reviewed, and discuss it in terms of my research. At my university critical thinking was seen as a skill to acquire to aid academic learning, employability and life skills. It was not seen to be a part of the discipline of philosophy as such, although it clearly included some aspects of it, such as logic. Philosophy courses such as ethics were taught after the foundation year, while critical thinking was a foundation year course. It was taught as a subject in itself, but I hoped that skills learnt from the course would be transferable. Classes were based around a 'first wave' definition of critical thinking from our class textbook. This was because 'second wave' definitions carry values and assumptions that I did not want to impose on my students. I was also wary of expecting particular outcomes as a result of critical thinking, as outcomes that I might find desirable, my students might not. I expected that critical thinking might be expressed differently, and given the different range of options available, decisions and actions might also differ. Knowledge is gained in communities after all and not in vacuums. After being introduced to a Buddhist definition I incorporated it into my lessons, and this informed our class discussions about whether critical thinking might look different in different cultures, and how Cambodians might express critical thinking.

There is debate about whether some Asian students are less capable of learning critical thinking than Western students. Much research centres on Confucian-Heritage East Asian students, of whom the greatest number are Chinese studying in Western institutions. A perceived lack of critical thinking skills has been attributed to cultural attitudes towards education, the role of the individual in collective societies, as well as previous classroom experiences, and the role of the teacher. This alleged lack is often connected to a perception that Asian students do not participate in classroom discussion, a conflation of critical thinking with Socratic dialogue that has long existed

in Western thought. However, these views have been contested. The ability to learn critical thinking may be universal, but the expression of critical thinking and the actions that result may differ according to culture and society. Moreover, the suggestion that certain groups of people use logic less often, does not mean that they cannot use it. With regards to classroom participation, there may be a variety of reasons why some Asian students are less likely to speak out in class, and research suggests that lack of language acquisition, as well as confidence and experience in speaking in a second language can have an influence on this. Cultural context and familiar examples have been seen to increase participation in class, as has the use of provocative topics. Making explicit exactly what is required in class to demonstrate critical thinking has also been shown to help students, and a community of inquiry where students are encouraged to participate in asking and asking questions is a useful way to conceptualize the critical thinking classroom. Before the research I was not sure how my students would express critical thinking, or if they would participate in class discussion. There seemed to be conflicting voices about the possibilities. However, as there is strong evidence that critical thinking can be learned, I saw no reason to believe that my students would not be able to do so.

Chapter Three

Research Methodologies and Methods

3.1 Introduction

My research focused on classroom experiences of students and teacher and was therefore mainly qualitative. I did not aspire to produce objective knowledge; as teacher and researcher in the classroom, it was not possible for me to step outside of those roles and become an impartial observer. The framework for the research is a sociocultural approach as discussed above (1.3, p.6), and I assumed that 'individuals involved in the research situation construct reality; thus realities exist in the form of multiple mental constructions' (Fraenkel and Wallen, 2006, p.425). The construction and communication of meaning, and therefore knowledge is a basic tenet of what education is for. However, knowledge and learning are also culturally situated. As Gay puts it, a 'semiotic relationship exists among communication, culture, teaching and learning and it has profound implications for implementing culturally responsive teaching' (2010, p.76). In classes where people share a culture there are often shared epistemological expectations and understandings. This was not always the case in my classes, and what we 'knew' was sometimes at odds. Different constructions of reality became clear as we tried to communicate our understandings of the world. For my students a rich and powerful person must have done good things in their previous life in order to attain their position in this life. From my perspective that person had either been born into money and power, or had worked hard, as I saw no evidence to convince me that previous lives existed. Trying to explain those realities to each other and then apply critical thinking to them was a fascinating undertaking.

The research utilised two interconnecting methodologies; ethnography and grounded theory. It was ethnographic as I used classroom observation, surveys and examples of students' work. I applied grounded theory in the analysis of data, as I did not start with a hypothesis that I tried to prove, but with some open-ended questions that I gathered data about and then analysed. These methodologies are examined in more detail in the following two sections. There follows a discussion of research quality based on Lincoln and Guba's (1985) naturalistic criteria, and an examination of ethical and cultural issues affecting the research. I then detail the research methods I used and close this chapter with a discussion of how to recognise when critical thinking is happening, and the indicators I used to do so.

3.2 Ethnography

My research was ethnographic in that it was conducted over a long period of time (one year), it attempted to understand a situation from the 'inside' as much as is possible in a cross-cultural situation, and it did not start with a precise hypothesis. Ethnographers 'usually begin with an open-ended question and try to explore what is happening in the field' (Bhatti, 2012, p.81). Ethnography was initially used to study other cultures, or more precisely according to Lichtman, how 'humans interact within a culture' (2013, p.70). She accepts that schools have 'a distinct culture' (2013, p.72) and following this, so do universities. The university where my research took place was in another country, and so for me was a familiar culture (university life), within a larger more unfamiliar culture (Cambodia). To qualify this, I lived in Cambodia for six years before and during the research, and while familiar with many of the values and customs, I remained to a large extent an outsider.

Lichtman states that ethnography 'involves extensive immersion in a natural setting' (2013, p.72). Bhatti goes further and suggests that ethnographic researchers 'become, as far as possible, a part of the world they are trying to study.' (2012, p.80). I was definitely a part of the world I was researching in one sense; as Head of Faculty and class teacher, but being from another culture I was not entirely a part of it. According

to Breen (2007, p. 163) 'insider-researchers are those who chose to study a group to which they belong, while outsider-researchers do not belong to the group under study.' She continues that 'it is common, but of course not necessary, for researchers using qualitative methodologies to study a group or organisation, or culture they belong to and in doing so they begin the research process as an insider or "native"' (ibid). Exactly if and where I belonged is a slightly more complicated question. I belonged in the organisation in which I worked and carried out the research, and I belonged in classes where I was the teacher, but I did not belong to the group of Cambodian students who were the participants in the research.

Dwyer and Buckle (2009, p.55) write that a researcher can be 'an insider sharing the characteristic, role, or experience under study with the participants or an outsider to the commonality shared by the participants.' I shared the experience with my participants, but we had different roles and I was certainly outside their 'commonality.' According to Asselin (2003), an insider researcher 'shares an identity, language and experiential base with the study participants' (cited in Dwyer and Buckle, 2009, p.58). The only one of these I shared with my participants was the experience of being a student and for me it was in a different country, so by this definition I was an 'outside researcher.' However, there are other ways of conceptualizing the insider/outsider dichotomy. Dwyer and Buckle state that the 'intimacy of qualitative research no longer allows us to remain true outsiders to the experience under study and, because of our role as researchers, it does not qualify us as complete insiders' (2009, p.61). Furthermore, being a member of a group 'does not denote complete sameness' while not being a member 'does not denote complete difference' (2009, p.60). They propose it is time for us to put aside our historical 'tendency to frame complex issues as a struggle between opposing sides' and 'embrace and explore the complexity and richness of the space between entrenched perspectives' (2009, p.61). Another way of conceptualizing this is an 'insider-outsider continuum' (Hellawell, 2006). According to Hellawell a researcher's position may not be fixed on the continuum, in fact 'the same researcher can slide along more than one insider-outsider continuum, and in both directions, during the research process' (2006, p.489). These concepts of 'between' the two positions, or different positions on a continuum seem to be a better way of describing my position, than being fixed as an 'insider' or an 'outsider.' While clearly an 'outsider' in most respects, when it came to teaching and learning critical thinking I

shared the experience with my students and my position shifted slightly. My cultural values were questioned alongside those of my students, and while I did not become a complete 'insider' as this was not possible, I felt that I moved away from a polarised position as a complete 'outsider.' There are ethical problems that arise from this, and I return to them in the section on ethical and cultural challenges below (3.5, p.57).

3.3 Grounded Theory

According to Bhatti, (2012, p.82) grounded theory 'is quite useful for ethnography, where the theory emerges from the data and is not imposed on the data from the outset.' This research did not start with a hypothesis that I then tried to prove, but with some questions about students' experiences which I gathered data about and then interpreted. Charmaz (2006, p.16) states that '[g]rounded theorists often begin their studies with certain guiding empirical interests to study, and […] general concepts that give a loose frame to these interests.' My overall interest was in improving teaching and learning critical thinking, and the 'loose frame' to do this was made up of two strands; classroom participation and the use of cultural context in teaching. According to Thornberg (2012, p.85) grounded theory 'offers systematic, and at the same time flexible guidelines for collecting and analysing data.' My initial attraction to grounded theory was based on the fact that I wanted to gather the data first, and then see what I could learn from it about teaching and learning critical thinking. However, I was also attracted by its systematic approach to data analysis, because it helped me to not feel overwhelmed by the large amount of data I collected. According to Lichtman (2013, p.78), grounded theory has two key ideas; the 'use of theoretical sampling techniques – a concept that involves drawing repeated samples until no new concepts emerge' and 'the constant-comparative method of coding.' With regards to the first, I drew repeated data from four classes, the first two running concurrently, the third and fourth following one after the other. They all yielded very similar results; surveys, class participation and assignments from all four classes all contained the same themes and concepts.

Constant comparison means that coding is not a linear process in that one stage must follow the next, but 'researchers move flexibly back and forth between the [three] different phases of coding' (Thornberg, 2012, p.86). The first phase, 'open coding' (Glaser, 1978), or more recently 'initial coding' (Charmaz, 2006), is an open stage whereby data is compared with other data, and initial codes with other codes to find similarities and differences. I compared data from surveys with records of classroom participation, and exam papers with assignments for example. This initial stage is an intense one and involves, 'reading and analysing data, word by word and line by line' (Thornberg, 2012, p.87). The most frequently occurring codes are identified, then sorted or clustered into groups known as 'core categories' (Thornberg, 2012, p.87). These core categories are then used in the second stage, known as 'focused coding' (Glaser, 1978) to sort through large sets of data. According to Thornberg (2012, p.88), during focused coding 'the researchers explore and decide which codes best capture what they see happening in the data, and raise these codes up to tentative, conceptual *categories* […] and begin to assess the relationships between them.' During the third and final stage, theoretical coding 'researchers analyse how categories and codes generated from data might relate to each other as hypotheses to be integrated into a theory' (Thornberg, 2012, p.89).

To give an example, I found that after looking through a small sample of students' assignments there were frequently occurring words and ideas; for example, all of them mentioned education. I then searched all the assignments for discussion of education and found that every student had written about it, some in more detail than others. I then divided it into categories, girls and women and education was the second most common category, often referring to girls receiving less education than boys. I then found other examples referring to the position of women, so I looked for other mentions of gender and it became a category in its own right. This critique of gender roles in society, then became an example of critical thinking, whereby students were examining the values of their society and different expectations of male and female behaviour. More examples emerged as the classes, and data analysis progressed, which finally produced the theory that some students were adapting critical thinking to their own situations. I return to this in Chapter Four (4.6, p. 88).

3.4 Research Quality

Qualitative researchers have suggested that the concepts of validity and reliability which apply to quantitative research, do not translate well to qualitative research (Lincoln and Guba, 1985). Different approaches thought more suitable to qualitative research have been developed, although there is ongoing debate. According to Lichtman (2013, p.303), some researchers prefer what she refers to as a 'traditional' approach whereby credibility is achieved through techniques such as 'member checking (ask the respondent to confirm what was said), bracketing (putting aside the researcher's views), or triangulation, (looking for multiple evidence to confirm a particular idea).' She states that these techniques 'aim to make qualitative research more objective and legitimate' (2013, p.303). Other approaches she continues, such as that of Cho and Trent (2006) claim that validity cannot be achieved by these techniques, but is 'achieved as the research itself promotes action' because the nature of research is 'value-laden' in a particular 'social or political context' (2013, p.303). Others suggest we need criteria to assess the claims of research. Tracy for example, suggests eight: 'worthy topic', 'rich rigor', 'sincerity', 'credibility', 'resonance', 'significant contribution', 'ethics' and 'meaningful coherence' (cited in Lichtman, 2013, p.303).

While acknowledging the usefulness of other approaches this research is concerned with critical thinking, a discipline which uses standards as assessment criteria, (Bassham *et al.*, 2008, pp.2-7). Therefore, for reasons of coherence this research does the same. The criteria used here are Lincoln and Guba's (1985) credibility, transferability, dependability and confirmability. These criteria are equivalent to internal validity, external validity, reliability and objectivity for quantitative data (Shenton, 2004, p.64). However, I also acknowledge Cho and Trent's assertion that research is value-laden, and I return to this below (3.5, p.57).

In order to establish the 'trustworthiness' of research, Lincoln and Guba suggest 'activities that make it more likely that credible findings and interpretations will be produced' (1985, p. 301). Their initial criteria were developed in 1985 and have evolved in the years since, for example they acknowledge that values are actually more important than they had previously thought (2000, p.169). Others such as 'referential

adequacy' whereby the researcher submits raw data to an archive which cannot then be used by them, but can be perused later by someone not involved in the research in order to 'test the validity of the conclusions' has they admit themselves, too many drawbacks to be practical (1985, p.313).

There are three activities that Lincoln and Guba believe show credibility; 'prolonged engagement, persistent observation and triangulation' (1985, p.301). Prolonged engagement is 'the investment of sufficient time to achieve certain purposes: learning the "culture," testing for misinformation introduced by distortions either of the self or of the respondents, and building trust' (1985, p.301). Regarding the first, I lived in Cambodia for six years before and during the research, and although I do not profess to have a comprehensive understanding of Cambodian culture, I was involved in daily activities in ways that a visitor, or short-term consultant, might not be. I wanted to have better cultural understanding so as to enhance teaching and learning, and so I attempted to learn as much as I could before the research, as well as during it with the help of my students. I am not entirely sure that it is possible to 'learn a culture' even one's own, but it is important to understand as many of the norms and customs as possible and partake in daily life. The second point, 'testing for misinformation introduced by distortions either of the self or of the respondents' (1985, p.301), Lincoln and Guba state can be addressed by thinking and writing about one's values and constructions before and during the research. My beliefs and values were constantly addressed and challenged in the classroom, as were those of my students as an integral part of learning to think critically. Charmaz (2006, p.15) states that 'researchers, not participants, are obligated to be reflexive about what we bring to the scene, what we see, and how we see it.' Being reflexive means to reflect critically 'on the practice and process of research and the role of the researcher' (Lichtman, 2013, p.165). In a critical thinking classroom everyone is required to critically reflect about their assumptions and beliefs, not just the teacher. However, I also had to reflect on my assumptions, values, beliefs and presuppositions related to the research process. I did this through writing notes after each class, and while I coded the data. 'Distortions' made by my students in that they were likely to say what they thought I wanted to hear so as to pass the course, are familiar to teachers everywhere. I return to this topic in the next section (3.5, p. 56). The final part of 'prolonged engagement' is 'building trust.' As a researcher in the classroom I needed my students to trust me enough to tell me

what they thought. Lincoln and Guba point out that in order to build trust the researcher needs 'to demonstrate to the respondents that their confidences will not be used against them; that pledges of anonymity will be honoured' (1985, p.303). It became clear during the research that while I shared examples that students gave me to illustrate critical thinking in the classroom, I never disclosed anything else that they said either to other students or to members of staff. This encouraged to them to say what they thought and I read in their assignments of their disappointments in the university, with the syllabus or courses on offer, with their classmates or teachers and with the Cambodian education system as a whole.

In order to preserve their anonymity students were assigned numbers related to their position on the register. However, they filled in the first survey questionnaire before the registers were completed and numbers were assigned. Accordingly they wrote their names on them and I added their numbers later on. When filling in later questionnaires I explained that they needed to only write their numbers, but they often wrote their names as well. Their exam papers and assignments also had their names on them, as did the registers I filled in during every class. However, in this thesis the students remain anonymous as does the institution that we worked and studied in.

Lincoln and Guba's (1985) second activity to show credibility is 'persistent observation.' I observed students during critical thinking classes twice a week, for 48 hours each course. I was also involved with students in my capacity as Head of Faculty, as their teacher in other classes, and I came into contact with them frequently inside and outside the university. I was often invited to cultural events and so was able to observe my students getting married, visiting the wat (temple) and getting involved in community work. The third and final activity to show credibility is triangulation. Triangulation means 'seeking convergence and corroboration of results from different methods and designs studying the same phenomenon' (Biesta, 2012, p.147). I used various different methods for the purpose of triangulation. Information gleaned from surveys was compared with information from class assignments, responses in surveys were compared with records of classroom behaviour, and classroom participation was mapped against results with the aim of discovering if participation in class was associated with higher grades. This is described in more detail in Chapter Four (4.5, p.111). According to Coe (2012, p.44), within grounded theory the method of constant

comparison is also an example of triangulation, or as he puts it ‘corroboration of interpretations’ as during this process ‘newly collected data are constantly compared with existing data and theory […] to ensure overall consistency.’

Lincoln and Guba (1985, p.301) also state that credibility is enhanced by ‘an external check on the inquiry process (peer debriefing).’ This was carried out at regular intervals with my supervisor, albeit subject to the vagaries of the Cambodian electrical supply. They state that this is useful for various reasons; the most important for me aside from academic reasons, was to alleviate some of the loneliness of writing a thesis in another country. The third activity, ‘negative case analysis’ is ‘aimed at refining working hypotheses as more information comes available’ (ibid). This is akin to the constant-coding method as discussed above (3.3, p.49).

The second criterion for showing that a piece of research is trustworthy is transferability. According to Lincoln and Guba (1985, p.316), it is not for the researcher ‘to provide an *index* of transferability; it is his or her responsibility to provide the *data base* that makes transferability judgments possible on the part of potential appliers.’ Coe tells us that if we state that our research ‘with a particular group of participants in a particular context on a particular occasion’ goes beyond that occasion then we are making a ‘transfer claim.’ He continues that there are two mistakes we can make; ‘we may make sweeping over-generalisations, stretching too far beyond what our evidence can safely support,’ or if we go too far in the other direction ‘we will be limited to reporting what a specific researcher subjectively perceived to have happened on a unique occasion in a particular context […] with no basis on which to claim that this reflects any more than the idiosyncrasies of an individual researcher or that it has relevance to any other situation’ (2012, p.48). His remedy for this is ‘to limit any specific claims of transferability to contexts that have been described in similar levels of detail to the originally studied context’ (2012, p.49). Coe continues however, that it ‘follows that the selection of cases and contexts for study in qualitative research is guided not by their representativeness of some wider group, but for their potential to contribute information in their own right: their ability to provoke new insights, understandings, connections and explanations’ (2012, p.49). The context of my research was at the time a new one; although there is a lot of research about various groups of Asian students, this is the first at the time of writing about Cambodian University students in

Cambodia. It can offer insights into how my students reacted in the situation they were in, but I make no claim for these insights to be the same in any other situation. My aim is rather to add to debates about teaching and learning critical thinking, in particular the use of cultural context in the classroom, participation and the way that a 'passive Asian student' is constructed in Western institutions.

The fourth and fifth criteria for producing trustworthy research are dependability and confirmability. Lincoln and Guba suggest an 'inquiry audit' (1985, p.317), whereby the research is examined by an 'auditor' first for fairness of representation (dependability) and second for accuracy (confirmability). This can be compared to the task of supervisors and examiners when a thesis is submitted for an award. Triangulation and the keeping of a reflexive journal also add to confirmability (1985, p.318). Lichtman (2013, p.299), suggests that dependability 'emphasizes the need for the researcher to account for the ever-changing context within which research occurs.' This again is achieved by the keeping of notes and reflective journals. According to Shenton '[t]he meeting of the dependability criterion is difficult in qualitative work, although researchers should at least strive to enable a future investigator to repeat the study' (2004, p.63). In order to facilitate this 'the processes within the study should be reported in detail, thereby enabling a future researcher to repeat the work, if not necessarily to gain the same results' (2004, p.71). Future researchers in critical thinking could carry out similar research to mine, although the results may differ, particularly if the research were carried out in a different culture or country.

3.5 Ethical and Cultural issues

In this section I examine further ethical issues relating to my research and to teaching in a cross-cultural environment. According to Birch *et al.* (2012, p.1), alongside the 'familiar ethical principles of protection, informed consent, confidentiality and anonymity' in qualitative research, issues regarding 'research boundaries, informed consent, participation, rapport and data interpretation have become even more

significant' (2012, p.2). I have addressed the 'familiar' ethical concerns concerning anonymity and confidentiality in the previous section (3.4, p.56), and here I concentrate on issues regarding consent, participation and my role as a researcher. Following this I discuss issues relating to culture that had the most impact in the classroom; the differing cultural values of teacher and students, and hierarchy.

I begin with the issue of informed consent. I gained written permission from the Principal of the university to carry out the research and asked each student if they wanted to take part. The main ethical issue was that students might feel they had to consent to be part of the research or they would fail the course. In order to counter this I aimed for transparency at all times and informed students of my intentions and research aims. I assured them of their anonymity and confidentiality and explained to them that if they changed their minds, any data pertaining to them would be destroyed. I also told them that I was interested in finding examples of Cambodian culture that could be used in the classroom, and needed their help to find them. While they often had questions, and took time to discuss among themselves when I asked them to sign the consent forms, no students expressed any desire to opt out. I suspect that students were strongly motivated to show that they could do critical thinking, which raised the problem that as a researcher and a teacher I might be inclined to 'see' critical thinking happening, when in fact it was not. To avoid this I developed markers and indicators to show critical thinking as discussed in the final section of this chapter (3.5, p.74). Getting informed consent at the beginning suggests that 'all the ethical issues involved in a research project can be determined at the start of the project being carried out' (Edwards and Mauthner, 2012, p.17). In fact ethical dilemmas can occur at any point in the research. A reflexive approach as discussed above (3.4, p.52), where the researcher critically reflects on their assumptions and values can help in this situation, as can acknowledgement of issues of power.

I have touched on issues of trust above (3.4, p.52), and I return to it briefly here. The danger in qualitative research can be that a 'fake friendship' develops whereby the researcher is friendly to participants in order to access information (Duncombe and Jessop, 2012, p.108). Classroom rapport is different however, in that teachers are discouraged from becoming friends with their students. They are in a position of power, and this must be constantly reflected on. The biggest power-related problem

for my research was that students might tell me what they thought I wanted to hear, in order to gain my approval and to pass the course. I constantly reiterated that in terms of assignments and classroom discussions there were no right and wrong answers. For the purposes of demonstrating critical thinking, it is the process of formulating an argument and considering and analysing the available evidence that is important. I also asked them to write in their own words, and explained the concept of plagiarism to them. If students tried to tell me what they thought I wanted to hear about Cambodian culture, I was unaware of it because I was ignorant of so many aspects of it. However, any information they gave me about culture was useful for teaching purposes. When I asked the question is critical thinking important, most participants answered yes. Again, they could have been saying what they thought I wanted to hear, so I asked them why they thought it was important, and to give evidence and examples, which were useful for my understanding of what critical thinking might look like to a Cambodian student. I also developed methods of repeating questions in slightly different ways in order to check that information was credible. I return to this with particular reference to survey questionnaires in the section on research methods below (3.8, p.64).

Bhatti (2012, p.81), suggests that an ethnographer must have 'the capacity for both empathy and distance,' but this can bring 'contradictions and conflicts' and therefore ethnographers 'need to cultivate the ability to live with uncertainty and self-doubt.' I have described the insider-outsider continuum above (3.2, p.48), and here I return to related ethical issues. According to Kelly (2014, p.246) there are positives and negatives to both inside and outside positions; insiders 'bring potential insights into nuanced cultural signifiers, but their familiarity may lead to the recycling of dominant assumptions' whereas outsiders 'bring a freshness of perspective, but may impose their own worldviews uncritically.' I hoped my research would bring 'insights into nuanced cultural signifiers' from my students but I also worried that I would impose my worldview on my students. In fact during class discussion our worldviews often clashed, and explaining our thoughts, opinions and values to each other meant that we all had to reflect on our views and produce analysis and evidence to prove them.

These discussions often served to highlight my status as an outsider. My values were sometimes at odds with those held by my students, and I did not always try to hide this

as I felt that this would help to engender discussion and debate. As discussed above (2.2, p.15), Paul (1982) suggests dialogue with people from other cultures helps us to become better critical thinkers in that it helps to keep our minds open. I also felt that these dialogues were a part of the ethnographic process of gathering 'thick descriptions' (Geertz, 1973). According to Bhatti 'thick descriptions' contextualize 'both behaviour and the values implicit in the behaviour' (2012, p.81). I tried to understand not only what was happening in our classroom, but also to understand and explain what was happening in terms of the larger culture, as Lichtman (2013, p.75) recommends. This included not just the participants' values but my own; if I expected my students to engage in debates about their values and question their assumptions, my own ought also to be open to debate. For example, I horrified my students by explaining that female virginity was not particularly valued when I was growing up in East London in the 1980s, and that sex before marriage was perfectly acceptable to me and my peers. They told me that in Cambodia female virginity is extremely important as the family honour often rests upon it. We then had to do some critical thinking when looking at evidence that there are female sex workers in Cambodia who are neither married, nor virgins.

Lichtman (2013, p.75) asks '[h]ow can you begin to understand [participants] when the distance between you is so vast?' While a lot of the cultural context was baffling to me, after living in Cambodia for some time, I was able to see some shared concepts. Superstition for example, exists in many Western cultures; people read their horoscope every day, or touch wood for luck. Some students admitted that they often went to see a fortune teller, and it was a common topic for discussion in assignments, as well as in class. Superstition and visits to the fortune teller are a common part of everyday life in Cambodia, but are presented as barriers to critical thinking in our textbook, in that they stop people from thinking critically. I was concerned that discussing these ideas might challenge students' view of their society and culture, and that adopting Western style critical thinking might produce conflict in their lives. In fact, classes on superstition were often where students participated most, and they were not afraid to voice their opinions.

The question of whether teaching Western style critical thinking was an imposition of my cultural values on my students was one I wrestled with frequently. According to

Durkin (2008, p.42), within the literature there is agreement that all humans are capable of learning to think critically, the differences are in how it is expressed. I was aware that I ought to try not to influence the outcomes of my students' critical thinking, and that they might come to different decisions than I would in certain situations. My discomfort was somewhat assuaged by my introduction to the *Kalama Sutta*, (2.2, p.19). This Buddhist version of critical thinking was familiar to students and similar in many respects to the definition of critical thinking that I was expected to use in class. My students' enthusiasm for learning and the university's position that learning critical thinking was beneficial for students also helped.

Finally I discuss some of the cultural values that affected us in the classroom, and how learning critical thinking might affect students' lives. I had some understanding of the nature of hierarchy in Cambodia because of my previous work there, as discussed above (2.3, p.23). Hierarchy touches every aspect of Cambodian life. When I encouraged my students to ask me questions, or argue with me and each other, or criticise someone higher than them in the hierarchy I was putting them in a difficult position. Traditional Cambodian cultural values teach that young people should not behave like this with people in authority, or older than them. At the beginning of the research I was not sure if the students would be able to correct me by telling me if I was mistaken about their culture, and I wondered whether it would be ethical to ask them to do so. I imagined them having dilemmas about whether to do as I asked thereby causing discomfort to themselves and other students, or not do as I asked and therefore risk failing the course. I thought however that being an 'outsider' as well as their teacher might absolve them from any discomfort. In the event I think that as a 'barang' (foreigner of European ancestry), I was so clearly oblivious to the nuances of status that students were able to challenge me, knowing that there would be none of the repercussions they might incur with other Cambodians (see below, 4.2, p.83). When we greeted a visiting 'neak thom' (important person), students' behaviour was very different to mine, as it was proscribed by their position in the hierarchy. More importantly, they understood exactly where they were ranked and how to behave accordingly. This is more complicated than it sounds as different styles of speech and posture must be used in different situations. These are very subtle, and despite trying my best I often failed to apply them correctly.

As the courses progressed we all had our values and assumptions challenged. I never became angry and actively encouraged students to challenge me, and I believe this helped them to speak in class. Many students wanted to voice their opinions, and I came to realize that their thinking was not as prescribed by hierarchy and tradition as I had assumed it might be. This did not always extend to their lives outside the university, however. Marriage was an issue that caused a lot of discussion in the classroom. Young people were often expected to marry someone chosen for them by their parents. Two of my students were always seen together and referred to each other as boyfriend and girlfriend. This was very unusual. When we had discussions in class they always asserted that people should be free to marry whoever they chose. I was very disappointed when I later discovered that the young woman's parents had refused the match and chosen a husband for her who she had married. Most of my frustration was initially directed at the young woman who failed to stand up for what she wanted and gave in to her parents' demands. When I voiced this, I was gently reminded by a Cambodian colleague that a 'good' Cambodian girl does what her parents ask. In a collective society one does not always marry for love, one marries for the good of the family.

My main problem with hierarchy in the classroom as a teacher was that students were often late for class, or even absent because someone in their family who was older than them wanted them to do something, and they could not say no. Students also had to consider where they were positioned in the class hierarchy regarding their classmates. If a student was older, or had important parents, or came from a wealthy family, or was a monk they had higher standing and other students might not want to speak before them, or challenge them. This was one of the reasons much of the data I gathered was in written form, and I return to this in the next section. It is not always wise to speak out against people in authority in Cambodia, and people in opposition to the government and the powerful sometimes lose their liberty or their lives. However, many students reflected on their desire to create change and their powerlessness to do so (4.6, p.92). I do not think this criticism was born in my critical thinking classes; it was more that they were given the freedom and opportunity to say what they thought. I am honoured that they trusted me enough to do so.

3.6 Research Methods

My data included survey questionnaires, records of classroom participation, posters made by discussion groups, student assignments and exam results. I decided that gathering as much data as possible would be the best way to try and capture the students' experiences and create a 'thick description' (Geertz, 1973). Some of these methods proved to be easier than others, given the cross-cultural nature of the research. I gathered a lot of data from students, mostly in a written form. One reason for this was that I hoped that problems of hierarchy within the classroom might be alleviated if students were able to express themselves in writing. Secondly, according to some of the literature I read before starting the research, students learning in a second language sometimes find it difficult to speak to native speakers, or in front of classmates because they are embarrassed about their English language skills (2.4, p.32). Thirdly, my students told me that shyness is often seen as a positive attribute in Cambodia, particularly in young women, but also in young men. I was able to compare records of when students spoke in class with their questionnaire answers about how they felt about speaking, and what prevented them from doing so. Triangulation of this kind was possible because of the wide range of data collected.

3.7 Participants

The total number of students involved in the research was 93; 51 females and 42 males including 8 monks. I have included monks as a separate category because this is what they did themselves. When asked to write male or female in a box, they wrote monk or Mk as an abbreviation. On the register for each class there was a box, usually pre-filled by the university administration staff which also had either M for male, F for female or Mk for monk. Given the cultural norms regarding behaviour towards monks I thought it respectful to continue the practice.

Logic and Critical Thinking was a compulsory course taken in the first or foundation year of study. Each course consisted of 48 hours including mid-term and final exams.

Four classes took part in the research. The first two ran concurrently from February to June 2012, one in the morning and one in the evening. Students in the morning class have M as a prefix to their numbers and the evening class E. I assigned students a number according to their position on the register, so E17 for example, refers to student number 17 on the register in the evening class. The third class took place in the afternoons, ran from July to August 2012, and students were given the prefix A. The final class ran from September 2012 to January 2013 and took place in the evening. Students from this class have the prefix EV.

Class M started with 23 students on the register and finished with 21. Class E started with 17 students and all of them completed the course. Class A started with 30 students and finished with 28. Finally, class EV started with 25 students and 18 completed the course. The total number of students who registered for a course in critical thinking was 95 of whom 83 finished the course, therefore 12 students dropped out. The dropout rate increased significantly for the last class EV. The university had some management issues at the time and some students decided to leave and pursue their studies in the capital, Phnom Penh.

Students who dropped out of the course have been included in the research where they were involved. If a student signed the consent form and filled in the first questionnaire the information they gave has been included. If they attended only one class and did not fill in a questionnaire they have not been included. For example, M4 joined the class late, failed to attend the latter part of the course, did not hand in an assignment and then turned up unexpectedly to the final exam where he wrote nothing on the exam paper. He did however sign a consent form, take a mid-term exam and fill out two questionnaires. As he took part in some research and attended some classes, he has been included where possible in the data. Student EV12 completed everything he needed to do for the course, sat his final exam and then failed to hand in his assignment, and therefore failed the entire course. He is a monk and was called to Phnom Penh to pray at the funeral of the King Father who had died. He has been included in the relevant sections. At different stages of the research the number of students changed as students dropped out, and this is reflected in the numbers.

The students' age range was 18 to 35. As can be seen from the table below, most were in their early 20s, with 22 being the most frequently occurring age. The two youngest students were 18 year old females, and the oldest were a 35 year old male and a 32 year old female. The majority of students, 83 in total were aged 24 or under.

Table 2 - Age of Participants

Age	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**32**	**35**
Female	2	4	9	7	16	8	3						1	1	
Male			3	7	6	3	11	1		1		1			1
Monk				2	1		1					4			
Total	2	4	12	16	**23**	11	15	1		1		5	1	1	1

3.8 Questionnaires

According to Hambleton (2012, p.242), questionnaires are one of the most common ways of gathering data because they 'can be tailored exactly to the needs of the researcher.' Given the possibility that my students might be shy or reluctant to speak (see above, 2.4, p.31), I asked them for information and opinions through written surveys. At the beginning I also needed to get some information quickly so I could plan my lessons. I used questionnaires at three points during each term; a pre-course questionnaire, a mid-course questionnaire and a final one at the end of the course. Students were asked to fill in the forms in the class, and were given plenty of time to do so. This was because I did not want them to view the forms as a piece of work that had a correct answer. I remained in the class with them in case they needed any

clarification and to check that they filled in the forms themselves. The three questionnaires had different formats because I wanted to collect different information at different points of the course.

The first questionnaire, after a false start described below (3.9, p.65), was a simple one involving tick boxes and a few open-ended questions which repeated the tick box ones, in order to check the information given. The second was similar, also with tick boxes, but with extra room to give the option to write something, and the final one was more complicated with questions requiring some writing and examples. Survey questionnaires were a good resource for triangulation as I could compare students' actual participation in class with their answers on a survey as to why they participated or not. In order to check information received I repeated questions from slightly different angles, so for example I asked students if they participated in class, and also asked them if they were shy. If they saw being shy as appropriate behaviour for young people, they might not consider it as something that prevented them from speaking. My 'prolonged engagement' (Lincoln and Guba, 1985) with students, also helped to build trust and encourage students to write their opinions, (see above, 3.4, p.52).

3.9 Pre-course Survey

I wanted to know what students' experiences and learning environment had been before starting their course, as from my reading for the literature review (see above, 2.9, p.35), I thought this might have some bearing on their reactions to learning critical thinking, and might help me to plan my lessons. Although I knew that in the past the Cambodian education system was based mostly on rote learning, (O'Leary and Nee, 2001, Tan, 2008) from my work in Cambodian primary and secondary schools I knew that teaching practices were changing slowly. I wanted to know what my students' experiences had been; whether or not there had been any participatory classroom activities for example. I also hoped that courses they had taken so far at university were different from those at high school in that they were encouraged to learn more independently. Furthermore, I was interested in the way students preferred to learn;

that is to say if they embraced being an independent learner or preferred to just sit and listen. The easiest way to find out seemed to be to ask them to describe their previous experiences at school and university. This was the first part of the research and it was one of the more difficult aspects. Given that the students were studying at university level and had been given lessons in English for Academic Purposes (EAP) I expected their language level to be quite high. This was a mistake, as the questions I asked appeared to be too complex for many of them to understand. It was not clear to me then, and still is not now if this was a result of low level of English, or that they wanted to tell me what I wanted to hear but were uncertain what that was, or that they just were not used to being asked about their experiences or opinions.

I asked three questions on the first survey, given to classes E and M at the beginning of the research in February 2012. I have only used information taken from question 1 as it became difficult to disentangle what students were writing about. The answers to the first question were not always easily understood; my major mistake was to ask two questions in one - 'Please describe your previous learning experiences at High School and University; did your teachers ask you to work in groups, look for information yourself and ask questions in class? Or did they prefer you to sit quietly and take notes?' I had thought that these questions would give my students an easy way to answer by giving them examples that they could reiterate, while they could expand on their answers by giving further information and offer an opinion if they wanted to. The questions appear to be quite leading as I thought that they might not have had any experience of student-centred learning. I gave them examples of it within the questions so that they could think about whether this was their experience or not.

Classes E and M, had a combined total of 39 students. Of these, 16 students filled out the form in a way that was easy to understand. They answered both parts of the question separately, often in two paragraphs, for example:

> At high school, my teacher never gave any assignment to me, no research, no presentation. Group work was rarely happening. I needed to sit down and listened to the teachers.

> But when I studied at the university, the teachers gave me a lot of assignment and homework. They usually asked students to work in group and to do the presentation (E9).

Nine students wrote only about their experiences at high school. As Logic and Critical Thinking is a foundation year course, it is possible that they had not yet taken many other classes at university, or they may have felt uncomfortable talking about other lecturers and classes in the university. As I was interested in their previous experience at high school this information still proved to be useful. Six students wrote only about their experiences at university. Two students wrote about their experiences in some detail but failed to say if they were referring to high school or university, and two wrote answers that I could not understand. Four students did not fill out the form at all, and when I asked them why, they all said it was too difficult.

From the first two classes E and M of 39 students I had information about high school from 25 students, and about university from 21. I wanted to clarify their answers and also try to get some information from the students who had written nothing or had answered only one part of the question, so I decided to try again. I designed a tick box questionnaire which repeated the same questions in order to clarify what the students had told me. As four students in class E had failed to fill in the first form as it was 'too difficult' I asked the students in that class to help make a new pre-course questionnaire. They helped me to distil the questions into an easier form. We included 3 yes/no tick box questions, to make sure that the information gathered was the same as that from the first questionnaire; 'At high school - Did you work in groups or pairs in class? Did the teacher allow you to express your own opinion? Did you mostly just sit quietly and take notes?' These were the same as I had asked the first 2 classes, but separated into 3 distinct questions, which allowed for contradictory responses as a means of ensuring greater accuracy than the first questionnaire. We then wrote two more open questions – 1. 'Please describe briefly what you did in class at High School, and the environment. Was your experience good or bad? 2. 'Are classes at University different to classes at High School? How? Which do you prefer?' These elicited the same information as the first questionnaire, but in two separate questions.

The second two classes A and EV were given the second version of the pre-course questionnaire, 55 students in total. Every student filled out a form and there were no complaints this time of difficulty. The separation of the questions made it much easier to collect the information, and no boxes were left empty. Not all parts of the questions were answered; some students did not want to say if their high school experience was good or bad or whether they preferred classes at high school or university. When I asked, one of them explained that it is not always easy for Cambodians to express criticism, especially when it involves people who are older or in a senior position. The fact that I needed the students' help immediately set the tone for them to help me with cultural aspects of teaching from the very beginning of the research, so in a way my mistake turned out to be quite useful.

3.10 Mid-course Survey

The students were given a second questionnaire mid-way through the course, just after the mid-term exam. I asked a lot of questions during class, in order to facilitate our 'community of critical thinkers' as described in Chapter Two (2.5, p.41). I was interested to find out how students felt about speaking in class, and what reasons they had for doing it or not. I learned a lesson from my difficulties with the first questionnaire, and made the second one much simpler and repetitive. It had five questions with boxes marked yes and no next to each one. I told students they could just tick the box marked yes or no, but if they felt they could write something in the box to explain their choice it would be very helpful to me. By this stage of the courses, four students had dropped out and 89 students - 50 females and 39 males including seven monks, filled in the form. The first question asked if students answered questions in class, the second asked if they were shy. As discussed above (3.8, p.64), I asked this question because students may not have thought of shyness as a reason for non-participation. I had learned from my previous mistake that if I did not ask for simple, specific information I may not be given it. The third question asked if they understood the questions I asked in the classroom. I asked this because I thought that students might

find it difficult to say when they did not understand during class, as this might be seen as challenging me or as embarrassing for them. I thought they might find it easier in writing when only I would know what they had written. The last two questions asked if group discussion and the teacher asking questions in class helped them to learn. By then I wanted to know if my questioning and discussion techniques were appreciated or not.

3.11 End of Term Questionnaire

I realised towards the end of the first two courses that I had been overly optimistic about the effects of learning critical thinking. Before I started the research I imagined that it might improve students' lives, both inside and outside the university. As they taught me about the nature of the society that they live in and the hierarchy of authority from the government to the family, I came to think this quite naïve. I decided to ask them what kind of effect the course had on their lives, if any at all. The survey was given to the students at the very end of the course. There are two questions, the first asked if studying critical thinking had changed the way that they thought and if the answer was yes it asked them to expand on what was different. The second asked if they did critical thinking in their lives and if yes to give an example. I asked them to give examples for two reasons; to check if they understood what doing critical thinking meant and also to try to understand what 'doing critical thinking' meant to them.

3.12 Classroom participation

I tracked our progress towards becoming a community of critical thinkers by recording the number of questions that students asked and answered in the classroom, both as a group and individually. The individual answers are of more interest as they record

which students participated most in the class. In order to do this I employed a research assistant to sit at the back of the classroom and put a mark next to a student's number if they answered or asked a question. I also asked them to record any interactions between students. We drew a diagram of the classroom layout (see appendix 8, p.151), and wrote each student's number next to their position in the classroom. I asked each student to call out their number as I ticked the register, so that the assistant could write down their number. As the courses progressed this became easier as the students tended to sit in the same seats, and the researchers got to know the faces and numbers. Initially I used a researcher from the UK to work out the logistics of doing this, as I could easily communicate what I wanted and he worked with me on the first two classes. After that I employed two students who had already taken the class as researchers. They proved to be very helpful in the classroom to translate small group activities. I checked the researchers' numbers by recording one or two classes during each course and counting the number of questions asked and answered. The participation in all four classes was recorded in the same way using the same diagram. Classes took place twice a week, and one of these was usually observed. However, national holidays and observer availability meant that classes had different numbers of recorded observations; class M had 10 observations, class E had 15, class A had 9 and class EV had 11. The data collection was designed to monitor the participation progress of students *within* their class, and is thus dependable because each course had the same assistant recording the data throughout their course. It is possible to compare data across classes but the dependability of this is questionable because of the variation in research assistants. However it was possible to compare individual students' overall course results with their records of class participation. In order to do so the data was analysed using Spearman's Rank Correlation Coefficient, to ascertain if students who spoke more often did in fact gain higher results.

3.13 Assignments

All students were asked to complete one assignment during their critical thinking course. This was an essay entitled 'Is critical thinking important for Cambodia?' 84 students completed their essays, and I asked them to give me two copies. One I marked and gave back to them and the other I kept for the purposes of this research. Two students failed at the time because of plagiarism, and their work has not been included here. Later as I looked through all the essays and compared them closely I realised that some of them were very similar. It appeared that two students in the first classes allowed three students in subsequent classes to copy their work. As they were identical, or at least very similar the three copied essays have not been included to avoid repetition. Therefore a total of 79 essays make up this part of the research.

Despite having had lessons in study skills most students had no idea of how to write an essay, especially one that required them to do some original research. My experience in other classes was that students would copy and paste from the internet or each other with no regard for plagiarism, and to my surprise lecturers awarded them marks for doing so. Students had classes in writing for academic purposes (EAP) but it came to light afterwards that the teacher was not qualified, and in fact had forged his degree certificate. Therefore, when giving the class the assignment, I also gave them a lesson on how to write a basic essay; an introduction that includes definitions, what your position is and what areas you will explore in your writing; a main body that consists of paragraphs explaining your arguments with evidence, a conclusion that reiterates your argument and perhaps offers some solutions to any problems you may have raised, and finally a bibliography. I suggested that if they were stuck they look at the textbook for inspiration. I then had to explain how to use the index at the back of the book. The textbook was the only book on critical thinking in the university's extremely small library, so the only other resources for the students to use were the internet, class notes and any information they could find out themselves. Some students were very creative and used Khmer stories and proverbs as examples of critical thinking, while others discussed superstition and other beliefs with their friends and neighbours and reported on what they had found. This is discussed in more detail in Chapter Four (4.6, p.88).

3.14 Teaching Methods

In teaching critical thinking I drew on Kutieleh and Egege (2004) and Golding (2011). I have discussed their ideas at length in the Literature Review (2.5, p.41), and here I return to them to discuss the more practical aspects of using them in the classroom. I decided to create 'an educative community of critical thinkers' based on the ideas of Golding (2011, p.361), and to follow the second and third stages that Kutieleh and Egege (2004, p.6) suggest. Golding states that the best way to encourage critical thinking in students is 'to turn your cohort of students into a community of critical thinking that approximates an expert community – an educative community of critical thinking' (2011, p.359). As my students were experts on their culture, this strategy was a good starting point. However, as it relies on asking questions it raised issues concerning participation and how to engage my students and encourage them to join in discussion in the classroom. In the West participation is often seen as synonymous with critical thinking, as discussed in Chapter One (2.4, p.31), and this research explores the perception that there is a necessary link between the two.

Kutieleh and Egege do not state that their stages for teaching critical thinking have to be taught in a particular order, and I decided to adapt them for my classes. Their first stage: teach the tradition that critical thinking comes from, i.e. Ancient Greece, was not feasible given my students' level of English, knowledge of European culture, and time allocated to the course. Moreover they were not studying in a country where this tradition is dominant as the students in Kutieleh and Egege's research were, and did not have to adjust to this. The second stage; explain that there are 'culturally different approaches to acquiring knowledge' I thought was possible, but I did not in the beginning know what Cambodian approaches might be. Finding local contexts to apply critical thinking to, and discussing different approaches to critical thinking in different cultures were major discussion points for our 'community of critical thinkers.' These discussions often happened early on in the courses, during the first classes when we discussed different definitions of critical thinking (see below, 4.4, p.95). The third stage: explain the 'techniques and mechanisms expected within a Western critical thinking approach' was also related to defining critical thinking, and was therefore also discussed at the beginning of the courses. As discussed in the Literature Review (2.5,

p.39), Kutieleh and Egege found that making these techniques explicit helped students to situate critical thinking within their own academic and cultural experiences.

Golding suggests that there are four things a teacher can do to help create a community of critical thinkers; 'modelling', 'facilitating', 'assessing' and 'student questioning' (2011, p.363). Modelling refers to explaining 'how' 'why' and 'when' the teacher uses 'thought encouraging questions' herself, and in her own research. For me this came at the beginning of the courses when I explained the research and research questions to my students, as well as when we discussed definitions of critical thinking and how to do it. Facilitating, he continues, means to ask thought–encouraging questions during class and to set them for assignments. By assessing Golding means using the answers to thought-encouraging questions as criteria for assessing whether critical thinking has taken place. I discuss this further in the next section (3.15, p.74). The most important of the four according to Golding is student questioning, as asking questions makes 'critical thinking explicit' and he claims that students will begin to value such questions and use them themselves (2011, p.364).

Golding's first step is to ask 'thought-encouraging questions.' He gives several examples of these kind of questions, such as - 'what is an example of that?' - 'how do I [or you] know?' - 'what is the difference between Geoff's idea and yours?' - 'what evidence is there for…?' - 'what conclusions should we draw?' - 'what do we need to do next?' (2011, pp.361-2). I used all of these questions, but as well as asking about the difference between 'Geoff's idea' and someone else's, I also asked students what they thought about differences between my culture and theirs; about getting married for example, or whether women should go to nightclubs. These questions were designed to encourage critical thinking in Paul's 'strong sense.' As discussed in Chapter Two (2.2, p.15), in order to be a 'strong' critical thinker we have to reflect on our own beliefs and arguments as well as those of others.

Golding's step three (2011, p.361), where the teacher takes 'a thinking encouraging approach' and asks open-ended questions, rather than leading students to an already prepared answer, happened from the very beginning of the research as I often did not know the answers to the questions I was asking. According to Reja *et al.* (2003, p.161), 'close-ended questions limit the respondent to the set of alternatives being offered, while open-ended questions allow the respondent to express an opinion without being

influenced by the researcher.' This may be true in some circumstances, but in classroom research there is an ever-present problem that student participants may be influenced into saying or writing what they think the teacher wants to hear. In order to address this I reiterated frequently that it was the process of doing critical thinking that was important, not the answer that was given. I return to this in the next section (3.15, p.74).

In order to create a community of critical thinkers where students were regularly asked and answered thought-encouraging, open-ended questions, I had to find a context for the questions that students could relate to. I also had to take into account Hofstede's third category; in collectivist cultures 'individual students will only speak up in class when called upon personally by the teacher' (1986, p.312). I did not feel that I knew my students well enough at the beginning of each course to direct questions towards individuals, and I was mindful of the effects of hierarchy and that many of them, especially the female students might be quite shy. I therefore focused on creating group work exercises as well as whole class discussions. These evolved from my increasing knowledge of Cambodian culture and experience of teaching, and are described in more detail in Chapter Four (4.5, p.106).

From my reading for the literature review (2.5, p.41), I had some expectations of what a community of critical thinkers might look like. Golding's classroom is full of 'thought-encouraging' questions; from the teacher to the students, students to the teacher and each other and to ourselves. Similarly according to Lipman (2003, p.20), when a classroom is converted into a 'community of inquiry' students listen respectfully to each other, challenge each other to provide evidence for opinions and inferences, and identify when assumptions have been made. He saw these challenges as respectful rather than 'heated' and thought that students should be encouraged to participate, but that participation is not a requirement. According to Paul, (1982) there should be also be dialogue and discussion of ideas and values from different cultures.

3.15 Recognising and Measuring Critical Thinking

There are various tests for critical thinking available. None as far as I am aware are available in Khmer, the principal language of Cambodia. Lun *et al.* (2010) carried out two studies using critical thinking tests; the first using the Halpern Critical Thinking Assessment using Everyday Situations (HCTAES) and the second using the Watson–Glaser Critical Thinking Appraisal Short Form. They found that there was a link between proficiency in English and ability to succeed in critical thinking tests, and that 'Asian students' apparent lack of critical thinking is a consequence of the need to use English as a second language in academic discourse' (2010, p.614). My students' proficiency in English was too low to take any of these tests.

Another way to test critical thinking is to use the assignments and exercises in the textbook used in the classroom. Cotter (2009) carried out research into whether the exercises and written assignments provided by a textbook improved her students' critical thinking skills. She used the California Critical Thinking Skills Test (CCTST) alongside critical thinking exercises provided by the course textbook. The students took the tests, carried out four written assignments from their textbooks over the course of a semester and then took the tests again. She found that rather than improving, students' critical thinking skills as measured by the CCTST and GALT declined. Interestingly she also found that the 'Caucasian' students performed better at the tests than the African/American, Asian, Asian/American or Hispanic students in the class, but does not expand on this in her paper (2009, p.8). Cotter's conclusion was that perhaps the CCTST test was not a useful tool for the measurement of the skills that the text book she was using in her class referred to as critical thinking skills. The textbook I was given to teach the course and the only book on critical thinking available in the university library was from the United States of America. It was not possible to use the exercises in the book to test if students were doing critical thinking as they were mostly culturally specific to the USA, containing cultural references and language that were difficult for my students to understand.

I had to find ways of recognising critical thinking, which I needed to make explicit to the students. It seemed that participation in class might not be a good measure for cultural reasons so I needed to another way. Firstly I used the definition from the

textbook used for the courses (2.2, p.19). We referred to it often and discussed it at length during the first classes at the beginning of each course. When we had discussions about proof or evidence, and students wrote about this in their assignments or surveys I defined this as critical thinking, because according to the textbook definition, they were analysing a truth claim by looking for evidence. Our textbook definition also referred to 'intellectual dispositions' which we understood to mean being open-minded and reflective. For example, when they reflected on the society in which they lived, dissected it and critiqued it with arguments and evidence I saw this as an indication of critical thinking. In the *Kalama Sutta* Buddha tells us not to 'believe in anything (simply) because you have heard it' or because it has been 'handed down for many generations' and furthermore 'do not believe in anything merely on the authority of your teachers and elders.' These were good indicators, as students puzzled over why they believed something, examined the evidence and often came to the conclusion 'I believe it because my parents believe it.' An indication that they were thinking about their own prejudices or biases, comparing them with other opinions, and weighing the evidence. In order to be a 'strong' critical thinker according to Paul (1982), we need to compare different worldviews and perspectives with our own. In order to do all this students needed to be able to distinguish fact from opinion, and show that they could do so. According to Golding (2011, p.363), the use of 'thought-encouraging' questions can also be used as 'criteria to assess critical thinking.' He suggests the following – 'Do students ask and answer the thought-encouraging questions in their assessment tasks? How often and in how much detail?' (2011, p.363). Furthermore 'the academic teacher should have their students ask thought-encouraging questions of each other as they complete tasks and engage with new knowledge from their readings or lectures' (2011, p.364). As I was trying to create a community of critical thinkers as Golding suggests, I included this last criterion, but I was unsure if it was entirely suitable, given that some literature suggests that Asian students do not participate in class discussion. However, as Golding also states that it can be used to assess assignments, I decided to include it.

To sum up, the criteria I used to measure if critical thinking was taking place are:

1. Analysing truth claims by looking for and evaluating available evidence
2. Reflecting on one's society and prevalent cultural values

3. Examining one's own prejudices and biases
4. Being open-minded and considering other worldviews and cultures
5. Distinguishing facts from opinions
6. Asking and answering 'thought-encouraging' questions in assignments and to each other in class.

In my assessment of whether critical thinking was happening, particularly in students' assignments, I was not overly interested in the decision or outcome they reached. It was the process of doing critical thinking that was important, and that students could demonstrate at least some of the above.

Chapter Four

Findings

4.1 Introduction

To return to the main aims of this research, it began with a question - 'How do Cambodian students experience courses aimed at developing Western style critical thinking skills?' From my reading for the literature review, this became focused on three areas: the importance of cultural context when teaching and learning critical thinking; the connection between 'doing' critical thinking and classroom participation; and finally improved knowledge of these leading to changes in teaching and learning critical thinking for my classes. Other considerations were students' language proficiency, and ethical and cultural issues in the classroom. With reference to the latter, students' saying or writing what they thought I wanted to hear and the need to be vigilant about imposing my own cultural values were the main issues, and I return to these throughout this chapter.

This chapter comprises eight sections. The second is concerned with students' educational experiences at high school and university before they started a course in critical thinking. This was important for lesson planning, in particular concerning what kind of participatory activities I might use in the classroom. The third section discusses the different definitions of critical thinking we used in class, in exams and in assignments. The fourth explores how students expressed critical thinking by adapting it to their own lives and experiences. The fifth section describes the process of finding 'thought-encouraging questions' that were culturally relevant, and how students felt about answering them. The sixth describes the strategies I used in class to encourage participation, and discusses the relationship between participation and results. The seventh considers the question of whether students felt critical thinking was important

and the final section discusses our community of critical thinkers, and how it met or differed from my expectations.

The examples given here of students' work were chosen by me, and as much as I have tried to show all levels of ability and understanding there is an unavoidable bias. Students who wrote unintelligible or ambiguous sentences have not been chosen to illustrate a point, for the obvious reason that it was not clear to me what they were trying to say. All students' writing has been reproduced exactly, in order to give an understanding of the level of English language the students were operating in. These examples show their level of language proficiency, which was much lower than that of native speakers. However, they also demonstrate that this did not necessarily impede their understanding of the ideas and issues they chose to discuss. This chapter also gives glimpses of students' lives and their main preoccupations of education, superstition, gender, politics, and poverty. These themes are reflected in the examples given of students' work. The examples they chose to share, their thoughts on politics, on the environment, on gender issues are the small reminders they gave me every day that while critical thinking may be an abstract concept, it is applied to real lives.

4.2 Before Critical Thinking Class

Before I began trying to create a community of critical thinkers using questioning and discussion in class, I thought it would be useful to know if students had any previous experience of working in groups, sharing opinions or class discussion. This information was gathered by questionnaire, and as described above (3.9, p.65), it proved initially to be more difficult than I expected. The difficulties did however give me some insight into students' levels of English language proficiency, and as I had to enlist their help to re-write the questionnaire, it set the tone early on for them to advise me on cultural issues.

My reading prior to the research and my experiences working in Cambodian schools led me to make some assumptions about students' previous learning experiences.

Before the courses began I conjectured that students had experienced mostly teacher-centred educational techniques; had rarely done group work at high school; and that learning at high school was different from learning at university. I thought that this kind of previous high school experience combined with a hierarchical culture might inhibit students from expressing critical thinking or participating in class. The following information is taken from 93 pre-course questionnaires.

I assumed that at high school students sat quietly, listening to the teacher and taking notes, while teachers stood at the front of the class and read from a textbook. In fact 51 students said they mostly sat quietly and took notes, while 42 said they did not. This was surprising as I had expected the first number to be higher. Students who said they had mostly sat quietly often disliked this approach to learning. A23 for example was 'bored with some teachers who just come to read book, not explain more detail'. Other complaints were similar. A18 stated that this approach had not been useful for his future learning experiences:

> I had bad experience when I were studies at high school, I can know what the book said but I can't know what the term outside said, so affected me when I attended in University.

I felt that this kind of analysis of past experiences at the beginning of the course boded well for this student's ability to learn critical thinking. What EV24 wrote about high school was a revelation of a different kind:

> In that class, it was very noisy. Teacher talked about the lesson, students discuss about outside thing. Sometime, teacher talked on phone in class.

This description of a teacher talking on their mobile phone gave me some insight as to why students were surprised when I told them at the beginning of each course that they were not allowed to use their mobile phones during class. I was equally surprised when they told me that some teachers at our university made telephone calls during class, and allowed students to use their mobile phones in the classroom. This led to some interesting debates about mobile phone usage in staff meetings, where teachers said things like 'but the students will not like us if we don't let them use their phones'

and ‘they have wealthy parents who are powerful we dare not try to stop them.’ A reminder to me of the all-pervasive hierarchy.

Some students contrasted learning at high school with their learning experience at university, sometimes favourably, sometimes not:

> When I was at high school, I just write down what the teacher write on the board. I am not care much about my study. When I enter the university I try to study hard than high school. Because I start to think about my future, I prefer to study at university (A3).

> Classes at University are different to classes at High School. Because study at University have a lot of assignment, work in group and have a lot of exam too. When I study at University, I can improve my knowledge. I know how to do assignment and know a lot of thing around me. But study at University do not happy like study at High School (A9).

These students recognised that they were at a transitional part of their lives and that studying at university was different from high school. This was often framed in terms of themselves in that they felt they had to work harder and plan for the future. This is a transition that university students make all over the world. Moreover, the fact that some students could admit to being less happy at university than they were at high school, was a good sign that they were being honest, and a good indication that they were not saying what they thought I wanted to hear.

Lack of participation in class discussion is sometimes attributed to previous educational experience (see above, 2.5, p.36), and I assumed that students had probably not had much previous experience of group or pair work in class. In fact, their answers showed otherwise. In answer to the question ‘did you work in pairs or groups at high school?’ 56 students said yes and 37 no. I had also hypothesized that perhaps students might find participation difficult because they were not used to being able to state their own opinions, so I asked them if this were the case. 73 students said yes they could voice their own opinions and 20 said no. These figures are expressed in the table below for ease of comparison.

Table 3 - Pre-course Questionnaire, High school

	Yes	No
Work in pairs/groups	56	37
Mostly sit quietly and take notes	51	42
Able to express an opinion	73	20

The number of students who stated that they participated in group work or pair work at high school was almost the same as the number who said that they mostly sat quietly and took notes (51 and 56, respectively). This tied in with my own experiences of working in schools in Cambodia where group or pair work activities did happen, but not in every class, and they did not usually last long. Students who said they did group work often said they liked it, as A1 put it - 'it makes me can use my own brain.' Others also felt it was good for their learning - 'If I can ask teacher and discuss with my group, I think my knowledge will increase' (M21). Other students wanted to do group work but found that their teachers followed a set formula, possibly because of a lack of training, but also because of large class sizes:

> In my high school only a few teachers ask me to work in groups. There were many students in one class, not less than 55, so teacher not allowed us to moves the chairs or work in group all the time (E1).

27 of 93 students said that they did group work at university. This was far fewer than the 56 students who said they did group work at high school. This was disappointing, although given the lack of qualified teachers at the university not completely unexpected. However, I was pleased to read students' reflections on their time at high school. The fact that some of them had participated in group work seemed a good sign that there was at least an awareness that it existed, and many of them were very positive about it, which was reflected later on in the mid-course survey (4.5, p.109). Students were also often very frank about their high school experiences - 'High school experience is very bad thing that I don't really want to meet again' (M20). This level of honesty was heartening, and was again an indicator that students were able to write what they thought.

As I intended to ask a lot of questions in the classroom I wanted to know if students had previously been encouraged to express their thoughts and opinions. 73 students stated that they were allowed to express an opinion in class at high school. Nine students wrote that the teacher asked questions in class and five that they were able to ask the teacher questions. These are very low numbers, and suggested that there were not a lot of questions being asked. One student wrote that she had a bad experience when she asked a friend a question in class about a reading that she did not understand, while others wrote that they wanted to ask but had no opportunity or were too scared:

> When I asked my teacher, he didn't care about my question. So if I don't understand what should I do? I have to keep it in my mind. It was so bad to me about this experience. My teacher blamed me because I asked my friend, but he didn't allow me to ask him (EV13).

> Students often don't understand what the teacher going to teach them. I have lots of question to ask, but I have no chance (EV24).

> Studying time need quiet. Student talked when allowed, but they are so scare and they don't want to answer (M20).

This did not bode particularly well for my strategy of asking lots of questions, or for students to ask each other questions. On the other hand, the fact that many students felt they could express their opinions seemed a good sign. 29 students wrote that at university they had to do research themselves, and that this was different to high school. This was often seen in a positive light - 'I have research more by myself. I research more I know more. I loves it' (EV22). The transition from high school to independent learner can be difficult, and it was good to see that some students were enthusiastic about that change, and mature and confident enough to express honest opinions.

The pre-course surveys made clear to me some of the challenges we would face together in learning critical thinking. The first was the students' level of English language. Despite being university students, their language proficiency was much lower than I had expected. This was useful information to help me to pitch my lessons

and my questionnaires at a level that students could understand. Secondly, they did not seem to have had much experience in being asked questions in the classroom, although they did have some experience of group work. Asking and answering questions is seen as crucial to the creation of a community of critical thinkers, and I was interested to explore techniques to encourage this. Finally, although most students were happy to answer questions about their past experiences in the pre-course questionnaire, some of them found it difficult to write about their (then) current situation. However, when students did write about their experiences at university they were critical as well as positive. Occasionally they were directly critical of me. In order to challenge lax attitudes to time-keeping, I would ask students who were more than half an hour late to wait outside until I could talk to them, as it was very disruptive to have people wandering into class and trying to catch up. My opinion that their education was far more important than, for example, taking a Grandparent to the market was a common discussion with many students. Some students however, had to work or care for siblings. If I knew this I could make allowances for them, and make sure they did not miss anything important by giving them extra tuition. This policy was successful overall, although one student did not like it and did not hesitate to tell me so – 'I prefer that the proffesser should allow the students go in the class room if they are late' (EV25). Unfortunately EV25 had no good reason to be late, and so the policy remained unchanged. I was pleased however that she was able to express her dissatisfaction.

4.3 Definitions

The first lesson of each critical thinking course started in the same way. I began with the textbook definition as students could refer to it during the course, and we could also use it as a measure of critical thinking (see above, 2.2, p.19). Teaching this definition incorporated Kutieleh and Egege's third stage; explaining Western concepts and techniques of critical thinking. I also hoped that students might be able to help at this point with Kutieleh and Egege's second stage of discussing 'culturally different

approaches to acquiring knowledge' (2004, p.6). Initially we discussed the meanings of the different words and then tried to understand the definition as a whole. This was no easy task given the students' level of English. I then asked them to discuss the definition and to think about whether it was something that they considered to be a part of their culture (they did). When the first lesson I taught as part of this research with class E finished (13/02/12), I was approached by a monk who had waited behind to speak to me. He seemed visibly upset and told me that Buddhism has a strong tradition of critical thinking, and that it was already a part of Cambodian culture. He then asked me to read the *Kalama Sutta* (see above, 2.2, p.19).

This student offered a culturally different approach to critical thinking almost immediately and I was delighted. I immediately used the *Kalama Sutta* as a comparison to the textbook definition in the next lesson with classes E and M, (the first two classes which ran concurrently), and again later on with classes A and EV, much to the gratification of the student who had brought it to my attention. I also acknowledged that student to each class, and asked them to do the same in future if they had examples of Cambodian culture for me to use. It was thanks to him coming forward so quickly that students could see that I was keen to learn about their culture, and it set the tone for them to think about examples to give me. It was also a useful addition to our knowledge of critical thinking in a cultural sense. We understood that there is a tradition of critical thinking in Cambodia, and it helped us to think about critical thinking from different perspectives and compare them.

Before we began reading or discussing definitions in the first lesson of the third and fourth classes (A and EV), I decided to ask the students what they thought critical thinking might be. I put them in groups and asked them to produce a poster definition of critical thinking. The following are some examples from class A, (07/02/2012). Some of them had clearly read the textbook or discussed the course with previous students and produced posters like these:

Critical thinking is the way of deciding wheather a claim always true, sometimes true or false

> Critical thinking is the general term that used to describe thinking is clear that based on Logic, Reason, Analysis and hypothesis.

This was impressive as I had not allowed students to consult their textbooks during class while producing the definitions. Other groups however wrote definitions like these:

> Critical thinking is the negative way to complain about sth or someone for changing (attitude or behavior)

> Critical thinking is the deeply and clearly idea of criticize sth or s.o in both negative/positive way to change or correct the lacking points to become better and better one.

I thought about this often in my teaching and was at great pains to stress the difference between criticizing and thinking critically. The *Kalama Sutta*, as a definition of critical thinking helped students to understand this difference, and we discussed it in the first lessons of each course. It was useful in terms of both language and culture. Students were studying in a second language and the *Kalama Sutta* was readily available to them in their own language. Secondly it may have helped to allay their anxieties around what might seem to some to be invitation – even an instruction - to indulge in criticizing other people. Offering criticism can be problematic in Cambodia because of the nature of hierarchy; criticizing someone with higher status is not permissible. In his assignment A16 returned to the fact that Critical Thinking as a discipline is a Western idea that might suffer in translation:

> I can say that it is hard for Cambodian people to decide whether critical thinking is important or not for them, because critical thinking comes from the West. Moreover, the linguistic concepts of Cambodia and Western countries are different. So they will have different

> understandings about critical thinking. For example, Cambodian people have inaccuracies in translation of critical thinking. They define "critical thinking is thinking something bad or criticizing something negatively". In contrast, Western countries define critical thinking as thinking deeply or critically in order to find if something is true or false with reasons and evidence. So, Khmer people will think critical thinking is not important, because they define critical thinking negatively (A16).

Despite our discussion of the *Kalama Sutta* early on in the course, this student described critical thinking as coming 'from the West'. He was making an important point about the relationship between language and culture; critical thinking in the way that we were learning it does come from the West, and has its roots in Socratic dialogue (see above, 2.2, p.13). He may also have been thinking about the syllabus and textbook we used for the course, and referred explicitly to those. His point that the word critical can be seen negatively was an important one that needs to be addressed when teaching in a cross-cultural environment. However he had not made the link that I had hoped to create in my teaching to the *Kalama Sutta*. I return to this below (4.3, p.88).

We revisited definitions often during the courses. Students were asked to define critical thinking in their mid-term exam; this was taken half way through the course after 24 hours had been taught and was sat by 90 students in total. In answer to question 1 – What is critical thinking? - 63 students wrote an exact copy of the definition in the textbook, albeit with some spelling mistakes such as 'interlectual' for intellectual or 'dipositions' for dispositions. This was an impressive feat of memory on their part. Another 20 made an attempt to write the exact definition ranging from just the opening sentence to a few lines. Five students added some of their own thoughts to the textbook definition while seven students attempted to answer purely in their own words. These were usually a few sentences about critical thinking helping with decision making, building arguments, thinking for oneself, or the advantages and disadvantages of doing it - 'at work the boss does not accept our opinion' (A21).

Halfway through each course, 83 students reproduced or tried to reproduce the textbook definition when asked the question what is critical thinking? Only 12 students wrote some of their own thoughts on the subject. This suggested that what most of

them perceived to be critical thinking was a textbook definition from the USA. I was disappointed that none of them mentioned the *Kalama Sutta*. At the time I reasoned that their previous experiences in exams had probably been that to get the best mark they had to repeat word for word what they had been told or read in the textbook.

At the end of the course students had to hand in their assignment, an essay entitled 'Is critical thinking important for Cambodia?' During classes on essay writing I had suggested to students that before answering the title question they should define their terms and think about the meaning of critical thinking. Most students followed this advice and gave a definition of critical thinking in their introductory paragraphs. 35 students gave a definition of critical thinking copied directly from the textbook we had been using in class. Another 38 also gave the textbook definition, but added other definitions or their own ideas. Six dispensed with the textbook altogether and gave other website definitions or their own ideas. These extra definitions were similar to the textbook definition, referring to analysis, evidence, and decision-making (see above, 2.2, p.19). A25 explained what critical thinking meant to her:

> As I am the one who is studying critical thinking course and have not finished yet, I would respond simply that critical thinking is to try to be open-minded, to get something new in different ways, then know what something is and think about it deeply before judging or deciding what is good or bad, especially to analyse situation clearly and rationally. It is best for our life; I mean that living in a satisfied way, not regretful of making wrong decisions (A25).

For E9 there was a difference between 'everyday' thinking and critical thinking:

> It means that we have to like a scientist instead of a lazy man, thinking about many solutions instead of narrowing in one and examining all relevant evidence instead of jumping to conclusions without reasoning.

Only five students referenced the *Kalama Sutta* in their assignments. Most students used the textbook definition in their assignments and when asked to define critical thinking in the mid-term exam. However, more students were keen to add their own

ideas in their assignments. The number trying to explain critical thinking using definitions other than the textbook went from 13 in the mid-term exam to 44 in assignments handed in at the end of the course. The continuing use of the textbook definition was a surprise to me at the time, as I had thought that students would be excited by having their 'own' definition in the *Kalama Sutta*. I told them that they could add their own ideas to any of the definitions we used, as long as they could justify those ideas as being critical thinking. This may be an indication of how they viewed critical thinking, perhaps seeing it as a primarily Western concept as it was introduced to them in the first lesson. They may also have referred often to their textbook or class notes, especially when revising for exams and perhaps felt that being critical of critical thinking definitions was a step too far. Either way they were certainly consistent, but I was glad that over half of them (44 of 79) felt able to expand on that definition and give their own thoughts about it in their assignments. It was only when I began to write this thesis and looked at my lesson plans that I realised I had used only the textbook definition as part of a mid-term exam revision quiz. I also consistently referred to that definition during class when we considered whether someone was doing critical thinking. I had ignored any other definition myself, thereby directing students' thinking about critical thinking definitions. An imposition of my cultural values that I failed to notice. This was a reminder that it is difficult to shrug off our cultural biases, and that this needs to be planned for meticulously before it becomes an integral part of teaching practice. I return to how this might be managed in Chapter Five (5.4, p.127).

4.4 Expressing Critical Thinking

Given that some literature states that critical thinking may be expressed in culturally different ways (Durkin, 2008, Chan and Yan, 2008), I return here to how my students expressed their understanding of it, and how they applied it. To reiterate, the criteria I looked for to show critical thinking were:

1. Analysing truth claims by looking for and evaluating, available evidence
2. Reflecting on one's society and prevalent cultural values

3. Examining one's own prejudices and biases
4. Being open-minded and considering other worldviews and cultures
5. Distinguishing facts from opinions
6. Asking and answering 'thought-encouraging' questions in assignments and to each other in class.

While most students met some of the above criteria, none of them met the last one in full, and in fact this was not a good measure to use in our classroom. I return to this below (4.8, p.118).

As they lacked books or access to online journals, students had to think about how critical thinking might apply to their society and themselves. Many of them consulted the course textbook and wrote in their assignments about barriers to critical thinking, i.e. something that stops people from thinking critically. The textbook gives a list of barriers and many students chose from it. The most popular choices were superstition, prejudice/bias, poor reading skills, peer pressure, stereotyping and fear of change (Bassham *et al*., 2008, pp.11-12). Although they started with the textbook, students adapted their choices to describe Cambodian situations such as visits to the fortune teller or local prejudice against Thai or Vietnamese people. The most frequently cited barrier from the textbook was superstition, with 53 students writing about it in their assignments:

> For example: most people believe that if an owl flies into their houses, they will receive bad luck. People believe it because they heard it from the old generation. People try to kill owls. A few of them say that if you kill it, your luck will come back. The owl has become a bad bird. It will become a rare bird that people seldom see. […] I think the effect of superstition can make Cambodia stay a poor country because people damage everything they have. They say something is bad without looking for evidence. (EV13).

Citing discrimination and prejudice as barriers to critical thinking, brought forth an outpouring of what many female students had to contend with in their daily lives. They taught me a lot about Cambodian culture, and also gave me something I could ask questions about to generate discussion in the classroom (see below, 4.4, p.97).

Students wrote about the Chb'ab S'rey or rules for women in their assignments. E11 described it thus:

> Women have to stay home, do housework, take care children, not allow going to school, etc. More than that, if she is a good woman, she has to walk and laugh quietly (no showing teeth), forbid to go to other house, no sexy clothes. She must not speak loudly, speak with men etc. of course, women do have many rules for her lives. Cambodians think that women need to do that in order to be a good woman.

The Ch'bab Srey is a prose poem composed of a set of directions given to a daughter by her mother on the eve of the daughter's wedding. Most of it is concerned with serving one's husband and never criticizing him no matter what he does. It also reminds the daughter that the family honour rests with her, so she must not do anything to create gossip. Many of my female students felt constrained and frustrated by these ideas, particularly when they were not allowed to leave the family home to study elsewhere - 'Some of my friends who are women, they feel really disappointed and hopeless because of their parents' ideas. They cannot go to study or continue studying at Phnom Penh' (A25). A25 went on to think about the effect of gender discrimination on her society:

> There are many rules for woman in the Chbab Srey Book. […] We should not let the culture covers our heads all the time because we are human, we need to update ourselves and follow the next generation. We should understand the situation by doing the critical thinking. For example, according to Chbab Srey a woman cannot speak to a man, but nowadays we need the communication at the work place, home or somewhere else, if there is no contact between men and women, everything cannot run well. That is why we need critical thinking.

This was an example of students applying critical thinking to their society and seeing that girls often struggled harder than boys to go to school, which then affected their future life choices and employability.

Other students explored barriers to critical thinking not featured in the textbook, such as poverty, politics, culture and tradition. Students dissected their culture in writing (although not in speaking) to an extent that surprised me. Some of them wrote about the festivals that punctuate the Khmer calendar for example, which suggests that they were prepared to question the cultural values of their society:

> In Cambodia, there are many traditional ceremonies, but not all are done in the right way. For example, in Pchom Ben Day, Cambodian people always spend fifteen days to get up early in order to rice balls […] to throw on the ground for devils (Brat) and some people think that their relatives that are dead have become brat so they will get rice balls to throw. I think this is a wrong thing to do. As we see in Cambodia, the number of poor is higher than the rich and some people do not have enough money to make rice and some are homeless, and it is a good idea that if people give that rice that they make for the devil to the poor people, it is better than throwing it on the ground (A28).

Perhaps unsurprisingly for university students, they all mentioned education in their written assignments, some in passing and others at length. They examined the different reasons why people are unable to access education in Cambodia, and often declared the system to be corrupt. This student wrote about the problem of 'extra' classes that school teachers give to top up their salary, and which not all students can afford:

> This is a case where we need to use our critical thinking to figure out why 46% of all students cannot finish primary school successfully. Now we cannot blame the war since it ended decades ago. Most teachers do not pay much attention to their regular classes but to their extra classes, the part time classes where students have to pay. This applies to primary schools, secondary schools and high schools. Those who cannot afford the part-time classes can learn well but cannot manage to pass the exam. Those who can afford the classes have to spend most of their time in class and do not have enough time to practice the exercises themselves or to search for other sources of knowledge besides their teachers. Teachers also have less time to

> search for updated knowledge in and out of the field they teach and as a result, sometimes they guess the answer. Thus low quality education occurs. (A22).

A22 analysed the reasons for poor quality education in Cambodia, and suggested that the Khmer Rouge period can no longer be blamed for this. Others disagreed however and thought that it could:

> The destruction of war, insufficiency of school infrastructure and facilities, unskilled teachers, poverty and low income are the main causes of lack of education (E5).

Some students were brave enough to discuss issues in politics such as illegal logging, corruption and lack of democracy in their assignments:

> We all realize that if we cut all the trees down, the country will face big natural disasters such as floods, droughts, and storms in the future. Why do Cambodia governments allow them to do that? The government is getting benefit from it. They think about their own benefit rather than think about the country and its people (A5).

> For instance, the Cambodian People's Party (CPP) is a party that […] took the power in Cambodia from 1998 to the present day. They always say that CPP is the only power that completed many outstanding achievements for the Cambodian people several years ago such, as creating the movement that helped the Cambodian people to get out of the Pol Pot regime on January 7, 1979, developing the national economic system, pushing for the peace agreement in Paris in 1991 […]. A political party should not promote themselves with what they have done before. The best way is to show the future actions from their party to society and try their best to set goals and objectives that will be useful to citizens in the future (EV8).

> The public regime is a democracy, but the way of controlling is completely authoritarian. How can we use our brain to do the critical

> thinking about politics? If we are quiet our country will stay like this. If we express our feelings about politics, we will be in danger. (EV9).

Students analysed politics in terms of the effects of the Khmer Rouge regime on their parents, and more pertinently on themselves. They understood that fear can stop people from doing critical thinking, but more than that, they also understood that the fear was being passed down from the older generation to them:

> Those bad experiences in the Khmer Rouge time seem to become the culture of Cambodian old people to teach their children to be silent and do not try to criticize the government (E13).

E11 analysed the situation further by applying a textbook barrier to politics; fear of change (Bassham *et al*., 2008, p.12). She came to the conclusion that the recent past had been so bad for her parents and grandparents that they could be happy in a situation that was less than perfect, but better than before:

> Right now, Cambodia people are safe and live in peace, so they do not want to change the old government (CPP). They have family, jobs, and everything that they never have before. Therefore, their thinking is to wish to live in peace and stability in Cambodia. They may be scared and afraid of change that is why people are not open-minded to accept the change (E11).

Students understood that fear can stop people from doing critical thinking, but more than that, they also understood that this fear was being passed down from the older generation to them. E12 thought about whether people were able to do critical thinking during the Khmer Rouge regime and answered definitely not - 'When people have met any kinds of this situation they do not use their critical thinking to judge something, they just do by their animal instinct.' These young students were well aware of the impact of the Khmer Rouge regime, after all it happened to their parents and grandparents. They were also aware that they too were feeling the effects of it, by being told to stay out of politics. What they wrote showed that they knew that they, and their parents, were being manipulated by fear. This was one of the most profound things that my students taught me. The fact that they understood this and analysed it gave me some

hope for the future of Cambodia. Unfortunately at the moment there is little effective political opposition and it can be dangerous to criticise the ruling party. This creates a tension between doing critical thinking and keeping safe. The idea that doing critical thinking might be a danger to one's life is not something that is often a consideration for students living in Western democracies.

The result of students' critical thinking was sometimes tailored to an 'Eastern' or more 'holistic' way of thinking (Nisbett, 2003). EV8 wrote in his assignment about how he had used critical thinking to solve a dilemma; he worked at our university when there were some management problems occurring:

> Some owners focus on the quality of education but some focus money. I knew it and tried to think what should I do about it? Should I tell the students about this because it relates to their future? Critical thinking helped me to answer this question, the answer was I should tell the students but not in detail. So I told them if you care about your degree, or you want to have more chances to get a scholarship abroad, or you want more expert teachers or better quality education, you should move to Phnom Penh. It is good for both sides, I am not the one who destroys the honor of the university, but I am not also the one who is careless about the future of the students (EV8).

This student came to a result consistent with Nisbett's belief that East Asian students are more likely to choose the middle way when confronted with a dilemma. His decision shows that the outcome that he wanted was to find a way that created harmony and balance; something that was 'good for both sides.' The outcome of critical thinking was culturally appropriate to his situation.

4.5. Developing Culturally Relevant Questions and Examples

The thought-encouraging, culturally relevant questions I asked my students came from three sources; students' written assignments, class/group discussion, and my own research. As discussed above (4.2, p.82), students did not report having much previous experience of being asked questions in class or being encouraged to ask questions themselves. At the beginning of the courses I talked to them about papers I had read that suggested that some Asian students were less able or likely to do critical thinking than their Western counterparts. I wanted them to be aware of the reasons for the research and I also thought that telling them about some of my reading for the Literature Review might create some discussion. This was a very successful tactic in engaging the students in debates around critical thinking. I wrote down questions as they were asked during class. The following list is from my notes after my second lesson with class E (15/02/2012):

> What happens when we go to another culture? Can we do critical thinking in the same way?
>
> Do Buddhists and Christians think critically in the same way?
>
> Does everybody have the same critical thinking standards in all countries?

These were the kind of 'thought-encouraging' questions that I had expected to be asking students, and I was impressed that they asked me first. I had no pre-prepared answers for them, so we had a discussion where we all had to think about our values and cultures. Students sometimes asked me 'thought-encouraging' questions that I did not know the answer to, such as 'Did Pol Pot do critical thinking?' I deferred to their superior knowledge on this subject and referred the question back to them.

Not everything needed a local context, for example the critical thinking standards given in the textbook; 'clarity, precision, accuracy, relevance, consistency, logical correctness, completeness and fairness' (Bassham *et al*., 2008, pp.2-7) were comprehensible in English and translated well into Khmer. I asked questions which

had pre-prepared answers when I was teaching students the concepts they needed to use to do critical thinking; barriers to critical thinking, or critical thinking standards for example. Some of the pre-prepared answers in our textbook I thought might cause students some discomfort in class; according to our textbook (Bassham *et al.*, 2008, p.11), superstition is a barrier to critical thinking, something that stops it from happening rather than encouraging it. Belief in superstition, ghosts and witchcraft is widespread in Cambodia, and I thought that I might create controversy in the classroom by asking questions about students' beliefs. However, as discussed above (2.5, p.42), controversy in the classroom can be used to positive effect. Superstition was a great subject to catch the students' interest, and discussions about the most common ones ('if you need rain, put a cat into some water!') were always full of talk and laughter. Describing superstitions is not however doing critical thinking; there needs to be some examination of the background and evidence for or against the belief. For example, a student gave the example of an 'ahb.' I first had to ask what an ahb was (a woman who can detach her head from her body and fly the head around at night), where the tradition comes from (common across South East Asia), before asking what evidence is there for believing this to be true (rings or wrinkles around women's necks). We then finally got to thinking about whether this evidence was credible:

> This belief leads to the prejudice, discrimination and feared of women who have rings around their necks. The rings here are the folds or wrinkles that formed around some fat women's necks. My few nighbours said, they saw round fires flied in the field and went down on the earth. They think, they were Ahb that tried to catch the food at one night, but they did not have proofs. I think, it does not make sense that humans can detach their necks from their bodies and can also connect their heads with their bodies together (E7).

I used this as an example in later classes, when we discussed different kinds of evidence. We also compared superstitions from our different countries, and I showed classes examples of fortune telling and horoscopes from the UK in order to show them that such beliefs are widespread, and that I was not attacking their beliefs in particular.

Students' assignments were very useful to find topics that students felt strongly about, which were not in our textbook. From a total of 79 assignments, 31 female students, 11 male students and one monk wrote about gender. In class I used gender as an example when teaching prejudice, stereotyping and discrimination. I started with fairly accessible questions such as 'should girls and boys have equal access to school and why?' where students could easily guess my opinion, to more thought–provoking ones such as 'should there be different societal rules and expectations for girls and boys?' The one which provoked the most heated debate – 'should girls be allowed to go to nightclubs?' was usually answered by a resounding no from male students, whereas female students were divided between yes, no and not sure.

When teaching pseudo-science the textbook examples included astrology, which I knew might be a controversial subject for my students. Whether a wedding can go ahead or not, often hinges on whether the prospective bride and groom are compatible in terms of horoscopes. In fact I need not have worried about my students' sensibilities, many of them thought the practice was wrong, and were outspoken about their criticisms, particularly because many of them were afraid that it would happen to them. Their criticism was usually based on a lack of evidence - 'there is no evidence that the fortune teller can foresee the couple's destiny. Because of superstition, people make the wrong decision' (M2). 'They should think that how many people who the fortune teller said they could marry but they were divorce after they married' (M16). Students also helped me to find local examples of pseudo-science. After class E5 emailed me the following:

> Wednesday, 20 June 2012, 15:58
> Subject: Re: Pseudoscience.
>
> Here is my idea about Alternative medicine as pseudoscience.
>
> Some Cambodian people still prefer alternative medicine for some kind of treatment. 4 years ago, my sister in law gave a snall cup of Tes blood (A kind of animal look like donkey) and ask me to drink it as she said that this animal blood can cure 100 kinds of disease.

1- It is not testable. (No one has tested yet that they are not sick after drinking Tes blood)

2- Inconsistency with well established scientific facts:
(Although the Khmer practitionor, some who cure disease for Cambodia people by using aternative medicine, told my sister about this, no one has ever research how potential of the animal blood.

3- Using vague language (Curing 100 kinds of disease)

4- Lack of progression(This blood is still blood, but new diseases are coming to human being every day)

5- Failure to conduct research. (Khmer Practitionors did not find any relevant data or substance to prove that this blood contains something effective to cure diseases.)

I emailed him back to ask if he drank it. He replied that he did and 'it tasted very awful' and that 'nothing change after drinking.' He also told me the price of a small bottle of the blood - $100. This student had found an example that he subjected to the textbook 'marks of pseudo-science' used to distinguish science from pseudoscience (Bassham *et al*., 2008, p.476). This became an example of quackery that I used in class when teaching pseudo-science. Traditional attitudes to healthcare were commonly given as an example of a lack of critical thinking in students' assignments:

> For instance, in some villages, when a child has a fever, people send the child to a shaman instead of to a hospital or a clinic. The shaman prays and then pretends that a spirit takes over him and says that the previous mother (mother in the past life) is angry and wants to take the child back. We need to prepare her some good food so that she is happy and goes back. If the child is not seriously ill, he gets healed or he dies if he is. We cannot teach those older people since the belief is strongly built in their thoughts. What we can do is teach our younger people to understand that people get a fever because they are attacked by a virus or disease and we need to send them to the hospital or a healthcare centre (A22).

Note the ‘pretend’ in the example above. Students were very aware of the gulf between medical science and traditional beliefs. Examples like this were of enormous help in class when teaching pseudoscience because most students were lacking in knowledge about science.

In order to illustrate logical syllogisms or fallacies I needed alternative examples to the ones in the textbook as the language and examples, written for a North American audience were incomprehensible to my students and, also being British to me. This one for example:

> 23. Baseball owners have argued that baseball should continue to be exempt from antitrust laws. But the owners stand to lose millions if baseball’s antitrust exemption is revoked. No sensible person should be taken in by the owners’ obviously self-serving arguments (Bassham *et al*., 2008, p.140).

Having no knowledge about baseball, antitrust laws or indeed ‘baseball owners’ my students struggled to understand what any of this meant. Being familiar with patterns of logic I could identify this as a fallacy of attacking the motive, but coming from the UK I had no understanding of the terms either. What I had to do in these cases was to find more appropriate examples when I explained the fallacies and set tests. So number 23 became:

> Mr Chen argues that building a new market would be good for the whole town and would create employment. But Mr Chen’s brother-in-law owns a construction company, and he will make a lot of money if it goes ahead. We shouldn’t listen to him.

Some textbook examples were not appropriate topics for Cambodian classrooms. Here is one example from an exercise on identifying fallacies of irrelevance (Bassham *et al.*, 2008, p.139):

> 6. Jeff and Maribeth slept together on prom night. Sleep is a state of unconscious or conscious rest or repose. It follows that Jeff and Maribeth must have spent a very restful night together.

This is an example of the fallacy of equivocation; the word sleep together has two meanings, and the example has mistaken one meaning for another. In Cambodia it is not generally acceptable to speak about sex in public, so it would be difficult to explain this without causing a lot of embarrassment.

Politics is often used to give examples in our textbook and initially I was not sure if this would be appropriate material to use in the classroom. However, as some students in the first two classes (E and M) wrote about politics in their assignments, I experimented with using politics in the classroom. One student gave an example of a direct threat from the Prime Minister in his assignment - 'Hun Sen has warned during campaigning for commune elections on Tuesday that "Cambodia would face unnamed dangers if there were any change of leader."'(E3). After reading this I used Hun Sen as an example of the logical fallacy of 'scare tactics' as he frequently made assertions that if he was voted out of power there would be a civil war. I was nervous of doing this, as talking about politics can be difficult in Cambodia and sometimes dangerous, and I thought my students might not want to speak openly. However, my fears proved unfounded. When I asked the question 'what do you think stops Cambodian people from doing critical thinking?' The answer was often politics. I would then ask why this was the case and what was the evidence for believing this to be so. We would then discuss if it was the same in all countries, and explore the reasons why this might be the case in some but not others.

Students had much more knowledge than me of the political situation in their country and surrounding countries, but we also explored assumptions and prejudices about those countries, and where they might originate. Prejudice and stereotyping is not always easy to explain, and in order to understand this in class we discussed regional stereotypes; Thai people are greedy (they want to steal our temple), Vietnamese people are aggressive (they occupied us in the past and took our land). When I asked the students what the people in these countries thought about Cambodians they suggested 'friendly' or 'polite'. Some of them were surprised when I told them that in fact Cambodians are often stereotyped by surrounding countries as 'ignorant' and 'lazy'. According to Hinton (2006, p.456), these stereotypes can be traced back to the French colonization of the region, when the Cambodians were seen by their colonisers as 'a fallen race' who were 'lazy, backward and ignorant' but with a 'gentle soul.'

Cambodians were encouraged to see themselves as morally superior in the region and this continues in national stereotypes, when Cambodians see themselves as caught in the middle of the 'land-swallowing,' Vietnamese 'crocodile' and the thieving Thai 'tiger' (Hinton, 2006, p.455). This kind of local knowledge is an enormous help when explaining concepts like stereotypes which can be difficult to understand in the abstract, but easier to understand when applied to oneself and one's neighbours.

As the classes progressed I built up a stock of examples to replace the ones in the textbook, often helped by students' suggestions. Local sayings and proverbs were a rich resource to mine. They were particularly useful when discussing cultural pressures on young people – 'men are like gold, but women are like white cloth' means that female virginity is very highly prized; once a white cloth is dirty it will never be clean again, whereas gold can be polished to the same lustre as before. This was often given as an example of discrimination by female students. Another example given of stereotyping was 'fish in a bag, if one is bad they are all bad' as well as 'the bamboo shoot grows up to be bamboo' meaning that children will grow up to be the same as their parents.

'The cake is not bigger than the container' means that children should do what their parents tell them. This provoked some discussion about authority – 'Cambodia's culture says young people must follow what older people tell them. […] Moreover, it is considered as impolite to speak back or find reasons when older people scold you, so the only one thing you can do is listen to them quietly' (A10). One student dissected a proverb – 'if you eat fishtails you can swim well' and came to the conclusion that older people used it so that they could save the best part of the fish to eat themselves, while young people had to make do with the fishtails. She concluded that 'in fact people cannot swim if they do not learn to swim' (A28). The proverb 'think before you draw' meaning think before you act however, was described as an admonishment to do critical thinking, and was used by students as an example to show that Cambodian people can do critical thinking.

It became easier to ask 'thought-encouraging questions' as the courses progressed and I had more examples to use. I wanted to know if students understood my questions and what I could do to improve, so I asked them in the mid-course survey. Of 89 students 74 said yes they understood the questions, eight said yes and no, and

seven said no. Some of these students explained why they understood the questions - ‘She speaks clearly and loudly’ (M2), ‘She uses simple words and tries to explain before she lets the students to answer’ (E9). ‘She didn’t use any hard word that we won’t understand’ (M7). ‘I understand because my teacher try to explain to students, write a lot of examples’ (E17). This kind of answer was a good indication that my techniques were working. When students did not understand they said it was because of my accent - ‘sometimes I can’t caught up the pronunciation’ (EV3), or because I used ‘difficult’ words, or I spoke too fast. Language skills were identified as a problem - ‘Sometime I really don’t understand because English is not our native language, so we can not know all the word mean’ (A11).

As well as being a relief that most students generally understood what I was saying, the above answers were also a reminder to me to slow down when teaching and that students needed to become accustomed to my accent. At the beginning of every class when we discussed class rules, I asked the students to let me know if I was talking too fast, or using difficult language, or using examples that they did not understand. They sometimes did and I also began to be able to recognize looks of incomprehension, or a change of atmosphere in the classroom.

4.6 Participation

As discussed in Chapter Three (3.12, p.68), the number of questions I asked and the number of responses I received was recorded. These records pertain purely to whole class activities where I tried to encourage students to interact with me and with each other. Small group discussions are discussed in more detail in this section below (p.106). I asked questions from the beginning of each course, and to my surprise I immediately received answers to those questions. Some of these answers were from individual students, while others were the whole class calling out an answer together. To use class A as an example, during the first recorded class I asked 61 questions and received 74 individual responses and 16 choral responses. All four classes were

similar in that students answered questions from the beginning, and I give the figures for one class here as an example.

Table 4 -Table of teacher questions and student responses for class A

Date of lesson observation	No. of questions asked by teacher	No. of individual student responses	No. of choral responses	No. of questions students asked the teacher	No. of student interactions
09/07/2012	61	74	16	4	16
16/07/2012	60	40	6	3	5
23/07/2012	57	36	10	10	8
30/07/2012	74	36	19	5	3
06/08/2012	92	42	30	5	0
13/08/2012	37	45	11	1	4
21/08/2012	36	16	7	3	0
27/08/2012	59	32	17	5	0
04/09/2012	86	82	13	1	0

Students answered my questions from the beginning of the course and continued to do so, either individually or as a group. This was the same for all four courses. My worries that I would ask questions and be met by a wall of silence were unfounded. Of the 89 students whose responses were recorded, only four failed to speak at all in a whole class discussion where responses were being recorded. Initially I felt that that I had achieved Golding's (2011, p.361) steps one to three; I regularly asked 'thought-encouraging questions,' and students answered regularly. However, step four, where students ask the teacher or each other questions and then ask themselves, did not develop in the way I had anticipated. In fact it mostly did not develop at all. As can be seen from the table the number of questions students asked me during whole class activities was low, and the number of times they interacted with each other was also low. This was the same for all four classes.

Although it can be seen that there were individual responses and group responses to questions, the table does not give the whole picture. In fact in every class there were students who answered questions and those who did not. To illustrate this the table below is a comparison of the recorded responses of 10 students in class A. The top row is the date of each class where student responses were recorded. A indicates that the student was absent.

Table 5 - Sample of Individual Recorded Responses, Class A

	09/07	16/07	23/07	30/07	06/08	13/08	21/08	27/08	04/09
A2	0	0	1	0	0	2	0	0	1
A3	1	0	0	0	0	0	0	0	0
A4	0	A	0	0	0	0	0	0	0
A5	1	A	2	1	2	5	A	0	2
A6	**14**	**3**	**3**	**1**	**3**	**1**	**1**	**1**	**8**
A7	0	0	0	0	0	0	A	0	A
A8	0	0	A	0	1	0	0	0	1
A9	0	0	0	0	0	0	0	0	0
A10	7	1	1	1	0	0	0	1	2
A11	**17**	**9**	**2**	**5**	**13**	**2**	**6**	**3**	**13**

Class A was similar to all four classes in that I received answers to my questions, both individual and choral. From the table above however, it is clear that in this sample many students spoke not at all or rarely as individuals. It was not possible to record if those students spoke as part of a choral answer. In this particular sample it can be seen that students A6 and A11 (in bold) were the most talkative. Students A4, A7 and A9 on the other hand were recorded as not speaking at all. While teaching I was aware that it always seemed to be the same students answering the questions. Students who began by speaking in class spoke regularly, and those who began by speaking rarely also continued in the same way. Although I had hoped that participation might increase as students became more accustomed to my questions, it did not. As in many classes in my experience, the same students spoke regularly while others spoke rarely or not at all. This is not that surprising, most teachers are familiar with the student who likes to talk, the student who will offer an opinion occasionally on certain subjects and

the student who sits at the back and never says a word. In monocultural classrooms this is often ascribed to students' different personalities, while in mixed cultural classes with Asian students this is sometimes ascribed to their culture. My Cambodian students in their monocultural classes behaved exactly the same as British students in my experience; some of them liked to speak most of the time, some spoke occasionally and some did not speak at all. Therefore I would like to suggest that the reasons why some Asian students do not speak in mixed cultural and language ability classes may not be related to their culture per se.

The question of whether the students felt asking questions in the classroom helped them to learn was answered with a resounding yes. From students' answers in the pre-course questionnaire I knew that being asked questions might be a new experience for many of them. I wanted to know if they were comfortable with it, and also if it helped them to learn (or not) as this could inform my lesson planning. In the mid-course questionnaire 88 of 89 students answered yes, being asked questions helped them to learn, and one answered both yes and no. Mostly they felt that my questions helped to improve their understanding and gave them ideas, but they also said it helped them to remember the lessons.

While it was useful to know that students liked being asked questions and found it helpful, it was also important to know what either motivated or demotivated them to speak in class. Understanding and clarification were the main motivation for 28 students to speak. They stated that they sometimes answered to check if they were right or wrong, or to aid understanding - 'I will remember more if I try to answer the question. Even it is wrong, I also get advice or recommend to make me remember' (A11). It was also felt that asking questions helped to improve English language skills, although conversely other students did not ask questions because of a perceived lack of language skills. Shyness was also an issue although for fewer students than I had suspected. When I asked them in the mid-term questionnaire, about a third (32 of 89) said they were too shy to speak out in the classroom. The number of female students who said they were shy was higher than male students; 22 and 10 respectively. However all 32 of the students who said they were shy said that they liked working in small groups.

As discussed in Chapter Two (2.4 p.32), Liu and Littlewood found that students in Hong Kong did not speak up in class because they thought that if they made a mistake they would be 'making a fool of themselves' (1997, p.376). Fear of making a mistake was also an issue for some of my students. There was also some concern about right and wrong answers, and this affected whether they spoke. Some only answered when they were sure their answer was correct, while others did not care about making mistakes - 'If I know the answer I will speak out to the class about what I think. I don't care about right or wrong' (EV19). Likewise, M15 wrote that he was 'confident to speak (right or wrong) not problem.' Others however, admitted that they did care - 'I want to do it, but in my mind, I think my answer would probably be wrong, so I did not speak out' (EV1). This was sometimes connected to how their classmates might view them, or a fear that they might be laughed at. A25 reflected on her feelings - 'if I answer wrong, classmates will laugh and some look down. I know I shouldn't care that but I still care.' Other students had more positive thoughts about their classmates and wrote about sharing ideas, working in groups and communicating with their friends - 'I think it is good to show and share what I have known to the class' (EV8).

Hofstede's application of the cultural dimensions to education, category three - 'Individual students will only speak up in class when called upon personally by the teacher' - did not apply to my classes. I received answers when I asked whole class questions, although some students answered often and others rarely. At this point it bears repeating that Cambodia was not one of the countries that were a part of Hofstede's original study, so Cambodians may not entirely into fit a particular dimension. Category four – 'Individuals will only speak up in small groups' - turned out to be partially true; individuals did speak up in small groups, but not 'only' in small groups.

It became quite clear to me fairly early on during the first two courses that my strategy of creating a critical thinking community was not going quite to plan. My feeling at the time (and this was later backed up by analysis of recorded responses in the classroom), was that some students liked to talk a lot and some did not like to talk at all. Also they very rarely asked each other questions. In order to encourage more discussion I began to do a lot of group-work exercises. When we talked about barriers to critical thinking in Cambodia the one that provoked the most discussion was

superstition. I capitalized on this with the next class by developing a group exercise for the students to discuss superstition further. This was purely a device to get students talking, and while doing this I learned that if I let them talk in Khmer a lot more of them would join the discussion. However, I had no idea what they were talking about.

I developed the idea further by asking them to choose the most common superstitions in Cambodia, and write them in English on coloured paper which we then put on the walls. From this I finally learned why my landlady kept moving my washing line to the side of our shared roof terrace after I hung my clothes out to dry - 'Believe that walk under clothes line. It means we will have headache' (Class A poster, 10/07/2012). I then developed this into a group-work exercise about barriers to critical thinking in Cambodia. We had already discussed the barriers given as examples in the textbook, but I wanted the students to consider specifically what stops Cambodian people from doing critical thinking in preparation for their assignments. I asked groups to choose what they thought were the most common barriers, say why it was a barrier, and then suggest a solution. They then had to make posters in English and put them on the wall, and then I asked each group to present their findings. I gave each group different coloured paper so that I could differentiate between them in my notes. The light blue group from Class M (06/03/2012) made this poster:

The biggest barriers to critical thinking in Cambodia	
1. Superstition: believe on something before they do Ex: Go to fortune teller before they get married. - Some Cambodians still believe in offering food to ancestor when someone in family gets sick or have problems	2. Selective perception: the media only broadcast the positive news about the ruling party.
★ Educate people by using social network	★ Implement free press

This group, like all the others may have chosen barriers that they thought I would approve of, however their choice of selective perception was an interesting one. They clearly disapproved of the way that the Cambodian government controls the press. This was another example of students applying critical thinking to their own situations. I wrote notes after class to help me reflect on how classes were progressing. Groups were assigned a particular colour paper to write on, so I could identify who had written what if we moved papers around the room:

> Dark blue – a group of male students talked mostly about women's rights – fabulous! So far both groups are fine to talk in small groups, but no real whole class discussion – no q's to each other just presentations and applause, need to encourage them to ask questions (Class M, 06/03/2012).

This remained true for all classes; despite my attempts at encouraging each member of the group to speak, they would always elect one person to do the presentation. I had no idea how this person was chosen. It sometimes seemed to be the person who had the most authority, for example a monk or an older student. At other times it was a student who felt more comfortable speaking than others in the group. At the end of each presentation I always asked a question to the group. I tried to encourage the rest of the class to question the group who had presented, but I never succeeded.

In order to encourage more discussion I developed the lesson further with the next class. It started the same with small group discussions, each group choosing their top three barriers to critical thinking in Cambodia, writing them on posters and explaining to the class why they had chosen them. Each group then had to decide which one they thought was the strongest barrier of their choices and transfer it to the whiteboard, this took some time and discussion. Finally the whole class had to vote on the strongest barrier of their combined choices, which provoked a good deal of argument amongst the different groups. Lack of education was the winner, with superstition a close runner up and gender third. This finally resulted in a whole class discussion, but it took quite a few steps to get there.

During the activities described above students often switched to speaking Khmer when discussing in small groups. It is disconcerting as a teacher to be unable to understand

what students are saying or check if they are ‘on topic,’ but close monitoring of groups and asking what they were currently discussing, as well as the production of posters in English enabled them to express themselves more freely than they could before. If someone spoke in Khmer during whole class discussion I would always ask what they had said, to check their learning, and I was open to other students explaining to me what they had said. Eldridge (see above, 2.5, p.43), suggests that code-switching activities can be useful in the classroom and students can be de-motivated if it is proscribed (1996, p.307). While my students were certainly learning new vocabulary, language was not the main focus of my classes. I was happy for them to use whatever tools were available, to allow them to develop their critical thinking skills.

In the mid-course questionnaire the majority of students (82 of 89) wrote that discussing in small groups helped them to learn. 43 wrote that group discussion was helpful in terms of sharing knowledge and ideas, or getting new ideas from their fellow students - ‘I do love discussing question in a group, because we can share any idea and also make the classroom environment not so bored’ (EV22). ‘It helps me a lot, I can get a new ideas from my friend, make me brave to speak and show my own ideas to my friends too’ (A1). As well as sharing ideas, group discussion was seen as an opportunity to clarify information that students were not sure about - ‘It help me a lot because we’re sharing ideas. When we are wrong and our friend told me, I will remember’ (A11). ‘I can receive the new ideas and the politely correcting from the group members’ (A15). ‘When I don’t understand what teacher said and some of English word I didn’t get it, so a group member help me’ (A8). ‘We can raise the question that we don’t understand and ask our friends and teacher’ (M2). This was a good point, students who were afraid to ask questions in front of the class would often ask me when they were in a small group, and I could use these questions to discover if any other groups had similar problems.

If a student asked me an interesting question as I monitored a small group, I sometimes used it as way to create more discussion, by raising the question with each of the other groups in turn or with the whole class. Whilst students from class E (20/02/2012) were discussing in small groups, a student asked me a question about what happens when we do critical thinking but still make the wrong decision, using wearing a motorbike helmet as an example. I thought this was a great point to discuss, and asked her if I

could raise it with the whole class. Student 1 was reluctant to speak herself so I explained her ideas to the class, and then she joined in the discussion, as did other students. What follows is part of that discussion:

> Me: Ok, so we were talking in this group about, why is it that people do critical thinking, that they still do the wrong thing, so you know that you should put that motorbike helmet on, because if you are in a crash, you're not wearing a helmet, you probably will die, but you still get on your motorbike without your helmet. Now as a critical thinker, you've thought about it, you've seen people die, you know they die, it happens very regularly, crash on the bike, no helmet, you will die, but you still get on that bike without the helmet, why is that?
>
> Student 1: Some people they feel when they wear a helmet they always get a headache.
>
> Me: So you think they have done some critical thinking and headache or death, they choose… (Laughter).
>
> Student 1: But if we get headache when we drive a motorbike maybe we will have an accident too.
>
> Me: So if you do critical thinking about wearing a motorbike helmet, what would be most people's conclusion? Is it a good idea or not?
>
> Student 2: Yes, it protects your life.
>
> Me: What is your evidence for believing this to be true?
>
> Student 2: There are lots of reports, every day, every month, every year, lots of cases from the police, which show people without helmets are more likely to die.

This discussion evolved from a small group discussion into a whole class discussion. This may have been because the subject was pertinent to students' lives. Road traffic accidents are a very common occurrence in Cambodia.

I found students asking me questions in small groups to be a useful barometer of class understanding; obviously if every group asked the same question I clearly had not explained very well. Class M began very quietly, but started to engage more during the fourth class when I introduced some small group work. Here are my notes from the class (23/02/2012):

> So far this class has been very quiet and reluctant to ask questions. The lesson consisted of a discussion exercise to bring out barriers to critical thinking. I explained the activity, created three groups of five and one group of four, and asked the groups to start discussing. There were no questions during my explanation, or when I asked the class if they had any. However when I monitored the groups each group had at least two or three questions to ask me. They discussed in their groups in a very animated fashion for 35 minutes and then asked for more time.

Students did not often ask me questions in class, however they did ask when I monitored small groups. They were also able to clarify meanings with each other in Khmer, which aided their understanding. Small group discussions were the most successful technique I used in the classroom to engage students and to encourage them to participate.

Finally in this section I discuss the connection between participation in class discussion and achievement. As discussed in the literature review (2.4, p.31), there is a perception that participation in class is connected to 'doing' critical thinking. I was interested to see if the students who were more vocal in class would receive the best grades. In all four classes the students who spoke most in class were among the top-performing students. However there were also students in the top five who hardly talked at all, likewise some very talkative students were among the students with the lowest marks. The table below shows the five students who scored the highest results in each class in order of the highest score first. The second column shows their average number of responses per class. This was their total number of recorded responses divided by the number of classes they attended. The third column shows their ranking in terms of recorded responses; highest = 1. T = total number of students in class.

Table 6 - Comparison of Results and Participation

Class E T = 17	(m) = male (f) = female		Class M T=22	(mk) = monk	
Results in order of achievement	Average response per class	Rank in terms of responses	Results in order of achievement	Average response per class	Rank in terms of responses
E5 (m)	6.8	2	M5 (f)	5.8	1
E9 (m)	8.4	1	M1 (f)	0.4	14
E13 (f)	4.9	5	M19 (m)	2	4
E15 (f)	0.6	13	M11 (m)	1.3	7
E12 (f)	1.1	11	M12 (f)	0.4	6
Class A T = 29	Average response per class	Rank in terms of responses	Class EV T=21	Average response per class	Rank in terms of responses
A11 (f)	7.8	1	EV8 (m)	17.5	1
A16 (m)	4.2	5	EV5 (f)	5.1	9
A14 (m)	4.4	4	EV23 (m)	2.8	19
A23 (f)	0.3	19	EV13 (f)	3.5	15
A24 (m)	1	13	EV1 (mk)	5.1	8

As can be seen, in 3 classes (M, A and EV) the student with the highest score is also the student who spoke the most. In class E, the student with the highest overall mark had the second highest number of recorded responses, while the second highest mark went to the student who spoke the most. The third highest mark went to the student with the 5th highest recorded responses, but the fourth and fifth highest marks were gained by students who regularly spoke once or twice in class or not at all. In Class M the highest mark was achieved by the student who spoke most in class, but the second highest mark was gained by a student who spoke in class a total of 3 times, and did not speak at all for 6 of the 8 recorded classes that she attended. Student E15 who got the fourth highest score in the class, was number 13 in terms of speaking in a class of 17 students. There was no difference in terms of gender; the top 20 students were 10 females and 10 males (including one monk). For these students it was clearly

possible to do well in exams and assignments, and achieve a high overall mark without speaking out in whole class discussion. To gain a high mark they had to show understanding and application of critical thinking in their writing, measured using the indicators listed in Chapter Three (3.15, p.74).

Table 6 is a subset of the complete data, for which a brief quantitative discussion will follow. I applied Spearman's Rho test (appendix 9, p.151) to the exam results and participation measures for students in all classes. Classes M and EV had strong correlations between marks overall and records of participation (M: $p < 0.005$, EV: $p < 0.01$). There is no such strong correlation for classes A and E, (A: $p < 0.05$, E: $p < 0.1$). In no class is there a negative correlation between results and participation. It is possible that a correlation such as that for classes M and EV, might give an impression that high results are linked to high levels of participation but as the other two classes have no such correlation there is no real evidence for some kind of causal link between the two. In some classes students who have high levels of participation get high marks. In other classes students who participate very little get high marks, while students who participate frequently do not get high marks. It is possible that classes such as M and EV, where there happens to be a strong correlation between high levels of participation and high marks may lead to a perception that the two are linked. This may happen frequently in situations where non-Western students may be struggling with language or other assimilation problems and might not participate as freely in class as Western students. This is however, speculation, and I suggest that my qualitative research involving cultural context and participation gives the kind of insight that will be more helpful regarding teaching practice. In particular, regarding the imposition of cultural values regarding the relationship between debate, discussion and critical thinking. There is clearly room for much more qualitative and quantitative research in this area.

4.7 The Importance of Critical Thinking

A final survey was given to students at the end of each course. There were two questions; the first asked if studying critical thinking had changed the way they thought

and if yes, what was different. The second asked if they did critical thinking in their lives and asked them to give an example. I suspected that the students would answer yes, so I asked them to give examples so that I could ascertain what they thought doing critical thinking meant. All 85 students answered yes to both questions. Most students answered the questions in a comprehensible manner, however there was a great deal of crossover between the two questions. Many of them put examples in their answers to the first question, while others found it difficult to give an example.

In answer to the question 'Has critical thinking changed the way you think? If yes, how?', the majority (69) answered in terms of a change in decision making and thinking before acting. Both in terms of their lives – 'I think about the long term instead of deciding quickly' (A14), and in the classroom - 'now every questions that teacher asks I do think, and think before I give back my answers' (EV5). 35 wrote that they now looked for evidence, proof or reasons before believing in something or someone - 'Critical thinking has changed the way I think, because I used to believe in things without consideration and evidence' (M23). 'I know critical thinking class make me different […] I like to look on or do observation on the cause of something' (A18). 'Now I ask for evidence from everything people is saying to me' (EV5). Other students felt that the onus was on them to provide evidence and reasoning for other people - 'Critical thinking has change the way I think. It changes me to find more evidence and a good reason to tell somebody' (M20). Some students no longer believed everything people told them - 'Since I start critical thinking course, I never believe everyone quickly, I always ask for evidence before I believe them' (M5). 'In my village before I always believed what one girl said without thinking, but now I relize that what she told most of its are fake' (E1). One student felt critical thinking helped him to 'avoid being cheat by someone' (A3). This need for evidence was often linked to questioning authority - 'I am not believe in something without evidence like before. I started to think when old people tell me what to do. Sometime the way they ask me to do is stupid' (EV6). 'I always believe almost everything when the powerful person talk to me, but after I have critical thinking class I know that people says not all right. Sometimes people say the wrong thing even they are the educated people' (EV9).

Criticizing people above oneself in the hierarchy is often difficult in Cambodia, and I was impressed that these students were able to do so. However, the fact that they

were able to do this in writing for a course, may or may not have translated to other areas of their lives. Two students wrote that they had some difficulties to do critical thinking because of social pressures. E5 wrote that critical thinking had changed the way he thought, 'but not very much.' He went on to say that there are 'social barriers that do not allow me to think as I want.' Similarly E1 answered 'not much because everything I do in my life I always get permission or agreement from my family.' This was very honest, and a good indication that these students were not afraid to tell me what they thought in regards to critical thinking and their society. I am fairly certain that students had thought seriously about these constraints before critical thinking classes, some of them had told me that they had to do things that they did not want to do. For example, one student had to give up a good job and a relationship in Phnom Penh and return to the provinces because his Grandmother did not like him living away. I asked him if he was happy about this and he replied that he 'had to do it.' After his Grandmother died he went to study a Master's degree in New Zealand. Freedom comes perhaps as one gets older and moves up the hierarchy. This was also a salutary reminder that while critical thinking classes may help students in their studies at university, creating change in people's lives is an entirely different matter.

While all 85 students said yes they did critical thinking in their lives, they may well have been telling me what they thought I wanted to hear. As discussed above, many of them repeated the ideas we had learned in the classroom such as looking for evidence for a claim, or not believing someone unquestioningly because they are older or have a higher status. This is not in itself doing critical thinking, athough it does show some awareness of the processes of doing critical thinking, and what critical thinking ought to look like. What was more difficult for students was giving concrete examples of doing critical thinking in their lives. Some of the most interesting examples were related to superstition. Students subjected fortune telling and astrology to some analysis and found them wanting:

> Fortune teller cannot have magic or six scense, because I saw, they use only few candles and just note to something or draw something, and then they say something that will happen on the future. So if few candles can make people know or see their live on the future, all

> people around the world will follow them by using few candles too (A17).
>
> Before I always believe on fortune tellers especially I listen to the fortune tellers every morning which is talked about how bad or good the year of my birth today. However since I start a course of critical thinking, I stop listening to the fortune teller from the radio anymore. It doesn't make a right alternative to listen because I think most people in the world have the same birth years, so if everything the same as what fortune teller says, therefore they must get the same lives. In fact everything is not right according to what I observe (M5).

In a similar vein other students had been thinking about beliefs in ghosts and spirits:

> My friend told me there is a ghost in the house in Kampong chhnang province. In that story my friend told me the ghost asked to buy house from the owner of the house. I really do not believe in this story. First, I don't believe in this world had ghost another thing I think why the ghost need a house to live? (A23).
>
> For example, my uncle told me that there is ghost in my house, when he slept alone but I did not believe because I never seen it. Next nigh I slept in house only me and I did not see any thing' (EV16).

Again these students might have been saying what they thought I wanted to hear, but they looked for evidence, and asked questions, which are part of the process of learning how to think critically.

Student assignments were handed in at the end of the course and told a similar story to the final surveys. In answer to the question 'Is critical thinking important for Cambodia?' 77 students out of a total of 84 answered yes, one no and five both yes and no. For some although critical thinking was important, there were more important issues to worry about:

> Even though critical thinking is really important, there are many more important things than doing critical thinking. During the Pol Pot time,

> Cambodia lost many resources which make Cambodia become weak. Furthermore the government should pay more attention to poverty and literacy (EV19).

> Some people think that critical thinking is not important. […]. They live on $2 per day. It is difficult to do critical thinking (EV6).

It may be the case that students answered yes to the assignment question as they thought it would be what I wanted to hear, and they were more likely to get a good mark. However, I made it very clear to them that they could answer whichever way they liked as long as they met the criteria for doing critical thinking. Some students failed the assignment even though they answered yes to the question, because they had copied, or plagiarised, or had no argument or evidence to support their answers. Many of them held forth in their assignments about controversial issues, but never mentioned such things in class. My fear, (that I did not share with students) that they would feel unable to criticise anyone in authority, or reflect on their society was unfounded. Any reluctance to criticise the Cambodian education system at the beginning of the courses was forgotten by the end, as students held forth in their assignments on the problems of corruption in schools, the high drop-out rate after primary school, teachers' low salaries, a lack of schools, teachers and resources particularly in the countryside and a lack of critical thinking classes.

The most common solution to Cambodia's ills suggested by students was to improve the education system, and this often included introducing critical thinking classes at all levels of education. It was felt that this would lessen belief in superstition, create more gender equality, reduce poverty and encourage development. This indicates that they found the course useful and thought that it should be available earlier in the education system:

> Based on my own experience, when I was in high school I never heard about critical thinking, my friends and I just listened to every single world and instructions from teachers. If Cambodian students had knowledge in critical thinking they might be able to discuss the questions among their team rather than only listen to teachers (EV3).

> Before I didn't realize that critical thinking was very important for me, but after I learnt, I can think a lot better that I used to do. For example; before, when I come to class, I just listen and take note what my lecturers write down when they ask students whether they understand or not, no one answers or ask questions to the points they don't understand. Now different, students are more active in class and sometimes, can challenge with their lecturers (A24).

That phrase 'sometimes, can challenge with their lecturers' made me very proud. Critical thinking may have had an effect on students' academic life, if nowhere else. In fact I generally felt an overwhelming sense of pride in my students' ability to rise to the occasion and write about injustice and corruption in their assignments. I also felt afraid for them, but the many and varied conversations I have had with educated young Cambodians who are eager for change gives me hope. This generation may still be bound by tradition and fear, but they are at least aware of it. This awareness constitutes critical thinking in my opinion. They are also aware that critical thinking is central to at least part of their Buddhist tradition, and this may make critical thinking more familiar and acceptable. The decision to speak out, or not to speak is one to be made carefully, and with full understanding of the possible danger that might ensue. This requires a different application of critical thinking, than one might encounter elsewhere.

4.8 Our Community of Critical Thinkers

While I was able to carry out some of the steps advocated by Golding (2011, p.361) to create a community of critical thinkers, his model was not entirely applicable to my students. In some ways it worked very well; I did my best to provide an educative environment where students could develop an understanding of what critical thinking is, and apply it to examples that they could relate to. I encouraged students to see themselves as experts on their own culture and to dissect it by using critical thinking, and they did so. I asked them to provide me with examples to use in class that we

could apply critical thinking to, and they obliged. I asked a lot of questions. Some students consistently answered those questions while others did not speak at all. Furthermore questions from students did not often happen in whole class discussion, but rather during small group discussions. The last step where students move from answering the teachers' questions to asking each other questions did not generally happen when students did group presentations to each other, or during whole class discussion. It may have happened during small group discussions, but as students often reverted to speaking Khmer it was hard for me to tell. They asked me questions during small group discussions to clarify points from the lesson, as well as open-ended questions. However, no matter how hard I tried to facilitate it, students rarely asked me or each other questions during whole class discussion, and never after group presentations. My lesson planning changed and developed as I tried to increase participation by using familiar cultural examples as discussion points, as well as sharing some of my own cultural values to stimulate further discussion. I also created small group activities which lead finally to a whole class discussion as discussed above (4.5, p.108).

Although students may have missed out on the stage of asking each other questions, they did ask themselves questions, and this became clear when reading their assignments. Student A15 for example, included her questions in her assignment:

> After praying, they think some parts of the problem have been solved and also praying can give them strength and they believe without trying their best. What about if they think critically and just try their best? Have they ever seen a spirit come out and help them? For critical thinking, they will see what they have received is what they have done to help themselves and if they meet the same problem again, they will solve it effectively. However what if they believe in their pray, they will not have any solution to solve the same problem but praying instead which is not a solution.

Another student asked herself questions about the reasons for her religious beliefs:

> I was born in a family that believes in Buddhism. Since I was born until now my mother and my grandmother tell me a lot about the Buddha,

> so I also believe in Buddha. […] This point does not provide me the chance to think for my own. I just follow what my family says is good or bad, so this point is also the problem for harming people doing critical thinking (EV19).

This kind of questioning of beliefs was not something I heard discussed in the classroom, and students never questioned each other about such things. Most questions came from me, or were directed towards me. However, the fact that they preferred to write these things down in private rather than discussing them in the classroom, does not mean they were not therefore thinking critically in the classroom. The perception that participation is the same as doing critical thinking did not apply in this case, and I suggest that my research shows that there is not a necessary connection between the two.

To return to Hofstede's (1986) cultural dimensions related to education in collectivist societies, the first category – 'Positive association in society with whatever is rooted in tradition' turned out not to be completely true for my students. Although much of their lives was circumscribed by tradition, students were not always positive about it and in some cases were upset and angered by it; the expectation that they would marry someone chosen for them by their parents for example. The second dimension – 'students expect to learn how to do' in collectivist societies as opposed to 'students expect to learn how to learn' in individualist societies - did not entirely hold water either. While they first had to learn what critical thinking was and the skills needed to do it from me, they then had to think about how to apply it to their lives and society themselves as the examples in our textbook did not apply or were incomprehensible. Students expressed controversial opinions in writing rather than speaking. There may be many reasons for this; lack of confidence or ability in speaking English, fear of being wrong, shyness, hierarchy, or perhaps the fear that comes from living in a country where speaking out can be dangerous if one opposes the ruling party. However, the stereotype of the 'passive Asian student' did not ring true in my classes. Rather, students behaved more or less like the students from the UK I taught in London, some spoke during class discussion and others did not. The major difference was that they did not ask each other questions when the discussion was directed by me, and everyone could hear what they said. When small groups came together to argue their

positions, was when more debate and discussion ensued. This was an effective technique to encourage my students to participate, and could be used effectively in any classroom, including multicultural ones.

Chapter Five

Conclusions and Recommendations

5.1 Introduction

This research started with a question: How do Cambodian students experience courses aimed at developing Western style critical thinking skills? I focused on three areas: the importance of cultural context in teaching and learning critical thinking, the connection between critical thinking and classroom participation, and finally the improvement of teaching critical thinking in a cross-cultural situation. A research question arose from each area - How do cultural issues such as differences between collectivist and individualist societies, affect the teaching and learning of critical thinking in a Cambodian classroom? Given a familiar cultural context, will Cambodian students participate in classroom discussion, and how will this affect their overall marks for the course? How can knowledge of the above be used to improve teaching and learning critical thinking?

This research is also a response to the way that the 'passive Asian student' has been constructed in some Western universities. There is a perception in some institutions that Asian students are less capable of critical thinking, and less likely to participate in class discussion than their Western peers. The association of questioning and discussion to critical thinking in Western approaches adds to this perception. Other research however suggests that there are more diverse factors at play. Learning critical thinking in a second language has been shown to be difficult. Lack of language acquisition, lack of confidence and lack of experience in speaking English can lead to a reluctance to speak up in class. Lecturers who speak very quickly and use unfamiliar idioms, as well as unfamiliar cultural contexts used to give examples are also seen as challenges by international students.

My research explored how students behaved in a university in their own country, in classes that could be tailored to their level of English acquisition, using culturally meaningful examples. It shows that given a familiar cultural context my students were capable of learning critical thinking and applying it to their lives and their society. This is discussed in more detail below in the first section of this chapter. It also shows that just as in classes and seminar groups all over the world, some students liked to talk and some did not, and that therefore the stereotype of the 'quiet Asian student' did not hold true in our classes. The second section reviews this in more detail. There were various factors that helped to facilitate teaching and learning and these are interwoven throughout both sections, however the third section summarises these, and offers some recommendations for further research.

5.2 Language and culture

As discussed in Chapter One, while there is some debate research shows that Asian students are as capable of learning critical thinking as Western students. What they may do is express critical thinking in different ways, which is unremarkable given that they live in countries with distinct cultural, political and social practices. This research shows that my students were capable of understanding what critical thinking is and how to apply it. They were able to analyse their own cultural practices, traditions and despite the danger involved, the political system. There were two factors that facilitated their learning related to critical thinking. The first was language and the second cultural context. My lessons could be more or less tailored to the level of students' language proficiency. As discussed in Chapter One (1.2, p.32), research has shown that language is felt by students to be one of the main barriers to learning (Liu and Littlewood, 1997). My students said the same: that they struggled to learn when I spoke too fast or used 'difficult' words. They also had to adapt to my East London accent. Some of them felt that their language skills were inadequate, and this was often true. In my situation it was possible to adapt my lesson plans to meet the students' language needs. I also allowed students to speak in their own language in

certain circumstances in the classroom. As our goal was to learn critical thinking rather than English, this was an aid to understanding and I developed techniques to make sure that what we learned could be expressed in both languages. I suggest that in small group discussion, code-switching to a mother tongue can aid comprehension, as long as students are also able to express themselves adequately in both languages.

The second factor that helped facilitate learning was that I was able to use examples from Cambodian culture to illustrate critical thinking, and put things into a local context that students could understand. This gave them an advantage that students who study in multicultural classes in a foreign country may not have. My students were experts on their own culture, and I accepted them as such. I made it clear to them that I needed their help because they were experts, and that our community of critical thinkers needed their input as much as mine. The examples they gave me to use in teaching gave them a familiar context in which to understand critical thinking, whereas those in the textbook were often unrecognisable or incomprehensible. I was also able to use examples from my culture, and we compared for example Chinese horoscopes with ones from the UK. These comparisons helped students to see that there can be a lack of critical thinking in many societies, and helped us to be open-minded and analyse our own cultural values as well as those of others. My students were able to take the concepts that they learned and apply them to their own culture and society. Students studying away from home often have to struggle with learning about a new culture at the same time as learning how to think critically.

5.3 Participation

This research investigated a perception found in some Western universities that Asian students do not participate in class discussion. My results show something different. In classes where familiar cultural examples were used to explain and apply critical thinking, students participated in much the same way as many students in the English–speaking world; some spoke in every class, some occasionally and some rarely. I found no compelling correlation between speaking in class and students' overall

results; a propensity for speaking was not always related to receiving a higher mark. Students who achieved the highest marks for the course overall were often the students who spoke most in class, but were also sometimes those who spoke very little. I suggest that there were various reasons for this. The use of familiar cultural examples, the fact that I asked students' help in finding those examples to use in the classroom and that I was genuinely interested in their culture allowed them to participate in ways not open to Asian students studying in western Universities.

I did my best to create a community of critical thinkers based on Golding's (2011) recommendations. Asking questions in class was an important part of this, and students were overwhelmingly positive about it. They felt it helped to improve their understanding, gave them ideas and helped them to remember the lessons. However not all of them enjoyed answering questions. My students said that what prevented them from speaking in class was the same as other researchers have found: they were afraid that their language skills were not good enough, or that they would look foolish. I had worried that students might not participate because of shyness, or worry about being laughed at if they made a mistake, and in fact both of these were true for some of them. One third of students said they felt shy to speak in class, however all those that said they were shy said that they liked working in small groups. Most students contributed to whole class discussions, only four students were recorded as not contributing at all. The fact that most of them managed to overcome these worries shows that in our particular classroom environment, they felt safe to speak. Their worries about language may also have been mitigated by the fact that there were no native speakers (apart from me) to be compared with. When we have quiet students in the West we often attribute this to their personality, however when an international student from an Asian country is quiet we have a tendency to attribute it to their culture. My results suggest that the reality is more complicated.

Our 'community of critical thinkers' looked a little different from what I had expected, but it was recognisable as such: there were thought-encouraging, open-ended questions in the classroom, and we also asked ourselves those questions. However, whole class discussion was mostly a question and answer session between myself and the students. They rarely asked each other questions during whole class discussions or in response to a group presentation from their peers. Small group

discussions however, were places of great debate, and sometimes students asked for more time to finish what they were talking about. It was also an opportunity for students to ask me and each other questions that they did not want to ask in front of the whole class. Students often expressed themselves more openly in writing than in speaking and I developed techniques to allow this to happen during class. Making posters which illustrated the debates that were happening in small groups was very useful, and allowed students who may felt unable to speak in front of the whole class to contribute in a different way.

The association of discussion and debate with critical thinking is a predominantly Western view of what constitutes critical thinking. It rests on a particular cultural context. In an individualist, democratic society, for example this is an appropriate and acceptable way to behave. In a collective society, where there may be more emphasis on maintaining harmony this behaviour may be seen as less appropriate. There is also the political context to consider; in a democracy the voicing of views in opposition to the ruling party is permissible, if not expected. In countries such as Cambodia where there is less democracy, it may be dangerous to argue or engage a powerful person in debate. Applying critical thinking in these situations means that one may behave differently; doing critical thinking in the latter situation may mean keeping quiet until there is a more appropriate, or at least less dangerous time to speak.

5.4 Teaching Critical Thinking

I found that my Cambodian students were able to learn critical thinking skills, given a willingness on my behalf to learn alongside them. I also had to think very hard about the language I used in the classroom, and I was able to pitch my lessons at a level that students could understand. In a classroom where there are native speakers as well as learners who have English as a second language this may not be feasible. I am not suggesting that multicultural classes should be ‘dumbed down’ as this would be detrimental to all learners. However there are some small changes that lecturers can make; for example to speak more slowly, and to think about the colloquialisms they

use that may not be familiar to some of their audience. Introducing different cultural contexts can also be useful.

I am not suggesting that teachers in a multicultural classroom need to give examples from each country that their students are from, but an acknowledgement that critical thinking does happen in other countries, as Kutieleh and Egege (2004) suggest, would be helpful. The idea that critical thinking is a Western concept can be unpacked and explored with students and can be used to introduce all students to the relationship between culture and critical thinking. The *Kalama Sutta* is a good example of something that can be used to show that critical thinking occurs in different cultures and situations and a Western definition is not the only one available. Comparing different cultural perspectives on critical thinking may also help international students to see it as something familiar.

In order to facilitate participation I found small group work to be invaluable. When teaching multicultural groups, barriers such as superstition are a good starting point to create discussion. All cultures have superstitions and a comparison of those would be a good way to break the ice amongst diverse student groups. Creating groups of students with a shared language and allowing them to discuss in their own language can be very helpful for students to share knowledge and help each other. Giving them a task to do that results in a presentation in English to the class, or creating a poster can focus the discussion and make it easier for the teacher to check the group are on topic. Presentations of the biggest barriers to critical thinking in different countries would also be an interesting approach, and could result in learning for everyone in the room, including the teacher. Mixed groups could then be used to compare similar barriers and consider solutions to them.

Critical thinking cuts across all disciplines and is something that students in Western universities are required to learn. My focus on teaching critical thinking gave me insights into the relationship between culture and critical thinking, but also into the way 'passive Asian students' are constructed in the West. This seems to be mainly through the prism of non-participation. The onus is on teachers to find ways to encourage students to share their knowledge and engage in discussion. Finding a context that engages and interests students, especially in a cross-cultural classroom is one way to do this, and one that can be applied in many disciplines.

5.5 Concluding Remarks

Working in education, one does not often know what happens next in the lives of students. I would like to think that those who took part in this research continue to use their critical thinking skills, and the crossover of these skills into other areas of study would be an interesting area for further research. When a Cambodian asks me about my research, whether in a professional or social capacity, they often assume I am trying to show that Cambodians are unable to think critically and are relieved and thank me when I say that I am trying to show the opposite. When I am asked about the research by Westerners, the questioner will sometimes nod and smile and say something like 'oh yes they can't do critical thinking.' 'They' has so far referred to Cambodians, (in Cambodia), Asians in general, and in one recent example 'people from other cultures' meaning Non-British people. The latter was from a teacher of English as a Second Language in the UK. This kind of statement usually comes at the beginning of the conversation, after which I explain that actually I think most people can do critical thinking, but it may be expressed differently in, for example, collectivist cultures than in individualist ones. The outcome of critical thinking that we expect, may not be the one that we get when teaching critical thinking to people from other cultures. This can be seen as a learning opportunity rather than something that needs to be corrected.

I suggest that this kind of stereotypical reaction in relation to critical thinking and other cultures needs to be further investigated. Research often seems to focus on why people from other cultures do not always think in the same way as 'us'. This different way of thinking is sometimes seen as inferior. This is clearly a critical thinking mistake; open-mindedness is a positive critical thinking disposition, while stereotyping and fear of change are barriers to critical thinking. As educators, teachers and human beings we need to explore different approaches to critical thinking and what these might mean for us all, instead of assuming that our Western approach is the correct one. From a collectivist point of view for example, the outcome of thinking critically may look very different from an individualist one. This is something that can be added to the discussion. Teaching a group of students from a different culture, whose knowledge of their own culture far outstrips yours is a quick way to become an 'anthropologist' of your own culture; no cultural norms and beliefs can be taken for granted, and need to

be justified and explained. Working with Cambodian students enriched my knowledge of both their culture and my own. This in turn helped us all to consider what critical thinking might mean in different cultural contexts and the different decisions it might lead to. My knowledge of critical thinking and students' knowledge of Cambodian culture enabled us to learn together, for the benefit of us all.

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Appendices

A1 Research Study Invitation

Research Study: Thinking Culturally about CriticalThinking Invitation

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask me if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Thank you for reading this.

What is the purpose of the study?

The research is about teaching and learning critical thinking in Cambodia. The research will investigate how Cambodian students learn about critical thinking and develop their skills in it. We will also investigate how critical thinking might be different in Cambodia from western countries, and what the advantages and disadvantages of doing critical thinking might be. In following this course in critical thinking you will be contributing to our knowledge and understanding of what it means to think critically.

Why have I been chosen?

You have been asked to take part because you are studying a class in Logic and Critical Thinking.

Do I have to take part?

It is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect your grade for this course.

What will happen to me if I take part?

If you consent to take part in this research and you are currently studying Logic and Critical Thinking you will be asked to fill out a pre-course questionnaire to find out about your previous learning experiences. If you decide you don’t want to take part you will continue the course as normal. When you study Logic and Critical Thinking you can join in discussion groups. The discussions may be

recorded if the group agrees and if you say something important for the research you might be quoted, but you will remain anonymous.

What do I have to do?

If you are a current student all you have to do is attend the classes and learn about critical thinking.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Any information about you which is shared with others (eg. in reports and publications or is shared with a supervisor) will have your name and address removed so that you cannot be recognised from it. The information will be kept for about 2 years, until approximately September 2014.

What will happen to the results of the research study?

The results of the research will probably be published in an education journal in the UK, in approximately two years' time. If you wish to read the research please contact me and I will make sure you receive a copy. You will not be identified in any publication.

Who has reviewed the study?

The study has been reviewed by London South Bank University's Research Ethics Committee.

Contact for Further Information

Please contact me at suraben@yahoo.co.uk for further information or talk to me after class. If you have any complaints you can also contact my supervisor Peter Winbourne at peter.winbourne@lsbu.ac.uk

Thank you for reading this information sheet and considering taking part in this study.

A2 Research Study Consent Form

Research Study: Thinking Culturally about Critical Thinking

CONSENT FORM

I have read the attached information sheet on the research in which I have been asked to participate and have been given a copy to keep. I have had the opportunity to discuss the details and ask questions about this information.

The Investigator has explained the nature and purpose of the research and I believe that I understand what is being proposed.

I have been informed that if I participate in a discussion group I may be recorded.

I understand that my personal involvement and my particular data from this study will remain strictly confidential.

I have been informed about what the data collected in this investigation will be used for, to whom it may be disclosed, and how long it will be retained.

I understand that I am free to withdraw from the study at any time, without giving a reason for withdrawing.

I hereby fully and freely consent to participate in the study.

Participant's Name:(Block Capitals) …….

Participant's Signature: …….

Date: …….

As the Investigator responsible for this investigation I confirm that I have explained to the participant named above the nature and purpose of the research to be undertaken.

Investigator's Name: …….

Investigator's Signature: …….

Date: …….

A3 Consent Form Research Assistant

CONFIDENTIALITY FORM FOR RESEARCH ASSISTANT

I have been given information about the research and the extent of my role in it. I have had the opportunity to discuss the details and ask questions about the research.

I understand that my personal involvement and the data that I collect from this study will remain strictly confidential.

I have been informed about what the data collected in this investigation will be used for, to whom it may be disclosed, and how long it will be retained.

I understand that I am free to withdraw from the study at any time, without giving a reason for withdrawing.

I hereby fully and freely consent to participate in the study.

Researcher’s Name :(Block Capitals) …….

Researcher’s Signature: …….

Date: …….

As the Investigator responsible for this investigation I confirm that I have explained to the research assistant named above the nature and purpose of the research to be undertaken.

Investigator's Name: …….

Investigator's Signature: …….

Date: …….

A4 Pre-course survey

Pre – Class Survey Logic and Critical Thinking

Name		Age		Year of Study	
Date		Sex		Class	

At High School

	Yes	No
Did you work in groups or pairs in class?		
Did the teacher allow you to express your own opinion?		
Did you mostly just sit quietly and take notes?		

Please describe briefly what you did in class at High School and the environment. Was your experience good or bad?

Are classes at University different to classes at High School? How? Which do you prefer?

A5 Mid-course survey

Mid – Course questionnaire.

Name

Class

	Yes	No
Do you answer questions from the teacher in critical thinking class? (Do you speak out?)		
Do you feel shy to speak in the classroom?		
Do you understand the questions the teacher asks during the class?		
Does the teacher asking questions in the classroom help you to learn?		
Does discussing questions in a group in class help you to learn?		

A6 End of Course Survey

End of Term questionnaire

Name Date

Class

Has critical thinking changed the way you think? If yes how?
Do you do critical thinking in your life? If yes please give an example

A7 Data Collection

A.7 Data Collection

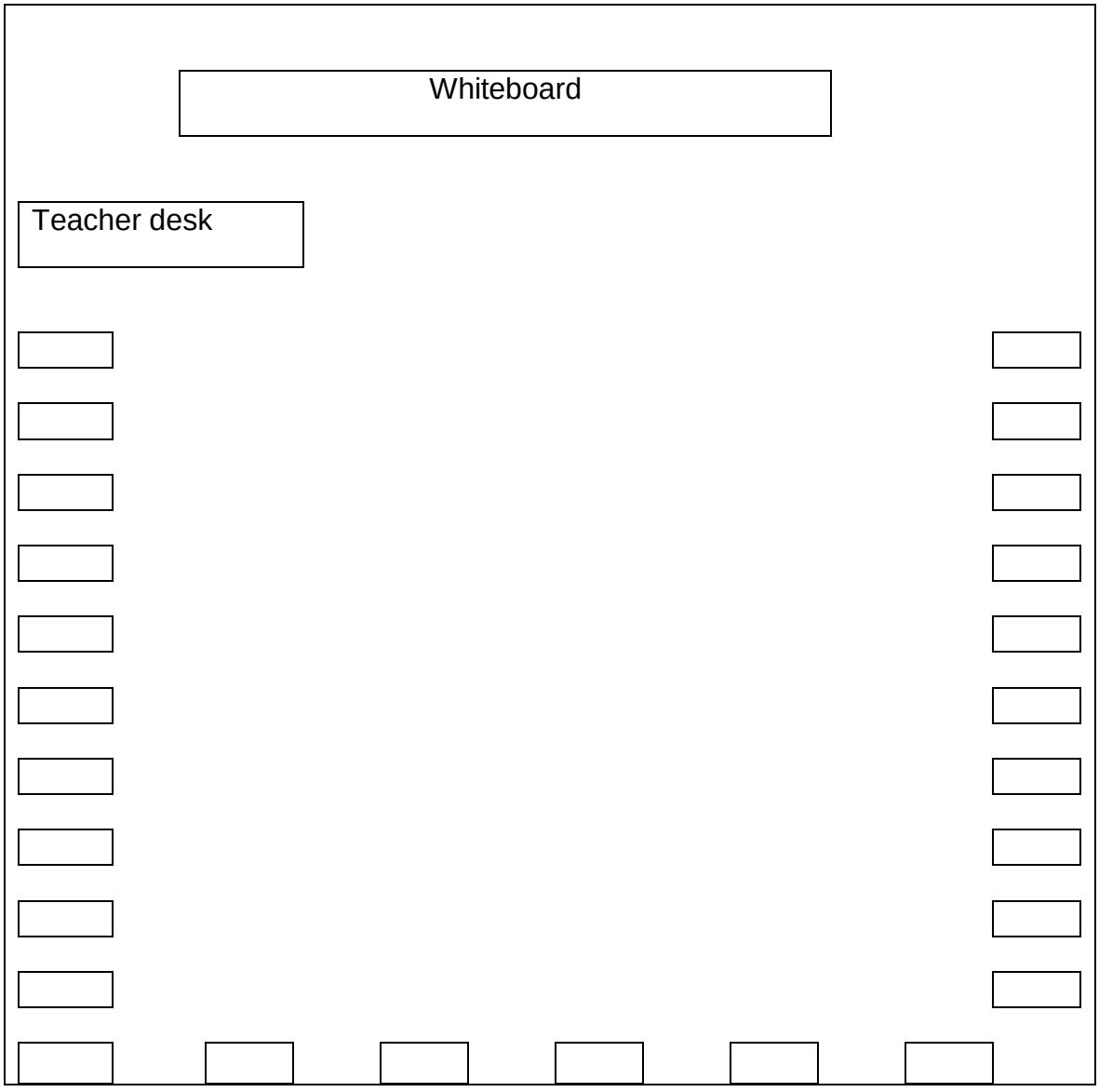
Name		Date		Class	

Teacher Questions		Total
Student Answers		
Whole Class answers		
Half Class answers		
Student Questions		
Student-Student Interaction		
Any other point of interest		

A8 Classroom Configuration

Data Collection Classroom Configuration

Name		Date		Class	



A9 Spearman Analysis

Spearman's Rank Correlation Coefficient Tables

1. Class E
2. Class M
3. Class A
4. Class EV

E students	Results	Rr		E students	Speaking	Rs		D squared		E students	Results	Speaking
1	89	6.5		1	15	10		12.25		5	98	68
2	73	16		2	11	12		16		9	95	84
3	81	14		3	57	4		100		13	94	54
4	73	16		4	23	7		81		15	93	7
5	98	1		5	68	2		1		12	92	12
6	86	9		6	61	3		36		1	89	15
7	89	6.5		7	3	16		90.25		7	89	3
8	84	13		8	16	9		16		11	88	30
9	95	2		9	84	1		1		6	86	61
10	85	11		10	19	8		9		10	85	19
11	88	8		11	30	6		4		16	85	6
12	92	5		12	12	11		36		17	85	0
13	94	3		13	54	5		4		8	84	16
14	73	16		14	5	15		1		3	81	57
15	93	4		15	7	13		81		2	73	11
16	85	11		16	6	14		9		4	73	23
17	85	11		17	0	17		36		14	73	5
	Group E students		rho	0.346201		sum D squared		533.5				

Significant at 0.1
i.e. you might expect to get this result occurring by chance once every 10-20 times

M students	Results	Rr		M students	Speaking	Rs		D squared		M students	Results	Speaking
1	96	2.5		1	3	16.5		196		5	97	53
2	93	5.5		2	11	6		0.25		1	96	3
3	87	12		3	9	8		16		19	96	16
4	0	22.5		4	2	21		2.25		11	94	10
5	97	1		5	53	1		0		2	93	11
6	80	16		6	3	16.5		0.25		18	93	5
7	89	11		7	7	9.5		2.25		12	91	3
8	80	16		8	2	21		25		15	90	44
9	80	16		9	2	21		25		16	90	3
10	85	13		10	5	12		1		23	90	21
11	94	4		11	10	7		9		7	89	7
12	91	7		12	3	16.5		90.25		3	87	9
13	60	21		13	5	12		81		10	85	5
14	74	18		14	3	16.5		2.25		17	81	3
15	90	9		15	44	2		49		6	80	3
16	90	9		16	3	16.5		56.25		8	80	2
17	81	14		17	3	16.5		6.25		9	80	2
18	93	5.5		18	5	12		42.25		14	74	3
19	96	2.5		19	16	4		2.25		21	68	7
20	66	20		20	13	5		225		20	66	13
21	68	19		21	7	9.5		90.25		13	60	5
22	0	22.5		22	0	23		0.25		4	0	2
23	90	9		23	21	3		36		22	0	0
Group M students			rho	0.52668		sum D squared		958				

Significant at 0.005
i.e. you might expect to get this result occurring by chance fewer than once every 200 times

Student	Result	Rr		Student	Speaking	Rs		D squared		Student	Result	Speaking
1	88	19		1	13	10		81		A11	97	70
2	84	23		2	4	17		36		A16	97	38
3	93	10		3	1	24		196		A14	96	40
4	0	29		4	0	28		1		A23	96	3
5	93	10		5	13	10		0		A24	96	9
6	93	10		6	35	6		16		A25	96	16
7	0	29		7	1	24		25		A19	95	0
8	76	25		8	2	21		16		A18	95	54
9	88	19		9	0	28		81		A3	93	1
11	97	1		10	13	10		81		A5	93	13
12	92	12.5		11	70	1		132.25		A6	93	35
13	92	12.5		12	5	14.5		4		A12	92	5
14	96	4.5		13	5	14.5		100		A13	92	5
15	86	22		14	40	4		324		A22	92	46
16	97	2		15	10	12		100		A21	91	4
17	88	19		16	38	5		196		A27	91	2
18	95	7.5		17	4	17		90.25		A28	89	14
19	95	7.5		19	0	28		420.25		A1	88	13
19	73	27		20	54	2		625		A9	88	0
20	74	26		20	1	24		4		A17	88	4
21	91	15.5		21	4	17		2.25		A26	87	0
22	92	14		22	46	3		121		A15	86	10
23	96	4.5		23	3	19		210.25		A2	84	4
24	96	4.5		24	9	13		72.25		A29	80	2
25	96	4.5		25	16	7		6.25		A8	76	2
26	87	21		26	0	28		49		A20	74	1
27	91	15.5		27	2	21		30.25		A19	73	0
28	89	17		28	14	8		81		A4	F	
29	80	24		29	2	21		9		A7	F	
30	0	29		30	0	28		1		A30	F	
			rho	0.307898			Sum D squared	3111				
		Group A students										

Significant at 0.05
i.e. you might expect to get this result occurring by chance once every 20-40 times

Student	Results	Rr		Student	Speaking	Rs		D squared		Student	Results	Speaking
1	93	6		1	46	8		4		EV8	97	175
2	91	9.5		2	61	5		20.25		EV5	96	41
3	92	8		3	51	6		4		EV23	96	28
4	80	17.5		4	35	14		12.25		EV13	94	35
5	96	2.5		5	41	9		42.25		EV1	93	46
6	93	6		6	131	3		9		EV6	93	131
7	0	22		7	50	7		225		EV19	93	79
8	97	1		8	175	1		0		EV3	92	51
9	90	12		9	30	17		25		EV2	91	61
10	0	22		10	35	14		64		EV15	91	21
11	88	14		11	38	10.5		12.25		EV9	90	30
12	0	22		12	38	10.5		132.25		EV14	90	26
13	94	4		13	35	14		100		EV22	90	148
14	90	12		14	26	21		81		EV11	88	38
15	91	9.5		15	21	22		156.25		EV17	85	37
16	81	16		16	28	18.5		6.25		EV16	81	28
17	85	15		17	37	12		9		EV4	80	35
18	0	22		18	34	16		36		EV25	80	27
19	93	6		19	79	4		4		EV7	0	
20	0	22		20	0	25		9		EV10	0	
21	0	22		21	5	24		4		EV12	0	
22	90	12		22	148	2		100		EV18	0	
23	96	2.5		23	28	18.5		256		EV20	0	
24	0	22		24	9	23		1		EV21	0	
25	80	17.5		25	27	20		6.25		EV24	0	
			rho	0.492692			Sum D squared	1319				
			Significant at 0.01									
			i.e. you might expect to get this result occurring by chance once every 100-200 times									
	Group EV students											