

Critical Thinking for Restoration & Development: Working within the Cambodian Higher Education System

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ABSTRACT

This study attempts to find an entry-point for maximizing the intellectual output of the currently constrained Cambodian higher education system. Both education and development are social processes that assume change; however, they occur within a cultural context that may be resistant to change. Critical thinking [CT] skills are required not only to absorb technical knowledge for development but also to empower young Cambodian adults to create the institutions to manage change endogenously while respecting Cambodia's rich cultural heritage and poising it to thrive in today's globalized world. A multi-disciplinary literature review traces the roots of CT beyond Socrates to the Buddha such that an embrace of CT can be positioned as cultural restoration. The primary research component of this study involves an analysis of the characteristics, attitudes and behaviours of fourth year, English language students that have explicitly studied CT for two semesters. Drawing on the framework from the literature, a quantitative survey explores five themes and an assessment is made to estimate the proportion of the study population that has the disposition of the 'critical spirit'.

1.0 INTRODUCTION

As a foreign higher education (HE) lecturer in Cambodia teaching a variety of content-based courses, I have been working from within the Cambodian HE for the past 5 years to increase the range of ideas available to young Cambodians such that they might apply what I since discovered was the Buddha's call for critical thinking (CT) skills.

Specifically this research, which is in partial fulfillment of a Master of Arts, Development Studies at the Royal University of Phnom Penh, focuses on better understanding the attitudes, behaviours and experiences of senior level HE students in Cambodia that have explicitly studied CT and assessing how those might compare or contrast with those required by critical thinkers.

While this work has been done in the context of Cambodia and reflects Cambodia's unique experience with Theravada Buddhism, the link established between the Buddha's teachings and what Western CT theorists today call critical thinking, make this work applicable to any dominantly Buddhist society, developed or developing. Even stripped of the link to Buddhism, the importance of CT skills remain applicable to any society wishing to constructively evolve from their status quo towards a more equitable society where the benefit is shared by the broadest segments of the population alleviating the suffering by the marginalized and vulnerable.

Throughout this paper, references are made to "higher education" and "endogenous" development. Their intended use here matches that of "university" and "autonomous" development which are utilized by the *Skills development for new dynamism in Asian Developing countries under Globalization* project.

1.1 Development

Todaro and Smith define development as the social "process of improving the quality of all human lives", (2006, p. 810); that is to say for the broadest segments of the population, not just those of the business or political elite. Intrinsic to development is positive social change.

Development, in its essence, must represent the whole gamut of change by which an entire social system, tuned to the diverse basic needs and desires of individuals and social groups within that system, moves away from a condition of life widely perceived as unsatisfactory toward a situation or condition of life regarded as materially and spiritually better (Todaro & Smith, 2006, p.17).

Development considers the significance of quantifiable measures such as consumption levels, availability of consumer choice variables, as well as access to basic public goods and services, such as sanitation, clean drinking water, health care and education, but moves into deeper psychological territory by emphasizing human dignity, respect and individual self-esteem.

So, development is a *social* concept that focuses on both the physical and psychological well-being of the broadest segments of the population. It assumes a gap between the reality of today and the potential of tomorrow and thus intrinsically involves social transformation, or positive social change.

1.2 Education

Learning is also a social concept that assumes change. "Learning is about change. It is concerned with the acquisition of habits, knowledge and attitudes. It enables the individual to make both personal and social adjustments" (Crow, L. & Crow, A., 1963, cited in Leng Chhay & Jenny Pearson, 2006, p. 25). Within the late developing Cambodian context, once one learns that the source of continuous disease is spoiled water, rather than say an insatiable evil spirit of an unknown ancestor or a 'sorcerer' neighbour, one adjusts their behaviour and stops defecating in the source of drinking water. Education is intended to change behaviour – without change, education is useless.

Sen describes education as both *instrumental* to development and *constitutive* of development (1999, p. 36-39). Increased educational opportunities drive development and with development come greater educational opportunities. Although not addressing HE *per se*, Sen details the need for the masses to have the thinking skills required to actively decide "what traditions they wish or wish not to follow" (p. 32).

If the lower levels of education are purposed for social reproduction; to achieve the goal of endogenous development, HEs aim, particularly within the Cambodian context, needs to be to foster not only technical and professional skills but also CT skills to allow graduates to be autonomous learning and thinking agents.

Without these skills to manage change even the educated remain a victim of the status quo or a victim of exogenous change; in either case one's base knowledge becomes an asset with diminishing rather than exponential returns.

In the short-run HE not only needs to develop local human ability to absorb international technical assistance and technology transfer (Hatakenaka, 2007, p.2; Kapur & Crowley, 2008, p.14), but in the long-run must also

build the human capital that in turns builds the very institutions that are regarded as an indispensable factor of development – the accountants, doctors, engineers, lawyers, teachers that comprise the middle-class. (Kapur & Crowley, 2008, p.3).

Universities, like all institutions reflect a way of thinking. Faculty members have the opportunity and I here it is suggested, the obligation to instill in students active, objective and rational thinking skills. To promote such skills faculty and administrators need to understand, embrace and by example demonstrate CT skills – in research, in boardrooms and classrooms. In the name of development universities cannot be dogmatic defending the status quo, but rather be open-minded in challenging themselves and open-minded as they are challenged by peers, administrators and of course students.

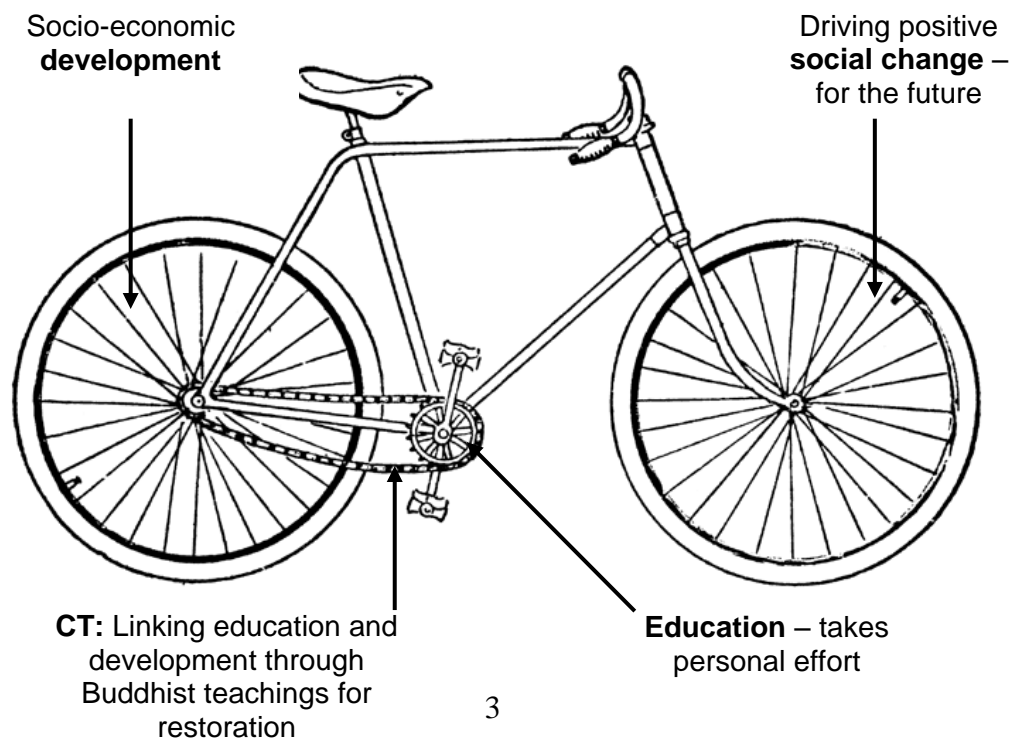
In summary both education and development are social concepts that are inextricably linked to change – a change from the status quo such that a not only the few, but the many can gain equal access to quality public goods and services and live a life of dignity and opportunity. To manage change rather than become a victim to it, one needs to be an active participant in an iterative process, using open-minded observation, experience and reflection, willing to question themselves and others throughout one’s analysis, all in a quest to rationally decide what to adapt, adopt and discard and which finally results in the confidence to behave in a way that is good for not only the self, but for the many. With such CT skills, young Cambodians will be able to autonomously decide which ideas to adapt, adopt or discard in a way which respects Cambodia’s rich cultural heritage (*restoration*) while at the same time positioning itself to thrive in today’s globalized world (*development*).

So while change is intrinsic to both education and development, they also occur in a socio-cultural context that may be resistant to evolution, thus creating tension, anxiety or *heat*. Pellini makes the same point writing of decentralization efforts in Cambodian education by noting "Development is often a process where local cultural values and traditional norms collide with models from another culture" (2005, p. 205).

This paper by this Westerner, attempts to avoid this well-worn path, by going deeper into Cambodian and indeed, Asian culture to re-blaze the middle path finding that the Buddha was the original critical thinker. So the author is a Westerner, the entry point attempts to restore traditional Cambodian culture by embracing and leveraging Buddhist teachings to equip young Cambodians with CT skills so they can develop Cambodia endogenously.

The overall interactions are illustrated in Figure 1.

Figure 1: Overall Interactions



Overall, Buddhism, CT, HE and the purpose of development intersect at the point of driving positive social change by objectively questioning the socio-economic status quo such that a more affluent, tolerant and dignified life can be enjoyed not only by the privileged few but by the broadest segments of the population.

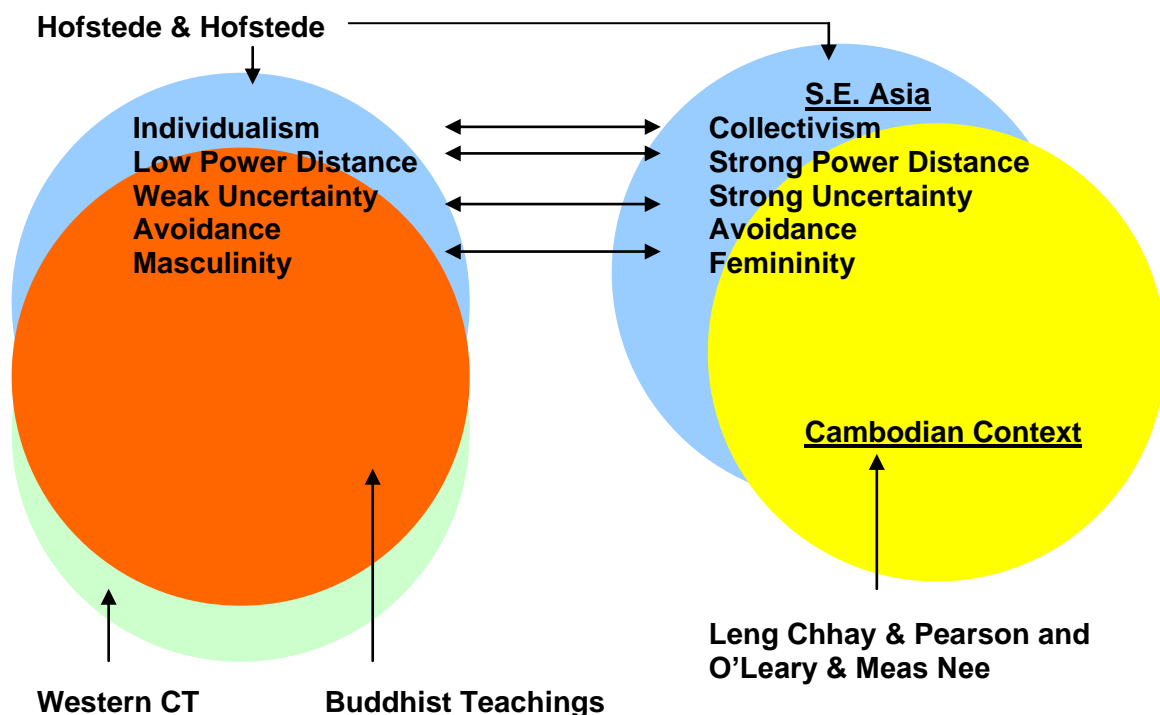
1.3 Theoretical Framework

Sociological relativists such as Hofstede have defined, measured and described dimensions on which cultures vary (Hofstede, 2004, cited in Hofstede & Hofstede, 2005). Later Hofstede and others nuanced these dimensions specifically within the realm of education (Carless, 1999; Dimmock & Walker, 1999, 2000, 2003; Hofstede & Hofstede, 2005). O’Leary and Meas Nee as well as Pearson and Leng Chhay have done work specifically in Cambodia, not amongst HE students but graduates of the system that are now development practitioners to offer an adult perspective on education in the Kingdom. Each of these studies manifests themselves in a list of characteristics and behaviours that are said to typify the educational environment. Combined, the findings of Hofstede and Hofstede (2005) with respect to S.E. Asian countries will overlap greatly with those of the Cambodian researchers.

Parallel to this, the skills and characteristics of critical thinkers as defined by contemporary Western commentators will be compared to Buddhist virtues. Again, combined those finding will overlap with each other, but will be juxtaposed to the findings of Hofstede and Hofstede, O’Leary and Meas Nee and Leng Chhay and Pearson.

The relationship between these five spheres is illustrated in Figure 2.

Figure 2 *Theoretical Framework*



1.3.1 Statement of Theory

In general, it is suggested based on the aforementioned literature and personal practitioner experience and reflection, that amongst the target population of Cambodian HE learners, there are contrasts between the status quo and the required attitudes and behaviours for CT as lay out by both Western CT commentators and Buddhist teachings. Primary research conducted in this study attempts to restate the

most significant characteristics and attitudinal and behavioural manifestations as questions that are grouped into five broader themes and probed within the Cambodian HE system.

1.4 Statement of Problem

The literature review establishes that the desirability for CT skills in Cambodia has been duly acknowledged and also supports the assertion that CT skills are not broadly available amongst Cambodia's HE system graduates. This author's focus is on the Cambodian context, however it would be fallacious not to acknowledge that education systems in the United States and Canada also struggle to supply enough HE graduates with CT skills as well. Such an issue is the challenge to generate enough CT skills, that the mainstream media regularly publish reports explaining that neighbouring nations such as Thailand (Nimkannon, 2007), Vietnam (Reuters, 2009, p. 14) and even South Korea (Martin, 2009, p. 11) face the same challenges as does Cambodia. To be clear, Cambodia's unmet demand for CT skills is in no way a unique situation. It is a challenge faced as much by developed world as much as it is by the neighbouring developing world. A basic premise of this thesis is that the Cambodian HE system does produce graduates that do go on to excel in international post-graduate study. The problem that this attempts to address is how CT can be leverage within the cultural context such that even more intellectual output can be derived from Cambodia's HE system.

1.4.1 Need for CT Unmet

The demand-side of HE, that is employers, in 2008 completed Cambodia's first comprehensive youth and employment study which examined the perceptions of both youth and employers on education, skills and opportunities for the future. Commissioned by the Cambodian Federation of Employers and Business Associations (CAMFEBA) the June 2008 study identifies clear demand-side dissatisfaction with supply-side, HEs ability to-date to provide skills related to critical thinking. The survey found that of the 220 employers surveyed, 64% identified analytical skills and 55% identified decision-making and problem solving skills as both the most important and most difficult to find in professional staff candidates (BDLINK, 2008, p. 84). The demand-side of HE, those driving at least economic development, are demanding more critical thinking skills from the HE system.

Prior to the release of the CAMFEBA report, the second annual Cambodia: Outlook conference 2008 hosted by the Cambodian Development Research Institute (CDRI) and ANZ Royal was convened. Held on February 28, 2008 the conference brought together some 250 invited leaders from government, the private sector, civil society and the development and research communities to discuss progress and challenges in Cambodia's development. It had a particular emphasis on issues of concern to the private sector and generating policy recommendations and ideas for future action. Their qualitative findings add to the call and a sense of urgency to the need for more CT skills and intellectual output from Cambodia's HE system:

“There is a shortage of qualified people ... as well as a lack of the generic [transferable] skills employers are looking for, such as **critical thinking**, writing and leadership” (emphasis added by this author, CDRI, 2008, p.8).

“There is a serious lack of conceptual thinking skills.” (CDRI, 2008, p.10).

“There is a bad need for key skills including **critical thinking**, not just passively but proactively. Reporting and writing skills are key. Students cannot write because they do not read” (emphasis added by this author, CDRI, 2008, p.11).

“Graduates can have two degrees and know nothing” (CDRI, 2008, p.11).

The limited output of CT skills may be explained by curriculum level gaps or pedagogy difficulties (including those of this practitioner-author) common in any early stages of the learning curve, however reflective practitioner experience suggests that there is also an anxiety or heat associated with the learning of CT even when the curriculum offers both implicit and explicit CT study.

1.5 Purpose of the Study

The ultimate purpose of this research is to work within the current constrained Cambodian HE system to better understand how more intellectual output can be achieved within the same system and same level of resources within the spirit of restoration, supporting young Cambodians in their pursuit of socio-economic development. Answers to the following questions are derived from a multi-disciplinary literature review and practitioner reflection:

1. From an HE standpoint, is there a “cost-free” thing that can be done to support restoration and facilitation of development? If so, is there anything in traditional Khmer culture that can be leveraged to support the first question?
2. What frameworks exist to identify socio-cultural variability? Can these frameworks be extended into education and more specifically into the Cambodian HE system?
3. What are the broader socio-political-historical aspects perhaps taken for granted by the Cambodian HE student, but must be explicitly understood by a researcher (especially a foreigner)?

Answers to the first two questions have already been alluded to; as an attitude, discipline of thinking and one could argue a way of living, CT is a cost-free thing that can do much to restore and develop Cambodia. As has been asserted earlier and will be supported later, traditionally Buddhism played a dominant role in the Khmer-psyche. Since the Buddha was the first critical thinker, current day embrace of CT is not yet again the submission to the foreign, but rather a celebration of what it means to be Khmer. Frameworks setting out dimensions of cultural variability, not only exist in general, but have been extended into the realm of education and have been supported by local research done in consideration of the Cambodian general education system. To address the third question in short, although there is much of Buddhism that encourages the adherent to ‘swim against the current’, there is also much in the academic literature that explains how generations of Cambodian regimes have encouraged the opposite. On the other hand, the emergence of a Cambodian ‘rational Buddhism’ movement led by the Venerable Chuon Nath and Venerable Huot Tath in the early twentieth century provides perhaps the most current, relevant and compelling reason to be believe “to be Khmer is to be Buddhist, is to be a critical thinker.”

With frameworks setting out dimensions of cultural variability as well as their associated attitudinal and behavioural manifestations from the literature and a deeper understanding of the broader socio-political-historical aspects of the Cambodian environment a final fourth question is posed:

4. How do the characteristics including the attitudes and behaviours of senior Cambodian HE learners compare to the list of manifestations as laid out by both Buddhist philosophy and Western CT commentators?

1.6 Five themes

The following five themes were probed with specific questions to provide insight. Due to space limitations, those findings regarding theme a) thinking and some of those related to theme d) sharing of ideas and aversion to questions are fully explored and interpreted herein. In addition, an overall assessment of the proportion of the study population that report to have the attitudes, behaviors and characteristics of the ‘critical spirit’ is included. Findings in these areas are deemed to be most germane to the *Skills development for new dynamism in Asian Developing countries under Globalization* project. Other key findings are listed, however not fully discussed in this paper.

a) Thinking:

1. Is there is a resistance or fear of “thinking too much”?

b) The nature of learning:

2. What is the purpose of a university degree? External status reward or the knowledge acquired through the process?
3. Who is at the center of the learning process? The teacher or the student?
4. Is there a perceived gap between in class learning and the students’ daily lives?
5. Is there a resistance to learning that results in a preference for learning about things already known about versus learning about totally new things?

c) Responsibility:

6. Is there a resistance to accepting personal responsibility?

d) Sharing of ideas and aversion to questions:

7. Is there a resistance to sharing ideas, asking or being asked questions or in speaking out that varies according to the learners’ relationship with the other party?
8. Are there perceived barriers related to the broader socio-political-historical context which include not questioning politicians in government or aspects of the status quo?

e) Behaviour:

9. Is there a tendency to behave in ways that preserve harmony rather than being “honest” or “right”?

2.0 LITERATURE REVIEW

2.1 Defining Critical Thinking

While there is much debate amongst Western based CT theorists as to whether or not CT skills are domain-specific or generalisable (Bailin & Siegel in Blake, Smeyers, Smith & Standish, 2003, pp. 181-193; Norris, 1985, 40-45) there is general agreement on the nature of CT though each commentator approaches it from different perspectives. Here the work of several commentators is offered such that the different areas of emphasis can be used to build a comprehensive definition for the purpose of this paper.

To explain particularly the cognitive processes required of CT Paul and Scriven at the National Council for Excellence in Critical Thinking who seem to be drawing on Bloom’s taxonomy, offer:

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (n.d).

In another contribution Elder and Paul put the thinker, learner within the context of this work, in the central role of the CT process “[CT] is best understood as the ability of thinkers to take charge of their own thinking. ...” (cited in Fowler, 1996). Victor’s approach is also important as she explains the central role of constant questioning in CT:

The purpose of critical thinking is, therefore, to achieve understanding, evaluate view points and solve problems. Since all three areas involve the asking of questions, we can say that critical thinking is the questioning or inquiry we engage in when we seek to understand, evaluate, or resolve (cited in Fowler, 1996).

The Center for Critical Thinking emphasizes the contributions to the discipline made by the Greek philosopher Socrates (469-399 BCE), which via what is known today as Socratic questioning also places the thinker (learner) in the central role with constant questioning being his or her most important tool. Socratic questioning emphasizes the "importance of [actively] seeking evidence, closely examining reasoning and assumptions, analyzing basic concepts, and tracing out implications not only of what is said but by what is done as well" (n.d.). It is noteworthy that in this process questions are asked not only of others but also of the self.

CT is an iterative process as it implies the equal consideration of new or competing information as it becomes available. Even Socrates, who was considered to be the wisest man in the Greek Empire, would offer the following caveat with any carefully considered theory, "[According to my] best understanding to-date" (Hogan & Smith, in Blake et al., 2003, p. 169). This suggests that an understanding from even one’s careful consideration is not infallible and recognition that today’s reality or ‘truth’ effectively comes with an expiry date. Notwithstanding the iterative nature, it is important to note that most definitions conclude with a formed ‘belief’ and or action. As will be discussed in greater detail later, the best critical thinking process is meaningless unless it is reflected in some form of self-enlightened, informed action or behaviour.

Paul has considered the relationship between the intention and morality of the thinker and begins speaking the language of Todaro and Smith when they emphasize *to the benefit of the many* in their definition of development:

[Critical thinking] comes in two forms. If it is disciplined to serve the interests of a particular individual or group, to the exclusion of other relevant persons and groups, it is sophistic [sponsored or fallacious] or a *weak* sense critical thinking. If disciplined to take into account the interests of diverse persons or groups, it is fair-minded or *strong* sense critical thinking" (in Binker, 1990, p.52).

Where the thinker uses the CT process solely out of self-interest or by focusing only on the negative, it is considered to be ill-intentioned or *weak*. Where it is balanced, open-minded, and self-enlightened, it considers the interests of *the many*, is well-intended and is thus described as a *strong* sense of critical thinking.

Beyond defining CT, Ellis (1997) speaks to the broader societal need for CT which is entirely descriptive of how this thesis approaches CT and that is that CT is

integral to facilitating endogenous socio-economic development. He explains that CT “plays an important part of social change ... institutions in any society – courts, governments, schools, businesses – are the products of a certain way of thinking”. The utility of CT is that it “is a path to freedom from half-truths and deceptions” (cited in Fowler, 1996). So while Sen ascribes education as integral for societal change (1999, p. 295), here the CT theorist, Ellis draws an even more direct link between CT and social transformation.

This researcher prefers the use of a more exhaustive definition to underscore the view that CT is a multi-step rational process involving constant questioning which culminates in a tentative conclusion that positively affects behaviour. At its core the preferred definition draws on Paul and Scriven’s cognitive skills but also includes the perspectives of other CT commentators reviewed.

For the purposes of this paper, CT will be defined as an objective, rational, iterative process with the thinker being an active participant conceptualizing, applying, analyzing, synthesizing, and evaluating existing knowledge in light of new information and is based on among other things open-minded observation, experience and constant questioning of the self and others ultimately resulting in a logical outcome that affects behaviour for the good of not only the self, but the many. Consistent with this, the purpose of critical thinking is to create *light*, not *heat* (inspired by Hogan & Smith, in Blake et al., 2003, p. 168). Where CT is *weak* as described by Paul it creates only anxiety, suffering or *heat*; where CT is strong it creates *light*, which promotes not only learning but empowerment to constructively challenge the institutions that perpetuate the status quo.

2.2 Buddhist Teachings

This section will draw principles from Buddhist teachings as noted by the literature which will then be synthesized with the concepts of CT as advanced by contemporary Western commentators.

The Buddha was the original critical thinker motivated at least in part for his dissatisfaction with the status quo of his day. The Kalama Sutta is a succinct assertion of what is today called CT and was delivered in a learner-centric way emphasizing the use of what is today called Socratic questioning.

2.2.1 The Buddha was the original critical thinker

A rigorous literature review within the realm of critical thinking failed to uncover what a coincident and reflective study of Buddhist philosophy did. Although overlooked by many Western researchers and contemporary critical thinking commentators, such as the non-profit educational reform organization, The Center for Critical Thinking, who tend to emphasize the important contributions of the early Greek philosophers such as Socrates (469-399 BCE) and Plato (427-347 BCE), in the context of education in Cambodia and in fact much of Asia, it is essential to underscore that the Buddha (563-483 BCE) himself was the earliest known practitioner of critical thinking.

The reasons for the West's omission is less of an issue in this paper but could be due to simple cultural bias or because the Buddha's work is considered to be solely applicable within the domain of spirituality whereas the work of the Greek philosophers would ultimately be applied to the development of the objective quantitative sciences. Here, the most salient point is that the omission or simple oversight makes it no less true that the Buddha was the original critical thinker. Establishing this is of paramount importance in order to clearly establish that an embrace of critical thinking is consistent with cultural *restoration* and not the submission to, yet another, imported Western idea.

Notwithstanding the above, by looking at Western writing interpreting the Buddha's message, the direct link to CT and the Buddha are made. To appeal to the 'ear' of the Western reader, Armstrong (2000) draws a parallel with the later Socrates, to whom the contemporaries attribute CT. She explains that for a Westerner to understand the Buddha and his Teachings:

One need only think of Socrates, who was never content to accept traditional certainties as final, however august they might be. He believed that instead of receiving knowledge from outside, like the *sruti* Vedas [inspired texts interpreted by the *Brahmins*], each person must find the truth within his own being (p. 16).

Beyond establishing the link between the messages of the Buddha and Socrates, this passage also emphasizes the central position of the self in determining the 'truth' and as further passages will also suggest, the Buddha rejected unquestioned or blind belief in traditions that to quite an extent define any society's status quo.

Armstrong traces the development of Buddhism during the Axial Age (800 – 200 BCE) describing it as a response to the dissatisfaction with the non-rational beliefs and behaviours promoted by the *brahmins* that had ridden chaos and *dukkha* (often simplistically translated to mean 'pain' or 'suffering'; but also includes notions of 'imperfection', 'impermanence', 'emptiness', 'insubstantiality' and others (Rahula, 1959/1990, p. 17)) in the society of the day. In the introduction to The Venerable Kong Chhean's translation of Oknha Sotann Preychea Ind's Gatiloke as retold by Carrison, she describes the Buddha's dissatisfaction with the status quo of the his day as well as the central role of the 'rational self':

In many ways, Buddhism was a social protest movement against the Hindu caste system with its superstitious obedience to the Brahmins and its bloody sacrifices of humans and animals. In his sermons about the right way to live, Buddha refuted the caste systems, claiming that all people were equal and that governments should be democratic and just. Buddha preached that there are no superhuman gods or kings, that man is his own master, and that no higher deity sits in judgment over his destiny. He spoke out against human and animal sacrifices, superstition, and belief in magical ceremonies. *Everyone was responsible to think for himself, using reason and logic to make wise and compassionate judgments. ... in Buddhism, the emphasis is upon individual self-reliance: observing, knowing, understanding and doing (emphasis added by this author, Carrison, 1987, p. 13).*

2.2.2 *Kalama Sutta*

The following is the Kalama Sutta which is considered to be the Buddha's most explicit expression of the importance of CT [comments are added by this author to identify the logical fallacy being cautioned against]:

Do not believe in anything simply because you have heard it.

[Hearsay / Hasty Generalization]

Do not believe in traditions because they have been handed down for many generations. [Appeal to Tradition]

Do not believe in anything because it is spoken and rumored by many. [Appeal to Popularity]

Do not believe in anything simply because it is found written in your religious books. [Appeal to Tradition or Inappropriate Authority]

Do not believe in anything merely on the authority of your teachers and elders. [Appeal to Inappropriate authority or to Tradition]
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 (Dhammayietra Center for Peace and Nonviolence, cited in O'Leary & Meas Nee, 2001, p. i) [Boss, 2001, pp. 57-67].

Within the realm of explaining Buddhist philosophy Armstrong interprets the Kalama Sutta in a way that echoes what is considered today to be the concept of CT. He [the Buddha] always refused to take anything on trust, and later, when he had his own sangha, he insistently warned his disciples not to take anything on hearsay. They must not swallow everything that their teacher told them uncritically, but test the dhamma at every point, making sure that it resonated with their own experience (p.43).

In spite of being developed in apparent isolation from the teachings of the Buddha, Western CT theories have evolved to independently develop a series of logical fallacies that can be applied to each of the cautions (“Do not believe ...”) contained in the almost 2,500 year old Kalama Sutta. This overlap continues as we consider the Kalama Sutta beyond its cautions. The Kalama Sutta calls for “... observation and analysis ... agrees with reason” which is the same call by contemporary CT theorists Paul and Scriven cited earlier. Further the morality check offered by the Kalama Sutta “... is conducive to the good and benefit of one and all ...” not only overlaps with the work cited by Paul regarding *weak* versus *strong* sense of CT, but also echoes Todaro & Smith’s definition of development which focuses on the benefit of the broadest segments of the population. Further, regarding Paul’s definitions of *weak* and *strong* senses, Armstrong explains that according to Buddhism, ‘blind’ faith, or the acceptance of something without careful observation and analysis of reason, is “unskilled” (2000, p. 105). Finally, the last call in the Kalama Sutta, that to “... accept it and live up to it”, is similar to what CT theorists say is the outcome of the CT process and that is appropriate action or behaviour that reflects disciplined critical thinking.

The Buddha used CT not only to achieve his own Enlightenment, but he used what is currently described as Socratic Questioning to press his followers to understand, experience and practice critical thinking in not only their own spiritual journey but also as a means for solving the daily problems of the laity ‘householders’.

'Come Kalamans,' he [the Buddha] said, 'do not be satisfied with hearsay or taking truth on trust.' People must make up their own minds on morality. . . . *Step by step he asked the Kalamans to draw upon their own experience and perceive the effect of the 'three fires' of greed, hatred and ignorance* (emphasis added by this author, Armstrong, 2000, p. 135).

As suggested in the above passage from Armstrong, Rahula also describes how the Buddha used a learner-centered teaching style to guide the learner to discover the answer,

The Buddha was not a computing machine giving answers to whatever questions were put to him ... He was a practical teacher ... He did not answer questions to show his knowledge and intelligence, but *to help the questioner on the way to realization* (emphasis added by this author, 1959/1990, p. 63).

Other Buddhologists explaining the nature of Buddhism also make the direct link between Buddhism and rational or critical thinking:

Buddhism was conceived as a rational way of thought, being entirely in accordance with the latest findings of the natural sciences. In contrast with Christianity, Buddhism was not based on 'dogmas of blind belief' and revelation, but on rational thought and experiential examination (Baumann, M., 2001).

It is noted that the Bhikkhu Bodhi in his essay *A look at the Kalama Sutta* which examines the greater context in which the Buddha offered the Kalama Sutta does caution against any interpretations that place Buddhism too squarely within the realm of natural science. Notwithstanding this important distinction, commentators including Bhikkhu Bodhi do draw a distinction between the 'blind belief' inherent in other world religions (Armstrong, 2000, p. 43 ; Carrison, 1987, p. 13; Rahula, 1959/1990, p. 8) and do note the emphasis that Buddhism places on the experiential and rational thought.

In summary from the above passages, just as CT, HE and development strive to improve on the current socio-economic status quo, the Buddha's journey to Enlightenment was at least in part driven by his rejection of the status quo and Brahmanist practices which represented the mindlessly repetition of what had become tradition in his day. He rejected as irrational, all hierarchy including a divine and divine-king and all magic and superstition. For the Buddha all things would need to be considered experientially and rationally before they could be accepted and even then, a final test was required, the outcome must be fair not only for the self, but for the many. In this endeavor he left his followers in the central position, in charge of their own journey towards the truth.

2.3 Discussion of Theoretical Approach

2.3.1 Dimensions of cultural variability

The theoretical foundation of this study is the multi-culturally prepared and responded work of Hofstede. His initial work across various strata of IBM employees in over 50 countries in the mid-1970's has been strengthened by criticism, to be revised, updated, expanded and extended into new areas including education as well as having its foundational hypotheses support by Rokeach, Schwartz and others (Hofstede & Hofstede, 2005, pp. 22-32). Hofstede's core findings were that cultures varied across the following four universal dimensions:

- **Collectivism versus individualism** – Collectivist “societies [are those] in which people from birth onward are integrated into strong, cohesive groups, which throughout people's lifetimes continue to protect them for unquestioning loyalty. In an Individualist society “everyone is expected to look after himself or herself and his or her immediate family.” (p. 76)
- **Power distance** – “the extent to which less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally” (p. 46). In a 'large' power distance society, members expect and accept inequalities between people;
- **Uncertainty avoidance** – “the extent to which members of a culture feel threatened by ambiguous or unknown situations” (p. 167). In a 'strong' uncertainty avoidance society, different is dangerous.
- **Femininity versus masculinity** – Feminine “when emotional gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life”; Masculine “when emotional gender roles

are clearly distinct: men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life” (p. 120).

Although Hofstede and Hofstede did not evaluate Cambodian society, data for Thailand and Hong Kong are being used as surrogates that are juxtaposed against Anglo-American data. The juxtaposition is important to attach real societies at either end of each dimensions’ continuum so that the list of manifestations becomes more meaningful. It is suggested that Cambodia’s scores would likely correlate strongly with those of Thailand but this assumption is not critical to this piece. Hofstede and Hofstede’s work is important to this piece because it offers an international framework that generates attitudinal and behavioural manifestations that have been extended within the realm of education. These offer areas of probing and language for the primary research discussed later in this piece.

If the comparison of Cambodian and Thai societies is fair, then Cambodia would be considered a collectivist, large power distance, medium uncertainty avoidance and feminine society. As such Cambodian society would be characterized as a society where learning is limited to a one-time event and limited to learning ‘how to do’. Social reproduction is achieved via the maintenance of harmony and respect for traditions. Education is teacher-centered and its effectiveness is extremely dependant on the ‘quality’ of the teacher as they transfer personal wisdom. Students play a relatively passive role speaking only when invited to by the teacher or when sanctioned by other students. Structured learning situations where the ‘right’ answers are given are preferred. The norm is that students are ‘average’, weaker students should get praise and individual excellence is greeted with jealousy.

2.3.2 Perceptions of Cambodian adult learners’ strategies

The discourse between expatriates and Cambodians about perceptions of adult Cambodian learner attitudes and strategies has already been initiated and documented. In the work done by development practitioners engaged in participatory training, Leng Chhay and Jenny Pearson (2006) offer insights on how Cambodians approach learning.

In general the comments made by Leng Chhay and Jenny Pearson are broadly consistent with the manifestations from the work of Hofstede and Hofstede. In summary, Leng Chhay and Pearson concur that Cambodians see a relatively passive role for the student. Learning is limited to learning ‘to do’ and the quality of learning outcome is the responsibility of the teacher who transfers knowledge. Students are not given the chance to debate or express their own thinking.

In another piece done within the Cambodian context, O’Leary and Meas Nee (2001) conducted research amongst development practitioners primarily in the area of capacity building. Their work was done to investigate why despite the tireless training efforts of so many, more genuine transformation at the village level has not occurred. Learning and the study of learning within the Cambodian context is central to their study. Cambodian overseas graduates as well as Cambodian educators are examples of high academic performers that have emerged from the constrained Cambodian HE system, while Cambodian development practitioners are adult learners providing a response to CT assumptions and expatriates involved in previous research have a role similar to this author.

Again, as with the work of Leng Chhay and Pearson, the findings of O’Leary and Meas Nee concur broadly with the manifestations from the work of Hofstede and Hofstede. Specifically, O’Leary and Meas Nee describe an education system where the student plays a passive role and the ‘all knowing’ teacher transfers personal

knowledge to the students. Learning is limited to rote-memorization rather than understanding and education is for social advancement rather than learning for the sake of knowledge. Interestingly, there is also a reference to the *Chab kram* which specifically discourages independent thinking. Here we have overt messaging cloaked as tradition intending to stifle independent thinking with the ultimate purpose of perpetuating the socio-political-economic status quo.

These characterizations stand in sharp contrast to what is demanded by CT as espoused not only by Western CT commentators, but also by the Buddha and the restoration work done by Ven. Chuon Nath and Ven. Huot That and their 'modernist' movement of the twentieth century. Buddhism puts the student in the central position responsible for actively pursuing their own successful education.

While the findings of a broad-based internationally conducted study have been extended into the realm of education, though not specifically in Cambodia, are at least broadly consistent with work done by others in Cambodia about learning and education, no known work has been done to assess the same amongst the target of this study, Cambodian HE students. To that end, a primary research has been conducted to see if in fact the attitudes and behaviours reported from the previous work can be said to exist within the Cambodian HE system.

3.0 RESEARCH DESIGN

3.1 Sampling

As this is a purposive quantitative study, the survey sample selected has been exposed to explicit instruction on CT. If one hopes to better understand the attitudes, behaviours towards as well as the experiences learning about CT from a learner perspective, one need study those that have been exposed to CT skills. To go to the HE student body in general, in say a random fashion, one would be trying to learn from a great many that may have had no exposure to the phenomenon which would be tantamount to researching the experiences associated with learning to swim, from people who have *never tried* to swim. In wanting to study a phenomenon, the sample is directed to where the phenomenon is said to exist. The sample is relevant to the phenomenon (Schwandt, 2001, p. 232).

To this end I surveyed my three classes of 4th year students in the English Department at the Institute of Foreign Languages, Royal University of Phnom Penh. These students have been exposed to one semester of explicitly applying CT within the context of a current world affairs course and another semester applying CT skills within the context of studying Introduction to Theoretical Ethics which is underpinned with CT. Combined the three classes offered a maximum sample size of 98, (skewed moderately male, n=54 versus female, n=44).

This is a rather convenient sample, however it reflects the relatively unique position that I as a practitioner have had, which adhering to the 'classic criteria' of research will hopefully ultimately create a unique and valuable body of knowledge to be shared with others.

3.2 Research Instrument

An anonymous, self-administered, dominantly close-ended questionnaire was developed, piloted and fielded. The 63 questions probed five broad themes. A final open-ended question gave respondents the opportunity to make any additional comments about the research instrument or their experience in learning and applying CT skills.

3.3 Data Analysis

3.3.1 Nature of the data

As indicated in Table 1, a modified 4-pt Likert-scale was used for questions 3-36 and 52 – 63. Although often assumed to provide interval data, the “Likert-type scale does not claim to be more than an ordinal scale” (Burns, 2000, p. 560). “Ordinal measurement implies [simply] the ability to put data into rank order” (Burns, 2000, p. 120) and as such the remaining ranked-in-order-of-importance questions 37 – 51, also produce ordinal data.

Table 1 General questions and original 4-box and 5-box rank ordinal data

Questions: 3-8 How <i>important</i> to you are the following reasons for seeking a university degree? Tick (✓) only one box for each statement.	Extremely Important	Somewhat Important	Somewhat Not Important	Extremely Not Important
Questions: 9-36 How <i>often</i> do the following statements describe you? Tick (✓) only one box for each statement.	Always	Usually	Rarely	Never
Questions: 52-63 Indicate how much <i>you personally</i> agree or disagree with each of the following statements. Tick (✓) only one box for each statement.	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly
Questions: 37-51 Write a number (1-5) in each box to indicate the rank in order of <i>importance</i> of each person or group for the following two questions and one statement. (1 is most responsible, 5 is least responsible)				Rank

3.3.2 Analysis procedure

Without access to other options to determine areas of statistically significant difference, the original 4-box data and 5-box ranks needed to be reduced to 2-box (Table 2), essentially reducing it to nominal data, but opening the door to chi-squared (χ^2) testing. “Chi-squared tests hypotheses about the independence (or alternatively the association) of frequency counts in various categories” (Burns, 2000, p. 212). Testing was done at the 90%, 95% and 99% confidence levels using a two-tailed test. Further directional detail is added through frequency analysis focusing on key research questions, and these areas of statistical significance.

Table 2 General questions and reduced 2-box score nominal data

Questions: 3-8 How <i>important</i> to you are the following reasons for seeking a university degree? Tick (✓) only one box for each statement.	Extremely /Somewhat Important	Extremely /Somewhat Not Important
Questions: 9-36 How <i>often</i> do the following statements describe you? Tick (✓) only one box for each statement.	Always /Usually	Never /Rarely
Questions: 52-63 Indicate how much <i>you personally</i> agree or disagree with each of the following statements. Tick (✓) only one box for each statement.	Agree strongly /somewhat	Disagree strongly /somewhat
Questions: 37-51 Write a number (1-5) in each box to indicate the rank in order of <i>importance</i> of each person or group for the following two questions and one statement. (1 is most responsible, 5 is least responsible)	Ranked 1 or 2	Ranked 3, 4 or 5

4.0 FINDINGS AND INTERPRETATION

4.1 Introduction

As noted earlier, due to space limitations, the findings for theme a) thinking and some of those related to theme d) sharing of ideas and aversion to questions are the only fully explored and interpreted herein. However, an overall assessment of the proportion of the study population that report to have the attitudes, behaviors and characteristics of the ‘critical spirit’ is also included. These are most relevant to the *Skills development for new dynamism in Asian Developing countries under Globalization* project. Following this, highlights from the additional findings are listed however not fully described and interpreted here. Data tables have also been stripped from this paper. The complete data, analysis and interpretation are available by contacting the author.

4.2 Findings and interpretations:

4.2.1 Thinking

Clearly, knowing if there is a resistance or fear of ‘thinking too much’ would be quite important when trying to develop a deeper understanding of HE students’ attitudes and behaviours regarding CT. As foundational as this issue is, it frankly would not have been considered for probing had it not been for the seemingly countless references made by Cambodians both within and outside of the HE system. It may also link to the literature previously reviewed by O’Leary and Meas Nee suggesting that the *Chbap Kram* specifically discourages independent thinking.

While 44% agree at least *somewhat* that they ‘don’t like to think too much’, 80% of respondents do not reject the statement and two-thirds of respondents do not reject the statement “Thinking too much will make me crazy”. Resistance to thinking as derived from Q52 is essentially equal for males and females, however the belief that thinking will make one crazy is significantly (95% confidence level) stronger amongst females with 42% agreeing at least somewhat versus 21% of males.

From this data, it can be said that for at least 44% of this target population there is a very real resistance to thinking and again that much of this stems, especially for women, of a fear of making themselves crazy.

A few respondents in the open-ended call for additional comments attempted to explain at least what they meant about their willingness to think and its potential 'harmful' effects. One respondent (R55), a male student also working in the formal private sector *somewhat* agreed that he did not like to think too much because he *somewhat* agreed that it could make him crazy clearly distinguishes 'thinking' from 'worrying' clarified further, "Thinking too much is not really bad. But worrying too [much] is not good at all." Another respondent (R65) is a female student that works informally in the family business disagrees *somewhat* that she does not like thinking too much, in spite of the fact that she believes somewhat that it could make her crazy gives an example of its 'harmful' effects:

Critical thinking is very important for humans. However, sometimes if we think too much [it] makes us feel uncomfortable or breakdown.

Ex: If our friend has a mistake on us and we don't care or think too much about it our relationship will [be] better but if we care we will break.

For R65 the truth comes from thinking, but when the truth becomes too painful, in this case the realization that the 'friend' is actually not a friend, it is the act of thinking that becomes 'harmful' and the 'selfish' friend is absolved of all responsibility. This 'misplacement' of responsibility is a phenomenon observed countless times in daily Cambodian life by this researcher and is an interesting area, however it is beyond the scope of this paper. For the current purpose, it will be simply stated that this 'misplacement' of responsibility runs counter to what CT skills demand. For a more detailed examination of how this 'misplacement' manifests itself in the Cambodian context, readers are directed to Penny Edwards' chapter, *The moral geology of the present: Structuring morality, menace and merit*, in Kent and Chandler (2008) as well as Seanglim Bit's (1991) *The warrior heritage: A psychological perspective of Cambodian trauma*.

While it is feasible to carry these questions further into the the realm of psychology, even for the purposes of this paper, further probing would need to explore what is understood by the word 'thinking'? Although Mr. R55 clearly distinguishes between the two, and Ms. R65 focuses only on the 'thinking' is possible that there is confusion amongst other respondents regarding 'thinking' versus 'worrying'? What is thinking *too* much? What is 'crazy'? Though the language was not used here, thinking is also said to create a 'headache' or *chheu kbal* which is then explained by others to be less of a pounding headache but rather discomfort and 'bad wind' which is also caused by particularly stressful situations (Marcucci, in Ebihara, Mortland & Ledgerwood, 1994, pp. 132, 137). Is this what is meant by 'crazy'?

Notwithstanding that another wave of probing would be very informative to answer these questions, some possible theories are suggested. It is suggested that some students have been influenced, perhaps by their Khmer Rouge Regime surviving parents and grandparents to believe that "Thinking too much will make you crazy". Commentators of the Khmer Rouge regime and survivor stories depict extreme survival strategies. It is possible that survivors of the regime, the parents of today's students, came to believe that thinking during the almost five years of the regime would make them crazy. Children growing up in the West, including this researcher, 'know' "if you don't work, you don't eat" because it was said by parents around the dinner table so many times. Although it requires more research to prove, it is possible that today's HE students have grown up hearing their parents unwittingly passing on

survival strategies from the Khmer Rouge regime to their children who thankfully live in a different society. In which case the advice which was once crucial to survival is at least no longer relevant or outright harmful to the new generation as they endeavor to develop their country and reach out to compete in today's globalized world.

Another possible theory explaining the fear of 'thinking too much' has been occasionally mentioned within the HE system and was floated as fact by a fourth semester MDS professor. In this case the MDS students seemed to knowingly agree: "If you study philosophy, you will be crazy". On one level, this could be seen simply as a "fun" play on words; the Latin word *philos* is re-arranged to "pholis" to approximate the French word *folie* which means *crazy* however some can explain why this is "true". An older IFL student traced this to a Lecturer of Philosophy at Lycee Descartes, but gives it credence by explaining that since much of philosophy challenges the student's worldview, it will make them crazy.

As a disposition to 'thinking' is so central to the pursuit of CT much more work needs to be done to better understand underlying factors and ultimately debunk this development defeating myth.

4.2.2 *Sharing ideas and an aversion to questions*

Findings here are limited to probing a resistance to asking questions or in speaking out that varies according to the learners' relationship with the other party, specifically here, between Teachers and Parents. This is a sub-set of the original question seven raised earlier. Further the earlier question eight, probing for a resistance to asking questions of to clarify government policy or in speaking out against it. The former is germane as it produces interesting findings that may provide evidence of a natural outcome of social evolution while the latter is integral, since it considers the perceived barriers related to the broader socio-political-historical context which determine the status quo.

Females are significantly less likely to speak out when they disagree with the teacher ($p < .1$), however they are significantly ($p < .01$) more likely than males to speak out when they disagree with their parents. More specifically, 84% of females report that they either *usually* or *always* speak out when they disagree with their parents, while only 47% of males claim to. Without more detailed information it is impossible to be certain however perhaps these mature women have already had experiences wherein a parent or both may have planned a more typically traditional life for them; that is to say one in which marriage is arranged at a younger age and education of females is valued less. These women may already have had to negotiate for more education, later marriage and perhaps even the ability to determine their own future partners. On the other hand, the typical traditional expectations of males, even in an increasingly urban and modern economy have not changed as much. If so a male's expectations are more in synch with that of the parents, so there is less room for disagreement and speaking out against parents for males than for females whose gender roles are changing.

For approximately 40% of respondents, government policy is *never* an area to question, even if only to clarify, and *never* an area to be spoken out against. Combined, 80% of respondents would *rarely* or *never* ask questions to clarify government policy, and 88% would *rarely* or *never* speak out when they disagreed with government policy.

The reality for the learner in current Cambodian society is that they are being taught to objectively examine their socio-economic status quo, which comes with CT skills, such that development can happen for the many, in an environment where they, correctly or incorrectly, perceive it is not appropriate or welcomed to do so.

4.2.3 In search of the ‘critical spirit’

This paper’s final question to be thoroughly explored is how many of the surveyed sample can be said to have the ‘critical spirit’ or are disposed to at least self-reporting that they have the characteristics, attitudes and behaviours of a critical thinker?

To address this question, one must go back to the proposed definition of CT put forth by this researcher as synthesized from the literature. CT can be defined as:

An objective, rational, iterative process with the thinker being an active participant conceptualizing, applying, analyzing, synthesizing, and evaluating existing knowledge in light of new information and is based on among other things open-minded observation, experience and constant questioning of the self and others ultimately resulting in a logical outcome that affects behaviour for the good of not only the self, but the many.

This definition is then operationalized through identifying 14 discriminating questions each with a strict either top or bottom-box, depending on the nature of the question, defining response (Table 3). That is to say: a learner that puts themselves in the center of the learning (Q42) and living (Q37) processes, not only in words, but also does so by actively pursuing knowledge (Q48-49), even in complex subject areas (Q59), keeping themselves abreast of current affairs (Q11-12), remaining open to new ideas (Q55), willing to question others to clarify (Q21) and is willing to behave accordingly even when it results in change or swimming upstream (Q62, 60, 13).

Table 3 Frequency analysis: Discriminating questions and defining responses

Discriminating Question	Defining Response	Frequency Count
52 I don’t like to think too much.	(4) Strongly disagree	16
63 Thinking too much will make me crazy.	(4) Strongly disagree	27
11 I stay up-to-date with Cambodian news.	(1) Always	9
12 I stay up-to-date with International news.	(1) Always	9
55 I prefer to use my own ideas in class (rather than new information from the course).	(4) Strongly disagree	16
59 I prefer to learn about things where there is only one right answer.	(4) Strongly disagree	11
Most of my learning comes from _____ .		
48 Reading the course textbook	Ranked #1	20
49 Reading additional materials / research	Ranked #1	14
Who is most responsible for correcting today’s social problems?		
37 Citizens in general, including me (n=50)	Ranked #1	44
Who is most responsible for the quality of your education?		
42 Student (me) (n=50)	Ranked #1	51
13 I am willing to go along with the group, even when I think they are wrong.	(4) Never	13
60 Traditions are a useful guide for solving daily problems.	(4) Strongly disagree	8
62 Change makes me uncomfortable.	(4) Strongly disagree	10
When I don’t understand _____ , I will ask questions to clarify.		
21 my teacher	(1) Always	15
Total (responses from 77 unique respondents)		263

It could easily be argued that responses to Q61 “My future success is completely within my control” should have been included, but it was not since 61% *strongly*

agreed, with the remaining 39% *somewhat* agreeing. With unanimous at least *somewhat* agreement, this question was not an effective discriminator. While the same argument could be made for excluding responses to Q37 & Q42 that also enjoyed mainstream support with 58% and 56% agreeing *strongly*, they were left in the analysis in an attempt to provide as inclusive as possible core group. On the other hand, the literature does not contemplate a resistance or fear of thinking too much; it assumes a jumping off point of honing the skills of willing thinkers. As this paper does not make this assumption, a declared willingness to think (Q52) and a lack of fear of thinking too much (Q63) are included as discriminating factors.

In order to discover if there is a sub-group of respondents that self-reported to have the characteristics, attitudes and behaviours of critical thinkers, several cross-tabulations of responses by respondent was done. A frequency analysis of each of these 14 discriminating questions with defining responses is found in Table 3.

From this data, it can be said that 77 unique respondents, of a possible 80, answered at least one question in accordance to the respective either top or bottom-box defining response, creating 263 defining responses of a possible 1,120 (23.5%). Responses indicate that almost all respondents provided defining responses, but only on a few of many opportunities. The 77 respondents answered in accordance with an average of 3.4 of a possible 14 questions.

From this rather universal approach, stricter criteria were applied. Due to the fact that a lack of resistance to thinking and a lack of fear of thinking are so foundational to being a critical thinker, only those *strongly* disagreeing to *both* Q52 and Q63 were considered. This left a possible core group of 10 respondents, or 12.5% of the surveyed population who on average, provided the defining response to an average of 4.8 questions of the remaining 12 questions. This may represent the core of those possessing the critical spirit; however, in attempting to be as inclusive as possible, while still discriminating a possible sub-group of critical thinkers from the mainstream, a considerable relaxing the defining criteria is employed.

In considering the results of those who answered either *strongly* disagree or *somewhat* disagree to *both* Q52 and Q63, a sub-group of 33, unique respondents emerges offering an average of 7.7 defining responses of the possible 12 remaining questions. Defined as such, by relaxing defining response criteria to either top 2-box or bottom 2-box responses, a group representing 41.3% of the surveyed sample provide defining responses to 64% of the remaining answers.

Given that only 12.5% of respondents fit the strictest of defining responses and that the 41% emerges following their *considerable relaxation*, it is concluded that perhaps one-in-three to two-in-five (33-40%) of the sample self-report having the 'critical spirit'.

4.2.4 *The other side of the coin*

On the 'other side of the critical spirit coin' findings indicate that there those that report attitudes, behaviors and characteristics which can only be described as the *antithesis* of the 'critical spirit'. Although space constraints prevent a full discussion and interpretation here, they are important to complete at least some understanding of the overall research.

- Almost 1 in 4 rank themselves as either least or second least responsible for the quality of their education (Q42);
- 1 in 4 *strongly* or *somewhat* agree that pursuing a university degree is important to fill spare time (Q7);
- More than 1 in 3 will *always* or *usually* go along with the group even when they believe the group to be wrong (Q13);

- More than 1 in 3 will *rarely* or *never* ask the Lecturer a clarifying question even when they don't understand (Q21);
- More than 1 in 3 prefer to use their own ideas rather than new information derived from a course, effectively shutting out learning (Q55);
- More than 2 in 5 *strongly* or at least *somewhat* agree that they do don't like to think too much (Q52); and finally,
- 1 in 3 strongly or at least *somewhat* agree that thinking too much will make them 'crazy' (Q63).

As with the search for the 'critical spirit', only rough estimates of the proportion of the study universe reporting characteristics, attitudes and behaviours which represent the *antithesis* of the 'critical spirit' can be made. On judgment it does appear that there is a sub-group that are driving at least some of the overall findings on these four points, however subscription to at least any one of them is broad-based. Depending on the actual questions included in this analysis, it can be concluded that roughly one-in-three up to two-in-five (33%-40%) report the characteristics, attitudes and behaviours that are the *antithesis* of the 'critical spirit'.

4.3 Conclusion

This brief paper has been drawn from the work done towards my thesis in partial fulfillment of the requirements for a Master of Arts in Development Studies. It uses education as an entry point for the promotion of development. At its core, current development theory considers the improvement in physical and psychological living standards for the broadest segments of the population. As such social transformation is both instrumental and constitutive of development. Rather than become victims of social transformation, this piece focuses on HE and the potential of CT skills to equip young Cambodians with the skills required to manage transformation endogenously. It attempts to do so not by threatening its traditional culture but rather by leveraging and celebrating it. The link established between the Buddha's teachings and what Western CT theorists today call critical thinking, positions CT as *restoration*. Restoration is seen as the first step towards development, while the Venerable Chuon Nath and Venerable Hout Tath and others of the 'modernist' Buddhist movement sought to restore Cambodian understandings of the 'authentic rational' teachings of the Buddha as means for social transformation.

Just as improvements in education are not the panacea of development, it is also true that improved CT skills are not the panacea of HE; however as explained by the literature to the extent that education is about learning, CT skills which empower learners with the ability to 'learn to learn', are as instrumental and constitutive of education, just as education is both instrumental and constitutive of development. Change is intrinsic to both development and education. CT skills acquired by the relatively few more privileged will enable those young Cambodians who will create the emerging Cambodian middle-class and fill institutional ranks, to lead the inevitable social transformation endogenously, such that a more equitable society may evolve and improvements to the physical and psychological living standards can be enjoyed by the broadest segments of the Cambodian population.

If all of this is to occur however, educators at the HE level must be aware of the very real obstacles faced by Cambodian learners as they endeavor to acquire CT skills. Aware of myths to be debunked and misunderstandings to be clarified, educators must be also be conscious of the fact that learners, rightly or wrongly, perceive it to be inappropriate to demonstrate their CT skills within the broader socio-political environment.

Primary research from this study confirms that at least for the 80 respondents who were in the fourth year of English study and who studied CT explicitly with the researcher for two semesters, the teacher remains at the center of the learning process rendering the learner passive as predicted by the literature. Alarming at least to this researcher is that roughly a third of respondents report characteristics, attitudes and behaviours that are regarded as the antithesis of CT. Specifically they are the least or second least responsible for their education; they will not ask a clarifying question of the Lecturer even when they don't understand; they will go along with the group when they think the group is wrong; and will effectively shut out learning from the course, preferring to rely on their previously constructed ideas.

At least in this population, findings are that the population can be roughly described as 33-40% that do report possessing a *considerably relaxed* definition of the 'critical spirit'; with essentially the same proportion reporting characteristics, attitudes and behaviours that are the *antithesis* of the 'critical spirit' with the remaining approximately 20-34% falling somewhere in between.

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