APPLICATION OF CONTEMPORARY TEACHING AND LEARNING APPROACHES AND LEARNING OF CRITICAL THINKING: EXPERIENCES OF MBA STUDENTS

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I understand that my dissertation will become a part of the permanent collection of Kathmandu University Library. My signature below authorizes release of my dissertation to any reader upon request for any scholarly purpose.

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DECLARATION

I hereby declare that this thesis has not been submitted for candidature for any other degree.

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Era Shrestha, Degree Candidate December 26, 2012

DEDICATION

Dedicated to my newborn, Prathira Aditi Shrestha, and the next generation of new Nepal that I hope will grow up to believe in the power of reasoning and follow the philosophy

Believe nothing
Because you have been told to
Or because you yourself have imagined it
Do not believe what your teacher tells you
Merely out of respect for the teacher
But whatever after due examination and analysis
You find to be conducive to the good, the benefit and the welfare of all beings
That doctrine believe and clings to
And take it as your guide (Buddha, Kalam Sutra, Anguttar Nikaya, 1-31-66)

ABSTRACT OF THE DISSERTATION OF

Era Shrestha for the Degree of *Master of Philosophy in Education (Development Studies)* presented to School of Education, Kathmandu University, on December 26, 2012.

Title: *Application of contemporary teaching and learning approaches and learning of critical thinking: Experiences of MBA students.*

Abstract Approved: ……

Prof. Tanka Nath Sharma, PhD

Dissertation Supervisor

Critical thinking is a very crucial life skill. Educational institutions have very important responsibility for empowering students with critical thinking competencies. However, students graduating from Nepali educational institutions are considered to lack critical thinking competencies, because of the traditional, teacher centered approaches.

Masters in Business Administration (MBA) are promoting student centered, contemporary teaching and learning approaches in Nepal. Research and studies have established that such approaches promote critical thinking. Therefore, this research was undertaken with the interest to understand how our educational system is transforming because of the application of contemporary teaching and learning approaches. This study explored the students' perception of their MBA course, where they have the opportunity to experience contemporary teaching and learning approaches. Their experiences of the various learning processes, learning behavior, orientations, and strategies were explored

to understand the implication of contemporary approaches in the learning of critical thinking.

The findings of the study indicated an emerging transition from a ‘teacher centered approach’ towards a ‘students centered approach’. The learning processes are transforming from traditional, theory based, book centered, and lecture focused approaches to more interactive, engaging, and participative approaches. The transformation has promoted an enabling environment that facilitates active exploration, questioning, articulation (of ideas/opinions), interaction, and justification. This has created potential opportunities for students to engage in critical thinking.

However, the available opportunities have not been realized by the students to actually practice critical thinking because of the lack of metacognitive and metastrategic competencies and evaluative epistemology. Students are not able to engage in the process of ‘critical dialogue’ that entails reflection, questioning (challenging), and argumentations without which critical thinking is not possible. Students are not conscious of their own thinking process, do not question their own belief and assumptions and cannot control and guide their thinking to practice objective evaluation and judgment. Students approach questioning with caution, view confrontation negatively, and often base their argumentation on intuition and imagination rather than evidences. They either withdraw (compromise) or rely on aggression, force, or domination to win an argument rather than objective reasoning.

Two factors have contributed toward this constrains and challenges in realizing the existing potential a) limitation in application of the contemporary tools and approaches, which manifest constrains in teachers’ capacity to manage the dynamics of

the learning processes b) students' motives, goals and interests that influences them to accept others' wills (of teachers/authority and co-learners) and restricts them to exercise their freedom of inquiry, evaluation, and self judgment.

The study concludes that the application of the contemporary approaches has only created an enabling environment but it has not actually enabled critical thinking. Therefore, it is evident that though theoretically the contemporary teaching and learning approaches (active learning approaches) have the potential to promote critical thinking by supporting enabling processes, application of it alone will not automatically lead to end results of enabling critical thinking if the learning processes are not managed to overcome the constrains.

The findings of the study have specific relevance and implication on education institutions that aims to apply contemporary approaches to promote critical thinking. From the study it is evident that critical thinking requires conscious effort and focused strategy. Hence, it cannot be achieved unless it is an explicitly stated educational goal and investment made accordingly. This commitment need to be expressed in form of an institutional policy and accordingly changes affected on various fronts such as instructional strategies, teachers' capacity, students and teachers' selection, incentive mechanism, and assessment methodologies.

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Era Shrestha, Degree Candidate December 26, 2012

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Era Shrestha, Degree Candidate

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CHAPTER I

INTRODUCTION

This chapter presents my interest in the subject of inquiry and the rationale for selecting it and its relevance to the present context in Nepal and our education system. It also presents the purpose and the research question. This chapter further describes the limitations and scope of the study and how the thesis chapters are organized.

Background of Study

The capacity to 'think' is the essence that differentiates humans from other species. It is the key factor driving the growth and development of humankind. It can be well argued that other species, plants and animals, might also have the capacity to think, which we might not be aware of. But what really matters is not only the ability to think but also the ability to control our thoughts and take conscious and informed actions as a result of our thought process. This ability to consciously control and guide our thought process is at the crux of how critical thinking is defined (Kuhn 1999).

Richard Paul, a renowned name among the promoter of critical thinking defines it in a simplistic term as "thinking about thinking, while thinking to think better", (Paul, 2007). But do we, all human beings, naturally have this capacity to be conscious of our thoughts and control it for its betterment? Is this a natural ability by virtue of being a human being or is it something that needs to be carefully groomed? If it is something that needs to be groomed or cultivated then what is the role of education in it?

Scriven and Paul (2004) believes that thinking is a natural process but it can be biased, distorted, partial, uninformed, and potentially prejudiced, so excellence in

thought has to be cultivated. So a person becomes a critical thinker when the person becomes aware of and takes control of his thinking processes in order to increase its efficiency to make it more rational, clear, accurate, and consistent. In terms of role of education in critical thinking, earlier philosophers like Bertrand Russell and John Dewey have emphasized on the ability to think and reason as the central purpose and very important outcome of education (Hare, 2001; Dewey, 1910; Sulaiman, Rahman & Dzulkifli, 2008). Dewey (1910) in his book 'How We Think' states that habits of discriminating tested beliefs from mere assertions, guesses, and opinions (which is the central theme of critical thinking) is not a gift of nature and hence needs to cultivated, and it is the responsibility of education to do so.

Critical thinking has been an area of concern from the time of Socrates (Fisher, 2001) and even today, it still holds equal and even greater significance and relevance. Complexities, uncertainties, and rapid changes is the norm of today's world, where problems are often complex and requires multidimensional solutions. To survive and to grow in such a complex, challenging, and dynamic world, one has to be able to think for oneself, and not just think but think critically.

The paradox of today's world is that one needs to have conviction on his/her thoughts based on his/her ability to think clearly and rationally, but at the same time be flexible and open to new, contradictory, and competing ideas; suspend one's pre-conception and deal with multiple voices. One has to have the courage to question one's own thoughts, beliefs, and judgments, make difficult choices and have the moral courage to accept the responsibility for the consequences of choices made. Hence, critical thinking is increasingly recognized not only as an important life skill and personal competency to survive in today's dynamic world, but also civic competence that citizens need to participate in society (Dam & Volman, 2004). It is

also one of the key professional skills sought by many employers (Reed, 1998) who are looking for managers who are good decision makers and problem solvers (Shrestha, 2010).

In the context of Nepal, graduates of the Nepali education system are often considered to lack critical thinking skills such as analytical skills and reasoning abilities. The traditional education system which is teacher centered and lecture based that promotes rote learning (memorization) rather than active participation of students is often blamed for this shortfall (Dahal, 2002). The Himalayan Times reported a research report from the first National Assembly of grade 10, commissioned by the Department of Education, which found that students have only been trained for examination and have not been taught to use their reasoning power and hence recommended education to promote creativity, innovation, and critical thinking ("SLC Students Learning by Heart", 2011). International literatures have also criticized conventional approaches such as lecture format of learning for not promoting active learning and hence critical thinking (Gokhale, 1995; Cooper, 1995; Koo 1999; Mandernach, 2006; Shrestha 2010).

The political transformation in the early '90s and privatization of higher education in Nepal have added a new milestone in the education sector of Nepal where educational institutions have attempted to experiment with new courses with contemporary teaching and learning approaches such as the MBA course. International studies have established that such approaches which promote students as active learners rather than passive receivers of knowledge can develop critical thinking (Cooper, 1995; Koo, 1999; Mandernach, 2006; Duron, Limbach & Waugh, 2006). This gives us hope for a new era, where students have opportunities to grow as critical thinkers and make meaningful contribution to the society. So, if these

contemporary A-like teaching techniques and approaches are being applied in Nepal, how is it changing our education system? This question triggered my interest on this research agenda.

Statement of the Problem

Masters of Business Studies (MBA) course introduced in Nepal claims to bring a paradigm shift in the traditional education system of Nepal by introducing contemporary teaching and learning approaches. The review of the websites and prospectus of various business colleges offering MBA course in Nepal indicates that they aim to prepare the graduates to face the complexities of rapidly changing world by giving them skills and competencies related to critical thinking such as diagnosis and analysis, judgment and decision making abilities. They claim to achieve this by adopting contemporary active learning approaches (A-like Techniques) such as case study, action learning and collaborative learning approaches. But at the same time we still hear counter claims such as the finding of the study done by Shrestha (2010) which explored the perception of the MBA graduates and their corporate sector clients. The study revealed that the graduates had sufficient theoretical knowledge of management and appropriate personal outlooks but were weak in analytical skills and hence failed to meet the expectations of the corporate sector. This also manifests in the employers preferences for hiring graduates educated abroad rather than in Nepal (E. Shrestha, Personal communication, over different point of time).

International studies also make similar claims that critical thinking skill among students are low even in education institutions claiming ‘critical thinking’ as their main goal as Sulaiman, Rahman & Dzulkifli (2008) states “critical thinking is often seen as a universal goal of higher education but is seldom confirmed as an outcome”

(p.123). John and Milter (n.d.) counter argue that the weakness is not with the concepts or approaches but in the implementation of those concepts and approaches.

Given these claims and counter claims, it is important to explore and understand what is happening in the MBA courses in Nepal and how the students are experiencing it. How are the various teaching and learning concepts and approaches applied and how the transformation is taking place? If the transformation is actually taking place then how is the new generation of graduates different? Where are the opportunities and potential to learn critical thinking or in spite of the available opportunities the graduates have failed to utilize it? If so where are the limitations? Is it to do with the tools (approaches) itself, which, though internationally recognized to enable student to gain critical thinking, for some reason failed to do so in the Nepalese context? Or is it related to the actors engaging with the tools (teachers; students or the educational institutions)? Or at the extreme, is it a case of false claims made by the institutions, where same traditional approaches to teaching and learning are continued, and hence no transformation in our education system and subsequently in our graduates and society is taking place? These were some of the critical issues that needed to be explored as it would give us an opportunity to build an understanding of our present education system and its potential in promoting critical thinking. To build this understanding, it was important to understand the perspective of the students themselves-what they have experienced and how they felt about the whole learning process.

In the context of Nepal, where introduction of contemporary teaching and learning approaches can be said to be relatively new (only about a decade if we consider the application of the tools limited to MBA course which have been introduced in Nepal in the early ‘90s), very little knowledge had been established as

to how the contemporary teaching and learning approaches are being applied and how they are transforming our learning process and hence the overall educational system.

Problems have been highlighted regarding the lack of competencies in the Nepalese graduates, but it has not been explored where the challenges are in terms of the process of educating them. Challenges have been established in terms of what does not work (i.e. the teacher centered, lecture based approach), but little knowledge exists on what works and what needs to be strengthened to make the system better.

Purpose of the Study

The general purpose of the study was to explore how contemporary teaching and learning approaches are being applied in MBA and how it is enabling students to gain critical thinking skills. The specific purpose of this study was to examine the perceptions of students themselves, who have experienced the contemporary teaching and learning approaches, towards the process of application of the approaches and learning of critical thinking competencies.

Inquiry Agenda and Research Questions

The main research question of this study was: how do the students perceive their present learning experience with contemporary teaching and learning approaches? This main research question was expanded to the following specific research questions:

1. How do students find their experience of MBA where they are exposed to contemporary teaching and learning approaches as compared to their previous learning experiences? How has the contemporary approaches transformed their learning processes?
2. How has the transformation in the learning experience (learning processes) created opportunities and potential for learning of critical thinking?

3. What are the challenges and constrains in the process of learning critical thinking? What factors has contributed towards this constrain (if any)?

Rationale of the Study

Critical thinking is not an educational option but an educational ideal. Students have the moral right to be taught how to think critically (Norris, n.d.), and it should be the core focus of our education system.

The traditional teaching and learning approaches in Nepal have meant a serious setback in enabling students to learn critical thinking. However, the introduction of contemporary teaching and learning approaches indicates an emerging shift in our education system and hence a step towards transition to a 'New Nepal'. Especially in the last decade, huge investment has been made in the education sector; both by education institutions, especially private colleges and the parents who want their children to have the best opportunity in order to empower them to face the challenges of life. Hence, at this juncture I felt it was important to see how things are unfolding in reality as against the claim made by the various educational institutions.

The study would add to the knowledge of application of contemporary teaching and learning approaches for promoting critical thinking. If the application of the contemporary approaches is actually transforming our educational processes, then the knowledge and understanding of the process would offer a great learning opportunity for other institutions who wants to make similar transitions in their educational approaches. The study would offer insight for building further on their strengths and opportunities.

On the contrary, if the finding suggests that the intended results have not been achieved yet and the graduates are still not better off than before in spite of genuine intent and investment made to improve the education processes, then the study would

add to the knowledge of the existing challenges and constrains in the present system and processes of education. It would provide valuable insights for addressing such constrains. The findings of this study would contribute in developing strategies and interventions to address the bottleneck in the present system so that a positive learning experience for the students to learn critical thinking can be created. By doing so it would contribute to strengthening the present education system of Nepal.

Delimitation of the Study

Critical thinking has many dimensions and many other factors other than teaching and learning approaches have implication on learning of critical thinking such as socio-cultural factors, families, and individuals themselves. However, this study explores only factors within the limits of teaching and learning approaches applied. Hence, it focuses only on the 'process' aspect of critical thinking i.e. understanding the dynamics of the application process and the various learning processes promoted and not so much on the 'outcome' of the process or the efficacy of the approaches, tools and methodologies (approaches) used.

The study does not aim to measure or establish the learning outcome as claimed by the students but only interpret their claims (students' personal beliefs and perceptions of teaching and learning approaches and its contribution in their learning) in order to understand the opportunity and constrains in the learning processes.

Further, it only explores the application of tools and approaches promoted by the educational institution/university. It does not focus on any other processes or initiative promoted beyond the institutional framework that might have implication on the students' learning, such as personal initiatives of the students themselves, influence of inspirational teachers who have gone out of their usual way (beyond institutionally prescribed or promoted approaches) to personally and positively

influence the students' learning or any other factors outside the educational institutions.

There are many other actors that have implications on the teaching and learning approaches of critical thinking other than students such as teachers (faculty) and the institutions (colleges/university). But, this study explores and limits the analysis to the students' perspectives of what they feel, believe, and have experienced, as understood and interpreted by them. It does not explore the perspectives of actors other than students. The implications of these actors are however explored through the lens of the students.

This study is not as such an evaluation of MBA program (course) in Nepal. MBA course is referred to only as a relevant field where contemporary approaches (A- like techniques) have been applied. The study focuses only in understanding the application of the contemporary teaching and learning approaches in the MBA program.

Operational Definitions

Various terminologies (terms) depicting different construct has been used in this study. These are the definitions of the terms used in this study.

Critical thinking. Critical thinking entails many dimensions related to both technical skills as well as behavioral aspects (disposition). For this study, in general terms, critical thinking is understood as the awareness of one's own thoughts and the ability to consciously guide one's own thinking towards a clear, accurate, and consistent thought process. This enables one to create, evaluate (judge) any claims, ideas, opinions, or statements to make a fair and rational choices (decision on what to believe), based on evidences rather than personal interest, imagination, intuition, whim, emotion or force.

Critical thinking competencies: For this study the word ‘competency’ is used to refer to both skills and disposition (attitude or behavior) together. Hence, critical thinking competencies mean both skills for critical thinking and disposition towards critical thinking.

Teaching and learning approaches. Teaching and learning approaches refers to the pedagogy used for teaching the students or helping the students learn. It, holistically and collectively, refers to the various instructional strategies used including tools, techniques, and methods for teaching and learning.

Contemporary teaching and learning approaches: Contemporary teaching and learning approaches refer to the approaches which are different than traditional or conventional approaches used such as the lecture based and teacher-centered approach. For this study, contemporary approach specially refers to the Active learning approaches.

Active learning approaches: A-Like techniques. Active learning approaches refer to approaches which are students centered i.e. promotes students as active learners rather than passive recipients of knowledge. The instructional model puts the responsibility of learning on the students and consequently encourages self exploration and self learning. Active learning is an umbrella term that entails several models of instructions such as action learning, collaborative learning and problem/based learning and includes tools/methods such as case studies, group discussion, group assignments, research projects, and internship assignment etc.

Transformation. Transformation in students refers to change (development) in skills and/or behavior (attitude). Terms such as transformation, change, shift or learning (learning outcome) are used interchangeably.

Organization of the Dissertation

This thesis is presented in nine chapters. Chapter I is the introductory section that describes the context of the research, while Chapter II presents the literature review. Chapter III discusses the theoretical understanding of my research topic (understanding and interpretation of the construct of critical thinking). The methodology of the study is presented in Chapter IV. The major findings and discussions of the study are presented in Chapter V to Chapter VIII. Chapter V discusses the major shift or transformation in the teaching and learning processes due to the application of contemporary teaching and learning approaches and the learning behavior, orientation, and skills promoted as a result of it. Chapter VI explores how this transformation in the learning process and the students learning outcome (skills, behavior, and orientation) relates to or translates into opportunities for students to learn critical thinking. Chapter VII discusses the existing constrains and challenges in learning of critical thinking while Chapter VIII explores the major factors contributing to these constrains and challenges. Finally, Chapter IX summarizes the major findings and discussion, draw conclusion and present the implication of the study. Final part of this report includes references cited in this study and a series of appendices.

Chapter Summary

In this chapter, I have presented the theme of the study specifically with reference to the Nepalese context. I have also discussed the statement of the problem, which prompted this study and led to the formulation of the key research questions for the study. This is followed by discussion on the relevance of the study, assumptions, delimitations, and operational definitions of the themes/terms used. The chapter ends with a discussion on how this dissertation is organized.

CHAPTER II

LITERATURE REVIEW

This chapter synthesizes the literature review undertaken as part of this study. Various published books, articles, journals as well as unpublished thesis have been reviewed. Masters and PhD level thesis (specifically of Kathmandu University and Tribhuvan University) have been referred. The outcome of this literature review exercise has been instrumental in helping me gain deeper understanding on the subject matter, shape my research direction as well as develop my theoretical understanding.

Origin of the Concept

'Critical Thinking' can be said to be an important construct, origin of which can be traced back to the ancient Greek era (Demira, Bacanlıb, Tarhanc & Dombaycıd, 2011). Though the term 'critical thinking' was not yet coined, Socrates was already advocating for rationality of thought or the ability to reflect and reason well (Fisher, 2001). Instead, the notion of self-awakening, reasoning, rationality, logic, and most importantly ethic of right judgment or virtue of righteous and justice based on the principle of thoughts and action were popularized then, which are themes central to the construct of 'critical thinking'. Demira et.al., (2011) citing Kriticos and Kriterion (2010), states that the concept of 'criticism' is known to date back to Ancient Greek, and is "derived from the terms "kriticos" (knowing the meaning and judging depending on it) and "criterion" (the standards of interpretation)" (p. 547). In 16th and 17th centuries, thinkers such as Hobbes and Locke played important role in rejecting traditional way of thinking and promoted critical intelligence as the basis of new views over learning (Demira et.al, 2011).

The term ‘critical thinking’ is said to have come to fashion only during the 1940s and 1950s (Hare, 2001). Philosophers like Comte and Spencer expanded the tradition of systematic critical thinking of Thomas Aquinas, to extend the field of application of critical thinking to social fields in the 19th century (Demira et.al, 2011). This was further strengthened and made more explicit by many academicians and thinkers in the 20th century (Marcut, 2005, as cited in Pokhrel, 2010).

Almost 2000 year later, the definition of critical thinking in this post modernist era still holds on to the root of the Greek philosophy - as the concern for judgment based on reasoned argument and evaluation is still at its core. ‘Socratic questioning’ has taken a central place as an important approach for teaching and practicing critical thinking.

Understanding of Critical Thinking: Consensus and Debates

> *Critical thinking involves not just the competent evaluation of reasons already available, but also the dispositions to so evaluate* (Siegel, n.d. p. 20).

Robert H. Ennis, Peter A. Facione, Richard W. Paul are some of the prominent names in the literature of critical thinking. They have made important contributions in shaping our understanding of the construct. Ennis, one of the earliest contributors of definition of critical thinking focuses on decision making – ‘deciding what to do’. Ennis, first started to define critical thinking as ‘correct assessing of statement’ (Ennis, 1993, p. 2), but later accepted that this definition excluded creative aspect of critical thinking, such as conceiving of alternative, formulating hypothesis and definitions and developing plans for experiments and hence later on went to define critical thinking as “reasonable reflective thinking focused on deciding what to believe or do” (Ennis, 1993, p. 180; Ennis, 1991, p. 6) which entails activities such as

judging arguments and credibility of sources; identify assumptions and conclusion; developing and defending one's position and asking appropriate clarifying questions.

Paul and Elder (2006) defines critical thinking as the art of analyzing and evaluating thinking with a view to improving it and states that:

> Critical thinking is, in short, self-directed, self-disciplined, self-monitored and self-corrective thinking. It requires rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities and a commitment to overcome our native egocentrism and sociocentrism (p. 4).

Initially critical thinking was defined only with skill perspectives such as ability to see alternatives, assess, and defend arguments etc. This was criticized on the ground that it is not necessary that those who have skills would practice it as Siegel (as cited by Glaser, 1998) notes:

> This 'pure skill' conception of critical thinking faces an obvious objection: it sanctions our regarding a person as a critical thinker even though that person never, or only infrequently, thinks critically (p.19).

Hence theorist like Ennis, Paul, and Siegel proposed definitions include both the skills (abilities) and disposition (attitude or willingness) to practice it. So, in general there is an agreement among the different theorist that critical thinking entails set of skills (abilities) and disposition (attitude).

Theorist agrees that critical thinking encompassed skills such as interpretation, analysis, evaluation, conclusion (inference) and justification (explanation) (Facoine,1990; Paul & Elder, 2010) and dispositions such as inquisitiveness, open-mindedness, fair-mindedness, objectivity, trust in reasoning, flexibility to change etc (Facione, 2000). However, there are still existing debate regarding the

interrelationship between the skills and disposition and whether one exists without the other, and whether the disposition should be accepted with a normative or laudatory sense (Lai, 2011). As Lai (2011) discusses, theorist like Ennis and Halpern emphasize on the interdependence while Facione and Paul argues that they are, in fact, separate entities as one cannot be considered a critical thinker if s/he only possesses the skills but is unable to apply those skills . Facione (2000) warns us against assuming powerful positive correlation between skill and disposition as skill does not assure one's disposition to use it. Paul in concurrence proposes the idea of 'weak-sense' and 'strong-sense' critical thinkers. 'Weak-sense' critical thinking means those who have learned the skills and can demonstrate them only when asked to do so while the ones with 'strong-sense' thinking are those who have incorporated the skills into a way of living such that they constantly re-examined and questioned their own assumptions and hence have a strong drive for clarity, accuracy, and fair-mindedness (Paul, 1994 as cited in Burbules & Berk, 1999).

Further, disagreement also exists in other areas such as importance of background knowledge, domain specificity, and transferability. According to Lai (2011), most researchers agree on the importance of background knowledge or command of content as essential for students to demonstrate critical thinking skills but have disagreement on the extent to which critical thinking skills are domain-specific.

Some argue that it is easier to learn to think critically within a given domain than it is to learn to think critically in a generic sense while other argue against it saying that critical thinking is about good judgment based on criteria and these criteria may differ across domains, but the fundamental meaning of critical thinking remains the same. This debate related to domain specificity further extends to the issue of

‘Transferability’, i.e. whether critical thinking skills and abilities learned by students in one context (domain) can be transferred to another.

There also exist some fundamental differences between theorist from philosophical tradition and those from psychological tradition. Theorist from cognitive psychological approach finds approaching critical thinking with philosophical approach problematic, as they emphasize on qualities and characteristics of an ideal person ‘the critical thinker’ or on what a person should or can do given an ideal situation and qualities of ‘good thought’ that meets specified criteria or standards of adequacy and accuracy. Hence, psychological theorists argue that focus only on what a person should do or can do given an ideal situation and not actual behavior or actions does not always reflect reality. Alternatively they emphasized on the cognitive skills, mental ‘process’ or strategies of thinking or representations a thinker uses, which manifests itself in form of visible behaviors that a critical thinker demonstrates while solving problems or making decisions (Lewis & Smith, 1993; Sternberg, 1986; Halpern, 1998 as cited in Lai, 2011).

Therefore, critical thinking is defined with behaviorist perspective focusing on how people actually think and the procedures performed by critical thinkers and not just characteristics of an ideal person or ‘quality of thought’. Some of the visible behavior, skills or strategies of critical thinking include persistence and perseverance in undertaking evaluation; effective communication or dialogue where individual reason passionately; demanding that claims be backed by evidence; deducing and inferring conclusions from available facts or evidence etc (Lewis & Smith, 1993; Sternberg, 1986; Halpern, 1998; Willingham, 2007 as cited in Lai, 2011).

Owing to the increasing debates and differences of understanding the concept of critical thinking, a panel of expert committee, lead by Peter. A. Facione, was

formed to foster a common understanding, especially for the purpose of educational assessment and instruction for critical thinking. The report titled 'Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction', popularly called the Delphi Report, presents the outcome of deliberations among the panel members. The Delphi Report (Facione, 1990) agrees that critical thinking entails set of skills as well as disposition and states that:

> We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based… The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit (p.2).

Though all the expert panel members agreed that critical thinking entails both skills and disposition, however, debate on whether or not one stands independent of the other still remains. Experts also agree on the transcend nature of critical thinking, but states that it demands domain-specific knowledge in certain context and may require specific methods and techniques to make context specific reasonable judgment.

Relevance of Critical Thinking and Role of Education

Philosophers from Greeks era to the scholars of the present day regard critical thinking as an integral part of education (Burbules & Berk, 1999). Philosophers like John Dewey and Bertrand Russell are often quoted with reference to education and critical thinking. It is also believed that that critical thinking in modern sense started with the work of John Dewey (Demira et.al, 2011). John Dewey in his book 'How we think' already talks about the role of education and grooming of critical mind back then in 1910 stating:

> powers of deep-seated and effective habits of discriminating tested beliefs from mere assertions, guesses, and opinions; to develop a lively, sincere, and open-minded preference for conclusions that are properly grounded, and to ingrain into the individual's working habits methods of inquiry and reasoning appropriate to the various problems that present themselves. No matter how much an individual knows as a matter of hearsay and information, if he has not attitudes and habits of this sort, he is not intellectually educated. He lacks the rudiments of mental discipline. And since these habits are not a gift of nature (no matter how strong the aptitude for acquiring them) ; since, moreover, the casual circumstances of the natural and social environment are not enough to compel their acquisition, the main office of education is to supply conditions that make for their cultivation (p.28).

Similarly, Bertrand Russell by emphasizing on students as independent persons whose development can be threatened by indoctrination (Hare, 2001) also has promoted the importance of education in promoting of critical thinking (though the term as such is not used).

This discourse on critical thinking and education still continues today as the educators continues to consider critical thinking as important life skills and puts the responsibility on the education system for ensuring it, as reflected in words of Facione (2011):

> Becoming educated and practicing good judgment does not absolutely grantee a life of happiness, virtue or economic success but it surely offers a better chance at those things (p. 2).

Similarly, Kuhn (2007) also emphasizes critical thinking as important life skill and hence the responsibility of education for it. It is not adequate to just make the students literate but also to empower them with critical thinking competencies. Kuhn (2007) states:

> Certainly young people must become literate and numerate. But in the end, what could be a more important purpose of education than to help students learn to exercise their minds to make the kinds of careful, thoughtful judgments that will serve them well over a lifetime (p.51).

This demand on education for promotion of critical thinking is not baseless as there are an empirical study that establishes direct linkages between critical thinking and student's performance such as the significant correlation between scores on college level critical thinking skills test and college GPA (Facione, 2011). Further, the National Education Goals Panel of the 1990 Education Summit, also make similar observations as it states that "the proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems" (NEGP, 1991, p. 62). Similarly, Partnership for 21st Century Skills also states that "critical thinking is one of the several learning and innovation skills necessary to prepare students for post-secondary education and workforce" (Lai, 2011, p. 4). In the

same line Shrestha (2010) quoting Duoc and Metzger (2007) further emphasized that the quality indicators for graduates are critical analysis, problem-solving skills, and overall quality of work.

Theoretical Underpinning of Critical Thinking

Works of many philosophers, researcher, and academicians have contributed in developing theories of critical thinking with reference to its various dimensions such as definition and attributes as well as development process and stages.

Theory Shaping the Definitions and Dimensions of Critical Thinking: Delphi Report (1990)

The Delphi Report (Facione, 1990) provides a useful framework for understanding the concept of critical thinking in a holistic manner. It establishes that critical thinking entails six core skills i.e. Interpretation (understanding the significance or clarifying meaning); Analysis (examining arguments); Evaluation (assessing claims/arguments); Inference (drawing conclusion); Explanation (justifying procedures; presenting arguments) and Self-Regulation (self-examination, self-correction).

Further the report also describes the characteristics that portrays disposition towards critical thinking such as inquisitiveness; well-informed; trust and confidnce in reasoning; openess to divergent views; honesty in facing one's own biases and altering judgments. The characterstics are also described in terms of persistence and precesion in difficulties and complexities.

Developmental Models for Conceptualizing Critical Thinking

Some of the theories have conceptualized critical thinking as a development model with progressive levels or stages, such that individuals can gradually progress

certain level for practicing critical thinking. Some of these development theories are described below.

Bloom's taxonomy

Bloom (1956) conceptualized a multi-tiered model of critical thinking, popularly called as the 'Bloom's Taxonomy', that theoretical ranks thinking into six cognitive levels, in an ascending order from simple to complex and from concrete to abstract. The Taxonomy is hierarchical, implying that, a higher level cognition cannot be attained unless the lower one is attained (Krathwohl, 2002). The taxonomy has been revised and the new one, titled as 'Revised Bloom Taxonomy' entails the six levels namely Remembering (recalling information/facts); Understanding (explaining ideas or concepts); Applying (using concept in a new situation); Analyzing (seeing the whole picture and interrelationship); Evaluating (assessing and justifying one's stance) and Creating (new ideas, concepts).

Bers (2005) states that critical thinking takes place only when students operate in the top three stages i.e. analysis, evaluating and crating phases. At each level it is possible to assess measurable behavior, and hence teachers can assess those behaviors to encourage students to 'climb to a higher (level of) though' and hence learn critical thinking.

Kuhn's development model

Kuhn's development model of critical thinking (1999) involves cognitive competencies related to knowing. Kuhn conceptualizes critical thinking as a metacognition competencies (rather than cognitive competencies) i.e. second order thinking and refers to it as meta-knowing. In contrast to first order cognitive skills that enables one to know about the world, second order thinking is not just knowing something, but also "knowing about one's own (and others') knowing" (p. 17). Kuhn

argues that meta-knowing is developmental in nature, i.e. one's experience determines the extent to which one is able to progress in cognitive development.

Kuhn categorizes meta-knowing in three broad categories – meta-cognitive knowing, meta-strategic knowing and epistemological knowing.

(1) Metacognitive: Metacognitive competencies are knowing what one knows/believes and how they know (i.e. declarative knowing – "knowing that").

(2) Metastrategic: Metastrategic competencies are knowing how one come to 'know that' (i.e. procedural knowing -"knowing how". It entails the exercise of strategies to achieve goals of "knowing that").

(3) Epistemological: Epistemological competencies are knowing (understanding) of knowledge, how in general anyone knows and one's own understanding of knowing.

So meta-cognitive knowing is the understanding of one's state of belief (theory) and how one knows it (i.e. basis or the evidence). Hence, it entails the ability to coordinate theory and evidence as described by Kuhn (1999):

> The development of metacognitive understanding is essential to critical thinking because critical thinking by definition involves reflecting on what is known and how that knowledge is justified. Individuals with well-developed metacognitive skills are in control of their own beliefs in the sense of exercising conscious control over their evolution in the face of external influences. They know what they think and can justify why. Their skills in the conscious coordination of theory and evidence also put them in a position to evaluate the assertions of others (p. 23).

Meta strategic knowing entails the process of knowing, how one reaches that state of knowing and selecting and using appropriate cognitive strategies. Monitoring of one's comprehension is central to it as it is the "first step towards the use of metastrategic understanding as a means to regulate and improve cognitive performance" (Khun 1999, p.21).

Among the three category of meta-knowing, Kuhn considers epistemological meta-knowing as the most fundamental underpinning of critical thinking. It provides the impetus for critical thinking as "people must see the point of thinking if they are to engage in it" (p. 23). Epistemological meta-knowing defines one's approach to assertion (opinion, claims, and beliefs). Assertion are said to be representation of one belief state, emanating from "knowing". Kuhn describes four level of epistemological knowing i.e. Realist, Absolutist, Multiplist, and Evaluative. For Realist, reality is directly knowable and knowledge comes from external source and is certain. Since assertions are exact copies (representation) of this external reality, there is no need for evaluation and hence critical thinking. Hence realist is unaware of one's belief state and simply knows something is true. For absolutist too, reality is directly knowable and knowledge comes from external source and is certain. However, they believe, assertions might be correct or incorrect representations of this truth and hence needs to be judged, but such judgment does not entail evaluation but mere comparison to some absolute standard of truth. Critical thinking for them is a mere vehicle for making this comparison and they accept the standards as defined by some external authority of expert.

For multiplist and evaluative, assertions are not exact copy of external realities or representation of what exists out there independent of self but the construct of the human mind. Since, reality is not directly knowable, and knowledge is generated by

human minds and is uncertain, and hence everyone can have different opinion (assertion) according to their reality. Hence, for multiplist all opinion are equal and deserves the same treatment as there are unique possessions freely chosen by the owners as per their taste and wishes and hence not subject to criticism. Therefore, they do not see any relevance for critical thinking. However, evaluative believe that all opinions are not equal and hence needs to be evaluated based on their merit through a process of reasoned debate (judgment, evaluation, and argument).

Realist and Multiplist do not see the relevance or need for evaluation, while absolutist does evaluate, but the basis is some absolute truth (objective, observable, same for all). Hence it's only with evaluative epistemology that one is open to evaluation (making judgment on basis of evidence or merit) and hence thinks critically as Khun states:

> To be competent and motivated to "know how you know", puts one in charge of one's own knowing, of deciding what to believe and why and of updating and revising those beliefs as one deems warranted. To achieve this control of their own thinking is arguably the most important way in which people both individually and collectively take control of their lives (p. 23).

Cohen three- part theory

Cohen (2000) proposes a three-part theory of critical thinking, which he says is based on synthesis of research on three separate topics which are a) 'cognitive theories of reasoning (mental model)' which represent how individual represents, update and revise their belief state (alternate possible situations or state of affairs); b) 'normative models of critical discussion (dialogue)' which describes how one defend a claim (belief state) against challenges by an opponent or critic, through a process of reasoned dialogue and d) 'models of cognitive mechanisms and environment

(reliability)' which enables one to assess and choose the reliability of the processes by which one form beliefs and make choices (decision making). This process is said to progress from internal to external in focus.

Cohen's model is a multi-layered structure like an onion, where at its innermost core, critical thinking involves selective consideration of alternative possible states of affairs which is generated by the logical process of reasoning. At the intermediate level, these mental models are embedded within a layer of critical questioning, which is the norm for conducting appropriate kinds of critical dialogue which motivates the generation and evaluation of different possibilities. At the outermost layer, critical thinking is a judgment about the reliability of a cognitive faculty based on the belief formed where the individuals assign the degree of trust that should be placed in its outputs.

Cohen (2000) focuses on dialogue as one of the central theme of critical thinking and states "the reason for focusing on dialogue as a model of thinking is that the functional resemblance between thought and dialogue is more than a coincidence" (p.16). Cohen model draws from Watson Dialogue Theory, which promotes avoidance of fallacies that hinders dialogue from reaching its goal. For, Walton (1989), the proponent of dialogue theory, the ability to look at both sides of an argument is the core of basic critical thinking skills and states:

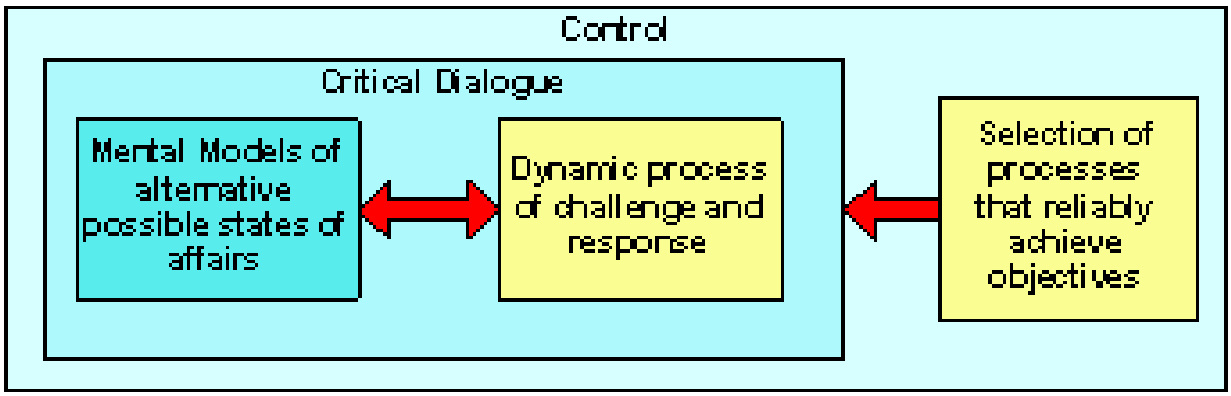
> The theory of argument as dialogue is an abstract, normative model which should present a relatively simple but precise set of rules and procedures representing how reasoned dialogue ought to be (p. 170).

Cohen model presents critical dialogue as both internal and external, i.e. dialogues may take place within a single individual (with self), or they may be conducted among different individuals (with others) as "thought first develops in each

individual as internalized speech and that we learn to reflect on and evaluate our own thoughts by responding to the thoughts of others" (Bodgen, 2000, as cited in Cohen, 2000, p. 16).

Figure 1

Cohen's Model of Critical Dialogue



Source: (Cohen, 2000, p. 4)

Paul and Elder's stage theory

Paul & Elder (2010) also propose a stage theory that suggest that students must pass six stages of intellectual development, starting from stage one as the Unreflective Thinker to The Challenged Thinker, The Beginning Thinker, The Practicing Thinker, The Advanced Thinker and finally The Accomplished Thinker to perform as critical thinker.

They are of the opinion that the students improve or gradually grow as thinkers, which teachers often are not aware of. So they suggest that intellectual quality in student work can be groomed in students only if teachers recognize that critical thinking develops only when properly cultivated and only through predictable stages.

Sternberg theory of human intelligence and its development

Sternberg theory of human intelligence, proposes a common set of processes underling all aspects of intelligence, which can be said to be linked with critical

thinking competencies. These include meta-components, performance components, and knowledge-acquisition strategies (Sternberg, 2005) .

Meta-components enable one to plan, monitor, and evaluate what they do. Performance components refer to actual steps taken (course of action) or strategies used to execute the instructions of the metacomponents. Knowledge-acquisition strategies refer to the ways in which individuals relate old knowledge to new material and learning; and apply the new ones acquired to solve problems (or decide what to do).

Learning Theories and Critical Thinking

According to Hammond, Austin, Orcutt and Rosso (2001), learning theories address key questions related to learning such as "how does learning happen? how does motivation occur? what influences students' development?" (p. 15). Hung (2001) identifies three major categories of learning theories: Behaviorism, Cognitivism, and Constructivism. Behaviorism states that learners are conditioned to respond to a stimulus, while Cognitivism believes that learner call upon various representations for reasoning and thinking is a process of manipulating those representations. Constructivism conceptualizes learning as an active process of constructing knowledge rather than acquiring it.

Critical thinking belongs to the school of cognitivism. Khun (1999) defines critical thinking as a metacognitive competency (or second order thinking) while Cohen (2000) defines it to include manipulation of representation (or alternative possible state of affair as termed by Cohen).

Bandura's social learning theory

Bandura's Social Learning theory (1977) highlights the role of others in one's learning. According to Johnson, Daigle and Rustamov (2010), the social learning

theory of Bandura emphasizing on the social aspect of learning, where individuals learn by observing others (also termed as 'observational learning'). They model the behaviors, attitudes, and emotional reactions of others. Hence the theory highlights the dynamics and inters relationship (interaction) between cognitive, behavioral, and environmental influences. It also emphasizes the role of motivation in learning, which includes external influences as well as self- reinforcement.

Piagets's cognitive development theory

Piagets's cognitive development theory like Bandura's also highlights the role of external environment and others in learning, as new learning takes place as "child interacts with the environment and with others" (Bartolotta & Shulman, n.d. p. 36). The theory describes the four staged development of thinking pattern and states that learning takes place when the learner encounters an idea, phenomena or practices that conflict with their world view. This disequilibrium is essential for learning. One learns when they are able to resolve this conflict by rearranging their cognitive structures. The interaction between teachers and learners and between learners themselves is essential for the process of learning as the state of disequilibrium and resolution of cognitive conflict is facilitated through this process (Geiger, 2008).

This process of dealing with conflict and reaching the state of equilibrium is similar to what Cohen (2000) describes as critical dialogue.

Motivation and Critical Thinking

Theorist like Facione emphasize on the importance of motivation in critical thinking by characterizing the overall disposition towards critical thinking as "consistent internal motivation to engage in problems and make decisions by using critical thinking" (Facione, 2000, p. 65). Studies have also established the relationship between motivation, cognitive engagement, and conceptual change (Hoang, 2007).

Various factors can affect motivation such as control on outcome, motive, purpose, task etc. Eggleton (n.d.) states that students' motivation is influenced by various aspects of teachers' pedagogical knowledge and emphasize on the role of teacher's personality, interaction, tasks, and classroom environment for effective teaching and motivating students.

Summary of the literature review on motivation by Lai (2011) suggests that a person's perceptions of control over his/her own successes and failures motivates them and those who are motivated are more likely to think critically. Similarly, McTighe and O'Connor (2005) stresses that students are motivated to learn when there is task clarity, relevance of the learning goals and assessments, and potential for success.

According to Regelski (2005), critical theory seeks and values motivations underlying human reason and the structure or telos (i.e., goal-directedness, purposiveness) of human action. Based on Kant's philosophy, who argued that reason is not a passive endowment that discovers logically necessary relations among given ideas but instead reasons constitutes knowledge actively produced or constructed by an active mind, Regelski (2005) emphasized the importance of individual's interpretation of a context in relation to motives and goals. Freedom is central to this understanding of motive for critical thinking (goal-directedness and purposiveness) as Regelski (2004) quotes Kant's philosophy:

> we are neither free, nor authentic, nor fully human if we allow external authority, environment, or fixed ideas of any kind to determine our thinking and actions. Blind acceptance of and acquiescence to such causes and effects on behavior denies the practical reason by which the individual is responsible for his or her own behavior, an such practical reason guided by the teleology

> of goal-directedness and purposiveness that involves and requires critical judgment (p. 4).

Hence for critical theorists, various unconscious influences can conspire to make people less than fully rational, and they are all too likely to accept their unfreedom blindly and willingly. So, critical theory promotes the idea of liberation from socially imposed blinders and promotes reason guided in terms of the ends or aims, intentions, interests, or purposes that empower people. Therefore, the advocates of critical theory emphasized on empowering students and teachers, to be free from any kind of coercion and thus free to achieve right results for themselves and others. They believe that education system should be able to ensure freedom by promoting critical thinking and empower them to realize their individual and collective interest freely and change their social and individual selves, by their own effort.

Regelski (2005) indicates two themes that can influence objective reasoning and hence have direct implication on one's freedom. One is 'situatedness of human reason' and the other is 'tension between individual and group'. Not grounding reasons in the life world of actors and agents can lead to false belief and expectation that knowledge is something out there to be revealed to us by external authorities and not as something that is personally constituted. Individuals can succumb under social pressure or be easily influenced by mass thinking as Regelski (2005) states:

> Human consciousness, in this view, is too easily passive in accepting ideology, doctrine, orthodoxy and mass thinking. People are too easily duped into a false consciousness that sees reality in terms of the gospel and liturgy of this or that vested interest or interest group. Ideology arises when certain socially constructed realities that serve the interests of one group are advanced by that group as being in everyone else's best interest, even if others disagree (p.7).

Critical Thinking and Teaching and Learning Approaches

Theorist promotes that education should aim to promote not just thinking but higher order thinking as Lipman (1995) states “thinking is presumably something students do already, it has become desirable to insist that education be aimed at the production of higher-order thinking" (p.2). Kim (2003) states that every critical thinking theorist believes that learning should incorporate critical thinking, which has to be consciously (deliberately) taught as human beings are fallible and without critical thinking a learner is likely to acquire false beliefs, become biased and rationalize unacceptable behavior.

From the literatures it can be established that critical thinking is not a natural gift and has to be carefully cultivated. Theoretically, anyone can be taught critical thinking, for which education philosophers, academicians, and researchers have proposed various approaches, strategies, and tools as well as defined the role of teachers and students for learning critical thinking.

Instructional strategies for facilitating learning of critical thinking

Literature suggests that critical thinking can be taught in a variety of ways but the instruction needs to be explicit (Facione, 1990). The Delphi Report (Facione, 1990) suggest that describing how critical thinking procedures are to be applied and executed, explaining and modeling their correct use, and justifying their application helps to develop cognitive skills. It also provides recommendations to the learners, besides teachers, that they must contribute personal effort, attention, practice, desire, and, self-monitoring (Facione, 1990).

Literature also emphasizes on the role of teachers and teaching approaches for teaching critical thinking. The various approaches suggested for teaching critical thinking include promotion of active participation, interaction, dialogue, questioning,

assessing the students' knowledge and skills and providing specific feedback. Kuhn (1999) suggests that conceptualizing students' potential for critical thinking can help educators improve their critical thinking abilities. The teachers need to be consciousness of the students' learning process and actively manage it by anchoring it in regular practice in order to enable students to exercise and strengthen their skills as well as foster the values for practicing it.

Walton (1989), who believes that Critical thinking entails central theory of reasoned argument which can be taught to students by emphasizing on a) empathy—the ability to constructively understand the other side's point of view, and (b) critical detachment — the ability to detect bias, and thereby avoid being too heavily partisan to attain a balanced perspective in argument (p. 182).

Paul (1995) suggests that there are five basic components in the teaching of critical thinking: (1) the instructor, who must be able to reduce big questions or problems into approachable tasks and guide students (2) the use of Socratic questioning to introduce basic issues (3)the use of role-playing and reconstruction of opposing views (4) the requirement that students reflect and analyze their own experiences within a global context and (5) teaching the difference between fact, opinion and reasoned judgment (as cited in Bowers, 2006, p. 19-20).

Duron, Limbach, and Waugh (2006) identify a 5-step framework and claims that it "can be implemented in virtually any teaching or training setting to effectively move learners toward critical thinking" (p. 160). The steps in their model are (1) determine learning objective (2) teach through questioning (3) practice before you assess (4) review, refine, and improve and (5) provide feedback and assessment of learning.

Kaasboll (1998) proposed approach to critical thinking, in addition to the pedagogical approach also emphasize on the educational conditions under which critical thinking is developed. His approaches include reducing the volume of course material, improving the preparation of teachers to encourage greater interaction with learners and using a more effective project-based approach.

Approaches and tools that contribute to critical thinking

Various empirical studies in higher education have tried to identify instructional approaches and tools that facilitate critical thinking. 'Student centered approaches' that promotes active participation of the students is promoted as the key strategy for enabling critical thinking (Cooper, 1995; Gokhale, 1995; Koo, 1999; Mandernach, 2006; Shrestha, 2010). Hence tools and approaches that promotes active students participants, popularly referred to as 'Active' or 'A-like techniques' are promoted for teaching and learning of critical thinking as Shrestha (2010) states:

> A-like techniques which include case studies, individual research projects, group projects and classroom discussions help in the development of analytical and learning skills and therefore, extensive use of faculty who have experience in using A-like teaching / learning techniques may help students to increase their willingness to learn, to accept challenges and to work in teams as well as to improve their critical thinking and communication skills (p. 5).

Duron, Limbach, Dennick and Exley (1998) discuss four methods that enhance critical thinking, namely focused discussion, student-led seminars, problem-based learning and role play.

Tsui (1999) found that activities such as class presentations, critical analysis of papers by instructors and taking essay exams rather than multiple choice exams have

positive relation to students' self-reported growth in critical thinking (as cited in Dam & Volman, 2004).

Paul (1995) suggests various learning activities that can be used to encourage critical thinking, such as guided discussion, debates, role-playing, problem-solving, case studies, group projects, simulations, model building, project design, performances, presentations, experiments, research, and interviews (as cited in Bowers, 2006).

Case study as a tool of critical thinking. As quoted by Lohman (2002), case study approach generally uses long structured cases in order to actively involve participants in the problem-solving process (Birchall & Smith, 1998; Fulmer, 1992; Harling & Akridge, 1998).

Cases help students to build on prior knowledge, integrate data and consider its application in future situations/problems as well as encourage teamwork and accountability. In order to improve the process of case based learning, teachers should focus on building students' knowledge base, assess the students' knowledge and skills and provide specific feedback (Kaddoura, 2011). In similar line, Savery (2006) suggests that case study helps students to understand important elements of the problem (situation) so that they can relate to it and apply it in similar situation in future. It is also a helpful tool for enabling student to identify logic flaws and false assumptions and hence develop their critical thinking skills. Bastable (2003) also believes that case based learning motivates learners to be engaged in their learning to think about reasonable answers, rather than simply receiving the information passively (as cited in Kaddoura, 2011).

Collaborative learning as a tool of critical thinking. Gokhale (1995) defines 'collaborative learning' as an instruction method in which students at various

performance levels work together in small groups toward a common goal and are responsible for each other and own learning. Similarly, MacGregor (n.d.) describes collaborative learning as an approach where students and their teachers are involved in a common assignment (enterprise) for developing common understanding.

Gokhale (1995) refers to the work of Johnson and Johnson (1986) to state that there is persuasive evidence that cooperative teams achieve higher levels of thought and retain information longer than students who work quietly as individuals. Her study also established that students who participated in collaborative learning perform significantly better on the critical- thinking test than students who studied individually as the informal setting facilitates discussion and interaction and hence collaborative learning medium provided students with opportunities to analyze, synthesize, and evaluate ideas cooperatively.

Karabenick and Collins-Eaglin (1996) found in a survey that college students in classes with greater emphasis on collaboration and less emphasis on grades were more likely to use critical thinking.

Collaborative learning is said to promote critical thinking by enabling active exchange of ideas within small groups (Gokhale,1995) and joint problem solving as "in peer collaboration, two relative novices who cannot solve a task individually, collaborate to do so together" (Cheong, 2010, p. 75). Cooperative learning methods improve problem- solving strategies because the students are confronted with different interpretations of the given situation. Further, the peer support system makes it possible for the learner to internalize both external knowledge and critical thinking skills and to convert them into tools for intellectual functioning (Gokhale, 1995).

Gokhale (1995) suggests that for collaborative learning to be effective, the instructor must view teaching as a process of developing and enhancing students'

ability to learn, where the instructor's role is not to transmit information, but to serve as a facilitator for learning, creating and managing meaningful learning experiences and stimulating students' thinking through real world problems.

Action learning as a tool of critical thinking. Serrat (2008, p.2) defines action learning as “a structured method that enables small groups to work regularly and collectively on complicated problems, take action, and learn as individuals and as a team while doing so” (p.2). It includes active learning strategies such as interactive class discussions, projects and debates which enhance understanding, retention and critical thinking (Mandernach, 2006).

Action learning contrasts from traditional approach in a sense that it directly connects the learners and their knowledge of the world (Willmott, 1997), empowering students and promoting critical thinking by enables them to be “critically conscious of their values, assumptions, actions, interdependences, rights, and prerogatives so that they can act in a substantially rational way as active partners in producing their reality” (Morgan, 1983, p.9 as cited in Howell, 1994. p.15). Since action learning promotes personal experience and understanding of the world as a basis of learning, the knowledge is personified in the experiences of students or the practitioner hence self-development is perceived to be very important in this approach (Willmott, 1997).

Reflective thinking as a tool of critical thinking. Gelter (2003) defines reflection as “conscious, active process of focused and structured thinking which is distinct from free floating thoughts, as in general thinking or day-dreaming” (p.338).

Reflective thinking is closely associated with critical thinking as it entails "active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusion to which it tends" (Dewey, 1910, p.9).

As in the process of critical thinking, reflective process also includes similar processes such as meta-cognition, analysis, integration, and synthesis (York-Barr, Sommers, Ghere & Montie, 2006). In similar line Banning (2006) states that critical thinking accommodates considerable tasks involved with information scrutinizing, differentiating, appraising and reflection on information for judgments (as cited in Behar & Niu, 2011). Tilley, Marsh, Middlemiss and Parrish (n.d.) associates reflective thinking with Socratic questioning and states that the first step in developing critical and reflective thinking is learning how to reflect on real life practice with the support and guidance of an educator (mentor or facilitator).

Problem based learning as a tool of critical thinking. According to Lesperance (2008), problem based learning (PBL) is a pedagogical technique that can help students develop problem solving skills by allowing them to explore real life scenarios, where students learn how to "evaluate the situation, seek additional information, find answers to questions and explore different hypotheses" (p.65).

Problem-based learning takes into consideration everyday situations, and creates learning opportunities for students by engaging learners or groups of learners in real-life, or simulated problems to be solved. Students are required to formulate hypothesis, process them; and also exploring and digging out information to support their ideas and rationale for the proposed solutions. They test and chose the best alternative that is able to best solve the problem.

According to Macklin (2001) "Some of the most innovative teaching styles explore the use of problem solving techniques to improve critical and analytical skills" (p. 307). In a study conducted by Lesperance (2008), it was revealed that, there were significant differences between groups in problem solving ability and ability to defend positions. Students in the PBL group reported that, they enjoyed the

opportunity to learn on their own, and that, PBL also improved their attitude towards learning; while at same time, improving their ability to search for accurate information. The author believes that, although there was no statistically significant improvement in critical thinking constructs among students with PBL, the instructor's observations of students' motivation to learn supports the notion that it can be used as a viable alternative to traditional lecture.

Tiwari, Chan, Sullivan, Dixon and Tang (1999) also suggest that, encouraging students to ask probing questions about actual problems would enable them to practice their skills in explaining and reasoning. In the PBL process, students should be helped and stimulated to be thoughtful in considering alternative views, challenging assumptions, and to evaluate differences in opinions and options. Hence, the authors believe that, PBL could help students to develop and improve their decision-making abilities; which in turn depend on a number of factors such as facilitating skills of the tutor, motivation of the student, and the dynamic of the group.

Other tools that contribute to critical thinking. Ertmer, Strobel, Cheng, Chen, Kim, Olesova, Sadaf and Tomory (2010) conducted a study that established role-playing as a means of simulating critical thinking. The study has linked role-playing techniques with development of some aspects related to critical thinking habits specifically related to the mind, like reflection and circumstantial perspective; and other related to skills, such as applying logical reasoning. The study suggests that for such development, scenarios need to be stimulated for role plays to enable students to demonstrate skills and habits of critical thinking; even if it meant, necessary guidance and scaffolding was required.

Another study by Scott (2008) discusses 'debate' as a useful tool for gaining disciplinary knowledge and assisting students in evaluating and delivering arguments.

Further, debate as a tool accommodates an important place in pedagogical methods since it allows students to develop critical thinking through inspecting arguments, engaging in research, accumulating information, conducting analysis, evaluating arguments, inquiring assumptions, and demonstrating inter-personal skills. This tool can be used as an effective supplement to teach since it largely engages learners in the material actually being used to help them learn; by discouraging students from simply receiving knowledge and, creating an environment of active participation. Results of the study indicated that students believed that debates increased their critical thinking skills.

From the reviews of the various tools that are promoted to enhance critical thinking among learners, it can be understood that, each tool discussed contributes to critical thinking in some way or the other. However, one particular tool or method is not preferred over other. Single tool or approach may not always be adequate and the effectiveness of the tool also largely depends largely on the situation, learning environment, students' motivation, capacity level, and many other variables depending on the situation.

MBA and Critical Thinking in MBA Students in Nepal

The literature suggests that MBA graduates must possess critical thinking skills and abilities. They should have strong analytical ability, high motivation to work and good knowledge of relevant management functions (Shrestha, 2010). Surveys by the London School of Business on the views of graduates on the benefit of doing MBA research concluded that that there are three vital issues for the future development of management education 1) integration of theory and practice in a multi-functional framework 2) internationalization to allow easy movement into other

cultures and countries; and 3) implementation of knowledge into useful action (as cited in Ainsworth & Morley, 1995).

In the context of Nepal, very few studies have been carried out to assess the outcome of the MBA programs. Findings of a survey among MBA students and potential employers carried out by Shrestha (2010) revealed that MBA graduates failed to meet the expectations of the corporate sector as they lack communication and analytical skills.

Relevant Studies in the Context of Nepal and Point of Departure

Very few research and studies have been undertaken with specific focus on 'critical thinking' or to explore the implication of teaching and learning approaches on critical thinking, in the context of Nepal. Only few literatures on themes related to critical thinking could be found.

Baral's (2005) study involving students of grade eight from five different district of Nepal, asserts that the objective of promoting behavioral and attitudinal change in students and to enrich them with practical knowledge cannot be achieved by following lecture techniques of teaching.

Gharti (2006), in his research involving students and teachers of grade six to ten of a private boarding high school, found that teachers in Nepal simply rely on books and follow preaching approach to impart knowledge rather than involve students in other learning activities. The teachers always take responsibility and ownership of the learning process, where the decision on all possible learning aspects such as methods, exercises, what; when; how to do are taken by the teachers. Such decisions are taken without consideration of individual difference among the students.

Similarly, Shrestha (2007) found that most of the teachers in Nepal like to follow the conventional approach of teaching irrespective of the fact that they know

about new methods such as communicative approach, which is similar to the finding of Phuyal (2008)'s study of secondary level English language teachers of various schools in Bhaktapur district of Nepal. The study found that the teachers consider reflective teaching as a very effective means of their professional development but in practice most (three-fourth) of them failed to do so. Though they had positive attitudes toward maintaining teaching diaries and peer observation as a tool of reflective teaching, none were applying them.

The study conducted by Gautam (2005) among secondary level mathematics teachers of Parvat district of Nepal, to assess the manifestation of internalized beliefs of teachers in teaching have similar findings. The study found that though the teachers believe that students' interest, intuition, and participation are most important in learning; students are encouraged to learn if they are provided with continuous feedback and rewarded for good response and teaching-learning activities must be student-centered as "lecture method is not an appropriate method of teaching…since it kills students' creativeness toward learning" (p. 35), these beliefs did not manifest in classroom practices. The reason behind this limitation was found to be lack of creativeness of teachers, lack of knowledge of alternative method of child centered teaching and reluctance of teachers to break the tradition.

Pangeni (2007), Dotel (2007) and Kadel (2007) discusses about their transformation from a teacher to a facilitator in their auto-ethnographic research (unpublished thesis). Pangeni states that during his early days as a teacher "he was dominated by the perspectives of the majority of (his) teachers who used to be very traditional" and together with that his own lack of sufficient knowledge made him an authoritarian teacher (Pangeni, 2007, p. 26). Methodologies learnt in B. Ed, discussions with peers, and training brought some changes in his pedagogical

approach and practices, as a result of which he started applying 'communicative interaction' approach of teaching which increased co-operative learning among students. Dotel (2007) and Kadel (2007) also have stated similar accounts of their transformations and the consequent improvement in teaching-learning environment in their classrooms.

An action research undertaken by Thapa (2008) among grade six students in a school in Bhaktapur concludes that active learning accompanied by activities motivate students to learn on their own, enables them to work collaboratively and brings positive change in attitude of students toward language learning. Similarly, Baral's (2005) study found that mathematics teaching helped students to "develop logical and dynamic reasoning (thinking)" (p. 32). However, the student found the teaching approach student centered.

These various studies have explored the transformation in the teaching and learning approaches, but do not specifically shed light on how the change in approaches and practices impacts the learning outcome of their students. Further, the above study does not explore particular implication on learning of critical thinking. Only one study directly related to critical thinking could be found.

Pokhrel (2010), in his qualitative research involving students (six) and teachers (3) of secondary school in Lalitpur and Kathmandu, explored how mathematics teachers perceive and practice critical thinking. The study found that critical thinking perceptions and practices differ among teachers and the students. Teachers claim to engage in activities related to critical thinking, such as group discussions and peer-learning. On the contrary, the students perceive that the teachers are always in a hurry and explained everything themselves instead of encouraging students to explore and students accepts teachers say as final. Though this study

explores the perception towards critical thinking and application of relevant tools that promotes critical thinking, it does not explore the implication of those tools in learning of critical thinking.

From the review of literatures relevant to my research topic, it is evident that very few studies have been undertaken to explore the application of contemporary teaching and learning approaches and its implication on the process of learning of critical thinking. The available research and studies have highlighted the existing gaps in terms of continuation of traditional teacher centered learning approaches and lack of relevant competencies in students (such as analytical; communication skill). The studies shows that though teachers are aware of some contemporary approaches such as reflective teaching, communicative teaching (which are approaches that are said to promote critical thinking), and believe it to be better alternative to traditional approach, their belief does not manifest in the classroom practices due to limitation in terms of capacity and attitude to overcome old tradition.

Further, application of some pedagogical approaches relevant to critical thinking such as active learning, cooperative learning, communicative interactions, facilitative teaching have been explored in terms of their contribution towards creating a positive learning environment. However, the study does not explore in detail the process of application of the learning approaches and how the process contributes towards the process of learning. Further, the implication of these approaches on learning of critical thinking also has not been specifically explored. Hence, a considerable knowledge gap exists in understanding of application of contemporary teaching and learning approaches and its implication in the process of learning, specifically learning of critical thinking.

Chapter Summary

In this chapter, I have presented a summary of the various literature reviewed in order to understand the themes related to the research topics. First the chapter broadly traces the root (origin) of the concept. Then it discusses on the various ways in which critical thinking and relevant themes have been conceptualized and defined by various scholars and researchers with reference to the ongoing debates and discussions on the topic.

Further, various theories shaping the construct of 'critical thinking' and its relevance to education have been discussed. Since the research topic particularly aims to explore the implication of teaching and learning approaches (instructional strategies) on learning of critical thinking, the various researches establishing the link between the instructional strategies and critical thinking have also been reviewed.

Specific tools that are considered to promote critical thinking, such as collaborative learning, problem based learning, case study have been further explored to understand their dimension and contribution in learning of critical thinking. Finally, studies undertaken in the context of Nepal have been discussed so that the point of departure and area for addition of knowledge for this study could be established.

All these reviews have helped deepen my understanding of the construct of critical thinking and outline a theoretical understanding to guide this research process, which has been presented in the next chapter (my understanding and interpretation of the construct).

CHAPTER III

MY CONSTRUCT OF CRITICAL THINKING: UNDERSTANDING AND INTERPRETATION OF THE THEORETICAL CONSTRUCT

From the literature review on critical thinking, it is evident that the construct of critical thinking is very complex and vague at times with diverse perspectives and different approaches to understand it. Given this complexities, I thought it would be useful to outline my understanding of the construct, on the very onset of this research journey.

It is important to state this disclaimer here that the construct of critical thinking I have presented here is only my personal construct. It is only a representation of how I have interpreted and understood the various literatures and theories on critical thinking and not a set theory or established framework. Considering the complexities, intricacies, and debates in conceptualizing the construct, I cannot claim that what I have understood and presented here is what critical thinking actually is in reality, and my representation of the construct comprehensively depicts the overall facet of critical thinking. The only purpose for outlining my understanding (construct) of critical thinking is to identify key dimensions and themes in critical thinking that would serve as a reference point, guide my process of exploration and help me interpret and understand the findings. Hence, I have tried to focus only those dimensions and themes that are relevant to my inquiry in this research, and hence, is not a compressive representation of the construct.

My construct primarily draws from three theories that I found relevant to my area of inquiry, i.e. Delphi Report (1990), Cohen Three part Theory (2000) and Khun's Development Model (1999).

Dimensions of Critical Thinking

> *"Critical thinking is skeptical without being cynical. It is open-minded without being wishy-washy. It is analytical without being nitpicky. Critical thinking can be decisive without being stubborn, evaluative without being judgmental and forceful without being opinionated"* (Facione, 2011, p.23).

Irrespective of the various approaches of defining critical thinking, I find the following two themes central to the construct (definition) of critical thinking. One is thought (nature of thinking) and another is purpose of thinking (inferring conclusion/ judgement through a process of evaluation). Around these core themes, other themes related to the process of thinking are constituted.

Thought: Alternate ideas, opinion or claims. Ideas, opinion or claims as representation of one's thinking is central to the construct of critical thinking. Critical thinking is defined to include skills and dispositions that enable one to deal with alternate ideas, opinion or claims.

Nature of thinking: Controlled thought process. Words such as self-directed, self-regulatory, self-monitored (Paul & Elder, 2006; Facione, 1990) are used to define the construct, which indicates that critical thinking is not just thinking, but it entails 'controlled thinking'.

Purpose of thinking: Inferring conclusion/judgment. Critical thinking is also defined in terms of judgment or a process that includes inference (drawing conclusion as termed by Delphi Report, Facione, 1990). Various theorist define critical thinking as "reasonable reflective thinking that is focused on deciding what to believe or do"

(Ennis, 1991, p. 6); “judging in a reflective way what to do or what to believe” (Facione, 2000, p. 61); “thinking that facilitates good judgment” (Lipman, 1988, p. 39), “thinking aimed at forming a judgment” (Bailin et al., 1999, p. 287, as citied in Lai, p. 6). Hence, with the notion of a controlled thought also entails the notion of ‘purpose’ i.e. the end result or outcome of the process of controlled thinking which is to reach a conclusive end that enables one to make judgment or reach a conclusion (decision).

Evaluation of alternative claims and idea. The above goal of reaching a conclusive end or judgment is achieved through a process of evaluation. So critical thinking is controlled and purposive thinking for dealing with alternate claims (ideas, opinions, and thoughts) to reaching a conclusion by selecting among these alternative claims by following a process of evaluation.

Rationalization (reasoning).The basis of evaluating and reaching that conclusion or making that judgment is based on logical facts or evidence, i.e. the alternate claims, ideas, opinion are evaluated based on the available evidences following a logical and rational process of reasoning, as critical thinking is also defined as “reasonable thinking” (Ennis, 1991, p. 6) or thinking that “itself meets standards of adequacy and accuracy” (Bailin et al., 1999, p. 287).

Argumentation (justification). The purpose of the process does not end with just reaching a good judgment or conclusion. It requires the critical thinker to be clear about the process through which it has reached that judgment, the evidences used to reach that conclusion and hence be able to explain or ‘justify’ their conclusion, view point or ideas to others as Delphi Report (Facione, 1990) defines critical thinking as “explanation of the evidential, conceptual, methodological, criteriological, or conceptual considerations upon which that judgment is based” (Facione, 1990, p. 3).

Reasoning is core to the process of argumentation, as when one reaches a conclusion following a rational process, s/he is clear on the evidence used and hence can rationalize and justify their conclusion (claims).

Moral dimension. The way in which critical thinking is defined also gives a sense that it is build on a moral foundation. Judgment is referred to as 'right' or 'fair' judgment. Hence terms like "good judgment" (Lipman, 1988, p. 39), "responsible thinking" (Facione, 1990, p. 3), "self disciplined" (Paul & Elder, 2006, p. 4) are included in the definitions of critical thinking. 'Right' or 'fair' judgment is those that are reached based solely on evidence, and not intuition, personal whim or emotion.

Self review and change: Self-correction. The definition of critical thinking also includes terms such as "self regulatory" (Facione, 1990, p.2) and "self-corrective" (Paul & Elder, 2006, p.2) thinking, which can be interpreted in term of correcting one's own though, idea or judgment. Hence, the process of reaching the judgment or criteria also includes the process of correcting one's own thought i.e. giving up one's view point (claim) when one does not succeed to justify one's position through a rational process of reasoning.

Hence, the definition of critical thinking does not end with thinking for the purpose of evaluating alternate claims but it also entails personal integrity and willing to persistently peruse "what is right/what to believe" and ability for self correction in the light of emerging reasons and evidences. This aspect of critical thinking is closely linked to the moral or righteous attributes of critical thinking.

Skills and Disposition of Critical Thinking: The Delphi Report

With reference to the above representation of critical thinking, among the set of skill identified by Delphi Report (Facione, 1990), the first four sets of skills (interpretation, analysis, evaluation and inferences) represents skills required to

practice the process of reaching the conclusion i.e. interpreting meaning; analyzing different ideas/claims; identifying arguments and evidence; evaluating the alternatives in the light of the available evidences and inferring the conclusions. Disposition such as trust in logic and reasoning; openness and acceptance of divergent world views or alternate claims; fair-mindness, honesty in apprising others viewpoint (reasoning); willingness and persistence in seeking information and working with complexities enables one to apply the skill and achieve the end result of drawing conclusions.

The next skill set in the Delphi Report i.e. 'explanation' enables one to clearly state and defend the end results (conclusion), validating or justifying it with appropriate evidence and arguments. Disposition such as self confidence in one's own ability to reason/judgment and trust in logic and reasoning enables one to practice the skills of argumentation (explanation).

The final skill set i.e. self-regulation enables self-examination and self-correction. Disposition such as openness in facing one's own biases and prejudices and avoiding egocentric or socio-centric tendencies enables one to practice the skills of self-regulation.

Process Dimension of Critical Thinking

It is also important to note the argument put forward by the theorist from cognitive psychological tradition, which asserts that defining critical thinking only on the basis of skills and disposition is not realistic. It only defines what a person is capable of doing ideally but does not describe the actual process of how the person reaches that desired state. It describes the quality of thoughts but does not explain 'how a person thinks'. It only says critical thinker needs to rationally evaluate alternate claims to reach a good judgment, but does not describe how one can be rational or what the process of reaching judgment is. Hence, it is important to

understand the mental ‘processes’ of thinking the critical thinker uses that manifest in form of visible behaviors or strategies. Kuhn’s development model (1999) and Cohen’s three part theory (2000) provides some insight in this process dimension of critical thinking. Hence, I have attempted to conceptualize the ‘process dimensions’ of construct of critical thinking based on these two major theories, which are discussed below.

Conscious and Controlled Thinking

Kuhn conceptualizes critical thinking as a metacognition (metaknowing) that entails three key components of what develops cognitively that makes critical thinking possible, which are metacognitive knowing; metastrategic knowing and epistemological knowing.

Metacognitive knowing is awareness of what one knows (knowledge or theory) and how one knows it (basis of knowing i.e. evidence). Meta-strategic knowing entails the process of knowing i.e. application of cognitive strategies to reach that state of knowing, where as epistemological knowing is one’s understanding of what knowledge (reality) is and how one attains it.

For critical thinking rather than knowledge (content) alone, the thought process that enables one to acquire that knowledge or reach that conclusion or judgment is important. This is similar to what Paul refers as dia-logical process i.e. between or across two or more logic, where “logic refers to the basic structure of meaning and interpretation, that underline our thinking and that enables us to reason something through and without this underlying conceptual framework we can only have loads of thoughts but cannot organize it into worldviews” (Paul, 1991 as cited in Glaser 1998, p.32).

Hence, for critical thinking, awareness and control of one's thought process, knowing what one knows and how one knows it (metacognitive knowing) and the ability to monitor and guide one's thought and understanding (metastrategic knowing) is essential. So individual with developed Meta-cognitive knowing is aware of what one knows, their belief state (theory) and how they know it (evidence) and hence has a greater coordination between theory and evidence.

Similarly, with developed metastrategic knowing one is able to consciously monitor one's cognitive process such that they can consciously control the evolution of their belief or knowledge and apply cognitive strategy to guide it, in order to consistently apply the standard of evaluation across all situation and time, and not succumb to external pressure or false logic (Khun, 1999). They can consciously monitor their thought (comprehension) and guide it accordingly as new information or context emerges, change it where necessary, with appropriate selection and interpretation of evidence. With this awareness and control, one is also able to justify their assertions /claims (beliefs states) through effective theory-evidence coordination that forms the basis of logical reason and argumentation. This ability to link theory and evidence can also enable them to effectively question and evaluate other's assertions /claims (beliefs states) by effectively assessing and evaluating the theory and evidence they provide.

Development of Evaluative Epistemology

According to Kuhn, epistemological knowing entails one's orientation towards knowledge and knowing, hence defines how one sees one's own and other's knowledge, claims or ideas. Hence, it determines how much one value reasoning and application of metacognitive and metastrategic skills and how committed and persistence one can be in seeking truth (good judgment).

Kuhn defines four levels of epistemological metaknowing depending upon their understanding of reality and how knowledge is generated i.e. Realist, Absolutist, Multiplist, and Evaluative. Among these, only those who can progress to evaluative level can transform into a critical thinker. For Realist, Absolutist, and Multiplist there is no relevance of evaluation, and without evaluation, they cannot be considered critical thinker. For Realist all assertions or claims are same and equal as they are exact represent of objective reality. So they do not see the need of and hence do not engage in the process of evaluation.

Absolutist believes that assertion might not be exact representation of reality as it actually exists and hence have to be verified through direct observation or authority of expert. Hence, instead of engaging in the process of evaluation for verification they tend to compare and confirm with some absolute (fixed) standard of truth (usually defined or prescribed by external authority of expert). Therefore, they accept the opinion of higher authority or go with the masses (majority opinion) or tend to believe what confirms with what they have observed, experience or their past knowledge.

For both Multiplist and Evaluative knowledge is not objective or standard but the construct of the human mind. Therefore, they accept that there can be multiple claims according to personal interpretation of the reality. Accordingly, Multiplist believes that everyone is entitled to have or choose their own opinions, as that is their reality, and hence all opinion are equally valid and deserves the same treatment and should not be criticized. So there is no need for evaluation for them.

On the contrary, Evaluative though agrees that individuals are entitled to have or choose opinions, they believe that all opinions are not equal and hence need to be evaluated on the basis of merit. Therefore, Evaluative focuses on the rational process

of verification based on judgment and evidences. They demand that all opinion and claims be justified through argument and evidences.

Hence, it's only those with evaluative epistemology that will actually seek to evaluate different alternative claim based on rational evidence. Only they will feel the need and see value in engaging in the process of inquiry and apply the metacognitive and metastrategic competencies. They are able to persistently engage in the process of evaluation.

Critical Dialogue: Reflection, Questioning and Argumentation

As discussed, critical thinking entails systematic evaluation of alternative claims in order to make rationale judgment based on evidence (logic), and this judgment is reached through a process of critical dialogue.

Cohen's model also talks about assertion (or state of belief as discussed by Kuhn), which Cohen terms as mental model or alternative possible states of affairs. Cohen states that the generation, selective consideration and selection of various mental models are undertaken through a process of critical dialogue. This can also be understood as critical inquiry, as Matthew Lipman (proponent of community of inquiry) and Leonard Nelson (proponent of modern Socratic inquiry) present dialogue as a process of inquiry to help students find an answer to their questions and hence enable active participants of the student in the process of inquiry (as cited in Davey, n.d.).

Cohen's model presents critical dialogue as a two way process, which can be with self and between two or more individuals, which is similar to what Davey (n.d.) terms as monologue (with self) and dialogue (with other) or the dialogical conception of critical thinking (termed as 'dialogical inquiry') propagated by Glaser (1998). Glaser (1998) describes critical thinking "as a practice that involves dialogues"

(exchange of views) and "as a practice in which our mode of thinking is itself inherently dialogical" (reflexivity) (p.11). Thought is said to first develop in each individual as internalized speech and we learn to reflect on and evaluate our own thoughts by responding to the thoughts of others (Bogden, 2000 as cited in Cohen, 2000, p. 16).

Internal dialogue: Reflection. The process of internal dialogue begins with awareness or consciousness of our one's own thought (thought process), as Kuhn suggests that the most effective strategy for the students to enter this process is to heighten participants' meta-level awareness regarding the discourse.

So as discussed earlier awareness of what one's own thought process (one beliefs state, coordination between theory and evidence) and ability to consciously control and rationally guide it towards some direction enables one to engage in the process of internal dialogue (reflection). So the process of reflection entails being conscious of one own thought, of one's beliefs and assumptions and proactively questioning it, in order to decide 'what to do' – to continue with it or change it in the light of emerging evidence, following a process of rationalization. In the words of Paul, those who have the skill of reflection are strong critical thinkers, while those who do not practice reflection are weak as they may enter the process of argumentation " but do not apply this skills reflexively – they do not question their own assumptions and remain blind to the perspective nature of their own thinking" (Paul, 1991 as cited in Glaser 1998, p.33).

External dialogue: Questioning and argumentation. External dialogue entails communication externally with other. Communication is very important aspect of critical thinking as communication "enables us to determine the extent to which our own assumptions are reasonable or justifiable" (Scriven as cited in Glaser 1998, p.

21). However, it is not just any communication (or conversation) or only verbal exchange of information but “critical dialogue” that is essential for critical thinking. Critical dialogue is not just exchange or sharing of information but critical consideration of the claims (ideas, opinion, and assertions) put forward by others.

According to Lipman, communication aims at just exchange of information and hence maintains equilibrium between those engaged, while dialogue aims at creating disequilibrium (as cited in Davey, n.d.).Cohen describes this process as ‘Confrontation’. Hence, external dialogue, is the conversation or dialogue with external individual(s), where the parties involved expresses their view or stand points and seeks to clarify each others’ claim further or validate (justify or defend) their standpoint.

Cohen model draws from Watson Dialogue theory, which promotes avoidance of fallacies, such as attacking strategies to prevent others from advancing standpoints or trying to win an argument by appealing to pity, that hinders dialogue from reaching it goal. Various type of dialogue studied by Walton is discussed by Cohen such as deliberation, inquiry, negotiation, information seeking, and persuasion, and critical discussion is described as a dialogue type used for the resolution of difference of opinion (i.e. disequilibrium which is central to critical thinking). Resolution here does not mean negotiation (or compromise) to simply settling the difference but involves persuading. However, persuasion does not mean ‘forcefully’ but connotes ‘convincing’ one of the parties to retract doubt concerning the other party’s position because of being convinced by reasons and not by force, aggression, emotion or pity because their reasons has not withstood the other party’s reasoning.

Davey (n.d.) also differentiates between dialogue and debate and states that according to Socrates the focus of debate is to win an argument (usually based on

emotive argument, and has no space for self correction) while dialogue focus on gaining further understanding so that the participants through the dialogue reaches the conclusion of the process of inquiry (group understanding/consensus of the topic under discussion).

So ‘critical dialogue’ (or reasoned dialogue) and not just communication is essential for critical thinking, such that the exchange (questioning, argumentation) is not forceful but persuasive; creates disequilibrium but with the intention to resolve the differences; is based on reasons and evidence but not on force, aggression, emotion or pity and focuses on not just winning but reaching a joint understanding and agreement. The process of external dialogue entails questioning and argumentation. *Questioning.* Critical thinking skill is said to be exemplified by asking questions about alternative possibilities in order to achieve some objective, as asking and answering question is a skill of dialogue (Cohen, 2000, p. 3). Inquiring mind is said to be the hallmark of critical thinker and hence good thinkers are also good questioner (King, 1995).

Questions focus on the fundamental of thoughts and reasoning forms the base line of critical thinking (Macknight, 2000, p. 39). Hence, the confidence to ask questions is critical to this process of inquiry, along with the ability to evaluate response, and hence ask further questions based on it in order to explore the topic further in depth. Theorists have promoted ‘Socratic questioning’ (and not just any type of questioning) as an approach that promotes in-depth probing and hence promote critical thinking (Macknight, 2000).

Macknight (2000) believes that the level of questions asked influences the depth of thinking that occurs, as thought provoking questions goes beyond fact and Socratic question, is said to facilitate probing (inquiry) at a deeper level, that touches

not just the upper level of understanding but deeper beliefs and assumptions, and generates further cycle of questioning and hence helps the participants to get into deeper dialogue.

Socratic questioning entails various levels of questioning such as questions for clarification; questions about the initial question or issue; question that probes assumption; question that probes reason and evidence; question that probes the origin of source question; question that probes implications and consequences and question that probes view point or perspective (Paul, 1990, as cited in MacKnight, 2000).

Argumentation: The ability to logically (rationally) present one's viewpoint or claim and justify it is also critical to the process of critical thinking. It also entails the confidence to face/answer questions and clearly present one's standpoint with logical explanations and evidences. Glaser (1998) also emphasizes the importance of argument (external dialogue) in critical thinking as she believes that it's not our own conviction but the strength of our argument that makes other accept out claims that validates it. Since argumentation is part of critical dialogue, the process of argumentation needs to be based on evidence and logically reasoning and not force, aggression, emotion or pity.

It is to be noted here that the process of internal dialogue also entails the process of inquiry and hence entails both questioning and argument, where one can question their own belief and assumption as well as engage with argumentation with self. But, for the sake of this study questioning and argumentation is discusses with reference to dialogue with others (external dialogue) and not internal dialogue, while for internal dialogues the terminology 'reflection' has been used.

Both internal and external dialogue are inter-linked (interdependent) and is a cyclic process. We reflect on our own thought based on the response of others and

based on the outcome of our reflection, we generate additional questions for further exploration or develop new hypothesis which we test by entering in the process of external dialogue with others. So for internal dialogue (reflection) external dialogue is critical and to extend or conclude the process of external dialogue, internal dialogue is essential. Awareness and control of one's thought process (theory-evidence coordination) enables one to reflect on their thought, actively questions other, rationally justify one's stance as well as evaluate others' claims.

Those engaged in critical thinking deeply engages in the process of internal dialogue with self (reflection), actively assessing one's own belief and assumption with greater awareness of one's own thought process. They also actively engage in external dialogue with others which is not mere communication (or exchange of information) but actually a process of inquiry, where one seeks to actively question (to solicit further information or to challenge the other party to substantiate their claim) and provide argument and counter claims to substantiate (justify) their own claim by presenting explanations (rationale/evidences). This exchange is focused on creating disequilibrium i.e. generating and tested diverse claims (counter claims) through a process of questioning each other's claims, reflecting on the responses, convincing (or being convinced) and reaching a conclusion or judgment based on evidence and reasoning and not force, aggression, emotion or pity.

Contemporary Teaching and Learning Approaches and Critical Thinking

Literatures have established that application of contemporary (active/student centered) teaching and learning approaches enables critical thinking by:

1. Promoting relevant skills/dispositions such as analysis, evaluation, openness to alternate ideas, honesty in facing one's own biases etc.

2. Creating an environment that promotes inquiry; exploration; questioning; sharing of ideas/opinions; dialogues; discussions and justifications.

Active learning approaches facilitates critical thinking by enabling students to think for themselves hence providing opportunity to think about alternatives; to analyze, synthesize, and evaluate ideas and solve problem rationally which are key aspect of critical thinking (Gokhale, 1995; Kaddoura, 2011; Savery 2006; Macknight, 2000; Cohen 2000).

It enables students to deeply engages in the learning process, requiring them to actively explore; articulate ideas (claims) with justifications; engage in debate (discussions); reflect upon one's own belief, assumption and biasness as well as question each other, which enables one to think critically (Dahal, 2002; Mandernach 2006; Koo 1999; Cooper, 1995; Gokhale 1995 & Shrestha, 2010).

Guiding Students Development through Instructional Strategies

Application of active teaching and learning approaches have potential to promote critical thinking, but just its application does not automatically lead to the desired goal unless the instructional strategies incorporates some factors that educational theorist have identified as key dimensions that enables students to learn critical thinking. They are:

Awareness of students' cognitive development process

Students' thought process (cognitive development, epistemological belief) is central to critical thinking. In order to help students develop their cognitive competencies (metacognitive, metastrategic and epistemological belief) teachers must be aware of its development process (Kuhn, 1999). Hence, teachers should actively pay attention to students' epistemological beliefs (Dam & Volman, 2004). Teachers can adopt various strategies to understand this development process such as close

observation, monitoring, and participation in their learning process as well as asking appropriate questions to probe into their knowledge and understanding.

Guiding the development process through appropriate instructional strategies

Teachers should also be able to shape the students' development process (Volman, 2004; Kuhn, 1999). Teachers' assessment and understanding of the students' development process provides enables teachers to select and apply appropriate instructional strategies for facilitating the students' learning process. With this understanding, teacher should be able to anchor (embed) critical thinking practices in the everyday learning process for promoting critical thinking skills as well as fostering the values for practicing it (Kuhn, 1999). The instructional strategy needs to focus on:

Making the learning explicit. The teaching and learning of critical thinking needs to be made explicit such that the various dimensions and processes of critical thinking, the skills that needs to be practiced and the desired behavior needs to be openly, clearly, and precisely explained to the students.

Students should be told how the procedures are applied and executed as well as their application appropriately justified (Delphi Report, Facione, 1990). Key themes of critical thinking such as logical reasoning (deduction); difference between fact, opinion and reasoned judgment; identifying biasness and fallacies; logical flaws and false assumptions etc also need to be explicitly taught (Walton, 1989; Savery, 2006; Bowers, 2006; Dam & Volman, 2004).

Managing and guiding the process: Process facilitation, questioning, and feedback. Teachers also need to actively facilitate and guide the various learning process to ensure that the students actually engage in the process to practice appropriate skills and techniques and demonstrate appropriate disposition.

The teachers must act not only as facilitator and moderator of the process but also as a "co-inquirer" in the process (Davey, n.d.); monitoring process such as groups discussions to ensure students follow the rule of inquiry; practice Socratic questioning to seek information and identify evidence and biasness; judge the credibility of sources; demonstrate empathy; appropriately deal with facts and opinions; practice logical arguments and not aggression.

Similarly, teachers can use questioning techniques to challenge students to explore their ideas and thought and express their beliefs, assumption and hence engage in critical dialogue with each other. Teachers can also facilitate students involvement in problem based learning by ensuring that students solve problems by rationally. They can encourage alternative seeking and problem solving behavior, promote articulation and questioning, face challenges and deal with uncertainties. They can also design assignments and task that promotes social interaction and dialogue (Macknight , 2000) and hence enable critical thinking.

Teachers further need to provide timely feedback on the students' performance to guide their future actions and development (Duron, Limbach &Waugh, 2006; Kuhn, 1999; Kaddoura, 2011). Through such processes teachers can ensure that students are not stuck with idealist, multiplist or absolute epistemology but transit to evaluative epistemology and strengthen their metacognitive and metastrategic competencies.

Modeling behavior. Teachers need to design and implement their teaching strategies in such a way that it models and demonstrates the actual application and execution of procedures that promotes critical thinking so students can learn by observation (Facione, 1990; Bandura's Social Learning theory). Teachers can model questioning techniques that seeks to clarify or challenge statements or beliefs; demonstrate the

difference between communication and dialogue; practically illustrate the process of critical dialogue, argumentation and rationalization by presenting real life example of how different claims are interpreted, analyzed, and evaluated based on the argument put forward and conclusion inferred from it.

Enabling Environment: Social Relationship, Motive and Freedom

Appropriate instructional strategies enable critical thinking by supporting relevant competencies. It also supports critical thinking by promoting an enabling environment that motivates and supports one to practice critical thinking competencies.

Social relationship and network is one such enabling factor that instructional strategies can promote to support critical thinking. Scriven conceptualizes critical thinking as a social activity as "it is in the public realm that reasons are defended or amended" (as cited in Glaser, 1998, p.21). Because of this social nature of critical thinking, social context, social network, and interpersonal skills have very important role to play in promoting critical thinking and hence are key aspects of an enabling environment.

Strong social ties and good interpersonal skills promote effective communication (social interaction) and hence facilitate critical dialogue, which is essential for critical thinking. One can be more open, candidly question and challenge each other if one has good social relationship and interpersonal skills. Osborne, Kriese Tobey and Johnson (2009) also emphasized on the link between inter personal skill and critical thinking stating that those students who are good in critical thinking also demonstrated the most use of interpersonal skills. Further, peer support system contributes in strengthening one's intellectual functioning by supporting learner to

internalize knowledge and critical thinking skills (Gokhale, 1995; Johnson & Johnson, 1986).

Appropriate competencies and enabling environment alone does not ensure practice of critical thinking as critical thinking entails “consistent internal motivation” (Facione, 2000, p. 65). Persistence and perseverance are core disposition of critical thinking (Facione, 1990), as also emphasized by Halpern who states “effort and persistence are two of the principal dispositions that support critical thinking” (as cited in Lai, 2011, p.20). It is persistence and perseverance which enables a person to diligently and consistently engage in the process of inquiry, face the challenges and deal with the complexities involved in it, without succumbing to external pressure and personal biasness.

Persistence and perseverance is influenced by one’s motivation, as according to Regelski (2005) one has to be free from external coercion, socially imposed blinders and other unconscious influences to be fully rational. Hence, motivation behind human reasons and goals or purpose of one’s actions is an important aspect of critical thinking. Therefore, instructional strategies need to promote freedom from any kind of undue pressure and influence and provide freedom to peruse one’s goal and interest. Further, the instructional strategies also need to put student in control of their goal and outcome, as those who have control over his/her own successes and failures are motivated to learn (McTighe & O’Connor, 2005).

Therefore, instructional approaches, in addition to promoting relevant competencies also need to support enabling environment that support factors such as social ties and interpersonal relationship. It also need to focus on strategies to adequately motivate students for engaging in critical thinking by promoting freedom, control, motive, and goal directness.

Summarizing the Discussions

Critical thinking is conceptualized as a process that deals with alternative claims, through a process of evaluation based on logical reasoning in order to reach a conclusive end of making a conscious and rational selection (conclusion/ judgment). For this process, it is essential that individual have highly developed metacognitive and metastrategic competencies such that they are aware of their thoughts and are able to monitor, control and guide it through the process of evaluation and judgment. Further, this process can only be undertaken by those with evaluative epistemology as they are the one who sees the value in the process of reasoning and evaluation.

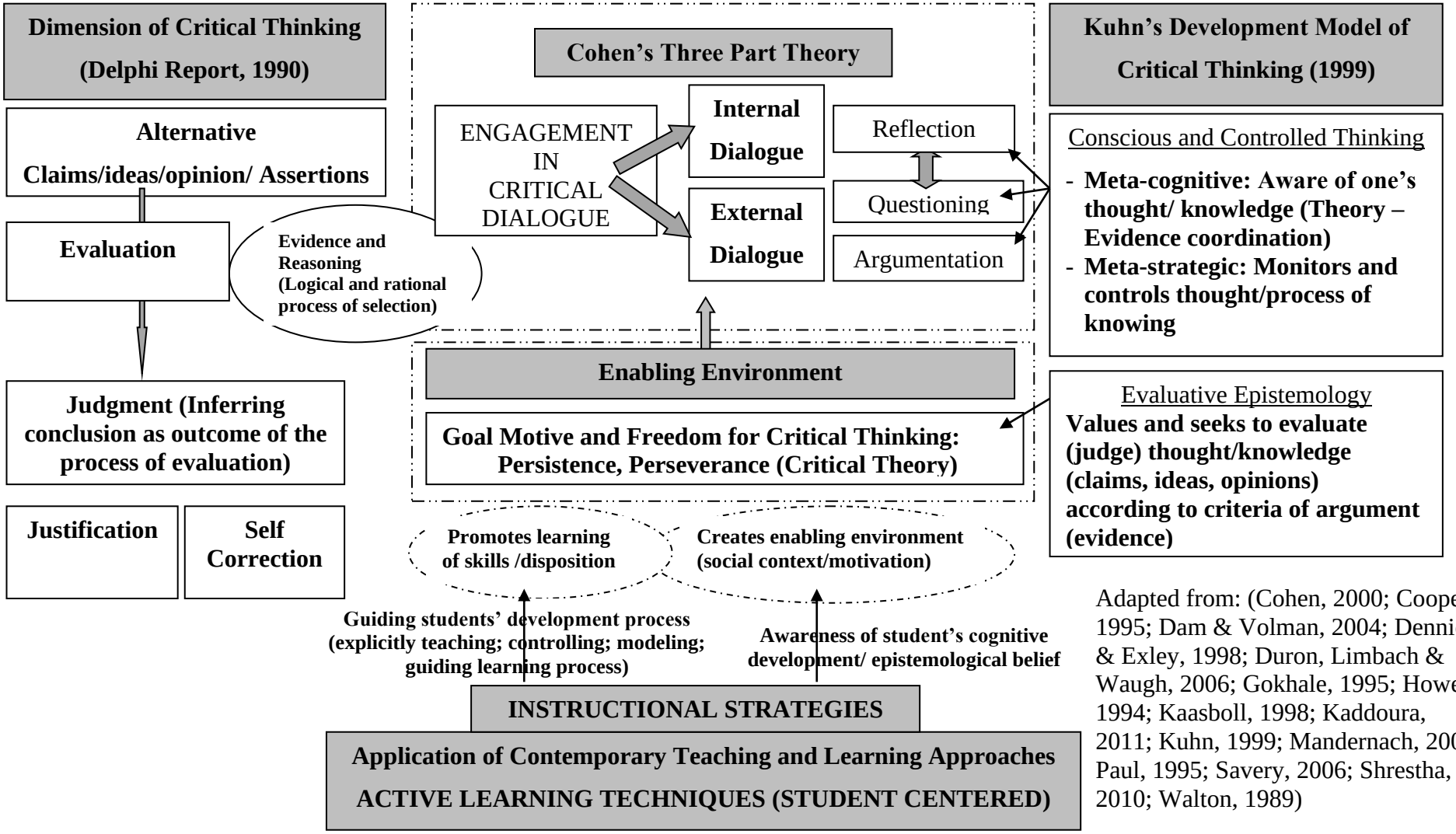
The process of 'critical dialogue' facilitates the process of evaluation and judgment. 'Critical dialogue' entails internal dialogue with self (reflection on one's thought) and external dialogue (questioning and argumentation with other). The process of critical dialogue entails meaningful engagement with others which in not mere communication or exchange of information but careful consideration and evaluation of claims and counterclaim. The process aims at creating disequilibrium in order to resolve it through a process of reasoned argumentation and inquiry based on reasons and evidences and not aggression, coercion, emotion or pity. Awareness of one's thought and ability to manage and control it enables one to engage in critical dialogue. Hence, the process of critical dialogue requires the practices of metacognitive and metastrategic competencies.

Contemporary (active) teaching and learning approaches and instructional strategies can promote critical thinking. Such instructional strategies for promoting critical thinking incorporate critical aspects such as teachers' awareness of students' cognitive development process and ability to actively manage the dynamics of the various learning process to support the students' development.

Instructional strategies (contemporary approaches) facilitates critical thinking by promoting relevant critical thinking competencies as well as creating an enabling environment that motivates and supports one to practice those competencies. Such enabling environment entails strong social network and interpersonal relationship. Only promotion of competencies and enabling environment would not suffice for promoting critical thinking as the process of inquiry entails persistence and perseverance for which students need to be adequately motivated. Hence the instructional strategies also need to incorporate strategies for motivating students. It needs to provide enough motivation, freedom, and incentive to practice and learn critical thinking. This construct of critical thinking is conceptualized in the figure below:

Figure 2

My Construct of Critical Thinking: Understanding and Interpretation of the Theoretical Construct



Adapted from: (Cohen, 2000; Cooper, 1995; Dam & Volman, 2004; Dennick & Exley, 1998; Duron, Limbach & Waugh, 2006; Gokhale, 1995; Howell, 1994; Kaasboll, 1998; Kaddoura, 2011; Kuhn, 1999; Mandernach, 2006; Paul, 1995; Savery, 2006; Shrestha, 2010; Walton, 1989)

Chapter Summary

This chapter presents the construct of critical thinking, based on my understanding and interpretation of relevant research and studies. It describes the various dimensions of the construct as it relates to my research agenda. The chapter deliberates on the emerging themes, as they relate to each other with reference to my area of inquiries, such that at the end of the chapter a framework depicting my understanding of the theoretical construct of critical thinking could be outlined.

This understanding and interpretation of the theoretical construct has guided the analysis and interpretation of the findings. With reference to this outline, the finding of the study has been presented and analyzed in the subsequent chapters.

CHAPTER IV

RESEARCH METHODS

This chapter is my road map for the study. It guides my overall research process. The chapter describes how the research has been approached. It explains my research design, methodology, and tools used as well as present the validity procedures.

Framing the Research

It is important, at this point, to disclose my personal interest in the research agenda I selected for my thesis. Education and its implication on one's life has always been of great interest to me and a topic of discussion that I often had with my friends, colleagues, and mentors, where we often deliberated on the process of education, and the role of education in development of an individual and hence in the development of the society and the nation. As a graduate from a reputed educational institution and a working professional, I believe I have had the best opportunity to learn and apply my learning in one of the most challenging profession of a Consultant where I had to support organizations and individuals in their learning and development. During my professional journey, I often found myself reflecting on my own process of education, in search of answers to the challenges I faced.

Therefore, I have always been looking for opportunities to better understand the educational processes and ways for making it more enriching, rewarding, and empowering, as I strongly believe that education defines who we are and what potential we have. Therefore, this research for me is more than fulfillment of a course requirement, but an opportunity to make meaningful contribution to the education sector of Nepal. I have also always been in awe of human potential and their capacity

to think and its implication not only on self but mankind as a whole. So I thought it would be interesting to merge my two interests, thinking and education, to define my research agenda.

Contemplating on several options and reflection with my friends, colleagues, and professors, I finally selected 'critical thinking' as the theme of my research. But still I was not sure of what aspect of it to explore. Various research ideas evolved, which changed over time with literature review and discussions. Some ideas reached to the point of research proposal but had to be dropped later after preliminary testing as the topic appeared not to be researchable. Finally, the present idea took shape.

The idea of how people learn critical thinking was of interest to me, but since it appeared to be a very vast and vague area I decided to limit it to instructional strategies (methods and processes), that promotes the process of learning of critical thinking, within a formal education system. Researchers have identified specific teaching and learning approaches that facilitate learning of critical thinking. Hence, I occurred to me that the process of learning promoted through application of such approaches in Nepal could be explored.

In the Nepali context, some relevant research in this area could be found, but very few directly linked to learning of critical thinking. Those I could locate established gaps in our traditional educational system and suggested reforms and strengthening of the learning processes. But how the process could be strengthened was not clear. Some teaching approaches related to critical thinking such as teacher's role as facilitators, communicative approach of teaching and activity based learning, have also been explored, establishing it as effective teaching approaches, but its application with reference to critical thinking had not been explored.. Further most of these studies focused on teachers' perspective. Given this knowledge gap, it was clear

to me that it would be relevant if I could focus my study in understanding the students' perspective of their learning processes, which were promoted through application of contemporary teaching and learning approaches, and its implication on learning of critical thinking.

Once the theme was finalized, I continued further by inquiring the best approach to explore this research agenda. I had to find a site where contemporary teaching and learning approaches were being applied. I interacted with students from various academic streams as well as different levels. Literature suggested that critical thinking can be taught from as early as pre-school. Hence, any group from pre-school to Master's graduates would have been equally relevant for me, provided that the research participants had experienced such contemporary approaches as part of their learning process.

My preliminary interaction with the graduates of different academic streams reveled that contemporary teaching and learning approaches (active learning approaches) are a distinct feature in management education, specifically in Masters of Business Administration (MBA). Even those colleges offering Masters of Business Studies (MBS), instead of MBA were not applying the contemporary teaching and learning approaches.

During preliminary interaction with some management graduates, they shared that the learning experience were same for them from school to bachelor's level, as similar teaching and learning approaches (specifically lecture based) were applied. However, they experienced a change in teaching and learning approaches only in Masters Level. Interaction with Masters Graduates from other stream (arts/ humanities) also confirmed that in stream other than MBA very little or none of the suggested approaches and tools was applied. Some other stream such as hotel

management or science or social science (food technology, engineering, architecture, development studies/social works) did encourage project work, field observation, presentation, but it was limited. Practical classes were more lab-based with few exceptions of some individual project works. So it was clear that MBA courses were extensively applying A-like techniques such as problem based learning (case study), collaborative learning (group assignment, group discussion), and action learning (practical assignment, internship, research based assignment). So, I selected MBA course as the site of my study.

Research Paradigm

Once the study topic was finalized, I had to select my research paradigm. A paradigm is the thinking pattern of a person (Groenewald, 2004), a basic set of beliefs that guides action and hence a worldview of the researchers (Denzin & Lincoln, 2005).

According to Denzin and Lincoln (2005), research paradigm entails three elements namely, ontology, epistemology, and methodology. Krauss (2005) states that "epistemology is intimately related to ontology and methodology; as ontology involves the philosophy of reality, epistemology addresses how we come to know that reality while methodology identifies the particular practices used to attain knowledge of it" (p.758-759).

I had option either to select positivist, interpretive, or the critical paradigm for my study. According to Orlikowski and Baroudi (1991), positivist is a scientific method that assumes that the natural world is governed by fixed relationships that may be discovered through carefully structured research, whereas interpretive approach assumes that meaning is something created by individuals, subject to a context and hence does not have a strictly objective or factual account of events.

Critical approach is defined by them as a research with an agenda uncovering inadequacies or inconsistencies in the current state of affairs from a social perspective.

In my research, I wanted to focus on understanding the perspective of the students, how they perceive their individual world of being a student of MBA, engaging with contemporary teaching and learning approaches and how they interpret and make sense of their learning processes. So when we are talking about individual perceptions, there can never be one reality as Conroy (2003) suggests that meaning vary between people and contexts and that people act on the basis of these meanings such that they create their own truths, and interpretive research seeks to discover how individuals make sense of their world as a way of explaining their response.

Accordingly, I decided to adopt interpretative paradigm for this study, as ontologically, the study seeks to understand the multiple realities existing within the consciousness of the various individuals (students). To reach this understanding of the students' reality I have interpreted what the students have shared with regards to their learning experience (process of learning) with reference to critical thinking.

Therefore, epistemologically, this research attempts to find out the knowledge of the reality from the viewpoint of those who have experienced it through a process of investigation (in depth exploration) and interpretation of those experiences as lived by the informants. Therefore, this research is based on subjective epistemology and ontological belief that reality is socially constructed. Guided by this research philosophy I designed my research methodology. This philosophical paradigm guides the whole process of this research; the way I have collected, analyzed, and synthesized the data and drawn conclusion from it.

Research Design

In concurrence with the selected research paradigm, I proceeded to develop my research design. Research design is the conceptual structure (blue print) within which research is conducted. It is governed by the features that match the purpose and relevance of the study as well as economy in procedure (Cohen, Manion & Morrison, 2008) and hence guides the process of data generation, analysis and interpretation (Creswell, 2003).

In this research I wanted to focus on the process (tools, techniques, approaches) of teaching and learning and not so much on ascertaining the end results. I was more concerned in understanding what happens within the process of learning rather than measuring (quantifying) the outcome of the process. Therefore, I decided to choose qualitative approach as qualitative research produces findings not arrived at by any means of statistical procedures or other means of quantification, but through a person's narration of their experiences and the findings are arrived from real-world settings (Patton, 2001, p. 39 as cited by Golafshani 2003).

This research is an exploratory study, which explores what happens in the teaching and learning process. It also incorporates explanatory design, as it attempts to explain observed phenomena, where possible, given the availability of data.

Data Generation Tools and Procedures

Since this research focuses on understanding individual perceptions, my key data are individual's expressions, opinions, and comments gathered through the process of in-depth interviews with the informants and focus group discussions. For the scope of my study I felt that 'expressed views' would suffice as evidence and hence did not go for getting written testimonies.

Open-ended questionnaire, with indicative questions on various theme, were designed to solicit respondents views, opinions, experiences, and feelings. The questionnaire was used only as a guideline to guide the discussions, and not as a rigid tool.

As every interview unfolded in a different way, the discussion and follow up questions were different for each of the informants. I had to revise the questionnaire guidelines as many as six times, each time using a new one for new informants. After each interview, I reflected upon the questions I asked and made changes especially where I felt I was unknowingly providing leading questions or when the questions were getting me brief and superficial answers rather than in-depth reflections of the respondents' experiences. The change in the questionnaire helped me to transform the interview from a monologue, with me as researcher talking more, towards a more interactive dialogue, where the conversation was more informal and natural.

Focus group discussions were also conducted to complement the data generated from individual interviews. It was also a means to cross-validate data generated from the in-depth interviews, as focus group discussions were carried out with some of the same respondents participating in individual interview together with some addition new participants.

I felt that having some basic outlines of the research theme, based on the literature review, would enable me to see how the interviews were unfolding in a holistic manner and ensure that adequate data were being generated covering all the study dimension, such that richness in data could be ensured. Therefore, on the onset of the study, I also drew an outlined of the 'construct of critical thinking' based on my understanding and interpretation of various theories (presented in Chapter III), which

was not a fixed theoretical framework but more of a reference guide for analyzing and interpreting results.

I gave adequate opportunity to my research participants to express their opinions, while I assumed the role of an empathic listener. Occasionally, I summarized what I have understood and probed in area where I felt I did not have enough deeper descriptions. At times, I even challenged the research participants when they were providing contradictory information and gave them opportunity to clarify what they actually meant. I asked follow up questions whenever I felt the need to enrich the data, probing deeper into their consciousness.

I continued discussion till the point, with addition questions or at time repeating themes already discussed, such that no additional information were coming. Revisiting topics already discussed were important for data richness as well as validating data and addressing areas of contradiction. At the end of each interview, I asked the research respondent to add anything they wanted to say about the topics discussed as well as the process of the interview itself. I also solicited feedback on my approach of inquiry if anything had made them uncomfortably or if any area could be explored differently.

I continued interviewing new participants until the point of data redundancy or data saturation as described by Tuckett (2004) and Sandelowski (1986) (as cited in Laverty, 2003) was reached such that no new information or no further clarity on the issue could be reached by addition of new participant. I stopped further data collection once I was comfortable with the amount and depth of information generated and was confident to describe and explain each theme.

The transcriptions of each of the interviews were sent to the respective participants to review (member check) and a written response verifying the accuracy

of the content of the transcription was solicited. In addition to the direct quotes and expression, I have also used my own notes as data source. Such notes of researcher are referred as ‘Memoing’ and are considered an important data source in qualitative research (Miles & Huberman, 1984, p. 69 as cited by Groenewald, 2004).

Groenewald (2004) recommends four types of notes for memoing i.e. observational notes which notes down what happened during the process; theoretical notes that 'attempts to derive meaning' as the researcher thinks or reflects on experiences; methodological notes that helps the researcher to reflect on the methodology and critique oneself on the process, and analytical memos which are end-of-a-field-day summary or progress reviews.

Instead of four different notes, I maintained only two types of notes, one in which I took notes during the interview itself, jotting down key words, themes as well as my initial thoughts, reflections, ideas etc. This I have called the field note. Additionally, I maintained another note which was a combination of observational, theoretical and analytical notes as suggested by Groenewald (2004) but also included reflection in general and not tied to a specific area or process. It also included some reflection on methodology as well, but most of the reflection on methodology was done while revising the questionnaire guideline rather than maintaining a separate note. I have called this note or memo as ‘analytical notes’.

The process of writing the field notes began during the process of interview itself, where I jotted key words, thoughts or ideas or even questions. These were mostly preliminary thoughts or first ideas that occurred during the interview without much reflection on it. After each interview, I went through the field notes (and the transcription) and then developed my analytical notes which included mapping of my thoughts/idea, hunches, impressions, emerging themes with the aim of developing

themes and drawing relationship and inter-linkages. In this note I also noted down my preliminary interpretation i.e. meaning that I derived by relating the findings with the theoretical understanding I had developed on the topic.

Filling the analytical notebook did not take place in specific time, but at different intervals, whenever some thoughts occurred to me, which was of collective or general in nature and not related to specific interview. Additional reflection was added in these analytical notes after the data coding, categorization, and analysis.

Data Analysis and Interpretation

The preliminary data for this research consist of precise description of what the respondents have expressed, i.e. the 'key expression or comments' regarding what the respondents shared in terms of their belief, feeling and experiences.

During the whole process of information generation and analysis, borrowing on the methodological approach of information elicitation and data analysis suggested by Hycner (1999 as cited in Groenewald, 2004), I have carefully and accurately transcribed each of the interview sessions and sent them to the research participant for member check. After approval of the transcription by the informants, each of the transcriptions was carefully coded to identify and generate categories of key expressions and comments.

Similar expressions were clustered together while at the same time differences of opinions and variations were separately noted. Minority voices (stand alone opinions) were also kept parallel with others under the relevant themes. Each of the expressions under the different themes was then summarized, extracting general and unique themes from all the interviews and making a composite. At this point I moved further than what the raw data offered, to draw my own interpretation of what the respondent had interpreted as Coffey and Atkinson (1996, p. 139 as cited in

Groenewald, 2004) state that “good research is not generated by rigorous data alone … [but] ‘going beyond’ the data to develop ideas” for initial theorizing.

Putting all the themes together, I sketched the (inter) linkages among the various themes, so as to draw a comprehensive picture of what is happing and how. At this junction, my field notes and analytical notes were also referred to, as field notes are already “a step toward data analysis” as it involves interpretation and hence are part of the analysis rather than the data collection (Morgan 1997, p. 57-58 as cited in Laverty, 2003). The process was more like ‘mind mapping’ where I established interrelationship and contradiction between themes and understood the evolving pattern.

As suggested by Whitehead (2004), during analysis I looked out for supporting as well as alternative themes, divergent patterns and rival explanations so as to find both supporting and not supporting themes at the same time, allowing individual accounts to be recognized as it “adds credibility by showing the analyst’s authentic search for what makes most sense rather than marshalling all the data toward a single conclusion” (Patton 2002, p. 555 as cited in Whitehead, 2004).

I have also solicited the input of an educational expert, especially for analyzing and interpreting the finding of the study. This educational expert is a lecturer in one of the university offering MBA course and has also been involved in the MBA curriculum design. Further, the topic of my research is also of professional interest to him. This educational expert acted as a sounding box for me, with whom I have shared my thoughts, ideas, preliminary finding and interpretation over several rounds of discussions. These sessions sometime took the form of interview, where I solicited his views while at others it was more of a reflection session where he asked me probing questions, such that I could justify my analysis and findings. Other times

it was also like a debriefing and analytical sessions. The expert also reviewed the final draft of this dissertation for consistency and accuracy in data interpretation and presentation.

Further, it is also important to mention here that being a MBA student myself, I had my own experience, beliefs, and assumptions of the course and hence the process of bracketing (suspending) my beliefs and personal judgment as discussed by Husserl (as cited in Laverty, 2003) was very important for me during this study. I have constantly been aware of the possibility of my own experience and beliefs influencing what I discovered during this study.

I have not allowed my own previous experience, meanings and interpretations or theoretical concepts to enter the unique world of the research participants (Creswell, 1998, p. 54 & 113; Moustakas, 1994, p. 90; Sadala & Adorno, 2001 as cited in Groenewald, 2004). Instead, as per the procedural guidance provided by Groenewald (2004), I have tried to bracket my own preconceptions and enter into the respondent's life-world and position myself only as an experiencing interpreter. My previous experience of MBA has instead been instrumental in helping me better understand the student's context and relate to what the informants were describing, and hence enabling me to skillfully interpret and draw meanings.

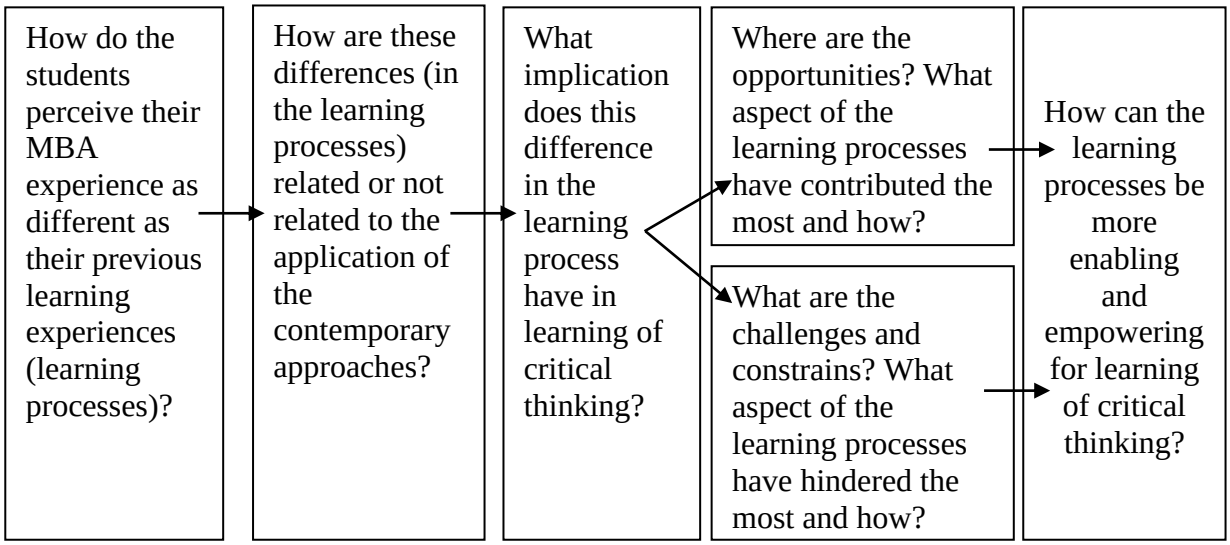
I have practiced bracketing at different level, starting from the very onset of developing information collection tools to collection of data and interpretation. While designing the tool for data collection and analysis, I have avoided focusing on area of exploration related to my personal interest or those which confirms my previous understanding and knowledge. Instead I have constantly focused on the research agenda and let the research questions guide my exploration.

During data collection and analysis I have made conscious effort to block my belief and experiences and attempted to see the research participants' experience on its own value. I have presented the participants voice, precisely the way they shared it, not even editing the content for language accuracy and consistency.

Only later at the stage of analysis, I drew my meaning from it, the way I understood and interpreted it. While generating themes and interpretation, I made conscious effort that "no position is taken either for or against" (Lauer, 1958, p. 49 as cited in Groenewald, 2004). I have followed the following process for data analysis:

Figure 3

Data Analysis Process



For facilitating the analysis process, the structuring of the process began with conceptualizing MBA course as a learning experience, lived by the individual students themselves (Lester, 1999). The study assumes that the teaching and learning approaches introduced in the MBA courses are new and different than the traditional approaches or what the students have experienced before, and hence is a unique experience for them. So the study first broadly explores how their learning experience is different than their previous learning experiences, capturing the differences (shift in

the learning process) because of the application of the contemporary approaches. This difference in learning experience is further analyzed to understand its implication in learning of critical thinking, with respect to opportunities and constrains in the learning process, which are explored with the perspective of a possibility (potential) for a more enabling and empowering learning process.

Nature of Respondents and Selection Criteria

The students who have experienced MBA Course in Nepal are my research participants. Since richness of information was my primary focus, I adopted purposeful sampling approach to identify the research participants, as Patton (1990) suggests that the logic and power of purposeful sampling lie in getting information rich cases from whom we can learn a great deal about the issue central to our research.

I selected one institution affiliated to each of the three universities offering MBA course in Nepal, namely, Kathmandu University (Kathmandu University School of Management), Pokhara University (Ace Institute of Management) and Purwanchal University (Himalayan White House Graduate School of Management). I used my personal contact to identify who presently were enrolled in the MBA courses in the selected institutions. After I got a contact with one or two students enrolled in the respective universities, I shared the respondent selection criteria with them and sought support to identify and contact potential research participants. Hence, I purposively identified my participants based on the pre-determined criteria as “In purposive sampling one picks up the cases that are considered to be typical of the population in which one is interested. The cases are judged as typical on the basis of the needs of the researcher” (Thakur, 1997, p. 92). The following criteria were established to select the specific sample:

1. Final semester students or recent (fresh) graduates: Final semester students or fresh graduates were deliberately selected, as they would have a more comprehensive picture and rich experience of the whole process, as compared to new students.
2. Previous education (before MBA) completed in Nepal: As this research aimed to explore the research agenda, in terms of the differences the students have experienced in their present MBA course in Nepal (where they are exposed to contemporary approaches) as compared to previous learning experience (where the approach were more traditional), those participants who had experienced both the traditional and the contemporary approaches in Nepal were selected.
3. Not yet employed after the course (fresh graduates): Professional work experience can also be a learning experience in itself, and does have implication on the learning outcome of any course as students get opportunities to apply their learning. Hence just to ensure that respondents do not complicate their course experience and learning with those of their professional experience, only fresh graduates were selected for the study. However, those employed before joining MBA course, but not presently working, were also considered eligible as research participants.
4. Good performers: Students who were good performers (with GPA more than 3) were selected as participants with the assumption that it is more likely that students with higher intelligence and capacity would capitalize on the available potential and opportunities. This was important to rule out the possible implication of personal limitation or intelligence on the learning processes.

Before making the final selection, background of each of the participants were checked to ensure that they fitted the required selection criteria. Snowballing method of sampling were used to identify additional potential participants. Snowballing is a method of expanding the sample by asking one informant or participant to recommend others for interviewing (Babbie, 1995; Crabtree & Miller, 1992 as cited in Groenewald, 2004). After the interview session with the earlier participants, I shared with them the selection criteria and asked them to recommend their friends (classmates) for additional interviews. I had to assure them that they would not be identified as a 'referee' for the sample.

For this study the sample size or the number of respondent was not predefined, as the emphasis was on ensuring depth of exploration and richness of data rather than numbers. Efforts were made in exploring each sample in greater depth for generating rich data rather than increasing the number of informants alone. The sampling continued until I felt there was no variation of data or no new data were forthcoming. All together in-depth interviews were carried out with seven research participants of the selected universities. Additionally, two focus group discussions were carried out, in which four previous participants of the in-depth interview participated together with two new research participants.

Quality Measures

Validity, reliability, and generalization are the three measures that define the strength or the quality of any research, which is also referred to as 'the trinity of truth' by Tobin and Begley (2004). As in case of quantitative research, qualitative research is also subject to standards of validity, reliability, and generalization, but since these specific measures are issues concerned with measurement with their roots in a positivist tradition, these are said to have no relevance in qualitative research (Tobin

& Begley, 2004; Golafshani, 2003). On the contrary, in qualitative research 'reliability and validity are conceptualized as trustworthiness, rigor and quality in qualitative paradigm' (Golafshani, 2003, p. 604).

Lincoln and Guba (1985, as cited in Golafshani, 2003) have elaborated 'trustworthiness' as credibility, transferability, dependability and conformability. Hence, in order to ensure the quality and trust worthiness of my study, I have primarily based my strategies on these quality measures.

'Credibility' is equated with internal validity and is understood as the 'fit' between respondents' views and the researcher's representation of them i.e. ensuring that explanation fits the description and descriptions are credible (Janesick, 2000 as cited in Tobin & Begley, 2004). Cho and Trent (2006) describe credibility as transactional validity which is an interactive process between the researcher, the researched, and the collected data for achieving higher accuracy. Hence, for ensuring the credibility of this study, I have adopted the strategy of member check and audit trail (or also called as inquiry audit). During the process of the interview, I have asked follow up questions to establish if I have correctly understood the research participant's viewpoints. Accuracy of all interview transcriptions has been verified through member check.

Bracketing (as discussed in the data analysis and interpretation section) has been practiced to ensure that research participants' voice have been adequately emphasized and presented with great precision. The whole process of data collection, interpretation (mind mapping sheet) and other procedural documents such as field notes and analysis notes have been well documented and made available for any kind of external scrutiny.

As described by Tobin and Begley (2004), ‘Transferability’ refers to generalizability of inquiry and is comparable with external validity. In qualitative study, often this criterion is disregarded as this kind of study does not aim to seek knowledge for the purpose of generalization but focuses on multiple realities which are often specific to particular context. It focuses on ‘completeness’ by enlarging the landscape of the inquiry such that a deeper and more comprehensive picture can be drawn. Therefore, for establishing the completeness of this research, my main strategy was in-depth exploration of the issue till the point of data saturation. I have explored the perspective of each of the participants in depth in order to create a broad description. I have also made sure to bring variation in the nature of the informants themselves, approaching students of different university/institutions. Even within the same institution (college/class) I have captured the perception of not only one category but brought variation (in terms of previous education background, urban/rural context, male/female, previous professional experience). This enabled me to create a complete picture and giving space to multiple realities.

Schwandt (2001, as cited in Tobin & Begley, 2004) describe ‘dependability’, which is comparable with reliability or consistency in quantitative paradigm. Dependability is understood as a process of research which is logical, traceable, and clearly documented. Hence, as in case of establishing credibility, audit trail is my main strategy for demonstrating dependability of the study. As suggested by Campbell (1996, as cited in Golafshani, 2003), consistency of data will be achieved when the steps of the research are verified through examination of such items as raw data, data reduction products, and process notes.

I have maintained well documented field notes, reflective notes, and other procedural documents. Interview have been transcribed, coded, and categorized such

that all claims, statements or comments can be linked to individual transcriptions for validation, by following the codes. Basically, this process can be equated to the concept of 'decision trail' as described by Whitehed (2004), which is a process that makes clear how the finding of the study have been reached, clearly stating the philosophical principles of the methodology and setting it out in such a way that it is accessible and open to scrutiny.

'Conformability' is compared with objectivity or neutrality by Tobin and Begley (2004), and is said to be concerned with establishing that data and interpretations of the findings are not figments of the inquirer's imagination, but are clearly derived from the data. Hence, establishing the conformability of the study, creating richness of the data through in-depth interviews and gaining multiple perspectives through variation in the nature of the informants have enabled me to establish adequate evidence for what I have presented, and being conscious and recognizing my own personal influences and deliberately bracketing them have been two of my key strategy for establishing conformability.

Richness of data enabled me to create vivid description that would enable the readers to enter the world of the informants and hence understand and relate to the description presented. I have accurately and systematically recorded the experiences of the students (respondents), as expressed and interpreted by them, being conscious of my own experiences, beliefs and pre-conception and hence bracketing it throughout the whole process of the research so as to understand the respondents' world on their own independent terms . I opened up fully to the perspectives of my research participants, acting as an empathetic listener, consistently trying to understand how participants make sense of their experiences and presenting it clearly and accurately to the readers. This process, according to Golafshani (2003), eliminates biasness and

increases the researcher's truthfulness and hence affects the degree of validity and reliability of a research.

Ethical Considerations

As stated by Cohen, Manion and Morrison (2008), code of ethics in research guides the researcher to perform his/her behaviors duly so as to get the research activities approved, acknowledged and accepted by the people in question and the readers at large. Ethical standards and code of conduct are important aspects of any research and researchers are bound to maintain high level of ethical standard and adhere to ethical code of conduct.

As part of ethical conduct of this study, high level of confidentiality has been maintained while presenting the data. Only those informants willing to participate in the study by one's own free are the participants of this study. Participants' right not to disclose any aspect of the information was fully respected. Research participants were not pushed or challenged at any point of time or put into uncomfortable situation. On the onset of each interview confidentiality and their right not to disclose any information or experience that makes them feel uncomfortable were shared.

Full disclosure of the purpose and methodology of the study were made to each of the participants. At the end of each interview, participants were asked if at any point they felt pushed or uncomfortable and feedback was solicited if any questions or any aspect of the interview or behavior of the researcher had to be changed. No such negative feedback was received from the respondents and almost all the respondents shared that they felt relaxed and comfortable throughout the interview.

I pledge that the data and information received have been presented without any distortion. To the best of my knowledge, none of the respondent's view have been misrepresented, under/over represented or omitted. Further the information so

received as part of this research have been used only for the purpose of this research and has not been used for any other purpose nor will be done so in future.

Chapter Summary

In this chapter I have disclosed my philosophical standing and described my research methods and procedures. I have explained how I have generated data, shared the tools and techniques used and detailed out my analysis procedures. I have also described my research participants along with procedure for their selection. Finally, I have outlined my strategies for ensuring quality standards and trustworthiness of the study and the ethical considerations I have adopted during my study.

CHAPTER V

EXPERIENCING CONTEMPORARY APPROACHES: EMBARKING ON A JOURNEY WITH A DIFFERENT LEARNING EXPERIENCE

In this chapter I shall explore the students' perspective of their MBA journey, first understanding their hope and aspiration of joining the course and then further exploring how the students find their present learning experience as compared to their previous one. From my previous experience as a researcher, I have realised that it is difficult for people to articulate their experiences without any reference point, but they find it much easier to explain if they can compare, contrast, or describe in relation to some other specific reference points. Hence, I shall explore the present experience of MBA as compared to their previous learning experience.

I shall first explore how and why the students find their present learning experiences different and then identify what aspect of this difference (transformation) is related to the application of the contemporary teaching and methodology. From these key differences i.e. the key aspects of the course the students describe as a major change or shift as compared to their previous learning experience, I shall attempt to understand the various learning processes, learning behavior, and learning orientation promoted.

Embarking on a New Journey: Hopes and Aspirations

What one expects from experiences, with what aspirations or motives one chooses to experience something shapes those experiences and learning. It has implication on how one perceives the process, how they make sense of it, how they value it and what they gain. In order to explore the students' learning experience in MBA, I felt it would be interesting to first explore what the students actually expected

from the course and what their hopes and aspirations were before embarking on their MBA journey.

While sharing their hopes and aspirations from the course, some of the participants accepted that they joined the course without any clear idea of what it actually entailed, because for some it was the only next step to take after completing their bachelors in management, while for others "*there was a kind of trend*" in doing MBA. Yet there were another groups, especially those from non-management stream, who had joined MBA believing management to have wider scope and hence better future job prospective, as Kundan Sharma describes '*I saw more scope for management, like, I noticed that there were a lot of newspaper vacancies asking for managers. Normally, there was less demand for other streams*".

Almost all the research participants, even those who initially shared they joined MBA without any specific expectations, mentioned 'future job potential' as a major pulling factor. Research participants shared that they believed that the course would help them groom into 'professionals' ready for the job market, as Suvi Pradhan reveals "*MBA is a professional course and it has to make us more saleable*". Manju Manandhar shares similar belief where she feels she has made a huge investment and expects high returns from it in terms of better job opportunities. In concurrence, Midur Shakya and Manoj Ranjan also accept 'job prospective' being a key motivation for deciding to join the course as most of the job advertisement they have seen have asked for MBAs to apply.

Most of the research participants had clear ideas what the course had to do for them, i.e. increase their market value, but did not exactly explain what particular skills they aimed to gain that would enable them to be more competitive in the job market or 'how' the course would make them more 'saleable' as Manju shares "*I was only*

concerned with the degree itself. I just knew that MBA will increase my value to some extent. But, I hadn't imagined what MBA will be like". On further probing on the skills or competencies they expected to learn from the course, some of them stated learning managing skill or understanding how things work in a real life situation in general while others emphasized on aspects like personality development, grooming, communication, presentation, and being articulate and competitive.

Unlike others, Manoj Ranjan, in addition to hoping the course would enhance his future job prospective; he also had some expectations on 'how' he would like to learn. He expected the course to be 'different' because he had joined MBA as he was tired of rote learning and memorizing content by heart. He states:

> *I was so sick of rote learning. I gave up Masters of Business Studies (MBS), after few months, as the teaching methodologies were still the same like in my previous years, where I had to memorize everything. There was only lecture with no outside knowledge and opportunities for personal development. I joined MBA hoping it would be different. Even though the course content might be similar, the way of approaching it would be different.*

As anticipated, he found the teaching and learning approaches in MBA different, but at the same time expressed his dissatisfied with the course because the college did not have a 'job placement program'. Dharma Upadhaya, while discussing his reasons and anticipation in joining MBA, is not explicit on his expectation with regards to change in the teaching and learning approaches or the process of learning. However, while discussing the MBA course he does share his fascination for a 'different learning style' he believed that the course would offer as he states:

It was so fascinating to see the MBA students, sitting around in the college premises, working on their laptops while all our life we have just read books and listened to our teachers

In similar line Midur also did not have a very explicit idea on any particular skill or competencies he wanted to gain from the course, but indirectly appeared to be fascinated by a different learning style promoted by the course and also attracted by certain transformation that he believed was possible from the course as he states:

I was amazed to see my sister transform after she joined MBA. She came home to do her assignment on her computer; she was always using the internet. Five years back, when we see a person doing assignment on the computer it looked different…we did our assignments on A4 paper. Her communication skill impressed me the most. The girl who was so shy before was often questioning us… she was so confident in communicating, she was able to present herself well in front of anyone

Both Dharma and Midur, did not intentionally join MBA, but could not forgo the opportunity when they were able to succeed in the entrance exams because they considered themselves fortunate to get selected in a reputed institution for a course which had such good reputation in the market as Midur shares "*Being able to pass the entrance test in this university was a competitive thing…. Among hundreds of those who applied, I was also selected and I thought I should not let this opportunity go*".

The above discussion on the students' hopes and aspirations in joining the course clearly indicate that 'enhanced job potential' has been a key driving factor behind the their decision. 'MBA' course in general and those offered by some specific institution has a good brand image and there is a certain 'expectation' created around it which has shaped the hopes and aspirations of the students. Students use terms like

‘increased value’ and ‘saleable’ to describe what they expect to gain from the course, which indicates their hopes and aspirations has more to do with the end result in terms of being competitive in the job market and less on the ‘learning processes’ itself. So, at the beginning of the journey, the students have less expectation in terms of any specific teaching and learning approaches used in the course and hence no specific demand for it. However, the students do appreciate and value the contemporary teaching and learning approaches adopted in the course.

Students also did not explicitly express any expectation or anticipation to learn any specific skills or competencies related to ‘critical thinking’ or dimensions of critical thinking. Some references were made to terms that were linked to critical thinking, as described in the various literatures, such as analytical skills or widening of knowledge, or application of knowledge or interpersonal (interaction/dialogue) skills. However, the expected end result of gaining those skills was to increase their ‘competitiveness’ and ‘job perspective’. This indicates that the students have entered this journey on MBA without any conscious expectation of learning critical thinking skills.

Key Shift in Teaching Approaches: Teaching Style and Techniques

In order to understand the students’ perceptions of their learning experiences, the research participations were asked to describe their present learning experience in MBA as compared to their previous learning experiences. They described their previous learning experience as ‘traditional’, ‘lecture based’, ‘theoretical’, ‘book focused’ and ‘exam oriented’. Once of participant also referred to their previous experience as ‘academic’ implying it to be too theoretical and book oriented. In contrary, they describe their MBA experience as ‘professional’, ‘practical’, ‘interactive’ and ‘engaging’. The students find that the difference in teaching

approaches promoted in their MBA course have contributed towards creating a different learning experience for the students.

Change in teachers' personal style of teaching. Students explained that that one of the key differences the student felt was in the teachers' style of teaching. All the research participants shared that the approach in delivering content is the same as before, but the lectures now are not just theories or content from the book. It is now complemented with pre/post lecture discussions, sharing of real life examples related to the concept or personal experiences of the teachers. Teachers uses 'questioning' as a tool to promote interaction among the students as Midur share:

> *Teachers can get the students to participate and interact by asking students questions like what do you think Midur or what do you think Rashmi*? *or having a quiz session or singling out less vocal students with direct questions or bringing them to front of the class to share their views*.

Application of contemporary tools and methods. In addition to differences in the teachers' sharing styles and class discussions promoted through questioning and debates, additional material and approaches such as case study, role plays, articles/journals reviews and sometimes external guest lecturer for experiential sharing are also applied to facilitate better understanding of the content. Students explained that these kinds of exposures to various tools and approaches have also contributed to creating a different learning experience. Dharma describes the teachers teaching style in the class room as follows:

> *The lecture like before are usually slide-based...but now we also do articles related to syllabus and there are case studies. We practice that way…for example, if there is a chapter on leadership in organization relationship subject, we had to prepare a report on leadership, we also do role-plays as*

well, in some subjects…sometimes we also have guest lecturers, who come and share their experiences or take some class on some topic

Midur further add to the description of the learning approach stating:

Only to talk about one teacher specifically, there were always case studies. One individual case study, one group case study, one small situation clipping from a book that we had to solve, and then there are other extra readings to write synopsis for, and article critiquing. We would be given around four to five assignments every week.

In addition to the classroom based assignments, students are also exposes to real life/work situation such as internship, various stimulation exercises (which, often are field visit based or conceptualizing real business concepts) or event management assignments (such as students organized seminar, fun fair events, inter college meet etc), which are often promoted as part of the learning process and is valued by the students as an alternative or different learning approach as described by Manju:

MBA at our college not only teaches us the course content but they also involve us in different extra-curricular activities. There is 'Expression' [inter college meet/competition event]….we can develop ourselves not only through curriculum but also extra-curricular activities. We can learn about teamwork from 'Expression' as well..... Then we have assignments like interviewing an entrepreneur and write about his/her success story and presenting it.

For many of the research participants these contemporary learning approaches are new which they are 'experiencing it for the first time'. Few of them were familiar with some tools such as class presentations but the frequency was less, almost 1-2 for the entire course and hence the impact was not felt. Students that were from the management background had done case study but only for the exams and not

integrated in their regular learning sessions. One student from engineering faculty shared that case study was part of their regular course, but again the frequency was very less, and the approach was quite different as Midur describes it:

> *We were given a triangle and asked to find the value of x, and we find the value of x by using a formula in engineering. That is all. But, we don't have to find the value of x in management! Rather there is analyzing situations or providing recommendations*

The Institutional Factors Enabling Shift in Teaching Approaches

During the discussions the students also indicated a number of factors which facilitated this shift in the teaching approaches. They were:

*Class duration (hour).*The research respondents Manju and Kundan believe that longer lecture or class hours has also been instrumental for this change as just presentation on the content or lecture are not adequate to cover a 2-3 hour sessions. So, the teachers and students engage in other task such as class discussions and assignments, as pointed out by Manju when asked to describe how it was like being a student in MBA:

> *Like before they teach here as well, but the method is different. While we studied in bachelors there used to three or four classes of around 40 minutes each, but here classes are of two to three hours…it is not possible to have only lecture sessions for two to three hours…so after the lecture sessions we have question and answer sessions or class discussions and other activities*

Class size. Manoj, who did his bachelors from a public college feels that fewer number of students have enabled the teacher to have more direct contact (interaction) with the students as well as implement the contemporary tools and approaches, as he explains:

> *There was a good faculty in my previous college as well, but classes used to be really packed with like ninety to hundred students…There was excess number of students and the teacher would not really be able to have control over the class.*

Assessment approaches: Examination and scoring scheme: Research participants also shared that a difference in the assessment (examination) and scoring system has also been instrumental in creating a different learning experience. Students, specifically those, who have come from a traditional education system with annual examinations which entailed almost 100 percent of the total score find the assessment system with 40-60 percent (for 'practical' and 'theory' as they term it) instrumental in creating a different learning process. 'Theory', as explained by the students, connotes the final examination (at the semester end), which is often externally organized by the university from which the college has received affiliation (i.e. question is set and scored externally). This examination is often referred to as 'external assessment'.

'Practical' connotes those organized internally by the college, and scored by the teacher/professor conducting the courses. Score for 'Practical' assessment (also referred to as internal examination) is based on various aspects such as attendance, class participation, assignments etc. For many of the students, 'practical' assessment is a new experience, while some of them did have some practical assessment, but was very limited and the score allocated was also less and hence they were not much valued.

Among the three factors identified that have facilitated application of contemporary approaches, the change in the assessment system appears to have contributed the most.

The assessment scheme, which is ‘practical’ assessment based, has promoted more active application of the cotemporary teaching tools and methods. Since the teachers have to assess the student’s performance and score them, the teachers rely on the tools and methods to determine the students’ participation and award them scores. Hence it has become a key part of teachers’ teaching strategies. Since the process is linked with score, the students also consider it as an important aspect of their learning strategies, as Midur explains:

> *Earlier also we also had marks allocate for class participation, but since only 2 marks was assigned for class participation no one really cared for it. But not now, we have like ten to even twenty marks allocated for class participation in some subjects. So now, we are more motivated.*

Learning Processes and Practices Promoted

The above discussion on the students’ perceptions of their present learning experiences indicates that there are some major shift in teaching approaches as a result of application of the contemporary teaching and learning approaches-style, tools, and techniques. The shift in the teaching approaches and institutional arrangement have promoted some key learning process, practice and traditions and hence exposed the students to ‘learning experiences’ that have implication on the students’ learning behavior and orientation towards learning.

Collaborative Learning and Questioning Approach: Promoting the Process of Sharing of Ideas and Discussions

The promotion of collaborative learning through group assignments and group work as well as the questioning approaches adopted by the teachers has been instrumental for creating an environment of articulation and discussions. The questioning approach adopted by the teachers has not only been instrumental for

promoting interaction between teachers and students, but also among the students themselves. The teacher uses the questioning approaches to enable the students to articulate their viewpoints, as well as facilitate the discussions among the students, especially in larger open forum discussions.

Group discussion happens as an open forum, usually before or after lectures, where the whole class participates as a large group, often facilitated or triggered by the teacher. Group discussions also happen in small groups where case studies, or journal review or projects are given as a group assignment to small groups of 4-6. Group process or learning in groups has been instrumental in promoting interactions and discussion as Midur describes:

> *There would be more interaction because of groups…If it was one person his or her point would soon be over …. But with five people in the group the discussion would continue…once the discussion in your group ends then there are other five groups with five more members to comment and discuss on your group's views during presentation*

Students finds a certain level of comfort in groups and enter into discussion and debates as Midur further explains "*Because the friends in a group are of same level, even in a short time, there is more interaction and discussion as everyone can express freely*". Interaction in small group is much appreciated by students, especially the introvert and the less aggressive one as they find it much comfortable to open up with close friends as Suvi shares "*in a small group discussion, everyone gets to speak, even those who are shy speaks in small groups*".

Experiencing the world of ideas and opinions. Students shared that participating in interactions and discussions have given them an opportunity to listen to different ideas and perspectives. All the research participants, when describing the process of

collaborative learning and group processes, always related it to the process of ‘brainstorming’ and describe it with words such as “meeting of minds” and “sharing of ideas” and hence a process that has given them exposure to various ideas and opinions.

Experiencing the world of difference of opinions, contradictions, and debates. The process of sharing of ideas and discussions has also meant exposure to alternative viewpoints, difference of opinions, contradictions, and hence debate and arguments as Midur describes the process:

> *When a case is given, there is brainstorming and discussion. But, among the five members, there are chances that there will be contradictions. There have been many cases where four members in the group are talking the fifth one might not agree, But, that is nothing personal and that is acceptable too…. in the end we come to a conclusion or a solution.*

Problem Based Learning Approach (Case Studies) and Action Learning: Promoting the Process of Practical Application and Problem Solving

Change in teacher’s teaching style of delivery where focus is not only in the theory but also linking theoretical concepts with practical examples, real life situations and their own experience have given students an opportunity to understand the practical application of the concepts.

Further, assignment such as ‘internship’ where students themselves experience the real work environment; field visit and research/study based assignment such as industrial visit or interviewing entrepreneur and reporting on their findings or event management where students organize real events and understand the concept of organization or management has also been instrumental for giving students exposure

to ‘practical’ learning experience. Kriti Joshi, shares her internship experience in the following way:

> *I was lucky enough to get this assignment to develop promotional material for this company. We were given theme and we had to develop tag lines and brochures. I could apply my marketing knowledge while doing the assignment…we had to work with various ideas and choose from various options … It felt great when the company actually used the material I developed*

Further, applications of problem based learning approach such as case study and review of article/journals have also been valuable in creating a process that enables the student to experience real life scenario and practice problems solving. As Manoj puts in “I *used to believe all the case studies were real, especially those of Nepali organisation, now I understand they are not real, it is made just to make us understand the real world.* Other tools like ‘Role play’, where they have to in-act the real life character, is also valued for giving exposure to real life experience of facing and addressing problems.

Experiencing the multi dimensional world. The process of practicing real life problem solving and process of understanding practical application have provided the students an opportunity to understand the multidimensional nature of issues or problems. Midur, explains how the process like solving case studies helps one to view things from multiple dimension as he explains:

> *If there is a case where the manager is not performing well…we have to understand why the manager is not performing well in the first place. Maybe, there is lack of support or direction, or also may be due to lack of resources… if there are no resources then we have to review why there are no resources.*

Experiencing real life scenario and solving practical problems have promoted the practice of understanding issues or challenges from multiple dimensions as Midur explains:

> *In MBA, we are taught in every course to view thing from different perspectives… anyone studying in my institution would not forget "PESTEL' analysis. It means political, economic, social, technological, environmental and legal; and covers all operating environment. When we analyze anything, we have to analyze from all these perspectives.*

Experiencing the world of complexities. Some of the research participants believed that the process that gives exposure to real life experience is valuable for preparing them for their actual professional life in the future; grooming them for the real professional life, preparing them what to expect when they actually join the professional world. On the contrary, for participant like Midur, the exposure to the world of experiencing real life situation and understanding practical application have meant an opportunity for the students to understand the complexities of the real world and gain skills to cope with various situations considering the various actors and dynamics involved.

Learning Behaviour and Orientation Promoted

These learning experiences and resulting learning outcomes have shifted the 'learning approaches' of the students i.e. their process, style, orientation and behavior towards learning when compared to their previous learning styles and approaches.

Multiple Perspectives

The experience of the learning process where the students are exposed to various ideas, different perspectives and the awareness that in reality things are complex and multi-dimensional and needs to be viewed from different angles have

promoted the behavior of approaching issues from different and multiple perspectives. Students say that their learning process requires them not to limit themselves to single dimension but to view issues from multiple dimension.

Alternatives and Justification

Through exposure to various ideas (difference of opinion) and the orientation for viewing things with multiple perspectives, students have developed the orientation that same issue or situation can be understood and interpreted differently. They have accepted that people have different ways of thinking and hence there can be difference of opinions and perspectives. Hence there is no right or wrong answer, only difference of perspectives; hence it's okay to have different opinion. Therefore, alternative viewpoints need to be acknowledged and accepted.

Further, exposure to the process of practical problem-solving and understanding real life application has also promoted this orientation that world is complex, dynamic and multidimensional with many actors and factors (dimensions) influencing it. Hence, there can be multiple view points or dimension to the any issue, situation, problem and challenges and hence various ways or approaches to tackle it. This has promoted the understanding that there cannot be one single or standard or fixes ('right') solution to a problem and hence what is important is the ability to deal/cope with the situation as one interprets or understands it. Students now feel that it's okay to have different solutions or answer to a situation or a problem as there is no 'right or wrong answer', and solutions are acceptable or 'right' if you can justify it as Sugam explains:

> *How much is 2+2? Engineer says it's 4, mathematician says he can get 5, while an economist asks 'how much do we need?' So 'nothing is right or wrong'. You don't have to believe something because some theory says that. I*

think we have to say what we believe, but must back up it by strong justification.

Key Shifts in Learning Approaches

Students find their present learning approaches different as compared to their previous learning approaches. The shift in the teaching approaches and the learning behavior and orientation promoted have enabled the students to transform their individual learning approaches as well and redefined how they engage in the learning process and their style of learning.

From Silence Recipient towards More Interactive Learner

As compared to the previous learning experience the student find their present learning experience more interactive and engaging. They feel a greater need for interactions, sharing of ideas and opinion. Earlier they only had to listening to the lecture but now they have to speak, express themselves, share ideas and interact with others. Since deliberate measures are used to promote interactions, such as questioning by teachers and group discussions and as the student's participation and interaction is also linked to assessment or scoring system, students feel compelled to actively participate in discussions and voice their opinions in order to excel as explained by Manoj:

We have to go in front of the class and speak. One could keep silent and attend class for one or two days, but for how long. I attend college to study and I also need to secure marks. Another motive also lies in the fact that, if I bring a new issue in class, I would gain attention

The need for being competitive, different, to standout and be heard have enabled the students to overcome their inhibition in expressing their opinions as

Kundan shares "*I felt that I have to speak out, as the one who speaks win. So I started practicing in front of the mirror*".

In one hand the scoring scheme has promoted the need for expressing their views, while on the other hand the way the course content and learning orientation has been promoted also has enabled the students to actively engage in interactions and discussions (seeking others views and opinions).

Students feel that because of the exposure to diverse ideas, different opinions and, practical understanding of the content they are now more confident on the content and hence are able to express themselves more freely. Dharma shares that because of the process where one is exposed to diverse viewpoint they "*know more*"; "*become more knowledgeable on the topic*" and hence can share more. The process of listening to others opinion enables them to develop (form) their own ideas and hence gives them content to share as Dharma shares "*I like the sharing of individual ideas the most. We know what is right and wrong about every individual's ideas and we can generate our own ideas from there*". Midur also feels that the process of interactions contributes to the process of shaping one's ideas and opinions and hence promotes the process of further interaction as he adds "*during the process of interaction I am always thinking what should I say next, so I am always prepared and involved*"

Further, the perception that the field of management is multidimensional and dynamic and hence it can be viewed from different ways have also enabled the students to open up to questioning and expressing their views. The belief that management is something applicable to everyday life- what you see around together with the orientation that nothing is 'wrong' as long as you can justify it has enabled students to express their opinion(s). Midur explains:

> *In other fields, we have to understand and accept the theories e.g. while studying Newton's law we cannot question why didn't Newton eat the apple instead…But, in management, it is possible to do so. If we are taught that 2+2=5, I would rather not question it and understand that the sum indeed is 5 and not ask why the answer is not 4...management is related to something that happens in our daily life, it is also possible for thinking out-of-the-box, in management, there are possibilities to question from different perspectives, I can question why not six, or three or four.*

The understanding that 'all opinions and answers are valid as long as you can justify it' has been instrumental in helping the students overcome their inhibitions and fear of being 'wrong' and express freely as Kundan shares "*Earlier I used to fear what other would think if I said something…now it doesn't matter*". Further, Suvi also shares similar feelings as she no longer fears what other think of her and says she speaks thinking '*je parla parla*' (no matter what, or whatever the consequences).

From Disengaged Learner towards Greater Participation

As compared to their previous learning experience, the students describes their present learning experience as having "lots of assignments" and "class discussions" and hence more interesting, engaging, and participative as Midur explains " *Had there not been role plays and case studies, the classes would have been monotonous…it is because of these that the classes are active and participative*".

Because of the various tools, assignments, and class activities students feel greater need to actively participate and continuously engage throughout the process in order to excel as Dharma explains:

> *In BBA, I used to study only during the examinations. We were judged only once in a year by a single paper. Here are a lot of things like attendance and*

assignments. There is evaluation of mid-term exam as well. There is a weightage for everything you do. That's why I get a feeling that I have to do everything seriously, be up to date on my performance, and perform well on every aspect… It isn't possible if you think of doing good only in the final exam.

The students feel the need to interact, express their opinions, give alternative perspectives of different viewpoints, consider things from multiple perspectives and come up with their own solutions and justified answers. For this it is important to be part of the class process, understand how other thinks and address issues, and one's performance is depended on this as Midur explains "*if I missed one class I loose a lot, earlier we could read from books and lectures, but now it is more important to listen to your fellow students as well*".

From Theory towards 'Practice'

As compared to the previous learning experience, the student also finds the present experience as 'practical'. The student's explanation of the term 'practical' reveals that it has two connotations. First it means being self-engaged in the process as active learner, actively participating in different learning activities than just reading content from the book as they find themselves doing 'practical' assignments, projects work, making presenting, managing events and engaging in the discussions alongside their teachers and fellow students. Secondly the word 'practical' means need to understand the 'practical application' of the theory or content they are introduced to and not just relying on theory as Manoj states:

Previously, we only had to write and summarize the theory, but this time, we had to write about how to implement such theories... we can read the books

ourselves, why come to the college, what we are looking for is practical knowledge, how it is related to real life situations

Manju agrees with Manoj, as she thinks the assignments and class discussions that demands that they relate concept to actual application (in real life situations) have helped them keep up to date and well informed about everyday events and trends and not just rely on theory. With the focus on the 'practical application' and emphasize on relevance to the present context, student like Manoj feels the theories 'which are hundreds of years old' are losing its relevance to the present context as he explains:

Earlier we were focused on rules or theorems; but right now it's more journals that we read, search for cases on the internet and try to understand the present market scenario and business trends; this has made it more effective….what can a book written ten or fifteen years ago do! That might have been relevant then, but now, market situations have changed. People say that after the global crisis, the past economic theories are no more applicable

Now the students no longer have to depend on 'fixed' 'constant' or 'right answer' as there are multiple perspectives and multiple solutions. They are no longer concerned to get the theory correct but to get the 'justified solutions' as per the context. Sujan also agrees with Manoj and states that "*You don't have to believe something because some theory says that. I think we have to say what we believe but must back up it by strong justification*"

However, student like Midur still recognizes the important of theories but also appreciates his freedom in finding his own meaning of those theories as he explains:

Of course, there are theories, if there are no underlying principles, how can things exist? But, for every theory taught in MBA, we had a lot of group

discussions, simulations, field visits…there is more focus on practical implications... It is up to us to how to understand and what to do

From Rote Learning Towards Understanding

Another major change the students have experienced in their learning pattern is the freedom from rote learning. Almost all the research participants shared that they were used to rote learn, but now does not feel the need for it or minimized the habit of memorizing content by heart as Kundan share "*I do not think I would have to rote much here. I used to rote so much earlier, I could even remember by heart what was written on which page*".

Students now feel class interaction, participation, understanding practical application and the contemporary tools and approaches are more important for their learning than memorizing theories as Manoj shares *"earlier I used to memorize so much, but now I don't have to. Class participation is much important now",* a feeling which is also shared by Manju as she explains:

Until Bachelors I used to read only the books and rote learn and write what is in the books during the examinations. While I sit for the exams in MBA, I hardly recall books. I refer to my knowledge from slides provided by my teachers, cases studies, newspapers, and what I face in real world

The decreasing emphasize on content alone have also promoted the increasing need to "understand and not just memorize' as Midur states:

Earlier if I bunked a class, my friends could easily update me on the content, and I could still pass whether I understood the content or not, as I could memorize. Now you have to understand…. Now I have learned to understand

Since now students have to actively engage in the learning process, put forward their viewpoints and actively interact with fellow students, they now feel the

need to understand as Kundan shares "*how can you convince others if you have not understood yourself*". The need to understand is even more because of the need to explain practical application and relevance of the content in exams/assignment and not just state theories like before.

Students are able to let go of their behavior of memorizing also because of their orientation that the world is vast, complex, multidimensional, and very dynamic, where the same problem can have multiple solutions; there can be multiple perspectives and hence multiple answers. Students now believe that it is "impossible" and hence useless to memorize.

From Handed Down Knowledge toward Self Exploration

The students have experienced the need for greater exploration and discover things for themselves through inquiry, investigation, additional information search etc. The discussions and debates, various assignments where one needs to understand the practical applications and hence keep oneself updated are some of the factors promoting exploratory behavior in students. The students find that the lecture or the content provided in the class are not adequate and have to explore further as Midur describes:

> *There is a lot of difference in MBA… earlier the teachers tell us about 60 percent of what is, and the remaining 40 percent we have to find out what ourself. But, in MBA, we have to figure out 80 percent of what is on our own! The teachers just guide us for the remaining 20 percent.*

Freedom from 'theory' and 'memorization' have also given them more opportunity to explore as now students have to rely more on practical application and what's happing around and hence explore. As a means of exploring practical application, students are asked to follow on business trends like the stock market,

review articles and journals, follow newspaper or other things happening around, keep track of the business activities such as launching of new products etc. Kriti and Manju also share a similar view as they explain while doing a case study or critiquing articles they have to do a lot of research on the internet.

Learning Outcomes: Achievement and Transformation Experienced

We have discussed the change in their present learning process and the resulting shift in the learning approach, orientation, and behavior. So, what does this shift actually mean for the students? What have they gained as a result of their experience, what change and transformation have they experienced? In this section I have explored the student's perception of their achievement from the course.

While discussing their learning outcome all the participants consistently talk about two broad areas of achievement i.e. Confidence and Socialization, in addition to other managerial skills such as managing time, stress, and analytical skills. The key areas of learning outcome are discussed below:

Widening of Horizon- "Knowledgeable"

All the research participants acknowledged that the experience have been valuable for them to widen their knowledge horizon. They now feel more knowledgeable, have better and deeper grasp of the content as they now understand, are aware of its multiple dimension and have a wider perspective on things.

Articulation

All the research participants also accepted that they are 'more confident' than before because of their MBA experience. Confidence is described primarily in terms of 'articulation' i.e. being able to express and communicate confidently. The learning environment promoted have compelled students to overcome their inhibition, given

them the forum to constantly practice and learn, as well as given them ‘voice’ by giving them ‘ideas’ as well as building their confidence in the subject matter.

For Manju it’s more about gaining the ‘skills’ to communicate effectively, as she shares “*while I talk to my friends, they say my style of talking has changed*”. For others, including Manju, it also about having something to say now as they have better grasp of the content or they now have an idea or opinion of their own, unlike before.

Confidence is also described in terms of understanding of how to present oneself in front of others and is associated with personal grooming or personality development as Manju describes “MBA *taught us various etiquettes while speaking to someone and how to present self I feel I have groomed myself”.* Students also associate ‘personality’ with the ability or confidence to articulate or express oneself. With the development of communication skills and confidence in articulation, they expressed they feel their personality has been enhanced.

Team work- Managing Interpersonal Relationship

Another area that the research participants felt has been enhanced as a result of their learning experience is working with diverse team and managing the team dynamics. Though they have been challenged they feel they are compelled to work with diverse team and hence over the time they have learned the strategies and gained confidence to manage the team dynamics. The ability to deal with difference of opinion as well as the ability to express your viewpoint and defend yourself has also enabled students to manage team challenges and group dynamics as Manju explains “*You can’t guarantee you’ll always get to work with the groups you feel comfortable, but I have learnt to deal with difficult people [as I can respond to them]*”.

Handling Pressure: Managing Time and Stress

Research participants also shared that the process of learning enables them to handle pressure well, teaching them the skills of managing time and stress. Constantly working with lots of deadline that requires a lot of time investment in terms of preparation, material search necessitates effective management of time. Further pressure is not only because of the demand in terms of time and workload but also in terms of need to coordinate and collaborate with 'difficult' teammates in order to deliver within the deadline. Further students like Dharma, who describes himself as an introvert, also has to deal with the stress of 'speaking' if front of others as Dharma states "I *get to learn how to manage in less time, to handle pressure, to express myself, to cooperate and to work in a team*".

Analytical Skills

Research participants feel that other areas the experiences have contributed the most is strengthening their analytical skills. The practice of looking at things from different perspective, developing deeper understanding of the content, practice of exploring and digging the details of things and relating it to a bigger picture have enhanced their ability to analyze things better. Midur describes how the process of learning promoted in the course enables one to develop analytical skills:

> *We have to understand what is the effect that one variable had on the other… this way we are able to grasp the understanding and things stay anchored. If we relate one thing to another, it gets anchored! …we have to analyze the situation from different angles; we have to dig to the root cause.*

Decision Making: Alternative Generation and Selection

The exposure to the process and learning experience have also been valuable in helping the students to think about different options (view point) as Midur states

"*in the end we come to a conclusion or a solution; let us not say one but one or more solutions, recommendations or conclusions*". Similarly, Manju also believes that the case study helps them practice developing alternative as she states "we *study the case, see what the company did, and try to understand why it did it and what could be the alternative*".

The above discussion of the skills that the students have gained and the changes they have experienced indicates that the course has contributed most to two core areas i.e. 'confidence' and the process of 'socialization'. Students feel more 'confident' than before, because of enhanced personality, ability to voice their opinion, deal with different people, better handle pressure and also because of the confidence in their knowledge, ability to see broader picture, analyze, and make decisions.

Students also highly appreciate the process of socialization they have experienced, the opportunity to interact with others, listen to, and express ideas, develop personal network – externally and with friends. They find themselves more active in the social front. The ability to articulate, personality development, and the ability to deal with group dynamics and deal with interpersonal relationship have been instrumental in making them 'social'.

The reflection of the research participants indicate that the experiences have enabled them to transit form being an 'introvert' towards an 'extrovert'- who is confident to articulate, express, discuss, and debate, who loves to be 'social', know how to position and project oneself in a social setting, developing networks, and managing personal relationship.

Changing Trends and Shifting Boundaries: Implication of the Transformation

The above shift and transition in the teaching and learning process, orientation towards learning and the resulting transformation the students have experienced indicate an emerging shift in the traditional role of the actors involved in the process of teaching and the established boundaries.

From Teacher to Facilitator: Shifting Focus from Teacher to Students

The research participants have experienced an increasing role of the students in the learning process and decreasing role of teachers. The role of the teachers is being transformed from a 'a traditional knowledge provider' to more of a facilitator - facilitating discussions, class work, practical assignments and leaving the exploration, finding, and understanding more to the students.

The learning process, with more practical assignment and group work also demands more active participation of the students than direct contribution of the teachers. Midur believes that with the increasing participation of the students the direct role of teacher in teaching is decreasing as he describes "....*the class interaction would increase, and teachers' involvement in the class would decrease*". Though at times the teacher still performs the role of traditional lecturer, gradually they are also taking up the role of process facilitator.

From Class Room To Beyond: Single Dimension to Multi Dimensional Learning Process

In their previous learning process, the teachers were the sole source of knowledge. The learning process was one dimensional - from the teacher to the students. Now, the learning process has extended beyond teachers and classrooms to the external world through internet, field work, friends, after class informal discussions, newspaper, journals etc. Now not only the teacher engages with the

students, the student also engages with the teachers. Furthermore, students engage with other fellow students and other persons and institutions beyond the school boundaries. Hence, the source of knowledge is expanding and the learning process is getting multidimensional.

From Individual to Group Learning: Increasing Role of Fellow Students in Learning

With the adaptation of collaborative learning approach, research participants also find that the role of the fellow students more in their learning than the teachers, as Midur beautifully puts in "*earlier we had to listen to the teacher, now we have to focus more on what other students are saying… It is not 'self' but others who help us in the learning process*".

Earlier it was enough for the students to learn alone, listening to teachers and memorizing theories. But now students have to rely on each other for their learning and its outcome. The assignment which are often group based, where marks are scored by groups and not individual, have also increased the sense of interdependence and importance of co-learning. Hence there is increasing emphasize on social relationship as Dharma shares "It *was impossible to move ahead alone. Thinking that only I will do and won't cooperate with friends, didn't work. We had to keep good relationship with each"*

From Burden towards Freedom

The research participants describe the learning process with lots of assignments as very demanding in terms of time commitment, but at the same time also projects a sense of liberation or freedom. Hence they describe their new learning experience with words like 'liberating', 'less burden', 'much easier' and 'free'. Dharma feels that there is "*continuous pressure from the start to the very end of the*

trimester because of project reports, term papers, and class presentations". Even with so much work load, Dharma still feels comfortable and at ease as they appear to enjoy the pressure, as they can easily cope with stress and manage time. Once students learn to manage the time and social relationship, they say the learning process is much easier.

Students also find the learning process much more interesting and also easier because of the 'group work', as there is sharing of work load as well as responsibility because now 'two minds are better than one'.

Freedom from theory. Students also feel more at ease now because of the freedom from memorizing theories. It's much easier for the students to perform when the emphasize is more on participation and practical work than theories, one does not have to slog to excel but can perform well by actively participating in class participations, keeping oneself updated on a day to day basis rather than memorizing loads of theories. Dharma shared "*40 percent marks were internal… you can get marks if you come to class regularly and are attentive in the class.*

Midur shares similar view with Dharma as he feels that gaining marks for practical is much easier, almost like free marks as he states:

> *If I am able to score twenty for class participation, it will be easier for me later to score marks. It was like, if we are able to get twenty marks for free, we are motivated to participate in the class.*

Freedom from right answers. Further, the course is much easier now that the students don't have to bear the load of 'right answer' because anything can be right as long as you can analyze and justify. The belief that management is 'practical' can be understood from what you see and gain from day to day experiences or practical examples rather than from memorizing standard theories have also lessened the

burden. Suvi feels much easier now as she can deliver assignment or answer question "*from what you see around" "from your everyday experiences" or "practical examples than memorizing theories*". Similarly, for Manju as well, she does not have to "recall books" but explain things based on class discussions and real life experiences.

Students also feel a sense of assurance because they feel the practical assessment have promoted greater transparency in scoring and hence reduced teachers' control and monopoly as Midur explains:

> *In bachelors there was monopoly of teachers in awarding marks…But here, it is comparatively more transparent. How much mark has been given for what is clear here. It was not the case before.*

Increasing Sense of Ownership and Control

The increasing sense of greater need for participation and engagement indicates increasing ownership of the learning process. The students now also feel a greater sense of control of the learning process. The multidimensional learning process with multiple actors and factors is gradually shifting the control from single authority 'the teacher' to others i.e. the students themselves and the fellow students.

Students performance are based on factors like participation, articulation, group work which they have greater self control over, which are judged by the teachers. With constant engagement with the teacher, the students are able to judge and perform as per the teachers' expectations. Hence they feel in greater control.

Similarly, their performances are tied up with the performance of other fellow students. With the increase in their confidence to manage the team dynamics they feel in control of the process and its outcome. In fact they find it more effective and beneficial to work in groups when there is sharing of work load, giving them greater

leverage in performance and control. Hence, the perceived easiness and comfort in performance because of the practical assessment have given the students greater confidence and a greater sense of control of the learning process and outcome (in terms of score).

Additionally, the process of being engaged in the learning process, realizing that they too have a voice, their opinion counts, and their judgment makes a difference, have been a valuable process of self discovery, helping them realize their knowledge, their strength, and 'identity'. Hence, this development of self identify and the greater sense of control of the process, has put the students at the centre stage as a learner.

Discussion on the Findings

Student's aspiration for joining the MBA course is mainly to enhance their competitiveness in the job market. Their expectation is not specifically targeted towards any specific competencies they would like to gain. Further they also do not have any specific expectation regarding difference in teaching and learning approaches and the learning environment. However, though not expected, they find their present learning environment different from what they have experienced before and appreciate it for giving them an opportunity to experience a different world.

The students find their present learning experience distinctly different from their previous one primarily because of the application of the contemporary approaches, which have transformed both teaching approaches of the teachers and learning approaches of the students.

The change in class hour (longer durations), change in the class size (smaller size) and changes in the scoring system (based on practical assignment) are the three major institutional factors that have facilitated application of the contemporary

approaches and hence transformed the learning process. Where the course was earlier ‘traditional’, ‘lecture based’, ‘theoretical’, ‘book focused’ and ‘exam oriented’ now it is more ‘professional’, ‘practical’, ‘interactive’ and ‘engaging’.

Different teaching style. Students find the present teaching style different mostly because of the teachers’ style of teaching, where earlier teachers used to focus mostly on lectures but now the lectures are complemented with contemporary approaches such as open forum interactions, question and answering sessions and also other learning tools such as case study, group discussions, presentations, internships, article critiquing, role play, guest lecturer, students’ seminar, extra-curricular activities (events management). The contemporary tools and approaches have enabled the teachers to transform their teaching approaches.

Learning process promoted. The change in the teaching approaches due to the application of contemporary approaches have promoted learning processes that facilitates active communication and sharing of ideas and discussions that have enabled students to experience the world of ideas and opinions; introduced them to difference of opinions, contradictions, and debates; exposed them to complexities of multi dimensional world and practice practical application and real life problem solving and decision making.

Learning behavior and orientation promoted. The changes in the learning process have groomed new learning behavior in the students such as looking at things with multiple perspectives with the orientation that things are complex and multidimensional hence same issue or situation can be understood and interpreted differently. Students have also been oriented that people think differently and hence have different perspectives, ideas and opinions. Therefore, there is no right or wrong answer as long as one can justify it, and hence one has to acknowledge and respect

different viewpoints. This orientation has promoted the behavior of opening up to alternative viewpoints, accepting multiple realities and seeking justification.

Shift in individual learning approaches. The shift in the teaching approaches and the learning process, behavior and orientation promoted have fostered some key shift in students' learning approaches - redefining how they engage in the learning process and their style of learning. Students are now more interactive and explorative where earlier they were silent recipient. They find themselves more engaged in the learning process as proactive learners. Students no longer feel the need to rote learn and rely on theories but are more concerned in understanding the practical application.

Results of the shift in learning process and learning behavior. This change in the learning process and the resulting shift in their learning orientation and behavior have enabled students to develop in two core areas i.e. 'confidence' and 'socialization'. Students feel that they feel much more 'confident' than before, because of enhanced personality, ability to voice their opinion, deal with different people, better handle pressure. Their widened perspective and enhanced ability to see broader picture, analyze and make decisions have also further boosted their confidence.

Shifting boundary and control. Because of the transformation in the teaching and learning process, the traditional role of the key actors of the learning process is also changing. Teachers are no longer traditional knowledge provider but more of a facilitator. Students have experienced changes in their own individual roles as well as those of their co-learners (classmates), as now they find themselves and their fellow students more active in the learning process, actively influencing each other's learning process and learning outcomes.

Students are also more in control of their learning process and learning outcome, as now their performance depends on practical aspects such as class

participation and assignments, and not just teachers' assessment of final exams. Since the students find it much easier to score in practical assessment, it has promoted a greater sense of freedom, as they no longer have to rote learn and write the right (prescribed standard) answer, but can rely on their own experience of what works practically for them. The learning process has also given them voice, right to their opinion and judgment, hence empowering the students. This has transformed the learning process from teacher centered to student centered.

Chapter Summary

In this chapter, I have discussed students' hopes and aspirations of joining the MBA course in order to understand their expectations from the course. Then I have explored the students' perception of their present learning experience and the major shift (transformation) in it so as to understand the various processes, learning behavior and orientation promoted as a result of application of contemporary teaching and learning approaches. I have also explored the learning outcome (achievements) as a result of the transformation in the learning process. The implication of this transformation on learning of critical thinking is discussed in the subsequent chapters.

CHAPTER VI

THE TRANSFORMED LEARNING PROCESSES AND OPPORTUNITIES FOR LEARNING OF CRITICAL THINKING: HOW FAR ARE WE?

The previous chapter identified the major shift or transformation in the teaching and learning processes and the learning behavior, orientation, and skills promoted due to the application of contemporary teaching and learning approaches. With reference to this transformation, in this chapter, I shall further explore the opportunities and potential for learning critical thinking, existing in the present learning processes. My exploration shall focus on understanding the specific learning processes, learning behavior, orientation and competencies (skills/dispositions) as it relates to the potential and opportunity for learning critical thinking.

The discussion in this chapter shall be based on the finding of the previous chapter. This chapter is therefore, basically discussion on the finding of chapter V, with reference to its implication on opportunities for learning critical thinking. The findings are synthesized with reference to the construct of critical thinking outlined in chapter III.

Starting the Journey with an Enabling Environment

The study started on the grounds that traditional (conventional) education system which is teacher centered, lecture based, and promotes rote learning (memorization) and treats students as passive recipient of knowledge imposes barriers in learning of critical thinking competencies. The reflection of students' present experience of MBA indicates that the education system (teaching and learning approaches) is now gradually transforming from traditional lecture based teacher

centered approach towards a student centered active learning approach. Where earlier students used to rely only on teachers' lecture methods are now experiencing contemporary tools such as case studies, internships, classroom discussions, group projects, etc. Hence, the findings indicates that many of the active learning tools and techniques prescribed for promoting critical thinking competencies are presently being applied in the course.

Similarly the desired transition in the role of the teacher and the student is also taking place. Where earlier the teacher was the sole source of knowledge and the controller of the learning process, now there are multiple actors and the learning process has expanded beyond teachers and classrooms.

Further, students feel the need to participate more and hence make conscious effort to actively and continuously engage in the learning process. They feel more responsible for their own performance, have greater sense of control and ownership and are motivated to learn. The finding confirms with the fact that transformation of a teacher as a facilitator improves learning environment in the class as reported by Dotel (2007) and Kadel (2007) and application of active learning approaches motivates students to learn as reported by Thapa (2008). There is an indication that previous conventional trends where teachers preached simply relying on books and took responsibility and ownership of learning as reported by Dahal (2002), Gharti (2006) and Shrestha (2007) are changing.

So, because of the application of contemporary approaches (A-Like technique), that are proven to promote critical thinking, we can say that the foundation for enabling students to learn critical thinking has been laid. A precondition for ensuring an enabling environment has been met. So what does this mean in terms of sustaining an enabling environment for promoting critical thinking?

Does the foundation support opportunities and potentials for promoting critical thinking? I shall further attempt my exploration in this direction.

Synthesizing the experience shared by the students as discussed in the previous chapter with reference to the theories on enablers of critical thinking (as discussed in Chapter III), the following dimensions could be identified as enablers and promoters of critical thinking:

Social network and interpersonal relationship. The experiences shared by the students indicate that 'socialization' is one of the key outcomes of their learning process. They now have a stronger social network and enhanced abilities to manage interpersonal skills. Studies indicate a positive relationship between critical thinking and interpersonal skill as Osborne, et. al. (2009) states "Indeed, those students who were rated most highly on critical thinking also demonstrated the most use of interpersonal skills". Students feel that because of good interpersonal relationship they feel more comfortable and confident to express their views, ideas, and opinions. This is the starting point for critical thinking as ideas, opinions, and claims, are the foundation of critical thinking.

Diverse viewpoints, ideas, opinions. The research participant also shared that the collaborative learning approach such as group assignments have been valuable in bringing different talents together with different ideas and opinions. The process of collaborative learning has given them opportunities to share ideas and deal with diverse claims. Alternate claims (mental model or representation) are integral part of critical thinking (Kuhn 1999; Cohen, 2000). Hence with the students' exposure to diverse claims and the need to express their opinion, which can be different than others, we can infer that students do have the opportunity to engage in critical thinking.

Discussions, dialogues, and deliberations. The students' description of their learning environment is also characterized by increased interaction and discussion mostly because of the collaborative learning approaches, group assignments etc. The comfort of small group discussions and the opportunity for informal discussions beyond class in canteen and telephone conversations have given them greater opportunities to reflect and understand better. Students have experienced greater confidence in engaging in the process of communication (discussions, dialogue).

The questioning approach adopted by the teachers has been instrumental for promoting interaction between teachers and students, and also among the students themselves. Social interaction and discussion supports clarification of ideas and evaluation of others' ideas and hence fosters the development of critical thinking (Cohen, 2000; Gokhale, 1995; Macknight, 2000). The shared learning gives students an opportunity to engage in discussion, take responsibility for their own learning, and thus become critical thinkers (Cheong, 2010).

The informal discussions provide students with opportunities to analyze, synthesize, and evaluate ideas cooperatively and hence promote critical thinking (Gokhale, 1995). Further, interactions and discussions have the potential to take the form of "critical dialogue" which is essential for critical thinking (Cohen, 2000). Hence, because of the opportunity to interact, discuss, and debate, the finding indicates a supporting environment and opportunity for the students to engage in critical thinking.

Exploration and questioning. The learning environments described by the students are further characterized by process of self exploration and freedom to question. Students have acknowledged change in their learning behavior in terms of greater self exploration. Students have acknowledge the role of teacher in facilitating questioning

as well as the contribution of tools like group work/group discussion providing opportunity for questioning and exploration. Students share that they are more inquisitive and question more. They are learning the skill of inquiry – in terms of searching information beyond text books/lectures, actively questioning the teachers as well as fellow students. Since, questioning (as part of critical dialogue) is another key dimension of critical thinking, this process can be considered to promote critical thinking. Questions are said to engage both the questioner and responder in thinking (Macknight, 2000) and asking questions is said to help one to inquire about alternate possibilities and reach conclusions (Cohen, 2000).

Justification. Justification is another key dimension in the construct of critical thinking. Students have also shared that because of the need to frequently ask questions as well as the need to explain your viewpoints during discussions and dialogue with fellow students (and teachers) they have to constantly be prepared to defend (justify) themselves. Further, working with problem based learning- solving case study; have enabled them to develop ideas, solutions, make decisions and justify it. Hence, because of the environment to think about alternatives, select options and justifications, we can consider that opportunities for engaging in critical thinking exist.

Motivation to learn: Because of the interactive environment and student centered approach, students feel that they are motivated to learn. Further, students also express a greater sense of freedom and pleasure in learning process because of less burdens. They also perceive themselves to be in greater control of their learning outcome (and success) as they feel they can influence it positively because of the practical assignments. From this also we can infer that some level of motivation exists that

contributes to a positive learning environment for the students as motivation and critical thinking are closely related concepts.

Outcome of the Journey: Learning of Relevant Skills and Dispositions

Considering the research participants' description of their present learning environment and the process and practices promoted with reference to the desired learning environment for enabling learning of critical thinking, it can be inferred that potential and opportunities for learning of critical thinking competencies are promoted.

Further, with reference to definition of critical thinking provided by the 'Delphi Report' which is expert consensus on the construct of critical thinking (Facione, 1990) and the 'Bloom's Taxonomy', which is the theory that informs education pedagogy for critical thinking, we can also say the learning processes has also promoted some competencies related to critical thinking.

The Delphi Report defines critical thinking in terms of set of skills as well as disposition. The skills set and subsets includes six dimensions i.e. interpretation, analysis, evaluation, inference, explanation and self-regulation. Similarly, the Bloom's Taxonomy defines six levels of cognitive skills which include remembering, understanding, applying; analyzing, evaluating, and creating. The set of skills for critical thinking described in both the Delphi Report and the Bloom's Taxonomy reflect similar skill sets and description.

From the experiences shared by the research participants, we can infer that students have evolved from the level of mere 'remembering' towards 'understanding'. They have acknowledged the transition in their learning behavior where they have given up 'rote' learning or memorization of content and instead focus on understanding the content. They do not only recall information but now can explain it.

It can also be said that they have progressed further towards the level of ‘application’ as they are now more concerned about the practical application of content, are experiencing real life situations and are actively involved in problem solving exercise applying their content knowledge. They feel their experience has enriched their analytic perspective; students can go into details of things and see things from multiple perspectives and drawing conclusion. As a result they feel more comfortable with decision making. They also have to give justification (explanation) of their decision. The skill for assessing different options so as to recommend best solution can be inferred as skill for ‘evaluation’. Students also claim they are now capable of creating or coming up with new ideas, and forming opinions.

Delphi Report also defines critical thinking in terms of dispositions and includes a list of dimensions or characteristics that portrays towards critical thinking. If we are to broadly categorize them in different themes, it includes

1. Well informed- inquisitiveness, information seeking, explorative behavior
2. Open-mindedness and flexibility– to divergent world views, alternatives, difference in opinions etc
3. Fair-mindedness/objectivity -Trust in the process of reasoned inquiry, self-confidence in one’s own ability to reason/judge, facing one's own biasness and prejudices etc
4. Flexibility - Open to change, suspending judgments
5. Diligence, Precision, and Perseverance: diligence in seeking information or working with complexities, challenges, uncertainties

It needs to be noted here that these are not standard (theoretical) categorization. It is only my rough categorization, where I have clustered similar

dimensions together to create broad themes based on my own interpretation and understanding of the disposition described in the literatures in order to facilitate my understanding and analysis of the findings. With reference to this categorization, the experiences shared by the students reflect changes in behavior and orientations which are similar to the characteristics that the theories describe to portray disposition towards critical thinking.

Research participants describes that their present learning process, which focuses more on practical application and everyday happening than fixed theories demands them to keep themselves updated, be well informed of the latest happenings and trends. The tools and methodologies enable them to explore for more information and not just depend on text book and classroom knowledge.

Students find that their learning processes have exposed them to diverse ideas and alternative viewpoints, and hence they are now comfortable with dealing with different perspectives. They also share that tools like case study or internship and stimulation exercise, are building up their competencies in terms of managing complexities.

Hence from this we can infer that the learning process have promoted skills and disposition that can enable one to practice critical thinking given the opportunity.

Discussion on the Findings

The research participants' description of their learning process indicates that the application of the contemporary teaching and learning approaches has been able to transform their present learning environment from teacher centered to student centered approaches. The transformation has promoted an enabling environment that facilitates active exploration, questioning, sharing of ideas, engaging in debate/discussions interaction, justifying one's viewpoint etc, which offers

opportunities for students to engage in critical thinking. This shift is because of the transition in teachers' roles and behavior, where teachers act more as facilitators, promoting exploratory behavior, encourage alternative seeking and problem solving. They make conscious effort to actively engage students in the learning process using techniques like questioning and challenging students. The new learning process is also helping the students to transform into a proactive learner.

Relating this finding to the various literatures and theories which suggests that the application of active teaching and learning approaches that transform the learning process from teacher centered to student centered promote critical thinking, we can consider that potential and opportunities for critical thinking exists. Dimension in the learning environment that promotes inquiry, exploration, questioning, sharing of ideas/opinions, dialogues, discussions and justifications (argumentation) provides this opportunities and potential (Dahal, 2002; Mandernach, 2006; Koo, 1999; Cooper, 1995; Gokhale, 1995 & Shrestha, 2010).

The experience shared by the students also indicates that the students have progressed from the habit of just memorizing/remembering towards understanding; they are practicing analytical skills by understand things in practical context, discussing real life situations and self experiencing things practically. Students are involved in making decisions and problem solving, presenting justification (explanation) for their decisions and solutions, as part of their regular learning experiences. Relating this to the set of skills defined by Delphi Report and Bloom's Taxonomy, which defines the skill set of critical thinking, we can infer students have been able to gain some relevant skills that support critical thinking.

Students also share that they are now more open to diverse viewpoints, are more inquisitive, seek more information, have confidence in justifying their

viewpoint. This disposition also tallies with some of the disposition for critical thinking identified by Delphi Report. From this we can infer that in addition to the skills, students have also developed some disposition that support critical thinking.

Further, research participants have acknowledged that because of the application of the contemporary methodologies they feel motivated to participate and engage in the learning process. The processes have strengthened their interpersonal skills and social network. Social learning theories suggests that instructional approach that supports strong social networks, interpersonal relationship, peer support and collaboration is also instrumental in creating an enabling environment and providing opportunities for critical thinking (Gokhale, 1995; Cheong, 2010). Further, students are said to be engage in critical thinking when they are adequately motivated.

Therefore, the finding suggests that the learning processes have promoted relevant skills, disposition as well as opportunities to practice critical thinking. They also have the necessary motivation to engage in the learning process that offers the opportunities.

Chapter Summary

In this chapter I explored the learning experiences of the students related to the various dimensions of the teaching and learning approaches in order to understand the opportunities available for learning critical thinking. The finding suggests that the transformation in the learning environment due to application of contemporaty teaching and learning have created both an enabling environment for learning critical thinking as well as provided some relevant skills and disposition. Students are also motivated to engage in the learning process that can promote critical thinking. With this enabling environment and relevant competencies, how far the students have reached in actually practicing critical thinking shall be discussed in the next chapter.

CHAPTER VII

CHALLENGES AND CONSTRAINS IN LEARNING OF CRITICAL THINKING: ARE WE THERE YET?

In the previous chapter I have explored the implication of the differences in learning experiences of the students in promotion of an enabling environment for learning of critical thinking. The chapter identified opportunities existing in the various learning processes and the relevant skills and competencies students have acquired that have potential to enable one to practice and learn critical thinking.

In this chapter I shall further explore in greater depth those various learning process (such as the process of discussion, decision making/evaluation, problem solving analysis etc) that have potential to facilitate learning of critical thinking in order to understand how the opportunities have been capitalized and where the challenges and constrain are. I shall explore how students practice competencies related to critical thinking as claimed by them by deconstructing the various learning processes, in terms of application of skills, strategies, approaches, and demonstration of behavior, attitudes and orientation. This would help me understand the dynamics of the processes as it unfolds in actual practice and the challenges faced by them while doing so.

Deconstruction of the Students' Learning Processes

Finding of the previous chapter indicates that the various learning processes promoted has created opportunities for learning critical thinking. Promoting of some relevant skills also offers additional potential and opportunities for practicing critical thinking. But this does not signify actual practice of critical thinking. Having the

opportunity or relevant skills is one thing but actually utilizing it to practice critical thinking is another as “Knowing what counts as a reason and our deciding to take reasons into account” are different (Glaser 1998, p. 15).

The present learning experience of the students indicates that sharing ideas, opinions, and diverse viewpoints are a regular part of their learning process. But exposure to difference of opinion is not an indication of critical thinking. What matters is how those differences of opinion are dealt with. Students are confident expressing their views/opinion and justifying it, which are important aspects of critical thinking. But ability to express and justify alone are not what defines critical thinking. What matters are the strategies the students use to justify their claims, the way they develop/choose arguments and present evidences. Hence, I felt it was important to explore the strategies, behavior and practices of the students that manifest their mental processes, positioning and representation while they engage in the learning processes such as addressing problems, decision making, group interactions etc. These are some of the areas that I shall explore in this chapter. I shall relate the findings with relevant theories in critical thinking in terms of the various factors, dimensions, and the dynamics of the process that have implication in critical thinking that I have discussed in Chapter three (my construct of critical thinking).

Evaluative Epistemology: Following the Process to Reach Conclusion or Jumping to Conclusion

In order to understand how students practice critical thinking, I first explored the process and strategies the research participants (students) adopted to reach to conclusion and or make decision (decide what to believe and how to act further on it). Students expressed that their present learning experience requires them to explore

different options, analyze situations, make conclusions, and recommend solutions. So how do they actually do it?

Students were asked to describe their approach of working with case study and group discussions. The description of their approach of solving case study indicated that instead of generating and considering the pro and cons of various options, they simply come up with one solution. They do have to justify their recommendation, but the justification is not with reference to other possible option, based on the analysis of different possibilities, but just some statement on why they think the solution they have proposed is correct. The description of their problem solving approach does not entail a process of first generating alternative, evaluating it against criteria, reasoning out less viable option and then selecting the best alternative. They just come up with solutions, randomly, and present justification of it.

Kriti, Suvi, and Kundan shared that they have been instructed by teachers to first read the question in case study before they read the case itself. Suvi describes her approach to dealing with case study as:

> *Our teacher has instructed us to read the question in the case study first and then read the case in relation to the questions, underline key words related to the question, while reading*

Kundan has a similar experience and said he also has been instructed to read the questions that need to be answered first and then underline the key themes while reading the case study and prepare answers accordingly. This approach already is limiting students to be question focused rather than providing the students to openly explore, analyzes issues from multiple dimensions, come up with different options, and evaluate it to reach a conclusion. Alternatively one research participants shared that his teachers ask him to read and understand the case study first rather than getting

'bogged down' by the questions they need to answer. Yet the description of his approach also does not entail a process of analysis and evaluation of different options, identifying evidences, and making choices based on it.

Students find it challenging when they face situations that require evaluation of alternatives. When Manju was asked to describe the most difficult case study she has done so far, she describes:

> *...there were 3-4 options. None was like it was the best. Also, there were opinions given by four different people. We had to think about why each person gave his particular opinion, the emotions and also the benefit, so it was challenging for us*

The research participants' description of the group discussions also gives the sense that they enter into discussion with their friends without any prior opinion or ideas of their own, and only after listening to their friends' opinion they start forming their own opinion, building further on each other's ideas. The process of group discussion is for expanding on the same theme initiated by the first participant, where the next builds further on it rather than a process which entails critical dialogue-questioning, reflection and evaluation of alternate claims to reaching conclusion.

From the above discussion we can infer that the students make decisions or reach conclusions without actually entering the process of generating different possible options i.e. mental model or alternative possible states of affairs (as termed by Kuhn, 1999; Cohen, 2000) and evaluating it against 'standard of evidence or logic', which is an essential process of the construct of critical thinking. Dealing with alternate claims, ideas, options or mental models are the foundation of critical thinking, where one gradually evaluates, discards, and selects the best possible option to reach a judgment or conclusion. The absence of this process indicates that students

jump to conclusions and not reaches it following a systematic process of analysis, evaluation, inference (conclusion) and explanation. This manifest lack of evaluative epistemology of the student.

Multiplist Perspective: Reality is What Exists in Multiple Consciousness and All Are Equally Valid

> *"While it should be true that every argument has two sides, it should not be true that one side is always as good (strong) as the other"* (Walton, 1989, p. 2).

While doing case study individually, students have the leeway for randomly jumping to conclusions without following the process of evaluation, as they have a choice of dealing with only one chosen option (claim). But what do the students do when they are forced to deal with alternative viewpoints or claims when they interact with other fellow students during group discussions or class interactions? What is their approach when they have to solve the same case study in groups (as group project), where it is not only their individual view that matters but they have to deal with diverse opinions of fellow students? To understand this dimension, research participants were asked to describe their approach or modus operandi of doing a case in a group. The description of the process indicates that the students use the approach of division of labor rather than collaboration. Midur describes the process of solving cases in group as follows:

> *We divide two questions for each of the five members of the group…The members solve their respective questions and one member is given the compilation work… each member writes down roughly what he or she thinks the answer should be in their respective sections and we compile the answer not excluding any points.*

Dharma and Manju (who is from a different university) also have similar description of the procedure of doing case study:

> *If we have a case to do, we read it before coming to college the next day, and then discuss and divide our part. We send our individual parts and at last compile it* (Dharma)
>
> *We divide question among group members. At last, one of us compiles everything. If we have to make presentation on that we prepare slides for respective questions and then compile and then present… we do questions individually* (Manju)

When students are adopting 'division of labor and compilation' strategy they do not really have the opportunity to deal with divergent or alternative claims. With this strategy, even in group work, they still work individually and hence can operate with 'single mental model', avoiding the process of evaluation.

But what is the strategy that students use when they really have to face multiple opinions and claims during direct group discussions (debates)? When the research participants were asked to describe the process of face-to-face group discussions, they acknowledged that at times they have to confront alternative and diverse viewpoints. When they were further asked to describe their strategies or approaches for sorting out the differences in order to reach consensus or conclude group discussions, the approach described reflected strategy of a multiplist. They consider all view point equally valid and hence need to be incorporated. Hence, they have not experienced a situation as such where they have to deal with competing ideas. When Anmol was asked to describe their strategy of dealing with difference of opinion while solving a case, he shared "*I don't have any such experience, because our teachers tell us that nothing is right or wrong. So there can't be differing views*

regarding on how to solve a case". Suvi, also shares similar strategy of compiling opinions for concluding group discussion as she states "*All viewpoints are included. It rarely happens that there are debates or need to omit any one's point of view*". Midur also made similar statement:

> *How we are taught by the teachers is that, there is no exact answer and that, there might be two answers to the same question! When there is contradiction, we put in both the points in the answer. It is not necessary that, just because there is a contradiction, we write only one answer*

Students have been oriented that the same situation can have different solutions, or alternative perspectives. This orientation has made it easy for the students to resolve difference of ideas by simply considering all opinions as equally valid. Instead of 'reasoning out' the least possible alternative and selecting the 'best possible option' the students adopt the compilation strategy. Hence instead of an evaluative epistemology students are operating with multiplist epistemology.

Absolutist Perspective: Reality is What is Approved by the Masses or Authenticated by Defined Authority

So what happens when there is really 'conflict' or clashes of ideas and opinions (with those "adamant or difficult friends" as termed by the students)? When the research participants were asked to share what happens when they have to face such situation of difference of opinions (even though it might be rare) where opinions strongly clash with each other such that compilation are not possible. The responses indicate that students adopt two strategies. They leave it to the wider mass to decide, which means for them reality or truth is what is widely accepted or approved by majority (i.e. society in general). Alternatively, they let the teacher (the final authority) to decide.

Left with the masses to decide. When Dharma is asked to describe the purpose of a group discussion he says that group discussion is to "*help generate new ideas*". When further asked to describe the link between generating ideas and choosing the best idea he states "*conclusion from the ideas of the group is the best, isn't it?...I think majority's opinion is considered better, if the idea is good, majority supports it for sure*". Manoj also has similar opinion regarding group discussion as he states "*he or she might not always be right! But, as in majority, we note the good and bad aspect*". Suvi supports the statement as she shares "*unless, majority of the team members do not agree to it or the members cannot convince majority of us, none of the points are omitted*".

When Dharma was asked to describe how they know which opinions are good (meaning valid or logical) he states:

> *We ask to provide logic in support of a point. We don't know if the point is valid without knowing the logic behind it. A point is considered good if two, three other members say that the logic is good. Two, three people [majority] support good logic*

In cases where students are persistent and do not agree to give up their viewpoints (which they say is something totally different) in small groups then they are left at the mercy of the masses to defend themselves as Midur describes:

> *First we try to convince the person within the group, if not then the class will convince him/her...s/he would have to defend her/himself, we cannot support their point… There is a difference when only four people [in a group] are trying to make him or her understand, and when the entire class is doing the same [during the presentation]. The person will agree when greater number of people convinces them*

Teachers as the authority of knowledge. Almost all of the students accepted that, during difference of opinion, the teacher's verdict is acceptable to all. Students described that whenever a heated discussion happens (which is rare), first the student tries to sort it out in the team (small group discussion) through the opinions of the majority. If it does not get resolved then they resort to open forum (masses) or go to the teachers as final authority. When asked what they do if in case their fellow students do not agree to others or do not accept the opinions of the majority of the group, Manju shares "*If my friend continues to be persistent, we ask teachers. Last hopes are teachers, of course. Sometimes, I am not satisfied with the teachers, but we have to accept it".* Manoj agrees with Manju and says "*the final say is given by the teacher, in the end, it is up to the teacher to conclude the discussion*"

The above discussion indicates that students are operating at the absolutist level or multiplist epistemology. Students do not practice the skill of analysis and evaluation, they only compile and accept all claims and arguments as equally true or accept the judgment of established authority such as the teachers or the masses when they have to make a choice or evaluate between different perspectives. Students have not been able to transcend to the level of evaluative epistemology.

Engagement in Dialogue - Reflection, Questioning, and Argumentation

Students have acknowledged that their present learning experience exposes them to diverse viewpoints, opinions, and claims. The learning process has also strengthened their communication skills and made them confident to express their opinions. Exploration, questioning, interaction, justification is an integral part of their learning process. These are processes that support critical thinking by enabling students to engage in the process of critical dialogue. However, on the contrary the description of the students' learning process discussed above indicates that students

do not engage in critical thinking. They have not reached the level of evaluative perspective as they do not practice evaluation, mainly because of their epistemological belief that restrains critical thinking. So the question is what happens when students actually engage in group discussion? They have the opportunity to interact with each other as well as relevant skills that support critical thinking such as articulation, questioning, and justification which they claim to practice. Even though why are they not engaging in the process of critical dialogue? I shall further explore the various dimensions related to this process (of discussions/interaction), so as to understand how the potential have been used and where constrains are that inhibits students from capitalizing on the available opportunity? For this, I shall explore the key processes of critical dialogue related key to the construct of critical thinking such as reflection (awareness of one's thought), argumentation (logical reasoning) and inquiry (active questioning).

Conscious and Controlled Thinking: Reflection or Idle Thinking

> *"They can explain what they think and how they arrived at that judgment"*
>
> (Facione, 2011, p.6)

Consciousness of one's own thinking process, what one knows and how one knows, is the crux of critical thinking. So it is important to first explore the student's idea of their own thinking process.

Students have shared that their present learning processes have enabled them to express their own ideas and opinions. 'Ideas, opinions, viewpoints' are a reflection of one's thinking, and hence a core part of critical thinking, but it is not the possessing of ideas, opinions or claims that defines critical thinking but the process through which that thought or idea is developed, claims are made, judgments are formed or

conclusions are reached. This begins with the awareness of one's thought and the ability to control it.

When the research participants were asked to explain the process or factors that enables them to develop their own ideas, evaluate alternatives, reach conclusion or make decisions the students found it difficult to explain or describe the process. Students expressed little knowledge of the concept of 'thought process' and often appeared blank when we tried to discuss on the topic of thinking and thought process. Except for two research participants all others were candid about not being consciously aware of their thinking. They shared they are not in the habit of thinking about their own thoughts.

When the research participants were asked to share an example where they have consciously thought about their own thoughts, beliefs, assumptions or consciously worked through it their thoughts or opinions appeared to be evolving on its own and they felt their opinion and ideas were often spontaneous like Kundan shares "*During brainstorming, ideas can come instantly or subconsciously*". Research participants talk about skills such as analysis, evaluation, conclusion etc. However, while asked to describe how they apply those skills with an example they always describe it with relation to the content or the subject matter, talks about the facts and figure given in case study or exam paper, but not with relation to how they process that information or use them to make analysis or evaluation.

Among the two research participants who touched a little bit on thinking or reflection on one's own thought, the process appears to be superficial. Manju shared her habit of thinking about her own thoughts. She shares that when she is alone she thinks about a lot of things, keeps playing with ideas, but when asked about exploring the foundation of her thoughts, reflecting on her values, beliefs and assumption, she

expressed ignorance of it. Further, she believes that it is impossible to know about others thought process, hence denying the power of inquiry or question to explore others' thoughts. Another student, Midur accepts that the process of group discussion have compelled him to think about other people's thoughts, question why that particular person makes particular comment, but reflection on one's own thought is taken as 'optional' as he states:

> *To understand one's own views is a personal matter, some can and some can't! That is a personal choice. I have an attitude like "if I do this, then I do!", and then I don't really think about it. I am not the kind who thinks about why I did this later. Maybe if I do there will be some good result, but I don't have the habit of thinking about my own thinking*

Another research participant, Manoj, shared that he sometimes reflects on his thoughts, but it is mostly an afterthought, when the process or exchange has already occurred. When asked to describe how often he thinks about his own thoughts and where it is leading to or why he thinks in a certain way he answers "*not much actually*" and later adds that "*in class, some topics just appear out of nowhere. In the end, I regret saying it*".

The above discussion indicates that though the students have opinions (claims), they cannot pinpoint the source of its origin or its progression (development). They are unable to explain how they reached a certain judgment or conclusion because they are not aware of their own thought process. They have never questioned their thoughts, ideas, opinions and hence their assumptions and beliefs. They express less confidence in identifying evidence, assumption or arguments in given text such as case study. Hence, they are not able to practice reflection and guide their thoughts to the desired direction.

Argumentation or Only Assertion: Translating Opinion into Argument

For critical thinking opinions alone are not enough, students need to learn how to turn opinions into arguments i.e. constructing arguments to support their opinions According to Meany & Shuster (2002), argument includes assertion (of opinions), reasoning and evidence (on basis of which assertion are made). They also need to learn to engage other fellow students in the further process of argumentation.

Research participants do talk about the need to justify their answers or convincing each other. Students claim that they are able to make conclusion (judgment). They keep repeating the need to justify their solutions (answers). But without the evaluation process, how do the students know what is right (best solution)? Teachers have been able to hammer the concept that 'there are alternative perspectives, there are no right or wrong answer, what is important is justification or to provide logic". So how do the students actually 'justify their answers' which they claim to do? If the students are in the practice of presenting justification for their answers then they must have some process and basis for argumentation. So, what is the basis for their justification? What is their basis of reasoning or logic? From where do they draw their evidence?

When the students were asked to explain how they justify their viewpoint, how do they know what is right or which is the best choice, the explanation provided did not focus on logic or rationality (though they often use the term logic and justification). The explanation of the research participants gave the sense that they somehow knew the right answers by 'intuition' or 'gut feeling' as Manju states "*we don't know on what basis to make assumption and argumentation, we are not taught, so we use our intuition*". Kriti also describes the decision making process in one of her project work in similar manner and states "*we had three samples of brochure for*

marketing project. I felt that I have to take suggestion from others before I decided and did so. But I guess I made the final selection based on my intuition". Midur further explains how he has been taught to convince other using emotional appeal as he states:

> *While doing a role play, teacher assigns us role as the manager or labor and we have to act in the roles to resolve conflict…The teacher is actually not trying to teach us that such a situation will come in an organization, but, is trying to teach us how to negotiate, how to harmonize…if the person's weak point is emotional appeal, you should grasp it while convincing them*

Suvi further shares "*it doesn't matter whether we present solution in a negative way or a positive way, but, we have to justify that*". When asked how she justifies the answers, she says '*by presenting one's own views*' and when asked to further explain how that is done, she finds it challenging to express.

Research participants were further asked how they identify evidence, assumptions, central arguments or line of logic/reasoning in a case-study, they accepted that they have never thought about it as they are not instructed to do so. They shared that they use their own assumptions or imagination to solve case study, which are based on their day to day observation or understanding of the practical world.

Manju shared an example of a case where the problem of decreasing productivity had to be addressed, where she used her imagination to solve the case, assuming what might have happened, inferring from previous knowledge (what she has experienced or observed happening in ever day life). This might also be the reason that most of the students stated that they find Nepali cases much easier than those from foreign country as Manoj puts it "*We are here and we are more aware*

about the Nepalese business market scenario being a business student… we also know what the culture is here, so it's easier for us to solve Nepali case"

The answer was negative when research participants were asked if they state their assumptions in their answer (exam paper) when they use assumption (or hypothesis) to make decisions or provide recommendations. It appears that assumptions are mostly unconsciously processed and not explicitly stated even when consciously made.

Contemporary approaches are said to be used less in subjects that require definite answers like accounting, finance and more in subjects like management, marketing, human resource management, organization behavior, which students describes as "*guff dine subject*" i.e. subjects you can bluff your way out, which is a reflection of how students approach argumentation in these subjects.

The above discussion indicates that though the students are required to justify their claims they do not use the process of objective reasoning and argumentation. They rely on their conviction of what is true (or likely to be true given their past experience or observation or their belief of what might work best 'practically') and assert their opinion without evaluating its premises and justifying it without a logical process of reasoning based on evidences.

Simply Communication or Critical Dialogue: Engagement in the Process of Inquiry

> *"Engagement in dialogue comes from a discussion that is not simply a conversation - it is in every sense, engaging"* (Davey, n.d).

Critical dialogue is not just mere communication but deeper reflection and consideration of each other's claims. It focuses on creating disequilibrium, where one seeks to actively challenge each other through a process of active questioning as well as defend one's standpoint through a process of active argumentation based on

evidence and reasoning and not force, aggression, emotion, or pity. So it was important to understand how students engage in the process of inquiry, especially with respect to their orientation and strategy related to questioning and challenges.

Avoidance, withdrawal or compromise strategy: Avoiding disequilibrium. When the research participants were asked to describe a situation of conflict or difference of opinion and their strategy of addressing it, they found difficulties recalling situations (incidence) of confrontation though they accepted that their classes in general are interactive with ample opportunities for questioning. In one hand they state that their present learning experience have made them more exploratory and enabled them to question more while at the same time students expressed hesitation towards questioning and challenging others or being questioned or challenged by others.

From their deliberation it was clear that discussion (comments, questioning) had either positive or negative (good or bad) connotation, and discussion that included differences of opinion was considered "negative" and hence needed to be avoided. While referring to confrontation , the research participants use words like 'conflict', 'negative comments', 'attack', 'getting personal', which indicates that it is not a natural process for them to engage in a debate or argument. They are not comfortable to 'argue' and suggest that it needs to be avoided as Manoj states:

> *When there are debates, then [later] I think I should not have discussed with my friends over small issues, had I been considerate, then there would not have been an argument in the first place*

Since only "negative" discussions are understood as 'argument', students like Suvi, Kriti, and Manoj neither feel they have been challenged by their friends nor they have felt the need to challenge others. Suvi and Kriti describes themselves as those who do not like 'conflict', as Kriti says "*usually, I don't argue with friends… I mean I*

don't argue by standing and challenging others". Even, Manju, who appears to be outgoing, confident, and persuasive, hesitates to openly challenging others as she states "*I don't challenge intentionally*". Similarly, Midur, an outspoken student, also describes himself as "*I am not really a questioning kind of person*". Hence it is very rare occasion (once or twice in the entire duration of the course) they have faced a situation of conflict (of opinion). Such confrontational situations are presented as 'extreme' and 'negative' cases as Midur states:

> *I disagreed with the statement and it started to be personal…That was the only time when the situation went rather deep. After that, I have not really been challenged. From that I understand I am among the 80 percent of the class who think in the same way.*

Students feel they are attacked or dominated when they have to face challenges. Such incidents with real confrontation or clashes of ideas and debates are described to involve few (often same) individuals, who are described as 'aggressive', 'attacking', 'attention seeker' or 'trouble maker'. 'Challenging or difference of opinion' is associated with those who want to "be different" than the crowd, is "stubborn", and "argues to win". When Manoj was asked to describe persons who actually counter question (challenges him) and for what purpose they do it, he explains:

> *There are one or two people who do that. Not all. In fact, there are many who do not even raise questions …actually, they do that to prove that I do not know and to suppress, dominate me, to look for ways to strike me.*

Kundan also has a similar experience as he points out:

> *There are always these two, no, three guys in my class who are often the ones speaking in the class discussions, people who want to standout and hence*

which ever group they are in there is bound to be intense debate. It often happens that everyone else drops out of the discussion and at the end it is these two guys who are debating one-on-one till the point that it gets personal.

Midur description of the persons who challenges also has similar connotation as he states:

As they say 'too many cooks spoil the broth' the more people there are, that many ideas, and hence there is more probability of contradictions….Usually, in every class there are always two to three people who always prefer to think outside the box. They like to think opposite to the general mass. They have such kind of nature…..Such students usually have different opinions in whichever group they are in! I am not trying to say personally that he or she is very fussy, as those two or three students are not easily convinced with what other members in the group have to say. And, so when there are such kinds of members in the group, there would be conflict

Manoj, also describes those students who go against the majority as 'stubborn' and states "*There are two or three students who are sort of stubborn, sticking to what he or she says …but, as majority, we note the good and bad aspects*"

Research participants used the term "Positive" and "Negative" or relevant or irrelevant discussions to describe group discussions. When asked to describe what an 'ideal' group discussion would be like Kriti shares "*I think it would be fun and interesting. There would be friends who get along, everyone would listen to each other… and there would be fewer arguments".* When asked to further elaborate what relevant discussions are like, research participants describe that the discussions that are within the context of course material are relevant discussions. Similarly, the discussion that is in 'alignment' or in agreement with each other are said to be

'positive' discussion (or reinforcing discussion as termed by one of the research participant), whereas the negative discussions in the words of the participants are the ones that "*goes completely opposite*". When asked to give an example, Midur elaborates on negative discussion:

> *That kind of discussion is considered to be negative where people try to completely go opposite. It is not really possible for two people to come with the exact same strategy; but, a discussion that is aligned with one another is considered to be a positive … for instance, when we are talking about strategies, I might have proposed a market expansion strategy. That is an aggressive strategy. But, if the other members proposed not to expand the market, but to diversify then that is still an aggressive strategy, and is in alignment with the strategy that I proposed. In such a case we could compromise depending upon the market situation. But, sometimes, there are members who might also suggest not to take an aggressive strategy but to adopt a hold-back strategy by cutting or laying-off. That kind of discussion is considered to be negative, those people who try to go completely opposite*

Given this definition of 'positive' and 'negative' discussion', when asked what kind of discussion usually occurs in the class, Midur shares that sometimes negative discussion takes place but often it's positive "*because a case study usually tries to hint towards one direction*".

So what do the students do when they really have to face 'challenges' or difference of 'opinions'? When asked to describe their strategy of facing a challenge Dharma explains "*I give my own views and also listen to his views, if he continues to say what he says is correct…..I used to say that's ok".* Midur also adopts similar strategy as Dharma and states:

If a person says something and I am not satisfied with it, I say it, but if he or she strongly defends it, then I withdraw…if the person starts to forcefully defend, then I let it go.

Similarly, Manju also finds it challenging to deal with people with different ideas and instead of practicing inquiry to reach a conclusion of her own she prefers to give up as she explains:

There are friends who think that only their answers are right. In that situation, that person's ideas are also listened to. Sometimes, we even have to compromise. We feel like 'why to quarrel'?

Students accept that questioning is a part of the regular learning process, but confrontation or challenging is not. When asked what kind of questions they usually ask or are required to respond to, they describe it as 'questions for clarification', mostly on the content, but not to explore on what basis the other party are making claims, or what their assumptions or hypotheses are.

Questions for clarification are easier to respond to hence students do not feel threatened, and hence is not perceived as 'challenged'. Students find questions not directly related to facts or contents difficult to answer and hence feel threatened and challenged. When questions are deep, which students find it difficult to respond to, it is taken personally as an offense.

Kriti describes one such incident when she felt dominated because of the 'out of context' question asked. She felt the question was out of context because it was not on the content of her presentation (the facts presented), but questioned her judgment where she was asked why this option, why not others?. It is evident that students apparently are not practicing 'Socratic questioning approach', though they might be actively questioning.

The above discussion indicates that students perceive challenges and confrontation as negative and one who goes outside the mainstream labeled as troublemaker. Hence, only that discussion that are considered "positive" and confirms with the "majority" and not directly challenges or threatens one's viewpoint are entertained. Students either do not find themselves in a situation of disagreement or deliberately avoid such situations that lead to "negative" discussions by adopting withdrawal strategy. Hence, even though there are discussions, interactions, questioning, students do not feel challenged.

Defense and attack strategy: Avoiding objective argumentation and self correction. During arguments, in general the students adopt 'avoidance and withdrawal' strategy as they believe that 'all viewpoints are equally right'. But there are few who resort to direct counter attack when faced with such situations, and does not feel comforatable withdrawing their arguments. When Manju feels that her competence is being questions, she counterattacks and aggressively argues as she explains:

> *I have learnt how to deal with difficult people… Sometimes I have to counterattack with my point while at other times I have to make you understand… I am somewhat dominating whenever I feel my idea is valid. I try hard to push my own ideas.*

Kundan is also among the ones who feel the need to continue to argue to win, being more aggressive and assertive rather than rational and logical as he explains:

> *It is not that everything I say is absolutely correct. Even though my friends counter argues and I realize that I am wrong, I still try to stick to my point and be more assertive in pushing my point. I cannot draw back.*

When asked to explain why he continues to argue even after realizing that he is wrong, he states:

I have already put forward my words, and even though I realize the counter argument is correct, I don't take back my word, I think, why I should not emphasize on what I have said more assertively instead, I don't want to loose.

From the above discussion we can understand that students have been trained to actively participate and persistently debate, but not oriented on the techniques of critical dialogue. Students either argue aggressively or refrain from questioning, challenging, and being challenged which is both a hindrance for the process of inquiry and hence practicing critical thinking.

Due to the negative connotation towards challenges and questioning and lack of confidence to objectively reason and argument, students prefer to avoid a situation that leads to confrontation or disequilibrium either by refraining from or withdrawing from arguments. Alternatively, when they find themselves in a situation of disagreement, it is taken more as a personal attack and hence students feel the need to win at any cost. Hence, they adopt the strategy of aggressively asserting their viewpoint rather than relying on objective reasoning. They hesitate to review their claim, even though the emerging arguments and reasoning suggest otherwise, as it is taken as personal failure.

Discussion on the Findings

'Evaluative Epistemology' is central to the construct of critical thinking. Critical thinking is about dealing with alternative claims i.e. making a selection among alternative claims by applying the systematic process of evaluation. One has to be able to develop or consider alternative viewpoints (mental model), evaluate the different alternatives through a rational process (rationalization) to reach a judgment (conclusion – decision on what to believe). To reach a conclusion, one must have enough information to correctly interpret and analyze various claims. One should be

aware of one's own as well as others' claims, assumptions, and beliefs to understand and identify evidences and systematically analyze and assess it in order to infer conclusion. For this the process of inquiry (critical dialogue) is essential which includes both internal dialogues with self as well as external dialogues with others.

For internal dialogue one must be aware and reflect on one's own thought process, one's belief and assumption, as well as actively question and assess them with the intention (openness) to change if required. Similarly, one needs to engage in external dialogue with others by 'asking right questions' to assess others' claims through Socratic questioning that explores the depth of beliefs and assumptions or rationale for one's claims. They also should be able to justify one's viewpoint through a process of reasoned argumentation.

Conscious and controlled thinking. The finding of the study indicates that students are not aware of their thought process and are not conscious of the need to question their own assumptions and belief. They are unaware of their epistemological development- how their beliefs, assumptions, opinions are progressing. Hence, they are not in the position to direct their thought to the desired directions and hence practice metastrategic competencies as Kuhn (1999) states "theories may eventually change in response to discrepant evident, but often with the individual manifesting little awareness or control of the process… it is likely that the students will deny that they ever held a belief different from the one they are now professing" (p. 21).

The new learning experience has enabled the students to develop their own ideas and opinions, but without touching on the students' thinking process. Students are asked to use logic or justification but the required skills for it are not cultivated. Students are encouraged to imagine, use assumptions but are not supported to understand the implication of assumptions, beliefs, and evidences.

Relating this to Khun's development model of critical thinking, the limitation of students in terms of their awareness of their own thoughts (knowing) is a major constrain that hinders students to progress from cognitive level to metacognitive level. When they are not aware of their own thought process (metacognitive knowing), little can be expected from them to practice metastrategic competencies which is essential for critical thinking. How can one control and guide something which one is not aware of? Hence without metacognitive and metastrategic competencies, even with other relevant skill, one cannot practice critical thinking.

Students have express enhanced confidence in analyzing, generating solutions, and making recommendations. They claim that they have been practicing skills relevant to critical thinking such as evaluation and justification. But without the ability to consciously think about their own thoughts, beliefs, and assumptions, their practice of critical thinking can be questioned. We might infer that they might be applying the skills of analysis and evaluation but only on external content (e.g. facts given in case study) but without subjecting their own thought to the same process of analysis and evaluation. Among the six levels of skills defined in Boom's Taxonomy (1956), only the top three higher level of skill i.e. analysis, synthesis, and evaluation are said to promote higher order thinking (Bers, 2005), as these are skills related to thinking process. The other three lower level skills are only related to knowledge (content), i.e. the students' ability to remember, understand, and apply the concept or content (information, facts and ideas).

Similarly, Delphi Report (Facione, 1990) also defines critical thinking skill such as understanding, application, analysis, evaluation, and explanation (justification) with reference to its application on one's thoughts or the process of thinking and not just content. Khun's development model of critical thinking further

clarifies that critical thinking is not just about knowledge (content), it is more about process of knowing (thought process). Paul (1992) also believes that “knowledge coterminous with thinking" and cautions that typical school instruction, that emphasis only on the coverage of content alone without encouraging higher order thinking is detrimental to critical thinking as it fails to enable students to recognize that their assertions, beliefs, and statements have implications, and thus require evidence to support them, and for such students “believing, not thinking, is knowing” (Paul, 1992 as cited in Lai, 2011, p.22-23). Therefore, without metacognitive and metastrategic competencies, even with the relevant skills of understanding, analysis, evaluation, and justification one can still not be able to practice critical thinking.

Development of evaluative epistemology. The experiences shared by the research participants indicate that they operate either with multiplist or absolutist orientation. This gives them freedom from the responsibility of having to go through the rigorous process of analyzing, evaluating, and judging (evaluative epistemology) by either accepting everything as equally valid (multiplist epistemology) or letting others (authority, majority opinion) decide for them (absolutist epistemology). This lack of evaluative epistemology is a major setback in practice of critical thinking as Kuhn (1999) states:

> The absolutist sees knowledge in largely objective terms, as located in the external world and knowable with certainty. The multiplist becomes aware of the subjective component of knowing, but to the extent that it overpowers and obliterates any objective standard that would provide a basis for comparison or evaluation of opinions. Only the evaluative is successful in integrating and coordinating the two, by acknowledging uncertainty without forsaking evaluation (p. 21-22).

Further, the fact that students reach conclusions and make judgments without entering the process of generating different possible options indicates that students do not have mental models. This constrains critical thinking, as according to Cohen's three part theory, mental model is the basis of initiating critical thinking process. When students jump directly to the desired conclusions, without generating different options (mental model) they do not have a basis or need (relevance) for practicing evaluation, and hence miss out in the process of critical thinking.

The limitations on the student's capacity to be conscious of and reflect on their thinking also have direct implications on the students' capacity for argumentation (justifying claims on basis of the theory-evidence coordination). At the same time they are also not able to question and evaluate others' assertions /claims (beliefs states) and hence resort to false reasoning and argumentation. When conclusion is reached without the process of evaluation (theory-evidence coordination), then justification (reasoning) also happens to be flawed. Hence, without evaluative epistemology students have to rely on other fallible means as Kim (2003) states that human beings are fallible and without critical thinking a learner is likely to acquire false beliefs, become biased and rationalize unacceptable behavior. So unless student learn to identify their belief and accept them only based upon good evidence then, "even if their belief are true they are correct only by lucky accident" (Klein, 2000, as cited in Cohen, 2000, p. 4).

The heightened sense of comfort and freedom the students are enjoying because of the (over) emphasis on 'practical' approach in learning and the freedom to use imagination and assumption have also reinforced this lack of interest in the process of evaluation and reasoning. Students have been relying more on past experience (which they refer as practical knowledge) and intuition/imagination to

jump to conclusions which appear most likely to them, without considering that there are other options equally possible or without undertaking a systematic and logical process of reasoning, evaluation, and selection. Students believe on what is 'practically applicable and relevant to them', based on their prior knowledge or experience and what is socially accepted, without subjecting them to 'standard of evidences' (as termed by Kuhn). This is a major setback in critical thinking as "Instead of reasoning people usually have the tendency to jump to the first explanation that makes intuitive sense without carefully scrutinizing alternative possibilities and the general public often finds "personal experience" to be more compelling evidence than a carefully conducted, scientific study (FCT, p. 22).

Similarly, Kuhn (2007) in her research article 'Jumping to Conclusion' cautions that the "everyday causal reasoning of average adults regarding everyday matters is in fact highly fallible" (Kuhn, 2007, p. 51) as when people are reasoning concerning familiar topics they are likely to connect two events as cause and effect based on little or no evidence, and often apt to use prior information, belief and knowledge, rather than evidence to reach conclusion (Kuhn , 2007, p. 44).

When students do not recognize the importance of evaluation, there is 'absolute certainty' in the choices students make. Khun (2007) also cautions against undue certainty and suggests avoiding it, as undue certainty in one's judgments reflects a failure in "knowing what you know" and underlies the rigidity in thinking, which is a major hindrance for critical thinking (Kuhn, 2007, p. 50). Similar to 'certainty', 'disconfirmation' is also a major setback for critical thinking as when students do not see their claims (theories or alternative mental models) as belief states subject to disconfirmations, which needs to be reconciled based on evidences, they

merge the two (claim and evidence) as a "single representation of the way things are, with little awareness of the source of their belief" (Kuhn, 1999, p.21).

When students are limiting their judgment to their own assumptions or what they believe to be true, they are demonstrating ego-centric tendencies. Alternatively they are 'socio-centric' when they accept what the external authority (teachers, majority/mass or society) suggests. Ego-centric and socio-centric tendencies are described as major pitfalls of critical thinking as it inhibits practice of metastrategic competencies, as "Those who have developed strong metastrategic skills apply consistent standards of evaluation across time and situations. They do not succumb to a view of a favored assertion as more probable than its alternatives because of its favored status" (Kuhn, 2000, p. 23).

Paul (1993) also warns that since, people tend to believe 'what is commonly believed and [what is] socially rewarded a great deal of falsehood has been believed throughout human history" (as cited in Kim 2003, p. 73).

Engaging in the process of inquiry: Critical dialogue. When students do not feel the need (relevance) for evaluation they also do not recognize the need, relevance, and the importance of critical dialogue. The findings of the study suggest that students do not have the right orientation and skill for engaging in critical dialogue, which is very essential for critical thinking.

The findings suggest that students prefer to maintain status quo and avoid a situation that leads to confrontation or disequilibrium either by refraining from or withdrawing from arguments. Discussions as forums for critical dialogue (inquiry) are used only for sharing of information. Debates are concluding by compiling all opinions or accepting majority's opinion. Therefore, the process of communication does not take the form of deep thought provoking discussion that touches one's values

and beliefs. Situation of disequilibrium that offers the opportunity for evaluation and hence critical thinking is not created.

Without difference of opinions and disequilibrium created through the process of challenging and questioning, there cannot be a process of inquiry and hence critical dialogue. When students avoid debates, challenges and questions, considering it to be 'negative' and not part of a regular learning process, the essence of discussion as an opportunity for engaging in critical dialogue is lost. Sustaining only those discussions that are "positive" or which confirms with the "majority" opinion or alternatively using questioning and argumentation as a means of 'attacking' rather than for 'inquiry' prevents discussion from transforming to critical dialogue. The process remains merely a communication at superficial level, and hence inhibits critical thinking.

Further, when students believe that challenges and questioning are personal attacks, arguments need to be won at any cost and reviewing their claims (self-correction) is a personal failure, then the value of critical dialogue is lost. Because of these constrains and challenges, even with the process such as discussion forums that supports critical thinking and relevant skills such as communication, questioning, and interpersonal relationship, the process of 'inquiry' and hence 'critical dialogue' does not take place.

Enabling environment and relevant skills: *Required but not sufficient condition*. From the deliberations on the findings of the study so far, it is evident that that application of contemporary teaching and learning approaches has been able to create pre-condition for critical thinking by promoting collaboration, problem solving, interpersonal relationship and supporting articulation, interaction, questioning etc. However, it has not actually enabled the students to think critically by helping them

evaluate different claims, be critically conscious of their values, assumptions, be aware of their own biasness and engage them in objective reasoning and critical dialogue. Therefore, we can say that enabling environment and relevant skills are necessary but not sufficient enough to enable critical thinking.

The present learning experience is providing an enabling environment, students are enjoying the new experience and motivated to engage in the process, but this does not automatically enable students to engage in the process of critical thinking. As a result of the contemporary teaching and learning approaches students are familiar with skills relevant to critical thinking, but possession of skills does not just translate into its application for practicing critical thinking. It is not important what skills the students have. What matters for critical thinking is in what context and for what purpose those skills are applied. If they are applied only on content knowledge and not on the process of thinking and inquiry (process of knowing) then having skills alone does not serve the purpose.

Not limiting students to theories and enabling them to understand 'practical application' is a great milestone in transforming the learning process. But when the same practical knowledge becomes an excuse for blindly believing what is 'practically relevant' for them, then it takes one further way from the process of objective reasoning and hence critical thinking.

Just because students claim to have learned to develop their own viewpoints, can justify their views using their own logic, can actively engage in discussions with each other, it does not necessarily reflect critical thinking competencies. Students can master the skills of articulation and discussion, yet without the value and discipline for inquiry they can never engage in critical dialogue which is essential for critical thinking. Teaching students the skills of justification without teaching the values of

evidence, assumptions, beliefs, and its implication on one's own judgment can lead students towards aggression and assertion rather than argumentation.

Even with skills such as openness to alternative viewpoints, articulation, using logic/justification, one can still continue to operate with false beliefs, justify using false logic or irrelevant evidences. Exposing students to multiple perspectives, in one hand, offers great opportunity to practice critical thinking skill, but at the same time without internalizing the need, value, and disciple of evaluation it can lead students to be stuck with multiplist perspective. This can be even a greater constrain in learning of critical thinking as Khun states:

> Those who remain at the multiplist level of epistemological understanding, in contrast, conceive of no basis for judging the strength of an argument, except possibly its power to persuade. As a result, their critical thinking skills are taxed to an even lesser extent that those of the absolutist, who stands ready to evaluate assertions against a certain truth. (Kuhn, 1999, p. 22)

Kuhn (1990) suggests that although absolutist epistemological understanding might allow development of some elementary critical thinking skills, it does not strongly support for their development and on the contrary is more likely to function as a significant constrain on the development of critical thinking (Khun, 1999, p. 22). On the contrary, Multiplist understanding, though might provide some foundation by opening up to multiple perspective, but without the discipline to practice of evaluation, it is even a greater drawback than absolutist as at least the absolutist practice some skill of evaluation (comparision) where as multiplist sees no reason for argument or reasoning out. According to Khun (1999):

> people can spend their entire lifetime within the protective wraps of either a pre-absolutist stance in which assertions are equated with reality or more

> commonly the absolutist stance in which assertions can conflict but disagreements are resolvable by appeal to direct observations or authority: In contrast to absolutist stance, which is difficult to maintain in pure form, people often remain multiplist for life (Khun, 1999, p. 22).

So only with the exposure to multiple perspective and communication skill alone, but without the understanding of the need and self discipline for evaluation, even with a fertile ground created through the present learning process, the process of critical thinking cannot flourish. Only offering an enabling environment is not adequate if students are not helped to transform to the evaluative level, because according to Kuhn, this is a "course of development that most individuals never complete" (Kuhn, 1999, p. 23). For this they need to be oriented that though everyone has a right to their view but all opinions are not equal as "knowing is a process that entails judgment, evaluation and argument" and hence all claims needs to be weighing, evaluated and compared based on the strength of their merit, through a process of reasoned debate (Khun, 1999, p. 22).

Chapter Summary

In this chapter I have explored the various learning process that have potential to facilitate learning of critical thinking in order to understand how the opportunities have been capitalized and where the constrain and challenges are in the process of practicing critical thinking. The chapter highlights how the students' orientation and perspective reflecting their epistemological belief and their perception such as orientation towards challenges and strategies applied for dealing with challenges, argumentation, communication, and inquiry restrain them from practicing critical thinking. In the next chapter I shall explore the factors contributing to the challenges and constrains discussed in this chapter.

CHAPTER VIII

FACTORS CONTRIBUTING TO CHALLENGES AND CONSTRAINS

In the previous chapter I discussed the challenges and constrains in the learning processes. In spite of the existing potential and an enabling environment promoted through application of contemporary teaching and learning approaches (as discussed in chapter VI), these constrains and challenges have inhibited the students from realizing the existing opportunities and potential for learning critical thinking.

In this chapter I shall discuss factors (as well as actors) that have contributed or have influenced the challenges and constrains identified in the previous chapter. These factors have emerged while deconstructing the research participants' experience of their learning approaches, strategies, and behavior.

There may be many other factors (and actors) directly or indirectly influencing the challenges and constrains, but I have focused my discussion only on those factors related to the dimension of critical thinking, relevant to my area of study, as discussed on the section on the construct of critical thinking(chapter III). Further, I have limited my discussion only on those factors that have relevance to the educational institution and the key actors within (students and teachers). The factors and actors specifically related to instructional strategies, such as teachers, students and fellow students' roles and their capacity, have been explored.

Implication of Teachers' Role, Contribution, and Capacity

Critical thinking competencies need to be carefully groomed and is a very rigorous process. Hence, teachers are key actors and have a major role to play in the process.

Various literatures and theories emphasize on paying attention to and understanding the development of the epistemological beliefs of students (Dam & Volman, 2004) and managing the learning process by anchoring critical thinking practices in everyday learning process (Kuhn, 1999). Literatures also suggest that for students to learn critical thinking, the critical thinking should be explicitly taught, explaining how the procedures are applied and executed, explaining, modeling, and justifying their application, through proper instructions (Facione, 1990).

Teachers can model desirable behavior and demonstrate appropriate skills and approaches such as questioning that enhances social interaction and dialogue (Macknight, 2000). Teachers can also actively facilitate the learning process such as group discussion to ensure that the students actually engage in the process of inquiry and dialogue by practicing appropriate techniques.

Awareness of Students' Epistemological Beliefs: Questioning and Feedback

It is difficult to assess teachers' awareness of the students' cognitive development from interview with the students alone. However, from the kind of questions the teachers ask as well as the feedback provided, some inference can be made.

Bers (2005) state that teachers can assess students behavior and use those behaviors to encourage students to climb to a higher level of thinking. Teachers can use Socratic questioning to probe into students' epistemological beliefs as well as provide feedback of their assessments to the students (Duron, Limbach &Waugh, 2006; Kuhn, 1999; Kaddoura, 2011). Other literatures also suggest that verbal and written responses the students receive from teachers (and other fellow students) improve thinking skills (Cooper, 1995). Hence, feedback can reflect teachers' assessment of the students' learning process and indicate that they are paying

attention to the development of the students' competencies. The nature of the feedback and questioning can also indicate how it is being used as an instructional strategy to guide the learning process.

When the research participants were asked to describe the kind of questions their teachers usually ask them, they describe it as mostly to check students' understanding of a topic or to clarify further on what students have shared. The students remember being asked to describe or express their understanding on content or to share their point of view. They are mostly asked 'what do you think' but rarely 'why do you think so?' Or what is their rationale, belief, assumption or evidence for making certain statements or from where their comments are coming from.

Description of the questioning style of the teachers also suggests that the questioning is used to generate only further information (expanding the content), with questions like 'what else do you know? What next? Who can further elaborate on it?', leading to number of students joining the discussion rather than probing into the depth of individual students' root of the knowledge such as questioning their values, beliefs, and assumption.

When the research participants were asked to describe the feedback they receive it appears that the process of feedback is only during presentation of assignments and it is mostly group or collective feedback. Students recalled only rare occurrence when they received individual feedbacks. The term paper or assignment submitted mostly comes back only with score. Very few teachers make remarks or comments on it that too mostly on assignment paper and not final examination paper (which is assessed externally). These comments are very generic and brief and do not give specific and adequate guidance. Further, these comments are mostly related to contents, but not on the individual's approach of addressing an issue (such as use of

evidence, process of evaluation, and justification) as described by Suvi "*The feedback is like our teacher adds something in the contents if it is missing*". Similarly, Kriti explains:

> *Teacher indicated in our answers what was missing and what would be better….we had provided answer [example] from outside the case and the feedback was we need to answers from content in the case itself… however, what kind of example can be used was not told*

Some teachers also give verbal feedback, which are again on issue which are generic to the whole class, such as using or not using external information, imagination, or assumptions in case study but not discussing on what assumptions are or its implications on their decisions. The feedback students received during the class presentation are mostly on presentation style, mannerism/body language, vocal/pitch, confidence etc as well as on content such as which points were interesting, and where the gaps are (content not adequately covered).

Since the presentations are made collectively by the group (outcome of the group assignment), the feedback on the content is for the group in general, but not for one particular student. Sometimes the students can infer individual implication of the group feedback, from the feedback given to the particular section of the assignment to which the student has contributed specifically. Some times in extreme cases only students receive individual feedback as described by Midur:

> *It is difficult to get feedback individually. But if a student performs remarkably well or in case of poor performance, teacher provides feedback on communication skills of the student…normally, if the presentation is okay, there is no feedback.*

The research participants feel that it is not possible for the teachers to give individual feedback (even in terms of contents) as they are not aware of what happens in a group, the dynamics within and its implications on one's learning. Collaborative learning and hence group performance are core aspect of the course. Hence, the performances of the team members are assessed in terms of the final product only (i.e. the presentation or the assignment paper submitted), without consideration of the individual differences (performance) as the teachers are less aware of individual roles, contributions, and learning within a group.

If often happens that students cover the part of their fellow students who cannot contribute enough, in order to score better collectively. Dharma and Midur remembers that during their pre-course orientation they had been strictly warned about the required class participation. But Midur feels that the teacher were bluffing when they said they would find out about the level of participation and group dynamics and score them accordingly as he adds "*there is no chance and neither has there been a case where teacher has found out about inactive members in our group*". Midur thinks this is because of the institutional constrains as he describes:

> *There is one teacher in a class, and s/he has to guide thirty seven students in my case, the teacher is not really aware about the group process. It is rather impossible for a single teacher to observe and give feedback to seven different groups individually! …I have heard that in foreign university, if there is a group discussion, the professor is not alone; there are 2-3 'teaching assistants' monitoring, actively facilitating, and guiding the discussions in each group.*

Guiding Student's Development Process through Instructional Strategies

Explicit teaching of critical thinking competencies. From the discussion with the research participants it is clear that the development of critical thinking competencies as such is not an educational goal of any of the institutions, hence critical thinking and related competencies are not explicitly focused upon or discussed with the students. However, other competencies which reflects key dimension of critical thinking such as analysis and decision making, problem solving are identified as educational goals.

Research participants shared that their institutions have not focused specifically on teaching critical thinking skills. For some the term itself was a new concept. Students struggled to answer when asked to describe what they understood by the term critical thinking. All the research participants accepted that they have never discussed concepts relevant to critical thinking such as such beliefs, assumptions, values, biasness, evidences, fallacies, refutations etc during their learning process. They are not familiar with the concept and techniques of reflecting, questioning, reasoning, critical dialogue, argumentation etc as it has not been explicitly taught.

Students accept that they have been working with contemporary tools but never been explicitly oriented on the process or the approaches of its application, neither institutionally nor by individual teachers. Students are required to work with tools like case study, article critiquing, and group discussion but have not been coached on how it should be approached, what they need to focus on and what skill they need to practice. Students are not explicitly required to reflect on their values, beliefs, assumptions, indicate their line of reasoning, or discuss their evidences while making decisions or problem solving. Orientation (induction) session before the commencement of the courses is organized to orient the students on the various tools

they will be working with. But they are only told about the tools, but not the skills, processes, approaches, learning outcome or expected behavior or contribution required.

Educational institutions have been offering non credit courses on various topics. These courses are on presentation skills, personal/personality grooming, writing CVs/facing job interviews, report writing etc. In one college students who found doing case studies challenging requested the management for a special session. Two sessions were provided, but the research participant attending the course says it did not add much value, as same things discussed in the class were repeated.

Without the required skills and specific instructions, students are struggling on their own. They receive different instructions on doing case (study) from different teachers. Some ask them to read the questions first, then the content and underline answers, while others ask students to read the text first; some teachers ask them to go beyond the information given on the text and use their own imagination, while others ask them to strictly rely only on the information given on the text and never to use imagination or assumptions. Students are using different strategies for working with the same tool. Some students believe that solving case study requires researching outside the case information, while others (Midur, Manju, Kriti) think that the information available in the case is sufficient, and their job is only to use the information in the case to find solutions. So students adapt to individual requirement of the teachers.

Modeling approaches for facing questions. Students have accepted that questioning is actively promoted as part of the learning to the extent that it is linked with their performance (score). Therefore, students make deliberate attempt to ask questions. However, at the same time students shared that the questioning does not come easy to

them and at times they feel pressured for participation. They feel compelled to actively question and participate, to stand out and outperform other. They do so by compulsion, in order to demonstrate their participation for score, and not for the need of it.

Students do not feel the need to question their teachers because teachers are taken for granted as they are the 'authority'. Students like Suvi, Kriti, Manju do not feel that they have ever been in a situation to challenge the teacher. They have asked questions for clarification or things they have not understood, but only few of them can recall any occurrence where they did not agree with the teacher and openly challenge them as described by Midur:

> *Discussion and challenging is more among friends rather than with teachers. The reason behind why we do not have much of those with the teachers is that, we have a perception that they are well-trained and well-educated, have a better understanding, and whatever they say, must be right*

It's not only the orientation that 'teacher knows everything'. Even for those students who want to cross this threshold, there is still fear which is subjected through the authority and the control the teacher has over the students' grades. Among the research participants, only one shared about one particular teacher who openly challenged students to challenge him, think opposite to how he (the teacher) thinks, but others are described as one who accepts challenges only as long as their authority is not threatened. Midur shares his experience as follows:

> *There is no problem if you don't understand something and ask question for clarification …. But, to say that the teacher's point is wrong or that I do not agree; I need to think first before I speak… if a student challenges what the teacher has said, he or she might take it personally.*

Teachers encourage students to ask questions, but at the same time draws a boundary, which when crossed feels offended. Though the teachers are not explicit about it students can still sense it as Midur further explains:

> *Those teachers who try to restrict, we understand by the way he or she speaks! We get the feeling that they mean - now you are trying to be over smart*

Suvi is also careful about openly questioning or challenging teachers as often she feels the way the teachers respond to queries gives the sense that '*don't you even know this much*'. So she tries to explore and find on her own rather than question. Student like Dharma refrains from questioning teachers because it is like asking to be challenged and harassed with more questions from the teachers as he shares:

> *I should not speak if I didn't have enough evidence to think otherwise, even if I have 1-2 supporting points for my view on the matter that might not be sufficient. That's why I don't challenge.*

Research participant belonging to one particular college shared about a checklist that their teacher uses to track the students' class participations, assessing what kind of questions are asked and what points are being raised by the students and accordingly students are scored. Students are asked to put only relevant questions and irrelevant questions/comments do not get scored. There hasn't been any specific feedback on 'what is relevant and irrelevant' though. Dharma remembers once upon their inquiry, they were told that if you go out of the topic or talk about issues which are not relevant to the content than that's irrelevant. But during a discussion itself, students have not been given feedback on their performance (where they were able to stay relevant and vice versa).Students also shared experiences where teachers have

refused to answer the question stating that it's irrelevant, and also asked not to disturb the class with irrelevant questions, but have not explained why it's irrelevant.

Modeling 'questioning' techniques. Questioning by teachers is also frequent in the classes but students find the experience as something 'threatening' which students avoids. Sugam described one such scenario, where they felt the style of some teachers' questioning was to harness students rather than to promote joint exploration, as Sugam shares:

> *There are some teachers who come and start with questions like 'what is interest rate?' If you stand up and say '... is interest rate', then you have to face the attack. The teacher keeps on asking 'what else?', 'what else?' You have to say something new every time until the teacher is satisfied. When you say that you have nothing more new to say on the topic, the teacher says 'why do you need to be smart if you don't know everything about interest rate?'...Some people feel embarrassed in such cases like I mentioned just before. It was ok if the student thought that whatever the teacher did was for our own benefit. But not all students think like that.*

Student like Dharma finds such class participation a burden, the constant need to constantly participate and engage with friends/teacher stresses him out; as he says he is an introvert. Comments and counter comments are difficult for him, but he has to force himself to participate for the sake of marks. Manoj, like Dharma, also finds class participation forceful, where teachers encourages questioning as he is not comfortable with it as he shares "We *also have teachers who are dominating. They are forceful, there is a lot of contribution in making the students participative, but it should not be forceful".* On the contrary, for Kriti, teachers who cannot satisfy her

queries are the greatest de-motivators. Her exploration ends when the teachers appear confused when asked and tries to cover up with irrelevant answer.

Facilitating the process of dialogue: Guided discussion. Small group discussions and open forum (class discussions) are promoted as part of the learning process. This gives a very valuable opportunity for the teachers to actively facilitate and moderate the process in order to create a learning experience where students can engage in the process of inquiry, questioning, and critical dialogue to practice their critical thinking skill of evaluation, inference, and judgment. So how are teachers using this opportunity to enable students to engage in critical dialogue and hence practice critical thinking?

Students shared that group discussions are facilitated by teachers but it varies from one teacher to another. Dharma says, sometimes, discussions are just for the sake of discussing where "*teacher just asks and students make short and sweet comment and that's it*". Teachers are more active as facilitators, during open forum discussion, but less involved in small group discussions, where students are given a topic and left on their own to discuss. Except for one research participant who described the approach of one teacher as "*who stays close to a group pretending not to listen to the discussion while listening everything, and notices whether there is discussion and whether all the students are involved*" others are described as silent observer "*who observe from the distance*". They only interfere if there is conflict or if students call in to settle disagreement as Kriti describes "*We are given a topic and left for discussion, we refer to our teacher when we don't understand or teacher interfere if discussion takes the form of argument*".

Even in open forum discussion, where teacher is actively involved as moderator, the role is still of a "conflict manager as described by Midur:

> *It is like a football game. It depends upon the referee to what extent of roughness to allow in the game. It is upon the teacher to decide on what extent to allow the students to be involved with each other. That is upon the teacher's discretion. If the conversation is going out of topic and sometimes, it is possible that the conversation starts getting personal…In such cases, the teachers get involved and try to regulate the discussion to another direction. But as long as both are bringing up good points, the teacher waits and tries to understand the discussion*

Discussions are facilitated in such a way to avoid conflict (clashes of ideas) or disequilibrium. Discussions are allowed to proceed as long as it is positive and reinforcing each other's viewpoints but the teachers interrupt if strong difference of opinion and debate takes place. When it starts to get out of control, teachers usually interfere and conclude either by abruptly closing it without an explanation, or getting the students to compromise stating that "*all views are equally correct*."

Suvi also remembers similar occurrence in group discussion, where the discussion got quite loud. The teachers immediately interrupted to stop the discussion telling the students "*behave yourself*" instead of inquiring about what actually led to the dispute and teaching them skills to reason out differences through a process of dialogue.

It is evident that situation of debate or difference of opinion are often avoided instead of using it as an opportunity to engage the students in meaningful dialogue and teaching them the process of inquiry and argumentation. The way teachers moderate the discussion have oriented the students that constructive debate are those which lead to a healthy closure. Students believe that only those discussions can lead to a closure where the core ideas are the same and the difference is only because of

difference in interpretation. It is the teachers' approach that have promoted the multiplist perspective (all are equally correct) and oriented the students to avoid disequilibrium. It is the teachers who have enforced the notion of "positive" and "negative" discussion which has been discussed earlier to be a major constraint of critical thinking as Midur explains:

> *Most of the teachers tend to say that students, who support the positive discussion to be brilliant, or rather are considered to be good; and tend to suppress the negative discussions or leave it unheard. There has been a case where a friend in class was going totally against the positive discussion in the class, and the teacher avoided listening to him…asked him to end the discussion. …he never got to put his point . Such instances keep happening most of the time. Maybe, it is also because of time constraint. The teachers are asked to complete the course within a certain time and if he or she allows the discussion to go on, when to finish the course?.*

Discussion on the Findings: Teachers' Role, Contribution and Capacity

Teachers' roles and their deliberations are found to have a major implication in the learning process and how the available opportunities are capitalized. In order to enable the student to progress in their epistemological belief teachers first have to be aware of their process of development (epistemological stage), so that they can guide it towards the desired direction.

Learning is a social process where co-learners, social groups, and group dynamics have important contribution. However, cognitive development is an individual process, which needs to be managed and groomed at individual level. Teachers can positively guide the students' learning process, only when they are aware of individual students' development trajectory. Unless teachers have the

capacity to assess as well as carefully, systematically, and intensively guide the process of one's cognitive development (development of epistemological belief) by using appropriate teaching strategies, they cannot groom critical thinking.

The findings suggest that though there is an increased interaction between students and teachers, teachers are not able to directly and meaningfully engage with students at individual level. The engagement is more at group level, because of which teachers have less control and awareness of students' individual development. Teachers need to be in a position to continuously track the process of learning and subsequently guide it. However, teachers are not able to assess individual students' development and give feedback accordingly. Teachers are not using questioning techniques to assess individual students' epistemological beliefs. Individual assignment are used for scoring but not as such for guiding students' learning process, as students rarely receive hands on guidance or feedback on individual assignments.

Teachers are less aware of the group dynamics with in a group. Students are assessed only on basis of the outcome of the group exercise and not on the group exercise (learning process) itself. When the assessment is only of the end result (e.g. assessment of presentation as outcome of group discussion) and not the process of learning (based on individual role and contribution), the teachers have less opportunity to influence the students' learning process and hence their development trajectory.

Students are given feedback only on the content and not their process of thinking. When teachers are not aware of students' individual development and epistemological beliefs, they can provide feedback only on the content and not on their process of knowing (epistemological belief). Without working on the process of knowing, it is not possible to enable students to learn critical thinking. If teachers miss

out on enabling students to understand their own process of knowing (thought process) then they fail to "put people in metacognitive and metastrategic control of their own knowing" which according to Kuhn (1999) should be the development goal for teaching critical thinking (p.24).

Students need to have adequate skills, behavior, and orientation to engage in the learning process. Teachers need to explicitly teach, demonstrate, and model the desirable skills, behavior, and orientation. They also need to create opportunities (learning process) to practice those skills by actively managing and facilitating the learning process. Since critical thinking is not as such an explicitly identified educational goal, teachers are not actively engaging in making the learning process explicit. Hands-on facilitation of the learning process is also missing. Students have not been oriented on the required skills or trained (through modeling/demonstrations) to apply skills for practicing critical thinking. Constructs relevant to critical thinking such as beliefs, assumptions, values, biasness, fallacies, logical false, refutations etc have not been taught. Without the core understanding of such concepts and relevant skills/orientation, students cannot engage in critical thinking. Generic skills such as analysis, communication, questioning alone is not enough to enable critical dialogue, reasoning, and reflection.

Bandura's social learning theory suggest that individuals are said to learn by modeling (imitating) the behaviors, attitudes, and emotional reactions of others. By observing others, they solidify those actions (behavior) that are rewarded with positive reinforcement (Johnson, Daigle and Rustamov, 2010). As described by Bandura's social learning theory, it appears that teacher's approaches and behavior (modeling) has a profound influence on the students. This has direct implication on students' learning of critical thinking competencies. The way teachers have been

modeling their behavior have promoted orientation among students that inhibits critical thinking.

According to King (1995) students needs to be helped to develop a habit of inquiry, so that they can learn to ask thoughtful questions of themselves and of each other, about the material they read, hear in lectures and encounters during class discussions. However the way the teachers have been addressing students' queries and applying (modeling) questioning techniques, is unknowingly driving students away from the process of inquiry.

They approach questioning with a sense of fear and self doubt, and even though they are actively engaged in questioning, they lack genuine interest for inquiry. Questions are encouraged only within a set boundary, unless the teachers' authority is challenged. Students feel uncomfortable (often harassed) when questioning or when questioned by teachers. Hence freedom to explore is restricted.

Instead of acting as a facilitator or 'instigator' to promote active self exploration, teachers are taking the role of the final authority, giving verdict and concluding discussion for the students. This is a major setback for learning of critical thinking as Davey (n.d.) states "It would be detrimental to inquiry if the teacher were seen as an expert or imparter of knowledge" (p.20).

Instead of enabling students to practice a systematic process of inquiry, evaluation, inference, and judgment (in a situation of disequilibrium), teachers have been encouraging status quo as they enforce complementary thought and discourage contradictions. By reinforcing only 'positive' dialogue and discouraging confrontation, teachers are only encouraging 'communication', hence restraining the process of interaction during group discussion to transcend into critical dialogue.

Therefore, though contemporary teaching and learning methodologies and approaches are being applied, they are not consciously used to promote creating thinking. On the contrary the process of application itself is creating constrains and limitation for learning of critical thinking. This indicates limitation in teachers' capacity to apply the teaching and learning approaches and the capacity to manage the dynamics of the learning process, for creating meaningful learning experiences that promotes critical thinking.

Goal, Motive and Freedom: Persistence and Perseverance for Inquiry

Critical thinking is equally a matter of will as it is of skill, and requires persistence and perseverance. It is the motivation that defines one's propensity (disposition) for higher-order thinking (Facione, 2000). In order to be motivated to engage in the learning process one needs to be in control of it, be free from one's own emotion and blind belief as well as any kind of external influence, authority or environment (Regelski, 2005, p. 4).

Students description of their new learning experience indicates that they enjoy a greater sense of freedom and hence ownership of the learning process. They have greater freedom to explore, question, and interact. But does this freedom also mean freedom to think and exercise evaluation and judgment? How does this freedom influence one's persistence and perseverance in the process of inquiry?

Students feel that they are motivated to engage in the learning process. But the concern here is the motive for students' active engagement in the learning process is marks. They demonstrate confidence, actively express views/question, assertively communicate, develop and maintain social networks because of its implication in their score as Dharma candidly shares "*There is mark even for asking questions … We have to ask and answer even if it's only for marks*".

Students claim that the learning process has transformed from ‘teacher centered’ to ‘students centered’. That have a greater control over their performance, unlike before where it was entirely on the teachers discretion. However, deeper exploration suggests otherwise. They are not entirely in control (decision maker) of their learning process and learning outcome. The discussion on the challenges faced by the students in their present learning process indicates that students score is not a sole reflection of their individual performances. It is influenced by other externalities, such as teachers and fellow students. Therefore, students’ motive and goal are directed towards managing and maneuvering these factors (externalities) that have implication on their score.

Managing Teachers’ Authority

The scores received by the students are based on the teacher’s perception of student’s performances. Students are able to score high if they can demonstrate the desired attributes/behavior, which are defined by the teachers. Students find it challenging when there are inconsistencies in the expected attributes and approaches among different teachers. The approaches for solving a case study are presented differently by different teachers. But instead of adopting the approach which the students believe is right or beneficial, students’ share that they change their style according to the teachers.

One of Kriti’s teacher demands that only information provided in the case study be used, another asks them to go beyond it. Similarly, one teacher allows Manju to uses assumption and imagination, while another is offended by it. Both adjust their strategy for solving case study according to the teacher.

Manoj faced a similar disagreement with a teacher regarding an accounting problem. Manoj accepts that though he was not convinced, he followed the teacher’s

approach while solving the same problem during exams as he says "*otherwise we won't get good score*". When Manju, who also had faced similar differences with teachers, was asked who would she follow, her own judgment or teacher's verdict? She replied "*of course, the teacher's'. If I don't, my marks are deducted. Exams are for marks. I can do whatever I like outside exams. I feel like why to take risk in the exams*". Midur repeatedly comments that they have been oriented is such a way that there is no definite answer in management, there can be more than one answer, as long as you can defend it, but at the same time shares his dilemma when they have to deal with teachers with a different style as Midur describes:

> *Some teachers tend to be strict. They need some certain and definite kind of answer though they do not directly state it; we can understand from class interaction and all. If they need a certain answer, the students have to give that particular answer only to score marks even if we do not agree with it.*

Students believe that they should maintain a good relationship with the teachers and should not get into an argument with them, as it might be taken personally and affect their score as Midur describes:

> *If we keep a bad relation with the teacher, it is not going to be good for us. While questioning you should be careful… if you question the teacher, consider your five marks are gone...That may be the reason why students don't debate with the teacher easily… If I ask question and if the teacher starts to defend, then I just let it go.*

Students make effort to express their opinions to demonstrate their presence as Manoj shares "*If the teacher prefers certain student and not me, it must be because I have not interacted well with the teacher*". Students feel that in order to impress the

teacher, one has to standout from others, make themselves heard and grasp their attention. For this, questioning and interacting are important as Dharma explains:

> *You need to be somewhat extra [different] for teachers' attention…There is mark for class participation as well. Students like me are at a disadvantage because I am afraid to speak.*

Because of the implication on the scores, students have been adopting attacking/aggressive (and also withdrawal) strategy which have been discussed as major constrain of critical thinking. Either students don't enter into an argument, but if they do then they feel they have to win the argument. Students are not willing to give up their point of views during debates because it might be considered as lack of argumentation capacity by their teacher and hence negatively reflect on the score. Hence, they feel compelled to continue with their stances even with irrelevant logic as Dharma explain "*We have to keep on defending, using whatever logic, and it is difficult if you don't have enough to say*". Sugam agrees with Dharma and states:

> *When we sit and discuss outside of the class, mostly there are only the friends with whom we get along. We can leave the discussion. But in the class, in front of the teacher, if you put one argument, we have to keep on supporting it. I don't debate because I feel I can't defend my argument for long because I don't have enough knowledge.*

Midur also has a similar experience as he explains:

> *If teachers challenge me, I will not be able to say that I have not studied this or that, There are points for class participation…it is about marks. So, sometimes, there are situations when you have to say things you really know nothing about and keep on justifying yourself, I have done that too.*

Suvi describes group discussions have helped widen her viewpoints and shares "*When I listen to views of others my own knowledge broadens… It's not like only my opinion is right. Others' opinions can also be right*" and when asked if she also changes her opinion after listening to others' perspectives she states "*No, I don't. But I learn that there can be other viewpoints as well*".

Managing Social Relationship

From the discussion regarding student's motive to join the course, it is apparent that gaining professional skills for enhanced job prospective is a key factor driving students' performance. Students believe that one needs to be smart, outgoing, and confident. Students draw confidence and sense of achievement from being able to communicate, socialize, develop, and maintain social network and deal with different/diverse (often referred to as difficult) people i.e. fellow students. These competencies are indicated as the most valuable gain (outcome) of their course. These attributes are also the ones promoted and rewarded through the incentive system. Practical scores are based on attributes such as confidence, articulations, teamwork, interpersonal skills, and active participation, which are related to team dynamics. Hence, fellow students are important for one's performance and achievement.

Students appear to be drawn between two competing needs. In one hand, in order to excel, they have to outperform other fellow students, prove that they are different than others; more competitive, more articulate, and more aggressive (as aggressiveness is associated with those students who want to draw attention, prove that they are different than mainstream and hence better). This would require them to stand against each other, challenging, questioning, and debating. On the other hand, getting along with friends are important especially because of the collaborative learning approaches, interpersonal skills that is rewarded and collective scores (in

group projects/assignments/group discussions) that requires them to be in good books of each other. Hence, students play a balance strategy - maintain status quo with close friends (by compromising, avoiding or withdrawing) and aggressively (counter) attacking others.

Because of group assignments students cannot excel without their friends. Since the final outcome of the group is assessed collectively, without considering individual differences or levels of contribution in the group process, students are depended on each other for performance. Hence, in order to score well, it's important to compensate for others' incompetence as Midur describes:

> *There are some social loafers. They do not work individually or in a group...If such people don't work, then the group is in a weak position. …what do you do when tomorrow is the deadline and he comes and says he did not manage to do his portion?… We can't go to the teacher and complain either! After all, he or she is a friend and we have to study together for two years.*

Maintaining good social relationship with friends is important in order to project the image of a good team player with socializing, communication and interpersonal skills, which are competencies that are rewarded. If they cannot get along with their friends, then they can be considered a failure. Hence even though students have grievances they refrain from complaining as it would reflect negatively on their own competency. Kundan has found himself in a similar situation. As a team leader he once reported a non performing friend. He was instead reprimanded for not being able to manage the group. The whole team scored zero in teamwork. Henceforth, Kundan says he just covers for his friends, doing their part of the assignment as well. Manju, Kriti, Manoj, Suvi, and Dharma all have similar

experiences and have been adopting similar strategy as Kriti shares "*one cannot do anything about it except do friend's portion of the work*".

Good friends are perceived as those who help you demonstrate the desired attributes, help you 'project' the image of a good performer. They do not challenge you, but rather saves you in class discussions. Therefore students think that challenges need to be avoided if you want to maintain good relationship. When the research participants were asked to describe what makes them uncomfortable challenging others, Midur shares "*It is not possible to be highly professional with friends*" and indirectly hints the risk of such action on friendship by saying "*there are many consequences of a single action*" and "*After all, he or she is a friend and we have to study together for two years*".

If you challenge your fellow students and if they are not able to defend in class it is going to negatively affect your friends' score and vice versa. Hence students do not want to put each other and their friendship in trouble. Hence, students jokingly share about the pact they have with each other as Manju shared "*Normally, very less questions are asked. Because there is an agreement that no one will ask questions*", or if students do ask they play it safe asking 'easy' questions for clarifications, which their friends can deal with. If students have doubts they prefer to follow it up outside and not in the classroom, because class discussion, challenging will have implication in their score. Midur describes such situation by saying "*it is not okay to ask something in front of the class and we do that later casually in the cafeteria or other times*". Sugam agrees with Midur that students hesitate to discuss or argue inside the class itself as he states "*bigger arguments happen outside the class, but among friends that get along and do not take it personally*".

Discussion on the Findings: Captivated or Free to Pursue Inquiry

Critical theorist cautions that various unconscious influences can conspire to make people less than fully rational (Regelski, 2005). The findings discussed above indicates that in spite of the claim of freedom, students are not free to persistently pursue (or let others pursue) the process of inquiry. They are in the captivity of their own aspiration and hence are consciously or unconsciously accepting their unfreedom.

Exploration, inquiry, and evaluation are a painful process and need perseverance and persistence. It entails strong moral commitment to persistently continue one's inquiry and perseverance not to give up until the goal is met. However, students are not able to resist undue influences and persistently continue inquiry. Students are driven by the motive to score better, because of which they are willing to accept restrictions.

When the motive of scoring marks overrides the purpose of inquiry, it is easy for the students to give up their purpose of inquiry easily once their purpose of securing marks is fulfilled or if marks happen to be at stake in the process of inquiry. Their scores are subject to teachers' perception of their performance based on the demonstration of certain performance standards and behavioral traits. Their fellow students' support and contribution are essential to project those performance standards and behavioral traits. So it is important for the students to manage teachers' perception and hence their relationship with their fellow students.

The challenges shared by the students were not as such related to intellectual burden but mostly related to managing the group dynamics, social relationship, and the teachers' diverse demands. Once students learn to deal with different teachers and mange their social relationship, they find the process of learning much easier. Once

student gradually gains confidence to face different situation, articulate their views, comfortably participate in discussion, project their image through different strategies the course becomes ‘less burdensome’. That’s when they experience a sense of freedom and comfort. Students feel in control of their learning process, when they are in control of their relationship with fellow students and are able to manage the teachers’ perceptions towards them. For this control they are willing to accept others will, compromising their own rights and responsibilities of self-judgment and inquiry.

Students have the liberty to explore and question, but they practice it within the boundaries defined by external authorities (teachers and co-learners). They lack commitment and motivation to cross that threshold. Therefore, they are not free to explore.

Though they describe that their teachers are no longer traditional authoritarian, but more liberal and participatory, there still exists a fear for crossing certain boundaries. They are not willing to challenge teachers either believing them as the “knowledgeable one” or because of possible threat to their score. They are used to accept teachers’ verdicts without question.

Friends (co-learners) and social relationship, though valued as an important outcome (achievement) and key aspect of their learning process by the students, is also restraining the students to practice freedom of judgment. For the sake of friendship students are willing to compromise. Students are free to actively interact and question each other, but they do it only for the sake of participation and not, in reality, to challenge each other. In order to avoid conflict (disequilibrium) they are happy to accept the notion that “all are equally right” or accept teacher’s verdict or the majority opinion (considering it to be beneficial for all). They prefer maintaining status quo without really engaging in the process of inquiry. Therefore, the purpose of

the dialogue, as a means of inquiry, is not fulfilled. They also forsake their own right and accountability for inquiry and judgment.

These constrains are similar to those identified by Regelski (2005), who suggest that 'Situatedness of human reason' and 'tension between individual and group' affects one's capacity to think for self. Regelski (2005) cautions that, because of the tension between communality and individuality, people are vulnerable to accepting ideology, doctrine, orthodoxy, and mass thinking and tricked into false consciousness that sees reality in vested interest or interest group. When one does not consider the situatedness of human reason, one can easily abdicate or deny one's personal responsibility for constituting the knowledge and mindlessly accept that knowledge which will be revealed to us by external authority and institutions. Regelski (2005) states:

> People abdicate personal authority and responsibility by accepting without question a wide variety of authoritarian and doctrinaire orthodoxies and paradigms as being good, necessary and sufficient for understanding and dealing with the challenges of life (p.6).

When difference of opinions are taken as personal attack and potential risk in terms of loosing marks, rather than an opportunity to practice critical dialogue for evaluation and judgment, it impedes the process of critical thinking. When one resorts to counter attack to win an argument, instead of changing one's viewpoint in the light of emerging evidence, as it is taken as a personal failure, then the virtue of self-correction, which is essential for critical thinking, cannot be sustained. According to Kim (2003), even with the right skills, but without certain intellectual and moral virtues, sincerity, open-mindedness and fairness and discipline for self reflection, self-review, self-correction, thinkers can easily be distorted and biased and

"biased thinkers who hold unwarranted and irrational premises or rules of inference could use their critical thinking skills to support unwarranted or self-serving conclusions" (Kim, 2003, p. 74). Hence, even though students might have the capacity to critically think, without the moral virtue they can only use it to fulfill their self serving interest (of self or of a particular interest group) and hence are "weak critical thinkers" (as termed by Paul as cited in Glaser, 1998, p.33)

The present learning process has disempowered students to accept external influence at the cost of one's own self judgment, because of the existing (in) direct fear and coercion. On the other hand it has also negatively empowered them, because of the sense of freedom promoted, to pursue one's own interest and right at the cost of preventing others from advancing their right to inquiry by using indirect force and threat manifested through aggression, stubbornness, and domination. Hence, though students are given freedom they are not able to exercise it for applying critical thinking, which unfortunately according to Regelski (2005) is what critical theorist and psychoanalytic thinker Eric Fromm, was arguing in his book 'Escape from Freedom' (1941). Fromm believed that people lack the ability to cope with individual freedom and thus unconsciously long to return to the authoritarianism of pre-individualistic societies.

Education system cannot promote critical thinking unless it is able to liberate students from any kind of unwarranted influence and coercion, so that they are free to practice self-reflection, self-judgment, and self-correction as promoted by critical theorists as Regelski (2005) states:

> Critical theory, as a result, seeks liberation from socially imposed blinders that stress mechanistic cause and effect, what works kinds of thinking. Instead, it favors reason guided in terms of the ends or aims, intentions, interests, or

> purposes that empower people, in our case, students and teachers, to be free from coercion and thus free to achieve right results for themselves and others (p.17).

Chapter Summary

In this chapter I have focused my discussion on the various factors and actors that have contributed towards the challenges and constrains of critical thinking. The finding highlights that the absence of the right skill, capacity, and the orientation of the actors engaged in the process and other environmental constrains that does not allow students to practice freedom in judgment inhibits students to practice critical thinking in spite of the available opportunity. Among the two major factors identified that have contributed towards the constrains and challenges, first is related to the teacher's role, contribution, orientation and capacity to understand the student's epistemological development and guiding the learning process through instructional strategies. Second is related to factors such as students' motives, goals and interests that influences them to accept others' wills (of teachers/authority and co-learners) compromising their own right and responsibility for inquiry and self judgment.

CHAPTER IX

SUMMARY, CONCLUSIONS, AND IMPLICATION OF THE STUDY

In this chapter, I shall reiterate the major findings of the study and draw conclusion. I shall also discuss the major implication of the findings. The discussion shall focus on specific implication having relevance to educational institutions applying contemporary teaching and learning approaches, such that it would provide insight for strengthening the educational processes for enabling students to learn critical thinking.

This study began with the acknowledgement that critical thinking competencies are very important life skills and all education systems have the responsibility to empower students by enabling them to learn this crucial competency. On the contrary, there is a general notion that those receiving education in Nepal are not critical thinkers because of the limitation in our education system, which is traditional; teachers centered and hence have not been able to empower the students.

The recently introduced educational programs like the Masters in Business Administration (MBA) have been applying contemporary teaching and learning approaches that have been internationally established to promote critical thinking. The educational institutions also claim to promote skills relevant to critical thinking such as analysis, articulation (argumentation), good (rational) judgment, and decision making. Given this claim, it was important to understand what was happening in our education system because of the application of contemporary approaches. Therefore, this study was undertaken to explore the MBA students' experiences with the contemporary teaching and learning approaches, so as to understand how our

educational system was transforming and what the transformation meant in terms of learning of critical thinking. It specifically explored the opportunities in the present educational process for enabling critical thinking as well as identified the existing challenges and constrains. The major findings (summary) of the study and conclusion with its implications are discussed below.

Reiterating the Major Findings

The finding of the study clearly indicates that educational institutions offering the MBA courses are indeed applying contemporary teaching and learning approach. This has lead to a distinctly different learning experience for the students, which manifests an emerging transition taking place in our present education system. The learning process have transformed from traditional, theory based, lecture focused to more interactive, engaging, and participative process. Hence, the education system is transforming from a teacher centered approach towards a student (learner centered) approach.

Shift in Learning Processes: Teaching and Learning Style, Behavior, Orientation, and Outcome

The present teaching style is transforming from ‘handing down of knowledge’ approach to more engaging and participatory approach. The contemporary teaching and learning approaches have enabled the teachers to make this meaningful shift in their teaching approach. Change in institutional factors such as longer class hour, smaller class size and scoring system based on students’ performance in various other activities (assignment, class participation etc) other than final written examination have facilitated the application of these contemporary approaches.

The changes in teaching and approaches have been instrumental in creating valuable learning processes that have facilitated active interaction, communication,

sharing of ideas, and discussions. These learning processes have enabled students to experience the world of ideas and opinions, introduced them to difference of opinions, contradictions, and debates; exposed them to complexities of multi-dimensional world and practice practical application and real life problem solving and decision making.

The changes in the learning process have groomed new learning behavior and orientation that have enabled the students to acknowledge diverse viewpoints with the understanding that the world is multi-dimensional and complex and hence people can have different point of views as they have different way of interpretation (multiple realities). Hence, there is no right or wrong answer as long as one can justify it. These learning processes and orientations have lead to the shift in the learning style of the students, redefining how they engage with the learning process. Students now find themselves more actively engaging in the learning process, actively interacting, expressing, exploring, and questioning. They find the need to understand, explain, and practically experience things and not just memorize theories. Students are now opening up to alternative viewpoints, accepting multiple realities, and seeking justification and clarification. They are now more confident, social, extrovert with the ability to voice their opinion, deal with different people, better handle pressure, able to see broader picture, analyze, and make decisions.

Hence, this transformation in the learning process has changed the traditional role of the teachers and students, where now the students are in the centre stage, experiencing greater control and freedom in learning.

Enabling Environment: Available Opportunities and Potential for Learning of Critical Thinking

The transformation in the present learning process and the learning behavior, orientation, and skills promoted through application of contemporary approaches has

been able to create an enabling environment for learning of critical thinking. The various learning processes, that have facilitated active exploration, questioning, articulation, sharing of ideas, interaction (debate/discussions), and justification, are the key enablers of critical thinking as they support the skills and dispositions (behavior) to practice critical thinking.

Students claim to have gained skills such as understanding and practical application, analysis, decision making/problem solving (generating options/selecting best options - judgment). These are related to critical thinking skills as various theories describe critical thinking as a process of generating alternative claims, evaluating it against objective criteria following a rational process of inquiry that entails reflection, questioning, and argumentation. Students also claim to develop disposition that supports critical thinking such as openness and acceptance of alternative viewpoints, inquisitiveness (exploration), confidence in justifying their viewpoints, dealing with complexities (perseverance) etc.

Further, social relationship, interpersonal skills, and confidence to communicate , which are stated as their key achievement (learning outcomes), can also said to be enablers for critical thinking as social relationship that facilitates communication especially two-way communication in the form of dialogue is an important component of the process that promotes critical thinking. Further, the present learning environment also provides motivation for students to engage in the learning process and take advantage of the available opportunity to practice critical thinking.

Hence it can be said that an enabling environment and opportunity exists in the present learning experience to learn and practice critical thinking. The

contemporary approaches have supported learning processes, learning environment and relevant competencies that supports critical thinking.

Challenges in Realizing the Existing Potential and Opportunity for Learning of Critical Thinking

Existence of the enabling environment and opportunity to apply critical thinking competencies alone does not necessarily indicate actual learning and practice of critical thinking, as those with the opportunity (and ability) might not choose to use it. This is the key argument of theorist from cognitive psychology, who argues that opportunities and qualities alone do not characterize critical thinking. What matters is whether and how they use the skills and opportunities. Hence, it is important to understand the dynamic of the learning processes promoted and how students engage with it.

Theories suggest that students should be able to consciously control their thought process to evaluate alternative claims (judgment). This would demonstrate application of metacognitive and metastrategic competencies and evaluation epistemology, which are essential for critical thinking (Kuhn, 1999). For evaluation of alternative claims (mental model or alternative state of affairs) one needs to engage in the process of critical dialogue (process of inquiry) that entails both internal dialogue, reflection on one's thought, questioning one's own beliefs and assumptions as well as external dialogue with others to seek justification and justify own claims, through questioning and argumentation (Cohen, 2000).

Finding of the study suggests that in spite of the available opportunities, students have not been able to practice critical thinking primarily because of lack of metacognitive and metastrategic competencies and evaluative epistemology. Students are not conscious of their own thinking process, do not question their own beliefs and

assumptions, hence are not aware of their epistemological development. Therefore, they cannot control and guide their thinking to practice objective evaluation and judgment.

Students jump to conclusion without following a systematic procedure of generating or considering alternative mental model and evaluating it against ‘standard of evidence’ (logic) following a process of objective inquiry. Instead of the process of evaluation, their judgment is based on past experience, intuition, or imagination. Their trust in external authority (teachers or majority opinion) which is a reflection of their ‘absolutist perspective’ and ‘multiplist’ approach where they consider all claims as equally valid, inhibits them to value the relevance of evaluation. This is a major pitfall for critical thinking. Since students do not see the relevance of evaluation, they also do not engage in critical dialogue (process of inquiry).

The application of contemporary approaches has only promoted articulation, questioning, and explanation but has not promoted ‘critical dialogue’. The process has only supported ‘communication’ (mere exchange of information) but not a process of inquiry (critical dialogue). Students view questioning, challenges or confrontations as a negative practice and not part of a regular learning process. They either avoid or withdraw from arguments or compromise, thereby avoiding disequilibrium that offers the opportunity for inquiry (reflection, argumentation, questioning) and hence evaluation and judgment. Alternatively, they counter attack, trying to win arguments based on force, aggression or emotion forsaking the process of rational process of argumentation.

Therefore, the findings of the study indicate that enabling environment and relevant skills are essential but not adequate factors to enable learning of critical thinking. The same process that has created potential opportunity for students to learn

critical thinking can also create potential constrains if the dynamics of the process are not managed well and if the students do not develop the right orientation.

Exposing students to multiple perspectives in one hand offers great opportunity to practice critical thinking skill. But if the students do not internalize the need, value, and disciple of evaluation, it can instead create constrains in learning of critical thinking, by promoting ‘multiplist’ orientation.

Promotion of collaboration, teamwork, and social (interpersonal) relationship can support critical thinking by supporting open and candid dialogue. But it can also make students socio-centric with absolutist perspective who accepts mass opinion (collective interest) at the cost of self evaluation.

Not limiting students to theories and enabling them to understand ‘practical application’ is a great milestone in transforming the education system. But when the same practical knowledge leads them to consider what is practically applicable and relevant to them, based on their prior knowledge or experience as more compelling evidence than those arrived through a systematic process of inquiry, students have the leeway to avoid the painful process of inquiry and evaluation.

By teaching students the skills of justification without teaching the value of evidence, assumptions, beliefs, its implication in one’s own judgment and need to be open to one’s own biasness, it unknowingly encourages students to be aggressive than argumentative, such that students lose the core virtue of critical thinking which is self correction.

Students can develop skills relevant to critical thinking such as understanding, analyzing, inference, justification. But they can limit the application of such skill on content (knowledge) alone but not to thinking (process of knowing), without which critical thinking is not possible. Students can acquire some relevant disposition for

critical thinking such as need to be well informed, exploration, openness to divergent world views, self confidence in one's own ability to reason/judgment, working with complexities. But as long as they fail to develop other more core dispositions such as trust in the process of reasoned inquiry, diligence, precision, and perseverance to consistently and consciously follow the process of inquiry, honesty in facing one's own biases and prejudices and self-correction then they cannot practice critical thinking.

Factors Contributing to the Challenges and Constrains

Two major factors have contributed towards the challenges and constrains that inhibit students from realizing the existing opportunity and potential for learning critical thinking. The finding of the study indicates limitation in application of the contemporary tools and approaches, which manifests constrain in teachers' capacity to manage the dynamics of the learning processes. The other factors are students' orientation, motive, goal, and interest which manifest the undue influence of external factors (actors) that restrict students to exercise their freedom and disempower them from realizing the existing potential for critical thinking.

Theories suggest that in order to enable students to learn critical thinking teachers need to be aware of their cognitive development (epistemological belief) and actively guide it through application of relevant instructional strategies. They need to make the learning process explicit, explaining the procedures and modeling their application. Cognitive development is a very individual process, which needs to be dealt and groomed at individual learning. However, the findings of the study indicate that in spite of increased interaction with students, the teachers are not able to engage with them at individual level, and hence are not aware of and not able to positively influence their development trajectory. As a result important tool like feedback are

not effectively used for students' development. When teachers are not aware of students' individual development and epistemological beliefs, they cannot provide individual feedback. Further, they can only provide feedback on the content (knowledge) and not on their process of knowing (epistemological belief). Hence, students are not made aware of their own epistemological development. Without this understanding and awareness, students are not in the process of practicing critical thinking.

Since critical thinking is not as such an explicitly identified educational goal, teachers have not explicitly taught the relevant skills. Students are unaware of the core construct related to critical thinking such as beliefs, assumptions, values, biasness, fallacies, logical false, refutations etc, without which only with generic knowledge of analysis, communication, and questioning one cannot practice critical thinking.

Teachers have not been able to model relevant techniques like questioning and critical dialogue. Instead the ways teachers have been modeling those skills have promoted orientation that inhibits critical thinking. Instead of facilitating self exploration, teachers are giving verdict as the final authority. Instead of enabling students to practice a systematic process of inquiry, evaluation, inference, and judgment (in a situation of disequilibrium), teachers have been encouraging only 'positive' (complementary) dialogue and discouraging confrontation and disequilibrium. Students approach questioning with fear and avoid confrontation, which is detrimental for critical thinking.

Internal motivation plays an important role in practice of critical thinking as it requires conscious effort, persistence, and perseverance. Students need to be free from any kind of unwarranted influence and coercion, so that they are free to practice self-reflection, self-judgment, and self-correction. The findings of the study suggest that

contrary to students' claims of freedom, they are not free to persistently pursue (or let others pursue) the process of inquiry. They are in the captivity of their own aspiration and hence are consciously or unconsciously accept their unfreedom.

Students are driven by their motive to score. Their scores are subject to teachers' perception of their performance based on the demonstration of certain performance standards and behavioral traits. Their fellow students' support and contribution are essential to projecting those performance standard and behavioral traits. So it is important for the students to manage teachers' perception and hence their relationship with their fellow students. For this reason they are willing to compromise the process of inquiry.

Students practice questioning within the boundaries defined by the teachers. They refrain from challenging their authority. They are used to accept teachers' verdict without any question. For the sake of friendship students avoid conflict (disequilibrium). Hence they engage in discussion only for the sake of participation and not in reality to challenge each other. They are happy to accept that "all are equally right" or go with the majority opinion, hence forsaking their right, responsibility, and accountability for inquiry, evaluation, and right judgment. Alternatively, when they face the situation of direct confrontation or debate, students do not exercise their freedom to change their stance (claim) in the light of the emerging argument and evidence. They believe that self-correction will be perceived as their failure and lack of competency, which would reflect negatively on their score. Instead they retort to aggressive assertion of their claim at the cost of reasoned argument.

Hence, the present learning process has disempowered students to accept external influence at the cost of one's own self-judgment, because of the existing (in)

direct fear and coercion. While others are negatively empowered, because of the sense of freedom promoted, to pursue one's own interest and right at the cost of preventing others from exercising their rights by using indirect force and threat manifested through aggression, stubbornness, and domination.

Conclusions

As a result of application of contemporary teaching and learning approaches, students are experiencing a different learning experience, which is more participatory, engaging, and hence student centered. This is an indication of gradual shift in our education system. This transformation entails opportunities for the learning of critical thinking. The contemporary approaches have been able to promote learning processes as well as learning behavior, orientations, and relevant skills that can facilitate critical thinking. However, in spite of the available opportunities students have not been able to realize the existing potential. Even though students have some relevant skills, have the motivation and are actively engaged in the process that offers opportunities, they have not been able to realize the existing potential.

Therefore, it is evident that existence of the enabling environment and opportunity to apply critical thinking competencies alone does not necessarily indicate actual learning and practice of critical thinking, as those with the opportunity might not be able to capitalize on the existing potential. The present experience have enabled students to gain relevant skills and disposition such as communication, articulation, interpersonal skills, openness towards diverse views, which are competencies that can enable critical thinking. But in absence of other core competencies such as metacognitive and metastrategic competencies as well as evaluative epistemology, students are not able to meaningfully engage in the process that supports critical thinking. They do not have adequate skills to engage in the

process of critical dialogue to pursue the process of inquiry, evaluation, and judgment and are not able to practice perseverance to persistently seek what is right and lack moral courage for self-review and self-correction. Limitation in terms of teachers' capacity to manage the dynamics of the learning processes in order to create a meaningful learning experience and lack of students' freedom to engage in the process of inquiry because of undue external influence are the major factors that have inhibited the students from realizing the existing potential.

Hence, the study concludes that though theoretically the contemporary teaching and learning approaches (active learning approaches) have the potential to promote critical thinking by creating an enabling environment and providing relevant skills, it will not automatically lead to the learning of critical thinking if the teachers do not have the required skills to manage the dynamics of the process and students do not have the motives, and goals to resist undue influence and practice freedom to exercise their right, responsibility, and accountability for inquiry.

Application of contemporary approaches (Active techniques) has been able to create preconditions that support critical thinking but have not directly enabled critical thinking. It has supported the transformation of the system from traditional teacher centered to contemporary students centered, promoting greater interaction, engagement, exploration, engagement, questioning. But this transformation alone is not adequate to promote critical thinking.

Implication of the Study

Enabling critical thinking is not an easy educational goal to attend. Since the application of contemporary tools alone will not automatically result to critical thinking it would require extra effort and hence serious commitment and investment. From the study it is evident that critical thinking requires personal grooming (at

individual level). Hence teachers need to have the capacity and willingness to make that extra effort. The tools and approaches need to be carefully planned, administered, and monitored. This implies not only commitment at individual level but also a huge investment on the part of the educational institutions. Hence, the study has greater implication on educational institutions that aim to apply contemporary teaching and learning approaches to promote critical thinking.

Institutional Policy

Presently critical thinking is not an explicitly stated education goal of any of the institutions. So, no specific efforts have been made to promote critical thinking. Therefore, findings of the study indicating limitation in teacher's capacity, role, and contribution are understandable. Similarly, students have also joined the courses without any specific motive for learning critical thinking and do not have any specific demand for it, which gives leeway for the institution to have less focus on it. The progress for the way forward can only be made first by acknowledging the need, relevance, and importance of critical thinking by both educational institutions (supply) and the students (demand). This commitment needs to be reflected in the educational policies that would guide a conscious effort and focused strategy for enabling critical thinking. As guided by this institutional policy, changes need to be reflected in various fronts ranging from promotion of instructional strategies, students and teachers selection, and assessment methodologies.

The application of contemporary tools needs to be promoted institution wide, with specific policy guideline. Presently the extent of use of contemporary tools and approaches varies among teachers (which is also subject to the nature of the course) as some use it rigorously, while other don't or uses it only as a 'token' (like the example shared by one student where case studies were left for end of the course, to be done if

time permits). When talking about positive learning experiences the students were talking about particular “Marketing Madam” or the “Dean Sir” or the “lecturer who is also a working professional in a multinational organization” or “teachers who have studied abroad”, and cautions that there are others who are still traditional, authoritarian, and only lecture focused. Further, variation is also seen between students in the way they choose to engage with the tools and the learning process. Some are more vivid explorer, reads extra materials and search the internet to do case study assignments and are more active in class discussions, but they share that they do it more out of personal interest (in order to outperform or be different than other). They share that they have some friends in their class who do not like discussions, chooses to keep to themselves, and hates to search the internet.

If critical thinking is to be explicitly promoted then the application of the tools and the desired learning processes and behavior should not be at individual discretion. It should be seriously enforced and monitored through strict guideline and closely tied with student’s assessment (and teachers performance appraisal) process.

Assessment Methodology - Incentive Mechanism

The study indicates that the introduction of the scoring system based on practical assessment (class participation, discussion, group assignments) has played a major role in promoting application of contemporary (active learning) approaches and promoting learning processes that promotes critical thinking. The practical scoring approach has also motivated students to engage in these processes. Hence, for promoting contemporary approaches, educational institutions need to provide incentive for the students such as the score.

Scoring matrix. The practical score based on assessment of students’ performances (as per their participation on the various learning processes and behavior/orientation

promoted through contemporary teaching and learning approaches) varies between educational institutions (university). Some universities allow greater autonomy on scoring to the institutions affiliated with the university (up to 80 percent scored internally by the teachers) while other maintain greater self control (allowing autonomy to score only in average 40 percent internally). The remaining 60 percent is scored centrally by the university (by external examiner who is not familiar with student's development process).

The final examinations are described to be more theory based. Within the institution, the application of the contemporary approaches varies between teachers as well as subjects. Some teachers use only class participation/assignment based scoring, others use a combination of written and practical examination (approximately 20 percent practical) while some teachers have been using only written examination approach (based on theories) even to score for the practical examination.

Contemporary tools are used less in subjects like accounting, finance, investment/banking and more in subjects like management, marketing, human resource management, organization behavior (depending on the teachers discretion). This has implication on the extent of the use of contemporary approaches and its efficacy in creating adequate opportunity to enable critical thinking. Greater it is tied to the score, the greater the students and teachers are motivated and have greater scope for applying the contemporary tools. This might indicate that greater autonomy to affiliate institutions for practical scoring would be a way forward, but there are intricacies associated with this. The education experts shared a case of particular university which recently changed their policy to standardize their scoring mechanism to 60-40 ratio (external-internal assessment) where earlier the affiliate institution had greater autonomy. The decision was taken to maintain consistency in scoring

approach across affiliated institutions, as there were chances of practical scoring being misused.

One of the research participants shared that in his college, all the students got a minimum score in practical assessment irrespective of their level of performance (28 out of 40 for even those who did not actively participate, up to 32 to average performers and full 40 to others who showed some effort), as failures reflect badly on the college's reputation. Hence chances of such discrepancy and institutional constrains need to be addressed.

Assessment dimension. For enabling the students to learn critical thinking, it is essential to track individual student's learning process and guide it accordingly. This can be effectively achieved by anchoring it to the scoring (incentive) system. For this, appropriate scoring dimension (criteria) needs to be identified.

The present practical scoring system focuses on dimensions such as student participation: how good they are in teamwork, articulations, asking question, personality, confidence level. These are skills that support critical thinking but not core skills that reflect metacognitive/metastrategic competencies and evaluative epistemology. It does not reflect students' engagement in the process of critical dialogue and actual manifestation of critical thinking i.e. ability to reflect on thought, reasoned argumentation, evaluative perspective, Socratic questioning, self review/correction etc. These core dimensions also need to be specifically identified and linked with the assessment system. The facilitating (or supporting) competencies and skills related to process dimension (communication, communication, interpersonal skills etc) are also important and need to be promoted and hence assessed and scored together with competencies related to outcome dimensions that reflect actual practice of critical thinking (i.e. meta-cognitive development), which

also need to be assessed and scored separately. The supporting process focused competencies can be based on collective scoring approach, however for the critical thinking competencies, blanket approach will not be suitable, and hence a more individualized and intensive approach that monitors and tracks the students' development over a period of time need to be adopted.

Strengthening Faculty: Core Faculty, Capacity and Incentive

Teachers or faculty have a very critical role to play for enabling students to learn critical thinking, and their capacity and commitment does have implication on the outcome. Without addressing this and only having a policy to transform the system will contribute little.

Strength of core faculty. The increase in class hours (duration) and decreasing class size has been instrumental in increasing student-teacher engagement, which is essential for application of active learning approaches. However, the engagement is still not enough to adequately facilitate critical thinking. For enabling student to learn critical thinking, teachers need to adopt hands-on grooming, closely monitoring and guiding the metacognitive development of students at individual level, which means greater time and effort investment per student.

With the present students teacher ratio (approximately 30:1), it is still difficult for teachers to deeply engage with the students at individual level and provide hands-on guidance. Learning process such as group discussions, debates cannot be closely followed, monitored, and guided with limited class hours and huge number of students to manage. It is likely that the process of group discussion (if to be facilitated in form of critical dialogue) does not conclude in one session, which has to be followed up in next session or extended time period beyond class hours and in informal settings. The teachers need to be available beyond regular or formal class

settings to demonstrate techniques, model appropriate behavior and respond to queries or provide necessary feedback and guidance.

The fact that many of the institutions, presently, rely on part-time teachers or visiting faculty with very few cores (full time) faculty can be a challenge to ensure the required process facilitation. Part-time faculty will not have the time or the commitment to engage continuously in the students' learning process, beyond the time (sessions) they have been contracted for. Part-time faculty might also not equally own the values, principles, program of the institutions as they are linked with more than one institution (which might have different priority and agendas). Therefore, it is important to ensure and strengthen core faculty.

Teachers' capacity. Limitation in teachers' capacity to facilitate the learning process distinctly emerges in this study. Many of the part-time teachers are working professionals belonging to different fields and not education sector and are not trained on education pedagogy. They might not have the technical knowledge of the various relevant tools, or be familiar with education principles, philosophies, and learning process and hence are not in the position to adequately guide the students. Even the full time faculty or those from the education sector cannot be said to have adequate skills to guide students for learning critical thinking unless it has been included in their training curriculum. Teachers' capacity is the key to the present constrain and also might offer answer to the question arising that why even though with the appropriate tools having the potential to promote critical thinking it has not lead to the intended results. John and Milter (n.d.) of Ohio University, synthesizing their 11 years of experience of implementing MBA program, especially applying problem-based learning argue that the weakness lies not in the concepts or approaches used in the MBA program but in the implementation of those concepts and approaches.

Teachers need to be familiar with tools that promote critical thinking. They need to be aware of which specific tools are meant to promote what skills and competencies; what it is meant for or not meant for and the dynamic of the process of application, in order to ensure that the intended results are realized. Therefore, adequate investment needs to be made to strengthen teachers' capacity to work with the contemporary tools and approaches.

Incentive system. It is evident that attaining the educational goal for teaching critical thinking needs extra effort. Thus the question arises "why would a teacher make this additional effort?", "what is in there for them?" and most importantly "how to get part-time faculty to equally commit to this extra commitment when they do not have any institutional obligation?". The need to score (and control) 40 percent of the marks might be an indirect motivation (or indirect compulsion) for teachers to apply contemporary tools, but that too is limited to application of the tools only and not to go beyond for that extra effort required for teaching critical thinking.

Therefore, incentive system needs to be designed for the teachers in order to motivate them make that extra contribution. Beyond materialistic incentive, belief on the value of education because of its contribution to one's life and respect for teaching principles can act as motivator for enabling critical thinking. This means that educational institutions need to be able to attract teachers with such core values and principles.

Student's commitment. Student's commitment also has implication on whether or not the available opportunities for critical thinking are utilized. Which means the students placement process needs to be carefully managed to engage students who resonates with the values promoted by the educational institutions (educational goal of critical thinking).

The interview with the students and the experts clarified that except for few top colleges, it's a competitive market for the mushrooming colleges offering similar courses. Though all the colleges have screening (entrance) test, colleges are compelled to admit student without any specific commitment towards desired learning behavior. Some of the research participants shared their grievances towards their colleges for not seriously screening the students for placement. Many of his classmates left to join jobs in their last semester, only coming in for final examination, and did not attend the regular learning processes. Given such scenario, the question is how this issue of balance between quality education, attaining the goal for promoting of critical thinking and sustaining the market competition will be balanced. Such institutional constrains need to be addressed in order to achieve the goal of critical thinking.

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APPENDICES

Appendix A

Questionnaire Guidelines

Date of Interview: Venue: Time:
Name of the Respondent:
Institute:
Level/ Semester: GPA score in the last semester:
Previous education background (level/faculty or stream, university):
Contact Detail:(Email; phone)

Opening/Icebreaking
Begin the session with introduction to the researcher, presentation of the purpose of the research and methodology, reason for selecting him/her as research participants and providing assurance for maintenance of confidentiality. The interview shall proceed only after the respondent consents with the approaches and agrees to proceed forward.

Research Question 1: How do the students find their experience of MBA where they are exposed to contemporary teaching/learning approaches as compared to their previous learning experiences?

Exploring the differences

1. Can you tell us a bit about yourself and describe your life in general from the time you were a student in SLC to this day when you are a students in MBA (or graduated)? (how it has evolved, What has change)?
2. How would you describe your overall education experience till bachelor's level? (from SLC to masters level?)
3. What has changed, what is different and what is the same? (probing areas: school, teachers, yourself as students? teaching methodologies)
4. Why do you find it different?
5. What does this difference in teaching and learning methodology mean for your personally? (If teaching and learning approaches described as different)

Understanding the learning process and its implication (of contemporary approaches)

6. Can you describe the whole process/activities where you are involved in or experienced different teaching and learning approaches (probing areas: case study, group discussion, presentation, internship, group project/assignment – etc)
   Probing areas:
   - Process- what happens, who does what? Why?
   - Your role, contribution, strategy ?
   - Teachers role in it – feedback?
   - Your opinion of the process and tools
     - what is actually supposed to mean and how is it suppose to help you learn?

- The way it is being applied? Any thing you would want done differently?
- The aspect you like the most and don't like the most? Why?

- What does it mean to you?- value addition

Research Question 2: How has the transformation in the learning experience (learning processes) created opportunities and potential for learning of critical thinking?

How has their experience with helped the students gain critical thinking skills? What aspect has contributed the most?

7. Why did you join MBA? What was your expectation and what have you found in reality?
8. What has this experience of being a student in MBA mean personally for you?
9. What has changed after joining MBA? What have you gained and how has it shaped your life (probing areas: your outlook, opinion etc?)
10. How would you describe your self as a person (probing areas: articulation; exploration – disposition related aspects)? how does this relate to your MBA experience?
11. What particular thing in MBA helped you gain what you have gained and how?

12. Because of the course requirement, have you changed any aspect of your behavior- how you approach things or how you think about something
13. How do you evaluate yourself in terms of the following competencies/abilities and how/what role has MBA role played in it? - (can you give an example- how it has helped? Or Why do you think it has not helped? What can be done to help you better?)

Probing areas:

- Questioning skills? – How often you do it? Why – what kind and for what purpose? What does it mean to you?
- Dialogue with others? - How often you do it? Why? What does it mean to you
- Relate with other? - How often you do it? Why? What does it mean to you
- Challenge others? - How often you do it? Why? What does it mean to you
- Taking stance? Justify your view (rational/logical)? - - How often you do it? Why? What does it mean to you
- Ability to reflect on things? - How often you do it? Why? What does it mean to you
- Reflect on your own thoughts? - - How often you do it? Why? What does it mean to you
- (Aware of others thoughts? Other thought process – oh ho!! This person think this way?)

Research Question 3: What are the challenges and constrains in the process of learning critical thinking? What factors has contributed towards this constrain?

14. Can you remember a time/incidence during your MBA course where you have felt really challenged? Had to struggled?
15. Can you remember an experience (during the MBA course - Events, teachers, teaching tools, self as students) that have forced you to:

Probing areas:

- Think beyond regular classes content/what is presented in the class? Explore? How do you feel about it and how has it helped/hindered your process of learning?
- Express your opinion/take stance? How do you feel about it and how has it helped/hindered your process of learning?
- Question/challenge others' opinion? How do you feel about it and how has it helped/hindered your process of learning?
- Challenge your teacher? How do you feel about it and how has it helped/hindered your process of learning?
- Question yourself, your belief, your assumptions? Forced to change it ? it? How do you feel about it and how has it helped/hindered your process of learning? Best teachers? Best classes? Why?

Where are the opportunities for creating a more positive learning experience for students for developing their critical thinking skills?

16. What is your understanding of critical thinking and its importance?
17. (After giving definition of MBA)- what is your opinion on that?
18. What is your opinion on MBA and its contribution on developing critical thinking competencies?
19. How effective have the course been in helping you develop as critical thinker? What aspect of it has helped you the most and how?
20. Where are the opportunities or areas that have to be strengthened further to develop critical thinking competencies? What is already there or needs to be improved/change to make you a critical thinker (explore more given the dimension – awareness of one's thinking, analysis? questioning – clarity/confidence? /challenging based on evidences, opinion and its justification, reflection, evaluation of other ideas/claims)
21. If given an opportunity what would you change to make it more effective?

Closing

22. Anything that you want to add that I have not asked?
23. How did you feel about the interview?
24. Was there any moment (question) that you felt awkward?
25. Is there anything that I could have asked differently/done differently?
26. Your feedback to me (so that I can better the further interview process?
27. What did you enjoy the most during the interview?

Appendix B

Check List for Focus Group Discussion

1. What is the main differences you find in the MBA as compared to your previous learning experience – how has it transformed you/what have u learned or gained? (what skills you have gained?? Or how have u changed)?
2. What particular aspect of the MBA course has helped you to gain the said skills/helped you transform (which tools/or process in the course/learning process) ?
3. Note: once the students described skill or changes pick these specific themes and ask them to describe
   a) what does it means b) what does the process entails/what actually happens in the process?

- Analysis
- Alternate generation
- Decision making
- Problem solving
- Evaluations of different alternatives

(note for probing: probe to see how the students generates options/make decision/does analysis or solve problem; whether or not that process includes consciousness of one's own thought process, reflection on one's own thinking… awareness of one's own belief, assumptions)

4. Lets us take example of a group discussion..how do u reach a conclusion/consensus during group discussion when different people have different views?
   (what is the process in group discussion)
5. Lets take an example of case analysis, in a case there might be different solutions possible answer for the same case… so when u suggest a solution for a problem given in a case, please explain
   a. How do u decide which is the best solution or option? Given different option how do u select the one best answer? On what basis do u make that choice?
   b. How do u know u have made the right decision? (focus on how the students come to know they have the right answer?) (note for probing: do students talk about logic, evidences and selects the best answer by reasoning out different options based on logic/given evidences i.e. selects the one that wins the arguments)
   c. How aware are you of your own thought process e.g. While making that decision or selecting one best option among many other alternative available are u aware of what goes in your minds?
   d. During group discussion with your friends how comfortable are you with challenging/questioning your friends? – what supports and what hinders challenging/questioning your friends?
   e. How comfortable are you with challenging/questioning your teachers? – what supports and what hinders challenging/questioning your teachers?

Appendix C

List of Research Participants of In-depth Interview

S.N	Name of the Research Participants (Pseudo Name)	College/University	MBA Level/ Semester	GPA (in the last/second last semester)	Male/ Female	Previous level education			
						School		Bachelors	
						Name	Location	Name	Location
1.	Kundan Sharma	Private College/ University (Sample I)	4th semester	3.98	Male	Private School	Chitwan	Private College	Kathmandu
2.	Manoj Ranjan	Private College/ University (Sample I)	4th semester	3.67	Male	Public School	Argakhachi	Private College	Kathmandu
3.	Suvi Pradhan	Private College/ University (Sample I)	4th Semester	3.67	Female	Private School	Chitwan	Private College	Chitwan
4.	Kriti Joshi	Private College/ University (Sample II)	4th semester	3.60	Female	Private School	Kathmandu	Private College	Kathmandu
5.	Manju Manandhar	Private College/ University (Sample II)	4th semester	3.85	Female	Private School	Kathmandu	Private College	Kathmandu
6.	Midur Shakya	Private College/ University (Sample III)	Graduate	3.42	Male	Private School	Kathmandu	Private College	Dhulikhel, Banepa
7.	Dharma Upadhaya	Private College/ University (Sample III)	Graduate	3.25	Male	Private School	Syangja	Public College	Kathmandu

Appendix D

List of Research Participants of Focus Group Discussion

S.N	Name of the Research Participants (Pseudo Name)	College/University	Male/ Female	Participant of In-depth interview	FGD Session
1.	Kundan Sharma	Private College/ University (Sample I)	Male	Yes	I
2.	Manoj Ranjan	Private College/ University (Sample I)	Male	Yes	I
3.	Suvi Pradhan	Private College/ University (Sample I)	Female	Yes	I
4.	Manju Manandhar	Private College/ University (Sample II)	Female	Yes	II
5.	Anmol Chalise	Private College/ University (Sample III)	Male	No	II
6.	Sugam Chettri	Private College/ University (Sample III)	Male	No	II

Appendix E

Profile of Research Participants

Suvi Pradhan

Ms. Suvi Pradhan is from Chitwan. She is currently doing her MBA from a private college (final semester). She completed her schooling from a local private school in Chitwan. She continued her bachelor level education from a private college in Chitwan before coming to Kathmandu to do her MBA. She in-fact had joined Masters of Business Studies (MBS) in Chitwan, but later decided to come to Kathmandu to do MBA , believing it would give her better job opportunity. She joined MBS as MBA course was not available locally. She dropped MBS as she was not satisfied with it.

Manju Manandhar

Ms. Manju Manandhar, is from Kathmandu. She is currently doing her MBA from a private college (final semester). She completed all her previous education (up to Bachelors) from private education institutions. She took a break from studies before joining MBA and worked as a Medical Representative, for almost three years, in an international pharmaceutical company. She hadn't heard much about MBA course but decided to join it, thinking it will increase her market value and give her better job perspective.

Dharma Upadhaya

Mr. Dharma Upadhaya has just recently completed his MBA from a Private educational Institution. He currently lives in Kirtipur but is originally from Syangja, Waling. He did his schooling in Syangja itself, from a private boarding school. After school, he came to Kathmandu and completed higher secondary education in commerce stream from a public college in Kathmandu. He had taken a break from studies to prepare for GMAT with the hope to go abroad for studies. But in the mean time, he appeared for MBA entrance exam. He decided to stay back and do his MBA in Nepal itself , as he was successful to get entrance in one of the reputed college. He had heard a lot about the business school and hence did not wanted to miss that opportunity.

Kriti Joshi

Ms. Kriti Joshi is from Lalitpur. She is currently doing her MBA from a private college (final semester). She completed her schooling from a private boarding school. She says her interest in MBA grew while she was doing +2 because she believed that

MBA was a powerful degree. Therefore, instead of perusing her studies in Science, she decided to join MBA after her graduation in food technology (B. Tech. from a private college).

Kundan Sharma

Mr. Kundan Sharma is from Chitwan. He is currently a MBA student in a private college (final semester). He completed his schooling from Chitwan itself from a private school. He wanted to continue his studies in Agriculture but was not able to get a placement. So he came to Kathmandu in order to do Bachelors in Micro Biology from a private college. But, after the Bachelors degree in Science, he decided to leave science stream and join management (MBA) thinking that he will not have a lucrative career with a science degree.

Manoj Ranjan

Mr. Manoj Ranjan, is from a remote village in Argakhachi. He is currently a MBA student in a private college (final semester). He completed his schooling from a public school in his village. After SLC, he decided to come to Kathmandu to pursue his further education. He completed his bachelors from a public college in Kathmandu . After bachelors he took a break from studies to work as a sales person in a private firm. After 3 years of job, he decided to leave his job and hence joined Masters in Business Studies (MBS) in a public college. But in the mean time when he saw a call for placement for MBA course from a private college, he decided to give it a try. As he was successful in the entrance exam, he decided to discontinue MBS and join MBA thinking it would be good for him in long run.

Midur Shakya

Mr. Midur Shakya is a recent MBA graduate of a private college. He is from Kathmandu, and hence completed his schooling from a private school in Kathmandu. He did his bachelors in environmental engineering from a private college. With a degree in environmental science, together with his friends, he decided to start an NGO that works in the environment sector. After struggling in the NGO for a couple of years, he decided to continue his studies and hence selected MBA course. He was especially inspired by his sister to join MBA, because he could see his sister transform to a confident person.