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1. Title of the research

Developing an Integrated Model of Teaching Method For Promoting Critical Thinking among Learners of Secondary Education

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Dr. M. Abdul Aziz

Team Leader, Research Team (Group No- 11)

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ACRONYMS

BANBEIS	Bangladesh Bureau of Educational Information and Statistics
CQ	Creative Question
CT	Critical Thinking
FGD	Focus Group Discussion
GOB	Government of Bangladesh
NAEM	National Academy for Educational Management
NCTB	National Curriculum and Textbook Board
OAACC	Observations, Association, Ask, Concluding and Communicating
OECD	Organization for Economic Development
P4C	Philosophy for Children
RACE	Research for Advancement of Complete Education

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EXECUTIVE SUMMARY

Critical thinking (CT) is a crucial skill for living life and accordingly thinking pedagogy, constitute one of the main aims of education. But what exactly are critical thinking skills? Can it be communicated as the activity of the brain or of the mind? Therefore, modern research suggests that critical thinking like any other skills can be taught, learned and practiced through teaching- learning activities. Accordingly, Bangladesh Government in 2010 designed the 'National Education Policy of Bangladesh' followed by subsequent curriculum and teachers' guide in line with the vision and goal of education. With an intention of supplementing to the Government's effort, the researchers aim to contribute in promoting critical thinking ability among learners of secondary schools in Bangladesh. Therefore, the study examined the teachers' perception, strengths and shortcomings of existing pedagogy. It also figured out the appropriate strategies followed by a model for achieving the relevant aims and objectives. The study used the interviews, focus group discussion (FGP) and classroom observations as data collection methods.

The overall findings and discussion of the study is based on three main research objectives. The first part of the findings discussed about the concept and importance of critical thinking, the second about the existing pedagogy practiced by the teacher, and third about the possible strategies and developing a model of critical thinking pedagogy.

In according to query of the first objective, it has found that 28.57% teachers do not have clear concept about critical thinking skill as they showed ignorance through their responses whereas 71.42% teachers have preliminary ideas on critical thinking skill, though there are very little application in their respective classes. According to students understanding, 83.34% students have good ideas whereas 16.66% students don't have any idea about critical thinking. However, experts believe that critical thinking involves the brain to solve the problems of real life through a systematic way. The practice of using brain in solving the problem must start from the classroom, they opined in classroom observation, the study noticed that there is insufficiency of knowledge and appropriate understanding of teachers who are not much interested as well on the thinking activities in the classroom. Rather, they are very concerned about the students' exam and result as it affects the school performance

with the authority of government. However, it is necessary to confirm that all teachers have clear concept and commitment on critical thinking skill.

Under the second objective, it has found that only few teachers practice of critical thinking-teaching strategy in the classroom but not sufficient to improve the ability of students. Although most of the respondents in their interview have expressed their positive views on the practices of critical thinking skill in teaching, but it is difficult for them to apply the teaching techniques due to the short duration of the class whereas some teaching strategies like assigning group task, group discussion, telling relevant story and related the study with day to day life also develop the students critical thinking ability are encouraged by others. However, teachers must be trained so that they can prepare their lesson plan and apply the issues of critical thinking into the existing pedagogy.

In terms of third objective, teachers proposed significant ideas like attractive and effective lesson plan, teaching aids or tools, sitting arrangement, questioning, storytelling, solving puzzles, reading book, learn by their mistakes, encouraging the students to be an active part of the classroom activities whereas experts suggested that teachers should approach to determine the importance and relevance of ideas, recognize, build & appraise their arguments, identify inconsistencies and errors in reasoning and approach the problems in a consistent and systematic way as part of teaching-learning strategies. Most of the teachers opined to change the assessment system, because it largely emphasizes on memorized knowledge which fails to assess the student's inner capabilities like critical thinking. The content of the text should be brief and precise. They should offer the opportunities to the students to think, ask question, and inspire them to do so.

Moreover, the study recommended to prepare a comprehensive teachers' guides and modules which may contribute to implement teaching thinking strategy in the classroom activities. Every school should arrange pre-service and in-house training regularly for the teachers to be an integrated academic and producing an integrated graduate as well.

Chapter One

INTRODUCTION

1.0 Introduction

Critical thinking is a crucial skill for living life and thinking pedagogy constitutes one of the main aims of education. Importance of critical thinking is ever increasing as development in any sector largely depends on new ideas and skills. Critical thinking is the process to analyze, interpret, synthesize or, evaluate information in a clear, logical, reasoned and reflective manner to make a judgment or decisions or establish an argument. It is more than just thinking clearly or rationally. It's about thinking *independently*. Critical thinking means formulating one's own opinions and drawing conclusions. This happens regardless of outside influence. (wabisabilearning.com). It's about the discipline of analysis, and seeing the connections between ideas. (Blacwell, 1991) Here critical thinking can be defined as questioning (interrogating) and reasoning (evaluating) as example, seeking meaning, evidence, reasons, distinctions, and good judgments.

Knowledge is accumulating at such a rate that it is impossible to learn every-thing. Moreover, as knowledge is transitory, it is difficult to predict what will be useful for the future or what will be selected to learn. It has been proven beyond any doubt that students are overburdened with too many unnecessary tasks related to the rote learning process that has very little meaning in this modern age of professionalism and globalization. Critical pedagogy attempts to ensure human freedom and social justice by problematizing the assumptions that perpetuate injustice in society. (Talukder, 2019) Therefore, children must be taught how to think and learn i.e. equip them with the basic attitudes, beliefs, skills and resources necessary to tackle fresh problems and acquire new information. (Neville Jones & Eileen Baglin Jones, 1992) So it is essential to emphasize critical thinking, a reasonable reflective thinking as a guide to thoughts and actions.

Based on the importance of teaching critical thinking skills to the next generations question arrives how to achieve critical thinking ability and it becomes an important issue worldwide. Educationist, psychologists, philosophers are suggesting different teaching methods to integrate this quality. But what exactly are critical thinking skills? In this consequence it comes the question that is it a skill or inner ability. Modern research suggests that critical

thinking, like any other skill can be taught, learned and practiced through teaching- learning activities. Thinking as the activity of the brain or of the mind in general can be communicated. Nevertheless this quality can be enhanced through regular classroom activities while teachers teaching any subject. Teachers may gain critical thinking skills through training useful for designing lesson plans that get students to think on their own. In these cases teachers only need to have strategic change and to be aware of incorporating this endowment. To develop critical thinking among students, teachers need to be curious and open minded, along with few strategies. This study aims to find out a way to implement critical thinking teaching strategy in the pedagogy of secondary level in an integrated manner. **Integrated Teaching** method refers to the coordination of different teaching- learning activities to ensure more effective thinking enhancing environment in classroom . Like suggesting exemplary inquiry based, students engaging teaching method along with teaching materials.

1.1 Statement of the Problem

The ever increasing importance on teaching thinking arrive the questions how to achieve this skill and ability. Educationist, psychologists, philosophers are suggesting different teaching methods to incorporate this quality as it can be enhanced through regular classroom activities while teachers teaching any subject. It is, therefore, high time to rethink about our traditional chalk- and – talk teaching method. (Islam, 2017)

Teachers of Western countries are looking for more ways to integrate it into classrooms. In Bangladesh, creative evaluation system has been implemented without proper guideline in pedagogy. Present scenario does not show the proper implementation. (Shawkat, 2014) Practice of rote learning imposing barrier in thinking. Conventional teaching method motivates our students to memorize to get good grades and nothing else. Students do not get chance to understand the contents or get scope to create something on their own.(Azad, 2016) In fact, how we teach and what we teach is need to be problematized. (Islam, 2017) Most of the teachers do not have adequate concept on this issue. Few of them have the idea and they intended to practice this concept in the class room, but failed to implement it due to the absence of teaching- thinking strategy. Scarcity of equipment and lab, short class length, high work load and fewer periods per week are some of the problems identified by Science teachers to implement a properly planned classroom. (BANBEIS, 2015) To connection with

this, the study is a step to examine the shortcomings/weakness of existing pedagogy in promoting thinking ability and to suggest an integrated model and comprehensive approach to strengthen the pedagogy as practices in the class room of secondary Schools to achieve relevant aims and goals of Education. Unstructured interview, FGD, and classroom observations are the proposed tools for achieving the objectives. All in all, the outdated education system, lack of knowledge of teachers, especially secondary levels, lack of implementation of existing education policies of Bangladesh are responsible for the lack of critical thinking among students.

Therefore, this study has been conducted on “Developing an Integrated Model of Teaching Method for Promoting Critical Thinking among Learners of Secondary Education”.

1.2 Importance and Rationale of the Study

This study is to propose an implementable modern teaching method to enhance Critical thinking skills among learners of secondary.

1.2.1 Philosophical Approach: Philosophical inquiry is a form of investigation on ideas and concepts to derive a greater understanding and meaning. It encourages students to be engaged in critical questioning and creative reflection because discussion and questioning are built in the nature of philosophy. (Hashim: 2017, p- 22) The root of Critical thinking as the method of teaching and learning is philosophical inquiry, the teaching practice and vision of Socrates 2500 years ago. In 12th century Muslim scholars Az- Zarnuji argued that, “It is necessary to pursue knowledge by means of discussion, argument and questioning.”

1.2.2 Global Perspective: The body of work on critical pedagogy is growing with works by pedagogues from different areas of the world (Pennycook, 2001, Norton & Toohy, 2004 mentioned in Talukder, 2019). According to Putranto (2013), competence of divergent thinking among learners is very important in this global era competition, because the level of complexity problems in all aspects of modern life is getting higher. American philosopher John Dewey (1910) introduced the term ‘critical thinking’ as the name of an educational goal, which he identified with a scientific attitude of mind. Contemporary political and business leaders express support for critical thinking as an educational goal. (<https://plato.stanford.edu/entries/critical-thinking/history.html>)

In 1960 Professor Matthew Lipman created an approach drawing on the works of Vygotsky, Piaget, and Dewey, based on the tradition of Socratic dialogue is called P4C (Philosophy for Children) which is practiced in approximately 60 countries. This teaching and learning approach is motivating and challenging for pupils and teachers and taught learners to think critically. Research has clearly established that it improves behavior, motivation, learning, social, emotional skills and dispositions over time, as well as cognitive abilities. P4C engages children in developing their own questions in response to a given stimulus and learn in the process of 'how to learn'. They then enquire thoughtfully, and collaboratively, guided by the facilitator (the teacher). Finally they reflect on their thoughts and participation, and suggest how they can be improved on their learning (skills and content) next time. Consequently, both the process and the content of learning are simultaneously developed.

(<http://www.learn2think.org.uk/history.html>)

Recent days CT has reached in a more academic approach world-wide. Such as, the European Commission has funded "Critical Thinking across the European Higher Education Curricula", a nine-country research project to develop guidelines for quality in critical thinking instruction in European institutions of higher education. The Centre for Educational Research and Innovation of the Organization for Economic Development (OECD) in early 2018 issued a call for institutions of higher education to participate in a two-year study, with control groups, of interventions in undergraduate or teacher education designed to improve creative and critical thinking. (<https://plato.stanford.edu/entries/critical-thinking/history.html>)

1.2.3 National Perspective: National Education Policy, 2010 of Bangladesh enjoins critical and creative thinking as the aims, objectives; and principles of the Education Policy are as follows:

To stimulate the intellectual and practical qualities of the learners so that moral, human, cultural, scientific and social values are established at personal and national levels (Aim No. 2);

To foster creative and thinking faculties among the learners through a system of education that contains indigenous spirit and elements and which will lead to a life-oriented development of knowledge of the learners (Aim No. 5);

To ensure a creative, favorable and joyful environment for the students at the primary and secondary levels for their proper protection and congenial development (Aim No. 15).

1.2.4 Critical thinking ensuring Value Education: Critical pedagogy problematizes all oppressive and unequal power relations of society to ensure human freedom and social justice. It aims at ensuring liberation, transformation, and empowerment of learners (Giroux, 2011; Kincheloe, 2004; Pennycook, 1989, 2004; McLaren, 1989; Freire, 1970 mentioned in Talukdar, 2019). To facilitate the practice of problematization, it involves students in dialogue that ensures freedom and equal opportunities for everybody. (Talukdar, 2019)

Thinking is also a religiously obligatory duty as it is established by major religion of the world. Accordingly al-Quran promotes variety of thinking styles for instance Inquisitive, Objective, Positive, Hypothetical, Rational, Reflective, Contemplative, Visual, Analogical, Emotional, Perceptual, Conceptual, Intuitive and so on (Badi and Tajdin, 2010). In this way religious motivation of thinking is to promote in practice.

Introduction of Creative Question (CQ) by the GOB is an important step in developing creativity of students at secondary level. This system increases thinking capacity in the form of application, perception, analysis, synthesis and evaluation. After introduction of this new system a mixed repercussion has been seen among teachers, students and guardians though it is implemented to break down the present trends of memorization. Teachers' Training on CQ approach was inadequate in respect of time and concept. (Rahman, 2010) A huge number of researches have been done and so many organizations are working on CT education worldwide. But in the context of Bangladesh it is very few. There is no such academic approach or initiative to implement CT in Bangladesh. The study conducted in Bangladesh are mainly to identify the problems but not to provide any solution. This study intends to find an applicable solution based on the experts, teachers and students opinion as well as reviewing document related to CT. This study is a new addition in educational theory and practices in Bangladesh. Very specifically the study is helpful for popularizing the ideas and concepts of CT skill as an effective tool of pedagogy in the educational context of Bangladesh. Thus it can contribute to the educational policy of the country.

1.3 Objectives of the Study

The objectives of this study are-

- To determine the teachers' perception about critical thinking.
- To examine the practices of the existing pedagogy in regard to promote thinking skill.
- To find out appropriate strategies to promote critical thinking.

1.4 Scopes and Limitations of the Study

The study follows a qualitative research approach, involving the use of the document analysis, classroom observation, FGD and semi-structured interview as tools of data collection. It is limited to no more than 07 teachers, 06 students for FGD of Secondary schools (class 7 to class 10). Interview has been taken over phone call, FGD and classroom observations through Video Call/ Video Conferencing because of the time constraints and ongoing COVID situation.

1.5 Definition of the Related Terms

1.5.1 Teachers of Secondary Schools

Secondary level of education consists of classes from 6 to Grade 12. It lasts for seven years and this area of study is broken down into three categories. These are classes from Grade VI- to Grade VIII (Junior secondary grade), class IX-X (Secondary), XI and XII (Higher Secondary). In this research Secondary teachers refer to the teachers of class 9 and 10 only those who have at least 5 years of experiences.

1.5.2 Critical Thinking

Critical thinking is "reasonably and reflectively deciding what to believe or do." Critical thinking means making reasoned judgments. Basically, it is using criteria to judge the quality of something, from cooking to a conclusion of a research paper. In essence, critical thinking is a disciplined manner of thought that a person uses to assess the validity of something: of a statement, news story, argument, research, etc. 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. Thus, educating good critical thinkers means working toward this ideal. It combines developing CT skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society. (Rusbult, 2017)

Our government, upon understanding the necessity of creativity amongst the young generation, has introduced creative learning system in 2009 in its curriculum. This is also known as "Srijonshil Shikkha" in Bangla. Through this content, the government wanted to

encourage the young generation to think outside the box which would help them further in their life. The curriculum includes unseen and creative thinking questions as well as critical and analytical questions. (Karim) Which is ultimately refers to Critical Thinking. Critical and creative thinking are two different ways of processing information but they can be used together and work well when combined. In the context of Bangladesh which is similar that is applicable with same meaning. Critical thinking allows ones to evaluate the ideas that the creative thoughts have come up with. Critical thinking enables to decide which the best solution is. When one person thinks critically he/ she glean information. When they think creatively they come up with new solutions to problems.

<https://www.theclassroom.com/global-vs-analytical-learning-styles-8572440.html>

Chapter Two

LITERATURE REVIEW

2. Review of the Related Literature

Critical thinking is the ability to investigate a text critically, and a critical thinker is an independent thinker. Critical thinkers go into the deeper layers of a text and discover its underlying hidden meaning. They can initiate and carry on an argument about a text, scrutinize it and so relate it to its political, social, moral, philosophical contexts of the then society or time (Rupa, 2013). It is clear, reasonable, reflective thinking focused on deciding what to believe or do. Apart from that, critical thinkers know how to analyze with a purpose and question the validity of a text. As a seeker of knowledge critical thinker is motivated by rationale and facts. So critical thinking means acquiring specific abilities such as learning to analyze arguments, formulating and protecting peculiarities. (Rupa, 2013) Jadidi & Begheri (2014) support this saying that “The concept of critical pedagogy is essentially more tangible for language teachers and plays a vital role in the construction of learners’ understanding of unfamiliar and ambiguous belief systems, values and practices and their negotiations of new social relationships”.

Critical thinking is emphasized in National Education Policy; 2010 of Bangladesh describing education system is to foster thinking skills among learners. The concept of critical thinking pedagogy is essentially more tangible for language teachers when they try to address educational inequality. Language, identity and cultures from the language teachers schemata assisting them to question the dominant power relationships both because of particular learners and language they teach which can serve to empower and marginalize (Jadidi, 2014). Teacher education should encourage prospective teachers to critically reflect on their own identities and positioning in society. The objective of the program Philosophy for Children (P4C) in Malaysia is to make youth more critical, creative and ethical. Lipman’s P4C program was used here as a model. The Critical thinking pedagogy is infused in the teaching of English, Malay, Islamic Studies and Moral Education and is also taught as a stand- alone subject. The influence of the program on participants was supportive and has a positive influence on students’ ability to think and reason also in cognitive and social skills. (Hashim, 2014)

2.1 State of Critical Thinking-Teaching Practice

According to Amabile (2012) “individual creativity may be affected by even very minor aspects of the social environment.” Aspects of social environment such as excessive time pressure, sense of competition over supervision, unavailability of working material etc. According to the World Bank report (2013) Bangladesh is also facing so many problems. Teachers do not have much effective training, also the curriculum and testing procedures encourage and reward rote learning, the most common teaching style in Bangladesh is lecturing and reading textbooks. Teachers do not get much time; they have limited contact hours available during the academic year. Many teachers also have low motivation- because the profession is not regarded as high- profile one, career progression opportunities are limited, and incentives for innovating effective teaching and learning practices are non-existent. Large class size, limited physical space, lack of resources, and insufficient time to complete the syllabuses are among factors that hinder the fostering of such thinking. The constraints of insufficient time and the haste to cover the curriculum have often led to rigid and structured ways of teaching that leave little room for thinking or flexibility. (Hassan, 2018)

Challenges in the Learning Objectives: National Education Policy; 2010 of Bangladesh also provides guidelines such as learners should be discouraged from rote learning, rather use their own thoughtfulness, imagination and urge for curiosity. It also stressed to ensure creative, favorable and joyful environment. It is also emphasized to evolve an education process that is oriented to creativity, practicability and productivity to achieve advancement in the economic and social fields of the country.

Challenges in Instructional Teaching Strategy: There is really not much room for students to ask their own questions that relate to their interests and curiosity. Due to this emphasis, schooling becomes a chore for some students, killing their sense of curiosity and wonder, even boredom and loss of interest in learning. They lack critical and creative thinking skills, verbal communication abilities, inter- personal skills, self- confidence, and teamwork. (Hashim, 2017)

‘Present Situation of Science Education in Secondary Schools’ (BANBEIS, 2015) study emphasizes much in promoting scientific literacy. According to this study, teachers give less emphasis to achieve the purpose of science. Students disinterest in science occurred due to the absence of interesting classroom teaching, lack of qualified, trained and motivated

teachers, lack of favorable infrastructure of teaching-learning environment or “learning by doing” strategy in school. So, development of creativity, problem solving skill is hindered.

Challenges in Teaching Aid: Text Books are not at all suitable, some unknown terminologies and shortcomings have been marked in textbooks, some contents are not clear and some are incomplete. (BANBEIS, 2015)

In the text book of NCTB, textual representations are not sufficient to solve the exercises provided in text books. To solve the questions provided in exercises students need to take help from guidebooks or internet sources. Sometimes teachers also get confused about the proper answers. In these cases guidebooks misguide the students. Some experts view about this problem is learners need to learn more than the information of textbooks; they should search for relevant knowledge by themselves. But the question is how much relevant knowledge they should try to gather as they have already have loads in their study.

Challenges in Assessment: According to National Education Policy 2010, the National Curriculum and Textbook Board (NCTB) of Bangladesh has made changes in the content of the syllabus as well as the question pattern to assess the learner’s creativity. But, the teachers are not capable enough to carry out the plan. Around 41% high schools teachers cannot prepare creative questions. 55% teachers of primary schools do not understand creative system. According to a recent survey conducted by Research for Advancement of Complete Education (RACE), more than half of 100 primary school teachers, who took part in a survey, are still blurred about creative education method. Even more alarming is that about half of the teachers (47%) surveyed rely on guidebooks to prepare lessons while 92% students take the help of guidebooks to understand their lessons. Guidebooks, private tutors and coaching centers have been the top dependence for the learners. (Azad, 2016)

2.2 Strategies to implement

Critical thinking refers primarily to teach students how to analyze and develop reading and writing assignments from the perspective of formal, logical patterns of consistency. (Rupa, 2013) It is the teacher who facilitates the process of learning, and strives to ensure freedom and equal opportunity for students’ voice in the classroom. (Talukdar, 2019)

It needs to be assured that it is high time to come out from ‘memorization based teaching and examination system’. Students need to be inspired to think and write to explore critical thinking and broaden the outlook of knowledge. We need to engage our students using the approach called ‘learning by doing’; activities like presentations, debate, inquiry-based

questions, brainstorming, problem-solving, project-based learning, Socratic method and many more activities encourage students to think before doing their work. (Ismail: 2017, Karim: n.d.)

According to Putranto (2013), by using Observations, Association, Ask, Concluding and Communicating (OAACC) method on mathematics learning teacher can provide an opportunity for students to examine in depth the mathematical topics attractively packaged. Besides, using OAACC method provides an opportunity to investigate in depth math problems, so that students can construct all possible solutions as divergent, critical and creative.

A naturalistic inquiry by Abdullah (2013) examines the processes of implementing a critical thinking pedagogy for developing the quality of classroom dialogue. The study explains that learners' cognitive and meta-cognitive skills, highlighted in the critical language awareness theory, plays a significant role in engaging learners in successful interaction, through creating participation opportunities based on the notion of critical thinking.

A supportive school culture is needed to cultivate dispositions related to fostering constructive creativity and critical thinking. ICT can be used as a tool for developing thinking skills and facilitating critical thinking and higher-order learning. When using electronic devices, an intellectual student-computer partnership is established where the computer amplifies the student's thinking. Cognitive tools are designed to make learners think harder about the subject matter being studied while generating thoughts that would be impossible without the tool. (Hassan, 2018)

Shin (2012) argues that teachers have to build a paradigm where children should have fun. The teachers will direct themselves to set up stimulating lesson plan covering such activities as singing, finger plays, storytelling and so forth. Kind and Kind (2007), Cheng (2006), Todd (2003) reported different perspectives in defining creativity in science education, and different approaches adopted by science educators, including poetry, inquiry-based science teaching, experimental methods, imagery and imagination, analogies, discovery, understanding, presentation, application, and integration of science knowledge. For infusing thinking into regular lessons, one may need to consider the approaches of existing curriculum. Kind and Kind (2007) commented that such process of imagination in specific situations results in students' better understanding and new perspectives. In such context, the local wisdom, religious view, personal experiences find their way to be integrated into the classroom activities. Courses stimulate learners to raise a range of inquiry or questions.

Students have to be assigned some tasks which need thinking or speculation rather than simply factoid presentation. Homework will be selected that will teach them some skills. They shouldn't be given such homework which needs just copying. Let them ponder their study. The assessment system of Bangladesh depends on rote and regurgitation. Such tendency must be eliminated gradually. Rote learning cannot be avoided. But it needs to be selective. Like students should memorize the tables of multiplication by rote learning. But they also have to learn and think how to apply these; rote learning cannot be followed in this regard (Zannat, 2014).

Similarly, (Zannat, 2014) highlighted that students should have reflexive thinking in class, in whole day, and every day. They should make it a habit to mull over each new idea to connect it with previous knowledge. Thinking about the connections increases the usefulness of each memory, by increasing the number of ways in which it can be recalled. They have to be responsible for their own learning. Student should be helped to be aware of the ways in which they learn and make them able to monitor their own learning. To enhance critical thinking skills teachers should care about using instructional strategies that actively engage students in the learning process rather than relying on lecture and rote memorization which is mostly absent in sampled classrooms. (Snyder & Snyder, 2008)

Both the teachers and the students must have the practice to think about what they are going to speak. Great Saint like Imaam Ash-Shaafi'ee (rahmatullaah) said: "When one desires to talk, then it is upon him to think before he speaks. If there is beneficial good in what he will say, then he should speak. And if he has doubt about that, then he must not speak until he clears that doubt (by making his speech good)." So teacher must have clear concept on respective subject before entering the classroom and students should be taught where to find the information they need or how to research on a topic and whom to ask for information. Several barriers can impede critical thinking instruction. Lack of training, limited resources, biased preconceptions, and time constraints conspire to negate learning environments that promote critical thinking. (Snyder: 2008)

Assessment techniques should be used that provide students with an intellectual challenge rather than memory recall is instructed by Snyder (2008). Most programs and approaches for teaching thinking work on the basis that one must not only teach skills but also encourage the disposition to use them – proficiency is not enough: there must also be a tendency to exercise that proficiency. These dispositions are not themselves skills, but they do represent a readiness to use them. Examples of such dispositions, which are both cognitive and affective

in nature, might include: respect (for others and for the procedures of enquiry); open-mindedness (readiness to consider alternative views/explanations); and courage (to offer a point of view, a counter-argument, a justification etc.) (Richard: 1995)

According to the critical pedagogy classrooms of Talukdar (2019), problematization was facilitated as the students were engaged in dialogue with freedom and equal opportunity to speak. In the critical pedagogy classroom, students expressed their own views and questioned each other's views. The teacher intervened to make space for the voices in the minority. However, he positioned himself as one of their co-interlocutors in the classroom. So the students could question the teacher's views. Here, it appears that students shared the view that no knowledge and ideas are beyond question, as they are produced by individuals who necessarily have 'a class, a set of beliefs, a social position' or at least 'member[ship] of a society' and hence cannot be unbiased. As a result, the oppositional voices could engage in dialogue and students were so empowered that they went on to question the teacher's views.

How to promote thinking skill among students is a prime concern of the educational researchers of worldwide. Huge researches have been done in Western perspective. But research based on Eastern perspective is less specifically for Bangladesh situation is not conducted. Also it is important to have a study involving teachers of respective field and this study will serve the purpose.

Therefore, it is time to launch the "Thinking School" focusing on key strategies such as: (i) infusion of thinking skills into the school, (ii) reduction of subject content, and (iii) revision of assessment modes. (Hasan, 2018)

Chapter Three

METHODOLOGY

3.0. Methodology of the Study

A qualitative research approach based on interpretive paradigm is used for this study. The theoretical perspective most often associated with qualitative researches is phenomenology (Bogdan & Biklen, 2004). Following the phenomenological approach, researchers seek to understand meaning in events and in human interactions. The data collected in a qualitative study includes more than words; attitudes, feelings, vocal and facial expressions, and other behaviors are also involved. The data consists of interview transcripts, notes from classroom observations. Further, the context is important to the interpretation of data.

3.1. Sampling

Interview has been conducted with 02 experts on pedagogy as well as 07 secondary school teachers and 01 FGD (06 students) for students. In addition, 05 classrooms have been observed. 07 schools (04 from urban and 03 from rural area) have been selected as sample based on convenient sampling. The population of this study is the school teachers and students of Secondary Education of Bangladesh. A convenient/ purposive random sampling method has been used to determine the respondents who have been interviewed and whose classroom has been observed. The detail of the sampling has been provided below in Table 3.1.1 and Figure 3.1.1:

Table 3.1.1: Sampling of the respondents

Location (City / District)	Teachers' interview		Class Observation		Focus group discussion (FGD)		Interview with pedagogy expert
	Rural	Urban	Rural	Urban	Rural	Urban	
Chittagong		1				1	
Dhaka		1		2		3	2
Shirajganj	1						
Mymensing	1			1		1	
Rangamati		1		1			
Sylhet	1	1		1		1	
Total:		07		05		06	02

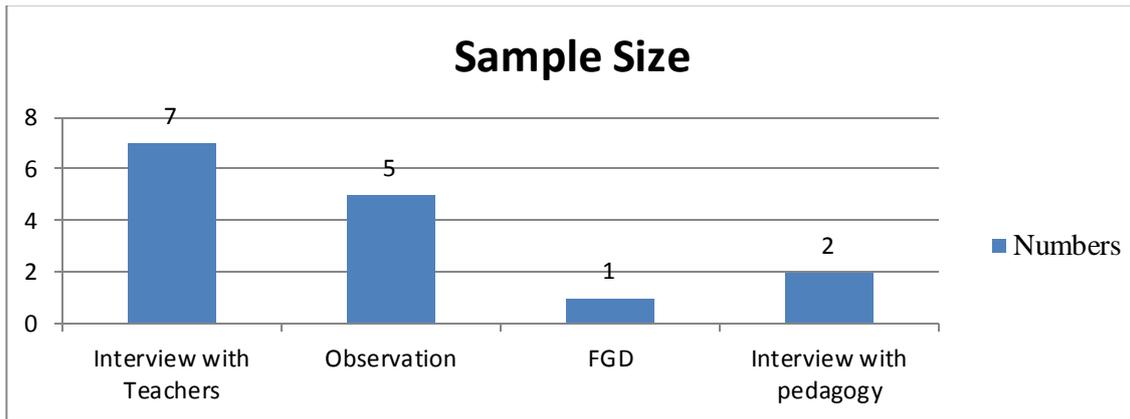


Figure 3.1.1: Sampling of the respondents

3.2 Sources of Data and Methods of Data Collection

Related books and research articles, documents, students, teachers of secondary education and experts of pedagogy are the sources of data of this study.

3.3 Tools of Data Collection

Document analysis, semi-structured interview of pedagogy experts and teachers based on two pilot interviews, class observation, FGD with students are the tools of data collection. All interviews are tape-recorded and vary in length from 20 minutes to 40 minutes. The interviews are informal and open-ended, and carried out in a conversational style. The complete interviews are recorded and transcribed for data analysis purposes. Confidentiality has been ensured in every step. Interviews, FGD and class observations have been conducted through audio and video calls / video conferencing.

3.4. Methods of Data Analysis and Presentation

Observations notes is written in conjunction with the interviews, follow-up interviews, FGD and casual encounters with subjects. Memoranda are also written while listening to taped interviews, typing transcripts, and reflecting upon a particular interview. Collection, coding, and analysis of data and ongoing literature review processes are blended throughout the study then thoroughly examining the transcripts to find final codes and themes. Codes and themes “grounded” in the data analysis is developed to report the information by writing a report. In the findings section, the different themes and direct quotes are displayed. It is a qualitative study hence report has been prepared using text and detailed descriptions.

3.5 Ethical considerations:

Prior to the commencement of this study, the research protocol was approved by the Ethical review committee of NAEM, Dhaka. Verbal consent was taken from all respondent before conducting the interview. Consent form was read before the respondent and interview was started upon receiving his/her consent. Right to refuse and withdraw from the study at any time was accepted. The information gathered from the respondents was kept confidential.

Chapter Four
FINDINGS AND ANALYSIS

4.1 Part – 1 (Research Objectives- I)

Section-one

4.1.1 Teachers’ perception on critical thinking skill & its necessity

Based on the findings of teachers’ interviews, it is evident that some of the teachers (28.57%) do not have clear concept about CT skill as they showed ignorance through their responses. Details in Appendix-01. Most of the teachers (71.42%) have ideas on CT skill, but there was no application in their class room described in figure 4.1.1. Some teachers’ responses are in brief:

‘It is to introduce students with widening knowledge, process to deliver them in and out of a topic’, ‘making a reasoned judgment’, ‘to create something new...’, ‘It is the ability to analyze topics and ideas clearly, logically, rationally’, ‘Problem solving from different angles..’.

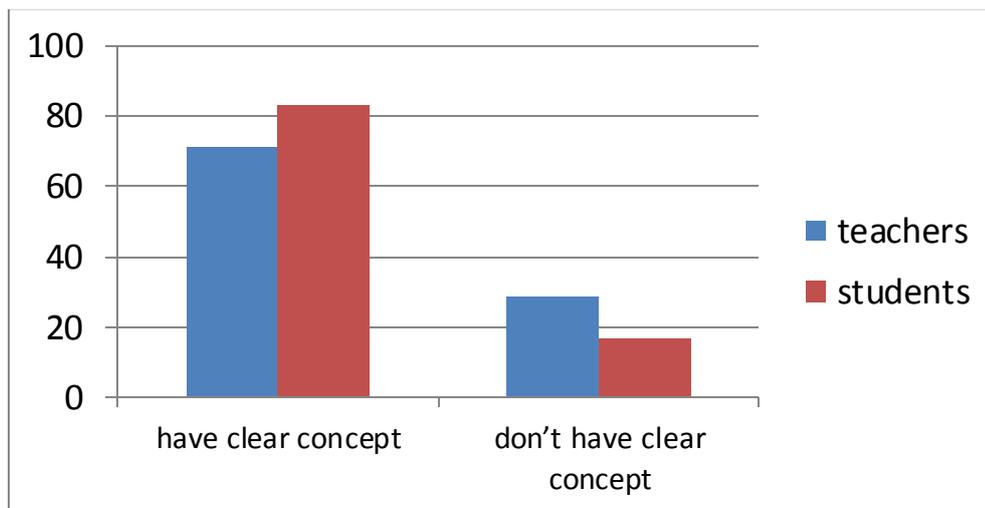


Figure 4.1.1: Teachers’ and students’ Perception about Critical Thinking

It also seems that, the teachers do not have any idea about National Curriculum and Teachers' Guide. Hence, they cannot follow Teachers' Guide provided by the Government. Teachers’ response is that:

‘We have to continue with our own way and have to prepare students to get good score.’

During interview one of the resepdents says about the long and complicated process of developing critical thinking ability among students. He says,

“Teachers are always afraid about completing the course and the outcome of their students in the exam. These are the category of evaluating their performance in the class. So, if they pay attention to develop an skill like critical thinking ability among students, there is no such evaluation of that. So, their teaching performance in the assessment of traditional system will be very poor.”

The necessity of having critical thinking ability is evident to develop the problem solving ability among students. Every aspects of life from individual, familial, social and national affairs, the ability to analyse the problem, and making a decision to solve this is always considered pivotal. In present education system, the emphasize on memorization not only increasing the stress of education, but also turning the students into unproductivity. However, the faulty evaluation system also discourages the students into developing the skills like critical thinking ability. One of respondents (teacher) says,

“Students get only 20 minutes to write the answer of a question of 10 marks and minimum of 3 pages. So, he has very little scope to think beyond of his memorized knowledge. The evaluation of the students critical thinking ability is also complex and time consuming. It also requires enough training on this. However, teachers usually do not have such sufficient training or instruction.”

Section -Two

4.1.2 Students’ Perception on critical thinking skills and it’s necessity

According to students’ view, CT is clearly thinking, thinking differently, rationally, extensively, details, creative thinking, Brain Storming/ Thinking outside box, to know about anything clearly, minutely, in details, To decide rationally and proper thinking. They also agreed that CT skill is necessary to face the real life challenges as well as to know the right or wrong.

Therefore, 83.34% students have ideas on CT while 16.66 % don’t have any idea as showed in figure 4.1.1. The importance of this in their practical life is also enough clear to them. Hence, the response of one of the students is,

“We usually focus only cutting good marks in our exam. Our family, teacher and others have also focused mostly on the result. The skills, technical ability which are

not counted in the formal evaluation system is less recognized to everyone including our family and teacher. So, we are not encouraged to develop our abilities in such a way.”

Section -Three

4.1.3 Experts’ perception on critical thinking skill and it’s necessity

Experts emphasizes on using brain, ‘Critical and Thinking both means involving the brain. One of the expert opined that each and every student has to use his or her brain. He also believes that thinking occurs in students brain. It was also emphasized by the experts that teachers have to know the function of the brain as he stated,

“In teaching- learning thinking have to take place accoringly. Learning without thinking is less valued”

Apart from that another pedagogy expert defined CT as visualizing something in different perspective. He also added that critical thinking is giving importance on others opinion. He also considered it as a postive reaction on other’s comments.

Expert also believes that the critical thinking ushers some other qualities like tolerance to others opinion, compromising attitudes and group work mindset. CT is the practical learing how to solve the problem. It promotes the new cycle of problem resolution- problem analysis and problem solving.

Section –four

4.1.4 Findings from the classroom observations on perception on critical thinking skill

From classroom observations it was found that teachers had lack of understading on critical thinking skill as there were hardly practices in following the component of critical thinking skill in their classroom. There is very few left for the students to practice in class. So, students are always in the way of memorization, not in thinking.

The releventization to the practical life is also rarely found in the approach of education most particularly in pedagogy. Teacher do not provide enough example of real life in their lecture.

4.2 Part -2 (Research Objectives- II)

Section-one

4.2.1 Teachers’ views on Existing pedagogy in regard to critical thinking

Teachers were agreed upon in a point that CT is essential for teaching but in practically CT's use is very limited. The informants could not assure about practicing CT in their classroom. 06 Teachers admitted that they allow questioning in the classroom though it is time consuming. In 5 schools out of 7 sampled schools teachers take classes through power point presentation. They showed videos and pictures. But using tangible objects are absent in classroom practices. Teachers' strategy was to solve the questions from Guidebooks especially the teachers of grade 8, 9 and 10. Other teaching strategies used by the teachers were group discussions, telling relevant stories, praising, project works, and let students to ponder, to relate the study with day to day life.

According to the most of the respondents (71.4%) the main barrier for teaching CT is the teacher himself or herself. Teacher should have CT mind or ability. Another main problem is the time (71.4%), teachers don't have that much time for critical thinking. They have to give much time to all students. And one cannot apply the same theory for all students. Another problem is the planning (28.57%), our teachers are not that much prepared to take the classes to apply CT. 71.4% respondent identified that our content prepare students for memorization. Other barriers mentioned by the respondents are lack of supportive environment (71.4%), big classroom(57.14%), too much exam and result oriented education (85.70%), lack of family support (42.85%), interests of the students (71.4%). Figure 4.2.1 illustrates the picture.

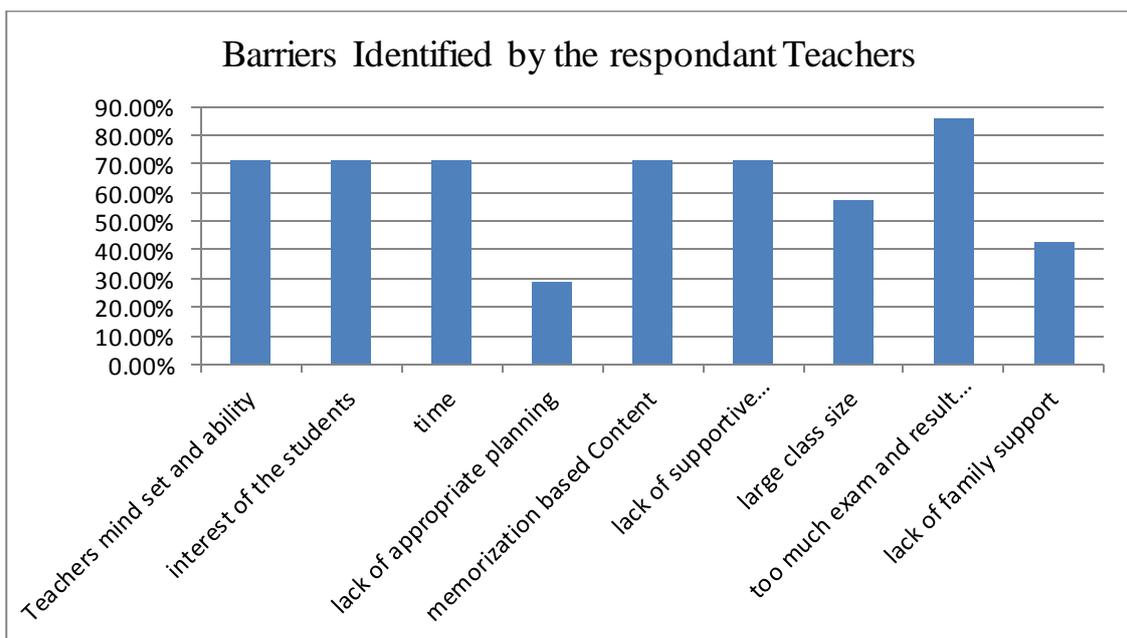


Figure 4.2.1: Barriers to implement CT identified by the respondent Teachers

It is praiseworthy that Government of Bangladesh has taken extensive steps to implement assessment system which will promote critical thinking among students. But most of the efforts are in vain as the education is not life oriented. It is remaining in paper and pen. Thus creative evaluation system implemented in Bangladesh has increased the scope for private tuition and wide spread use of guidebooks. Teachers and coaching centers give excuses that for learning how to write creative answers. Students need to take extra supports from school teachers as private tuitions. During assessment students do not have any scope to think deeply in the given short period of time. Thus it does not help them to improve their critical thinking. Teachers are always bound to force the students on writing long answers in exams rather than writing with applying critical and creative thinking.

Some teachers (28.57 %) try to use alternate teaching methods other than lecture methods. Snyder (2008) refers actively engaging students in project-based or collaborative activities can encourage students' critical thinking. But this effort also remains ineffective. For instance when teachers are providing project work to the students, teachers also give them information to buy the project in prepared way. Most of the teachers are unable to apply various teaching method for their limited skills and experiences. But experienced and capable teachers also admit that they only use traditional methods due to lack of facilities and infrastructures.

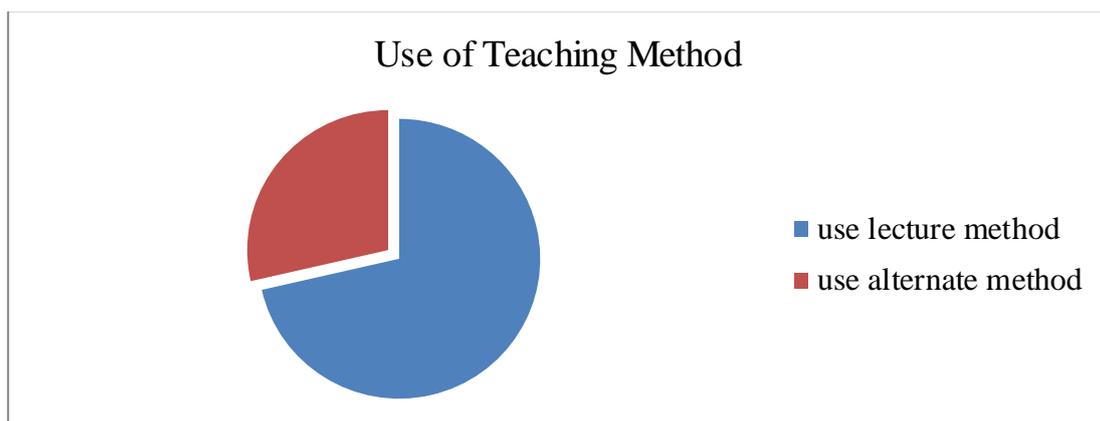


Figure 4.2.2: Use of Teaching Methods

Regarding textbooks the informants stated that the texts which have designed for Secondary students do not support using critical thinking pedagogy because of the open ended and close ended questions set in the passage for the language activities. They argued that multiple choice questions encourage a learner to choose only one or the best and the correct answer.

Multiple choice answers do not encourage a learner to find out alternative answers. Moreover time constrain is the biggest factor for not using different teaching methods and aid. According to National Curriculum of Bangladesh a period should be of 50 minutes. But in practical it continues for 35- 40 minutes which is not sufficient for a proper teaching-learning experiences.

The researchers did not find any emphasis on focusing instruction on the process of learning. Snyder (2008) emphasizes on focusing instruction on the process of learning rather than solely on the content. Emphases are given on solving questions from guide rather than reading books or enjoying study. But new learners need to take his or her work seriously and continue to create and solve things creatively. Students perform better when they able to share their own thoughts without relying on teachers and texts. But, the teachers hardly inspire the students to write on their own thoughts. They have to write according to teacher's directions or from a guidebook selected by the teacher. According to figure 4.2.3 its clear that 71% teachers are satisfied with existing pedagogy and the rest 29% are not satisfied.

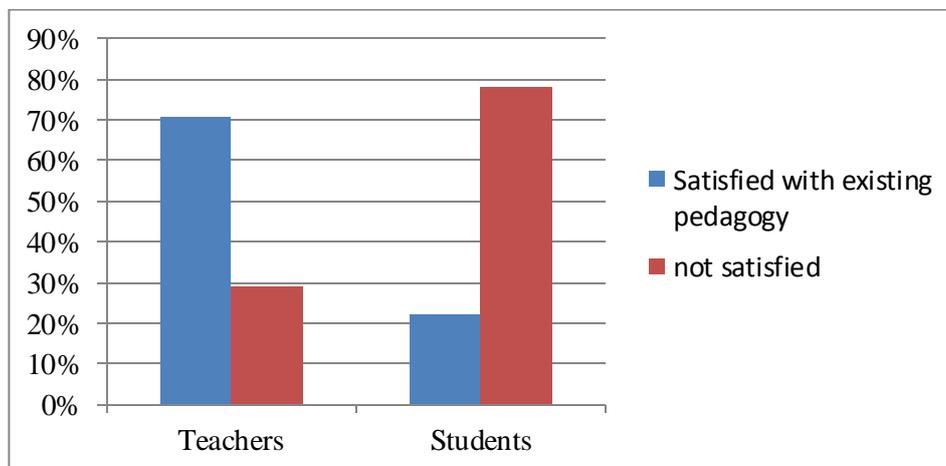


Figure 4.2.3: Satisfaction with Existing Pedagogy

Section -Two

4.2.2 Students’ View on existing pedagogy in regard to critical thinking skill

According to students, usually they do not get the opportunity to ask question. Above figure 4.2.3 shows that 78% of the students are not satisfied with teacher-centric methods and the rest 22% of the students have well-accepted it. Their views are as follows:

‘Sometimes we get opportunity for clarification. One teacher gave us the opportunity to think then answer the questions.’

‘Some teachers do not give us opportunity for further clarification. Then we have to remain in confusion. And we have to suffer. So I think we should have opportunity.’

Some students gave different opinions regarding the scope to articulate their points in a logical manner. For instance one said:

‘No, I don’t think so. Some teachers don’t try to accept our logic. Teachers try to establish their points keeping us shut that we have to listen only.’

While others view,

‘It depends on teachers. Those who give us opportunity, we can express ourselves there. But some teachers don’t and we can’t express ourselves there.’

One student replied affirmatively and others were negative regarding teachers’ encouragement for students to have comment on what each other says. Their view:

“Yes. But not all the teachers give us opportunity. Sometimes teachers have negative comments also”.

However, one students have differed the opinion of the rest. He said only giving option to response, make question are not enough supportive to develop critical thinking ability. Most of the time it is found that the question, response or comment from the students are also based on the memorization. Who memorized lectures, are only able to participate fearlessly in class. The fear is mainly caused when the teacher re-asked the students about an information. While he cannot reply, become the subject of ridicule or criticism by the teacher.

It is to be mentioned that most of the students consider critical thinking as thinking deeply, rationally which is supportive to solve the academic and real life problems.

Section -Three

4.2.3 Experts' views on Existing Pedagogy in regard to critical thinking

According to experts opinion we have to revise our traditional pedagogy as one stated,

‘There is a saying that in real life there are problems and trying to solve the problem we learn a lesson. But in the classroom we teach lessons then we give them the problem. So classroom situation is revers.’

He also stated that the biggest challenge is the teacher themselves because of their poor background. He added, they grew up like never asking questions. They were not allowed to ask question by their parents, their own teachers. Their mind set is not for asking question.

The socio-cultural behavior like intolerance, obstinate or noncompromising attitude have impacts over the classroom. Leaving space to others comment, response are very rare. The sense of superiority is also causing problem. New knowledge and understanding emanated from the students are always causing the sense of inferiority among the teacher. So they as per as possible try to avoid this.

One of the respondents (Expert) says,

“There is a misconception among teachers in Bangladesh- they think only having capability to teach students. The learning is only for the students not for them. So, they have nothing to learn from the students.”

Moreover, experts suggested to offer students to ask questions, to make arguments, to comprehension of their lesson, to introduce a well designed structural framework of teaching which will raise the level of students engagement and the use of different attractive graphical contents, videos, audios and teaching materials in the class. Experts also opined the necessity of having wellround integrated graduates- belonging personality and required critical thinking ability.

Section-Four

4.2.4 Findings from classroom observation on existing pedagogy in regard to critical thinking

Based on the classroom observation it was found that all classes (100%) were in lecture method. There were too many opportunities to apply Inquiry technique or to promote CT in the classes. In ‘Bangladesh and Global Studies’ Class teacher asked only memorization based question. There were no students participation. On the contrary, 3 teachers (60%) applied

remarkable enquiry techniques in their classes as showed in figure 4.1.3. Like deriving the lessons by asking questions in English and Science classes. In one class English teacher was able to engage their students in some extent. (20%) It is most particularly in speaking and writing sections.

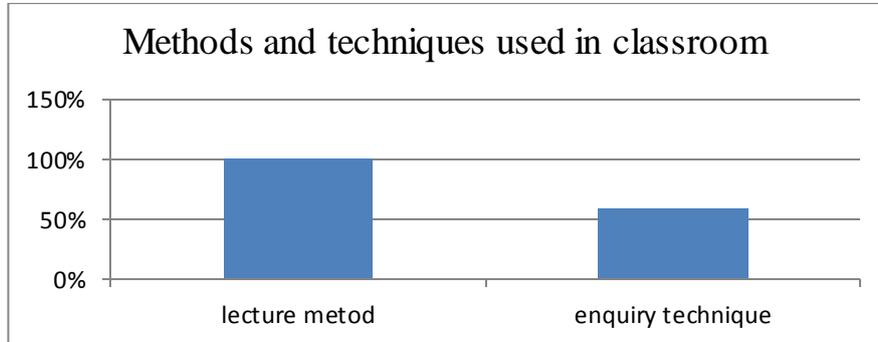


Figure 4.2.4: Methods and Techniques used in observed classrooms

4.3 Part -3 (Research Objective- III)

Section - one

4.3.1 Proposed Strategies by the teachers

However, most of the informants (93.3%) agreed with the essentiality of CT skills in the classroom. The respondents also claimed that for applying critical thinking pedagogy teachers have the pioneer role. Apart from this, teachers can encourage students to be creative and innovative by using CT pedagogy.

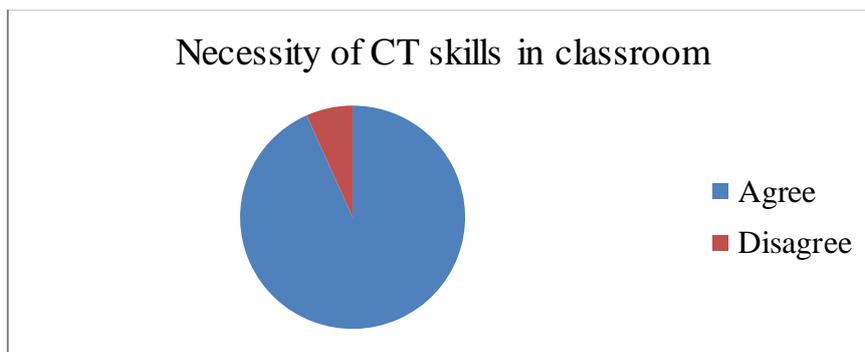


Figure 4.3.1: Teachers’ opinion about necessity of CT sills in classroom

In regular classroom activities there was too less application of dialogical approach or inquiry method. The nature of Socratic Method is dialogical. In this method each has to listen to the other. Each learns from the other thus dialogue is naturally empowering. Teacher becoming a facilitator should not impose his or her views on the students. A teacher displaying true Socratic irony only knows that he or she knows nothing, and is ever ready to join anyone on the journey of learning (Kazmi, 2011). Rosnani Hashim (1999) also stated that, “new

methods of instruction must be explored and teachers should be creative and innovative especially for moral development”.

Some teachers comments on CT is that, in Bangladesh we have lack of thinking capacity due to traditional education system. Both teachers and students don't get time to have gone through thinking procedures. Rote learning, guide/ note books, structured questions, load of books and exams all are the barriers which need to be removed from policy level. Even creative assessment system is also structured in a way that forces to stop thinking.

Teachers also suggested to spread the concept of thinking among the parents also as parents are not ready to accept the change of traditional method of teaching. It needs to determine the importance and relevance of arguments and ideas. With the cooperation of parents teachers can implement dialogue, question- answer or inquiry methods in classroom to promote thinking among students. Thus arguments can be recognized and appraised. Inconsistencies and errors in reasoning should be identified that students should not go through unnecessary or adamant arguments.

In terms of third objective, teachers also proposed significant ideas like attractive and effective lesson plan, teaching aids or tools, sit planning, interactive session, participatory method, puzzles in class, question-answer, storytelling, dot joiner, reading book, completing stories, mixed with different people of different environment, evaluating the existing evidence, learn by their mistakes, to keep the floor is always open, encouraging the students to be a part of the class. Briefly showed in figure 4.1.5.

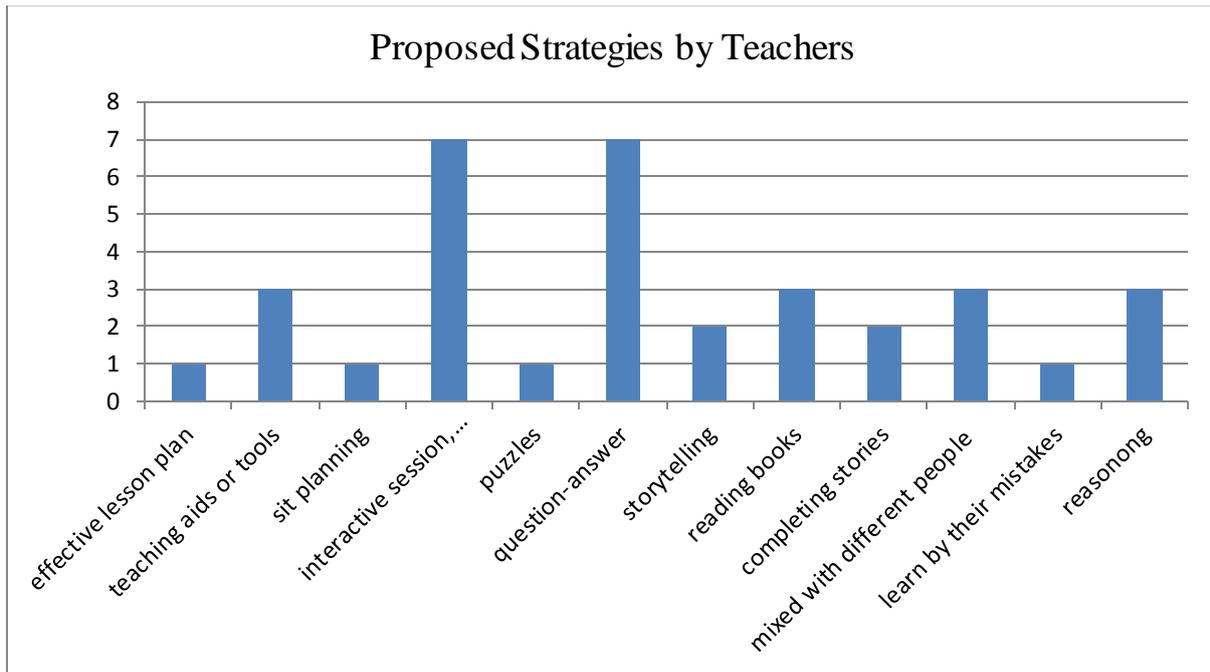


Figure 4.3.2: Proposed Strategies by Teachers

Teachers also suggested that they should approach to make students- a. Understand the links between ideas, Determine the importance and relevance of arguments and ideas, Recognize, build and appraise arguments, Identify inconsistencies and errors in reasoning, Approach problems in a consistent and systematic way.

The study has found that most of the teacher recommended to change the assessment system. In view of them, it largely emphasizes on memorized knowledge fails to assess the student’s inner capabilities like critical thinking. The content of the text should be brief and precise. They should offer the opportunities to the students to think, ask question, and inspire them to do so.

It is nessecery to confirm that all teachers have clear conception about CT skill. Then, teachers must be trained so that they can apply CTs into the existing pedagogy and prepare lesson plan accordingly. The study also recommended to prepare a comprehensive teachers’ guides/ modules considering all students which may guide teachers a way to implement teaching thinking strategy in the classroom activities. To implement critical thinking among students, teachers should be trained. Teachers' training programme should be arranged regularly. Every school and colleges should arrange pre- service and in-house training for the teachers to motivate them to explore critical thinking among the students.

Section- two

4.3.2 Proposed strategies by the students

Students gave some noteworthy opinion regarding ways to improve critical thinking skills. They believe that teachers are the key to make their students critical thinkers. They should provide opportunities to the pupils for thinking, asking question, pondering even inspire them to do so. Apart from that students believe teacher should be innovative, explorer, open minded as well as more and more knowledgeable. Some of their views are as follows:

- ‘By giving us the opportunity to talk, think or share’,
- ‘Think about new things, discovering something, exploring’,
- ‘Have to read many books, not only school books’,
- ‘Have to avoid arrogance, ego, and embrace knowledge openly’,
- ‘Have to be open- minded’, ‘ Read more and more’.

According to students it is possible for teachers to implement inquiry technique in classroom but teachers never give them the opportunity to do so.

- ‘We get less opportunity to express ourselves. We have got only one teacher who used enquiry technique or other different methods in classroom.’
- ‘Teachers don’t take our opinion.’
- ‘We gain divers knowledge while we do project works but we don’t get opportunity to present those.’

Section - three

4.3.3 Proposed strategies by the Experts

One of the expert emphasized to engage the brain:

- ‘So how do we engage the brain? The entire brain gets involved to find out answers. When the question is asked the brain cannot do anything else other than finding the answers. Also a chemical serotonin is released in the brain to help the brain relax from stresses. The answer might not be right but brain remains engage to find the answer.’

It was also proposed by one of the experts that teachers should let the students in preparing question:

- ‘The first part is teaching asking question, engaging students. So students can build question. We know that if students need to be motivate in the concept. In case once

students are interested they start asking question. Because every neuron in the brain, once it has Question 10,000 tentacles of neurons get active to find answers. So when it looks for answers it need Questions. If I give examples, “How to read?” As you know students don’t want to read, whether it in schools, universities or colleges. How to motivate them? Ask them to prepare question from the text. Or, let them read the story and design their own question.’

He indicated to the formulation of particular pedagogy model which will stimulate critical thinking ability among students. As he said,

‘It is nessecery to frame a particular teaching strategy which favors more interaction and participation of the students into the class. It may include the setting up the classroom structure like teacher and students sitting positions, distribution of week and good students, designing a well planned lesson plan and encouraging the students into more participation.’

He also suggested teachers should be trained to use differnt model to promote CT in classroom like “Mind Mapping”, “Fish Bones” etc.

Section-four

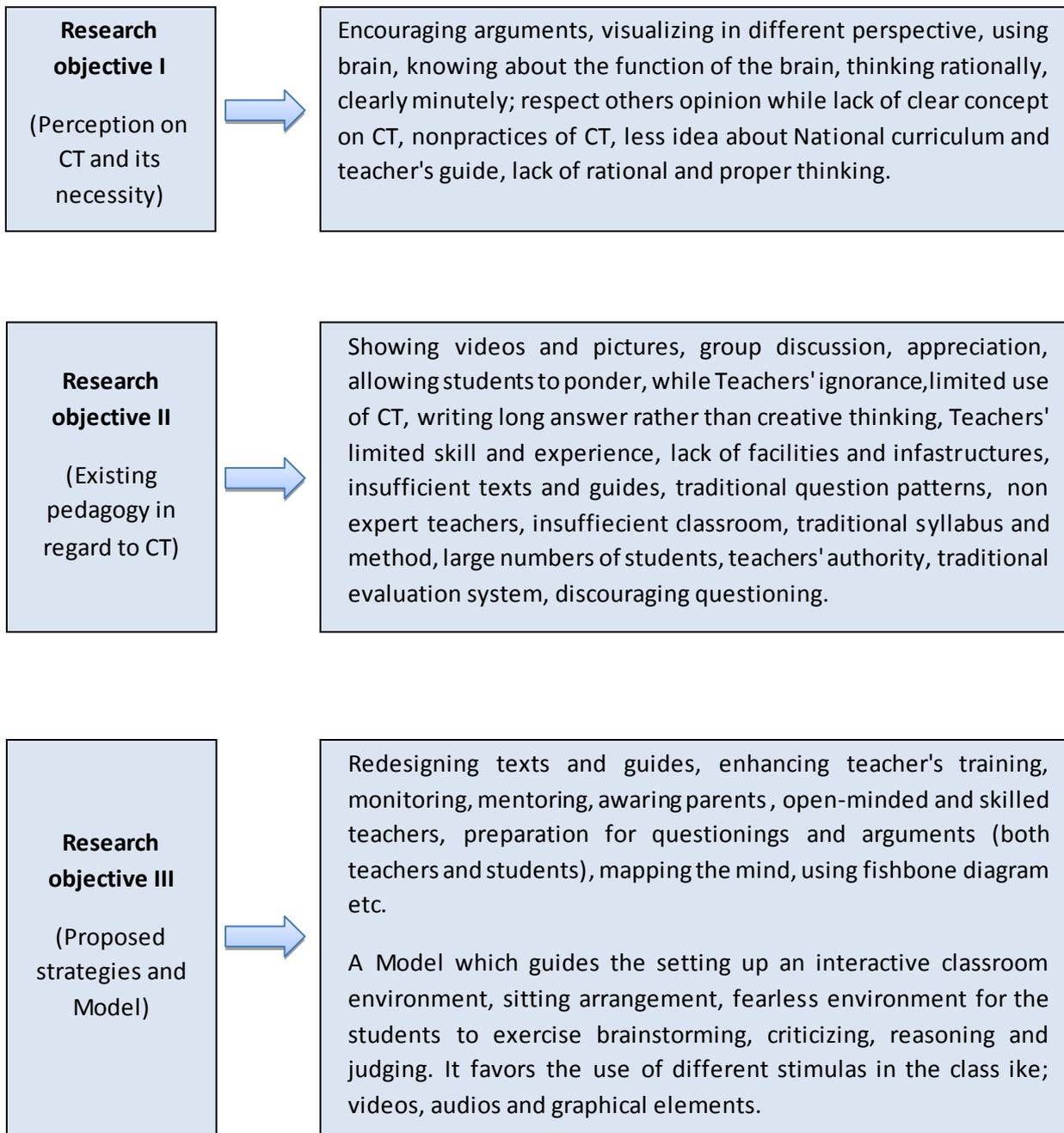
4.3.4 Proposed strategies from Classroom observation

From the classroom observation it can be said that first of all teachers should have clear conception about CT skill. Then, teachers should be trained so that they can apply CTs into the existing pedagogy and prepare lesson plan accordingly.

4.4 Overall discussion

Based on the research objectives I , II and III perception on critical thinking skill, existing pedagogy in regard to critical thinking skill, proposed srtategies to implement critical thinking skill respectively were discussed above by the researchers.This discussion were fully based on the findings from teachers (interview), experts (interview), students (Focus group discussion) as well as from classroom observations. Many significant issues were found from the findings are as follows:

Figure 4.3.3: Overall Findings at a glance



Chapter Five

DISCUSSION

There are significant steps taken by GOs, NGOs and International Agencies to enhance CT skills among learners. Key findings of those initiatives are discussed in order to develop an integrated method of teaching for promoting critical thinking in the classroom activities.

5.1 Initiatives by the GO's Government of Bangladesh

5.1.1 National Education Policy 2010:

National Education Policy 2010 has emphasized over the creativity and critical thinking abilities as it aims that children will become rational and intellectually accomplished human beings with ethical perceptions, free from superstitions. The aims, objectives, goals and principles of the Education Policy governs to stimulate the intellectual and practical qualities, cultivation of free thinking of learners, to foster thinking ability among students through creating environment mentioned in aims 2, 3 and 5 respectively. Aim 6 suggests an education process that is oriented to creativity, and to create a scientific mindset of the students. Aim 9 stresses to show tolerance for different ideologies for the development of a democratic culture and to help develop a life-oriented, realistic and positive outlook. Consequitively aim 10 discourage from rote learning, rather recommends to use learners own thoughtfulness, imagination and urge for curiosity. To acieve all the objectives Goal 15 suggests to create joyful, creative and favorable environment which may offer the students scope to congenial development.

5.1.2 National Curriculum of Secondary Education, 2012:

National curriculum is developed based on National Education Policy 2010. It follows Objective model or Product model. Learning Outcomes are selected considering the learners Cognitive, Affective and Psychomotor domain of respective classes. Teaching- learning methods emphasizes active learning stimulating the thinking process of the learner. Learning theories are discussed here in a precise way. Which highlighted that learning in classroom should be Constructed, Active, Reflective, Collaborative, Inquiry or Problem- Based and Evolving. Suggested methods are Question- Answer method, Peer learning, Group work, Demonstration method, Inquiry method. Proper implimenttion of all these method will certainly promote CT among learners.

5.1.3 Secondary Education Sector Investment Programs (SESIP):

For the proper execution of National Curriculum- 2012 NCTB has implemented 15 'Teacher Curriculum Guideline' with the assistance of SESIP of Education Ministry. NCTB also prepared 56 Guides for teachers. There are some special guides for Science teachers as 'Hand on Science Education (Hate – Kolome Biggyan Shiksha)'. Other significant steps for SESIP are implementing Creative Assessment and providing Teachers- Training accordingly. Main philosophy of Creative Assessment is to 'Say no to Rote learning'.

5.1.4 College Education Development Project 2017, Ministry of Education:

In collaboration of ECNEC and World Bank, Bangladesh Ministry of Education Launched a project to contribute in the development of college education. It has set several goals including offering the special training for the teacher to improve the level of participation in the classroom. In comparing with the institutions did not participate in this program, it has found better performance of those have participated. The study has also figured out positive correlation between the performance and the development of the teacher in terms knowledge and skills (Mridha, Uddin, Akter 2018). This is fully consistent with findings of classroom observation of this study.

5.1.5 Bangladesh: Teaching Quality Improvement in Secondary Education Project 2020:

Teaching Quality Improvement (TQI) Project funded by ADB, Canadian International Development Agency (CIDA) indicated several scope to develop the teaching quality at secondary level of education system in Bangladesh. In TQI project II, it has targeted several institutions to experiment its teaching improvement model. Many people in Bangladesh are now living below the poverty line that inspires this into the skill based education approach. Spreading universal values, qualities and preparing the generation to keep peace with the upcoming global order, it has recommended a wide reform into the curriculum and teaching module. It has worked to contribute in reaching up inclusive education for all by articulating and offering education to disadvantaged group of the community.

5.1.6 Creative Assessment Strategy for Secondary Education:

Secondary Education Board in light of National Education Policy 2010 launches an unique model of student assessment to improve their creativity and problem solving capability. It has designed the creative assessment system where the memorized knowledge are proposed to be less significant. However, different study figured out how the wording and practicing criteria

of assessment gets imbalance and the flaws of such assessment system due to the lack of research based content. (Rahman: 2019 and Azim :2018)) In this study, it has found that the assessment strategy is still ambiguous to the students and teachers. Due to lack of proper training and sufficient guidelines for improvising students into creative education.

5.1.7 Research and Teachers' Training Conducted by NAEM:

National Academy for Educational Management (NAEM) has conducted Teachers' Training and playing significant contribution in education. Some research conducted by NAEM investigated the applicability of the Creative Question (CQ) approach into secondary level. The study has found that the mixed repercussion created mainly for the introduction of CQ approach in the secondary level. Teacher got training, but not sufficient. At the same time the focus shifted towards exam, but less focus to the classroom activity. The students get perplexed due to having traditional approach of classroom activity and the creative approach of exam. This is fully consistent with findings of the classroom observation of current study. Teachers are not still prepared for this. At the same time, time limitation and urgency to contribute in cutting good marks of the students at exam are also considered the hurdle.

5.1.8 End Line Study on: a2i's Problem Based Learning (PBL) Initiative for Primary Education- a2i project (2019):

Study conducted by a2i found that the education is largely missing the life orientation and problem solving approach. It has targeted several schools to experiment the model of promoting PBL. This study has taken the concept of designing a model to promote critical thinking and problem solving orientation in life. Studies have shown that students have significantly improved their CT skills and willing to cooperate and collaborate and participate more in the group activities. Hence, given how successful the PBL intervention was, teachers and guardians expressed their recommendation to introduce the PBL method at primary level, even in the secondary level as well.

5.2 Initiatives by the Non Government Organizations/ International Agencies

5.2.1 British Council and Government Joint Venture Project "Connecting Classrooms 3 begins in Bangladesh" 2015

In sequence of the project 2008, British council and Ministry of Education have initiated a project to promote global citizenship outlook among students. In this program, it has targeted

the creativity, universal values, critical thinking skills as the key to face the challenges of upcoming global order. Primarily it has targeted 90 institutions and then in the second phase 800 institutions to implement its designed plan. British Council has made 5 key steps (theoretical understanding, teaching and assessment, identifying opportunities and developing leadership, project management and self evaluation model) to promote critical thinking ability among students.

5.2.2 World Bank:

World Bank in 2019 has conducted a research which indicates the growing necessity of including skills based education into the curriculum of tertiary education. (Rahman et. Al 2019) It has indicated that the developing nation like Bangladesh where most of the people live below the poverty line needs professional education. Growing level of unemployment and meeting the demand of skilled man power creates this scope to grow up professional education. This study during the interview with the experts found almost similar findings in terms of its objective to promote life oriented education.

5.3 Towards Developing an Integrated Model of Teaching Method for Promoting Critical Thinking among Learners of Secondary Education

One of the main objective of this study is to prepare an integrated teaching method for promoting critical thinking in the classroom activities. In order to do this job, the study has gone through selected framework, model and template demonstrated in the figure from which contributes to develop a new model for this study.

5.3.1 Blooms Taxonomy Domain:

Since critical thinking is a metacognitive process enables the students to understand better on specific aspects and objects, a study conducted by Dwyer, Hogan and Stewart (2013) designed a model of improvising students critical thinking through a process using the Blooms Taxonomy Cognitive Domain (1956). It begins with setting out particular stage of competencies.

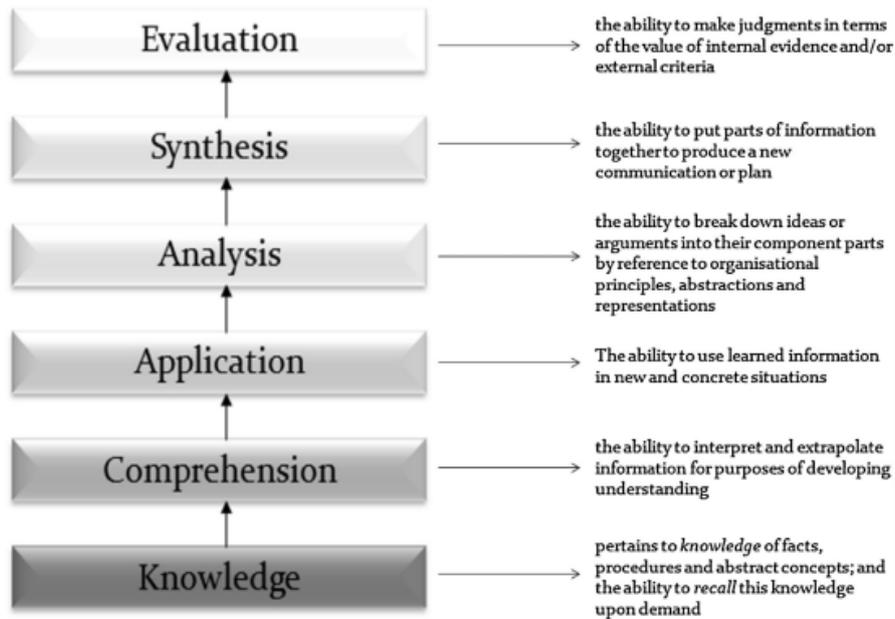


Figure 5.3.1: Framework for thinking and learning outcomes

Source: Blooms Taxonomy 1956

The model includes knowledge, comprehension, application, analysis, synthesis and evaluation. It defines particular core values, skills at every stages must be achieved to go over the next. Each goal has particular tactics to be achieved. The evaluation is the highest level of acquiring critical thinking ability.

5.3.2 Murrie Model for the Integration of Critical Thinking in the Classroom

Murrie (2019) discussd the integration of CT in pedagogy and developed a model of integration. There are two different actors in the classroom- students and teachers. The goals and objectives are in the middle. Teacher facilitate the CT values through modifying contents and strategies. Here the students contribute through interactions. Then the outcome of the teacher is the successful implementation of the teaching plan and students is the development of their competencies. The model 5.3.2 has given the foundation in making the model of this report.

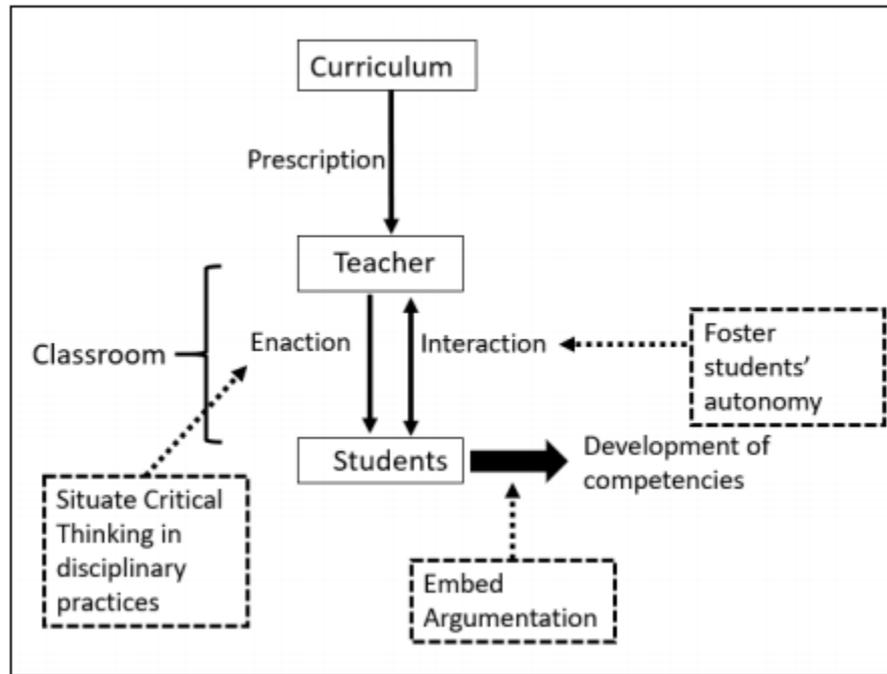


Figure 5.3.2: A Model for the Integration of Critical Thinking in the Classroom (Source: Murrie, 2019)

Figure 5.3.2 shows the assessment of the students CT ability requires the scale. In doing so, several indicators are set by Alfaro-LeFevre (2016). It includes mindfulness, knowledge of contexts, confidence, resilience, creativity, patience, decision making power, judging and appraisal capability. The indicators of this framework overwhelmingly evolved in making the scale of measuring CT competency.

5.3.3 TC2 model

The TC2 (The Critical Thinking Consortium) framework support Critical Inquiry in Mathematics demonstrated in the Figure 5.3.3. This model includes nurturing learners as communities of thinkers, framing critical challenges that invite students think critically, teaching the intellectual tools that enable students to address critical challenges, last of all assessing thinking and performance to support students’ use of the intellectual tools.

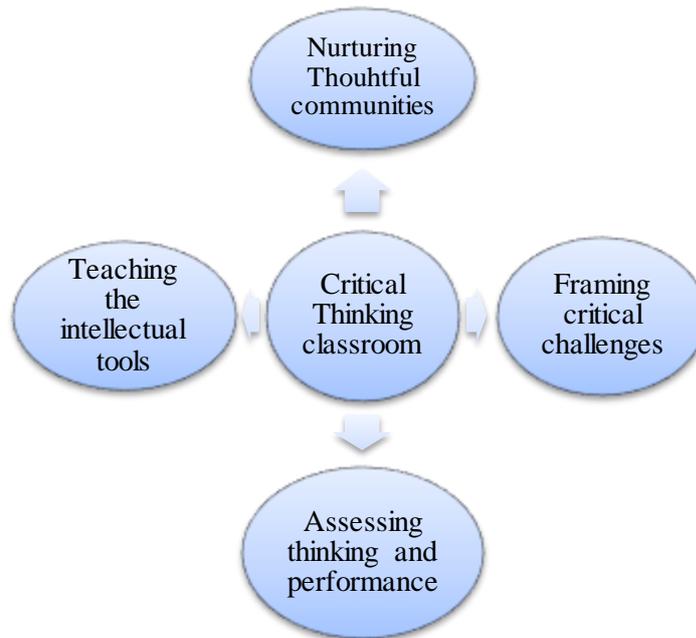


Figure 5.3.3 : TC2 model
(Source: www.tc2.ca)

TC2 model suggested the following ideas to promote CT pedagogy in the classroom activities-

- Teach flexible thinking strategies such as analyzing a word problem by identifying “what I know” and “what I need to find out”
- Foster helpful habits of mind such as perseverance through stories, explicit encouragement, role play and modeling.
- Develop background knowledge through critical inquiry (e.g. give examples and non-examples of quadrilaterals and ask students to figure out the sorting rule)
- Use different types of critical challenges to frame engaging and thought-provoking Math tasks (e.g. Critique the piece, Judge the better piece, Decode the Puzzle)
- Present problem for which students have no predetermined solution strategies
- Present “open” problems that have more than one reasonable solution
- Challenge students to find and use Mathematics in real life situations
- Ensure that teacher’s assessment reinforces the value of “explaining teacher’s thinking ”

5.3.4 The fishbone diagram

The fishbone diagram is a simple problem solving tool that allows quick and effective root causes to be understood, in the pursuit of corrective actions. It helps students to brainstorm and reasoning about any problem.

For constructing a Fishbone diagram one have to draw the box on the right of a flip chart, paper or board, and write the problem statement in the box. Now drawing the line going from

left to right as the ‘Spine’, connecting to the problem statement. Drawing the ‘fishbones’ emanating from the spine which represent the main cause categories.

5.3.5 Brainstorming

Raihan (2019) provided few steps for brainstorming session as demonstrated in the figure 5.3.4:

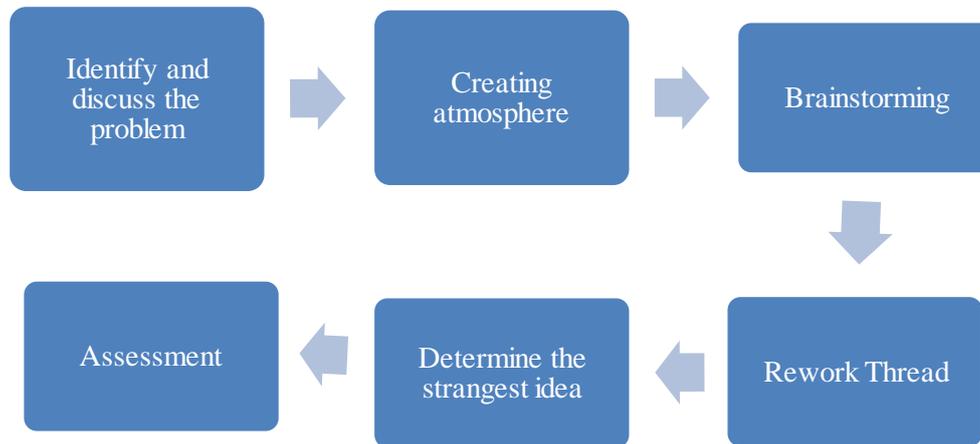


Figure 5.3.4: Steps of Brain Storming (Source: Raihan, 2019)

The figure shows that for a successful session, participants should be provided the minimum of information and time to think. Each participant should be given one sheet of paper to write the ideas. An author notes it down on the blackboard or paper in a prominent place for everyone. The participants are asked to look at the ideas and to create a new idea that improves the previous one and the process is repeated for three or more rounds. When certain ideas are drained from the participants, they are called on to choose the strangest ideas to put forward. The objective of assessment session is to evaluate ideas and determine what good can be taken from these. Once all the ideas are taken, the group can focus on specific ideas.

5.3.6 Mind Mapping

It is a graphic representation or sketches of students’ knowledge. Concept maps are naturally hierarchical, with the secondary concepts stemming from the main concept or idea. And there is always scope to add new concepts. It helps students visualize various connections between words or phrases and a main idea. Words on the line are *linking words* and specify the relationship between concepts. The figure 5.3.5 demonstrate some Arrangement of Mind Map:

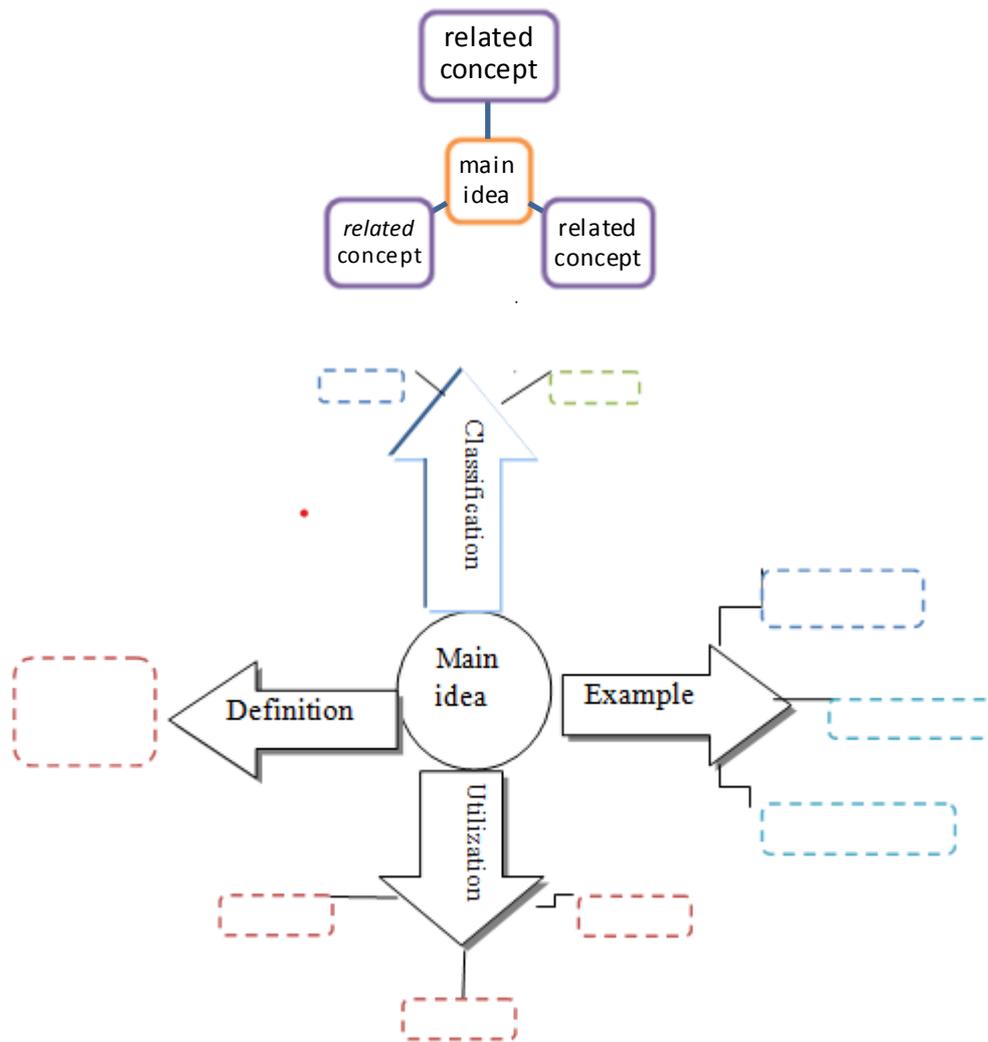


Figure 5.3.5 : Lay-out example of concept-map (Source: Raihan, 2019)

The figure shows that a focus question that clearly specifies the issue. Encouraging students (individually or in groups) to begin by generating a list of relevant concepts. Organizing the concepts by connecting and relating them to main idea. Cluster concepts that function at similar level of abstraction and those that interrelate closely. Arrange concepts in to a diagrammatic representation. The basic links between the concepts has to be created with linking lines and label each line with a proposition. Students should be provided the opportunity to review. It is better to include specific examples of events and objects that clarify the meaning of a given concept.

5.3.7 Daily Lesson Plan Template

	What and why?	How?
Stimulus Material	Reading a Text, a short passage, Poster, Video clip	
Lines of Inquiry (LOI)	LOI 1, LOI 2	
Discussion Plan	List a few expected questions according to the LOI	
Learning Outcomes (LO)	1. Comprehension 2. The 5Cs 3. Values	Community of Inquiry
Set Induction	Using audio visual aid or none	Pose a question related to the topic to prepare students for what is coming
Initial development	Read text, watch video clip to stimulate questions	Students raise questions and record it on blackboard
Organizing the questions (agenda)	Seeking the themes or problems. Focus on LOI question	Students volunteer to identify the categories.
Deliberation and Philosophical Inquiry (PI)	Examine the questions ONE theme at a time deeply, building upon each other's	Students decide which question to discuss first, Community of Inquiry (COI) and PI skills
Activities for practice	Oral or written exercises/ activities	One whole class group, small groups or individually.
Closure	Conclusion	Students cooperate to state the conclusion

Table 5.3.1: Daily Lesson Plan Template of Critical Thinking practice in classroom

(Source: Hikmah Pedagogy, Rosnani Hashim, 2021)

In this model, Dr. Rosnani tends to improve thinking skill among students by philosophical inquiry or by questioning. This model is based on Mathew Lipman's P4C. Here, author intends to encourage students to think, to reflect and elaborate on it. In this way, it help students discover the 'logical structure of their thinking'. The art of good questionnaing involves knowing how to ask the 'right' question at the 'right' time. According to this lesson plan teachers have to think of the objectives/ learning outcome, line of inquiry, questions that

will be inquired. Teachers have to respect and appreciate all students, give them the space to express their views and argument in a democratic manner.

5.4 Proposed Model of Critical Thinking Pedagogy:

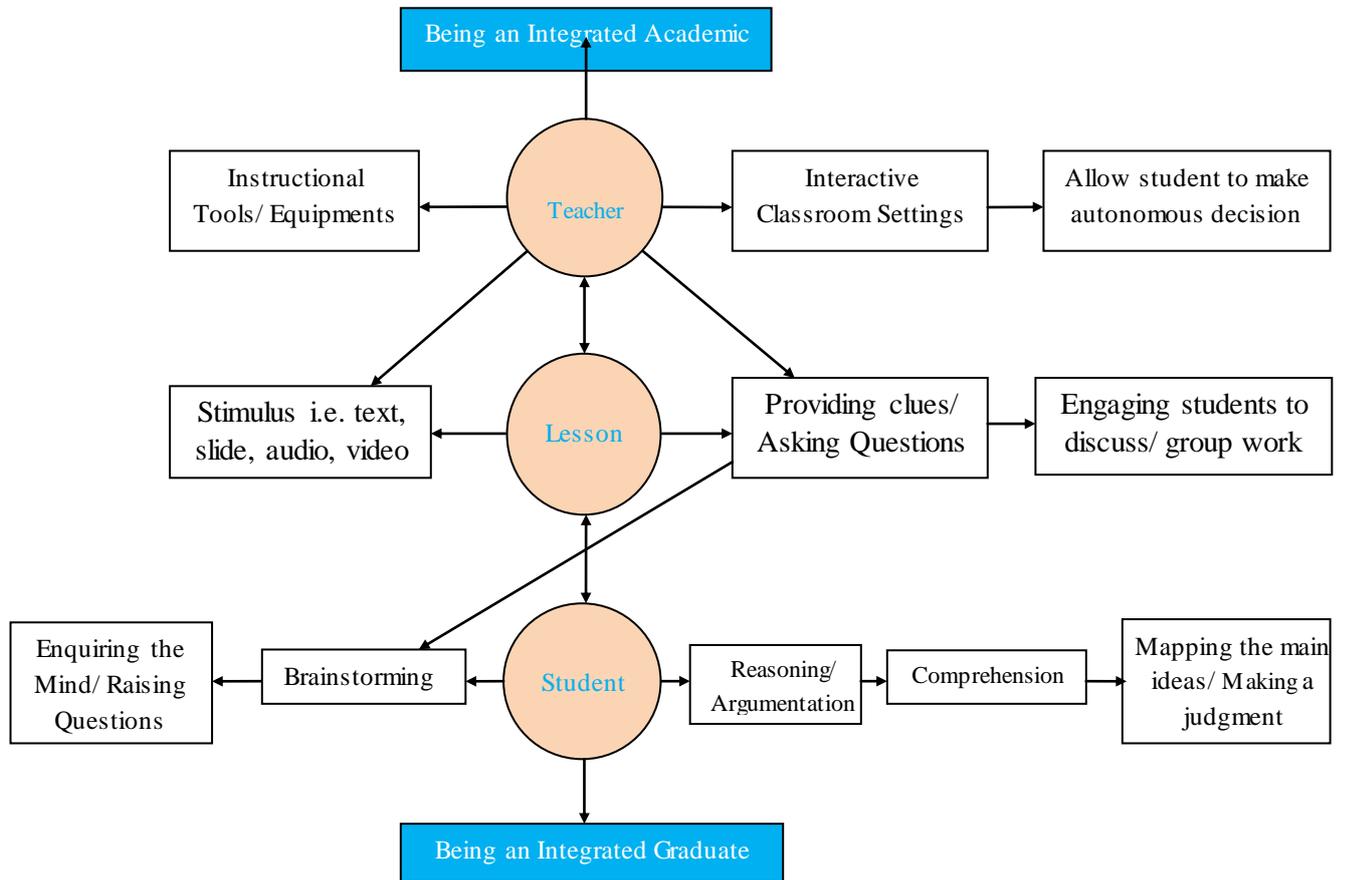


Figure 5.4.1: Proposed Model of Integrated Pedagogy of Critical Thinking (IPCT)

The figure 5.4.1 shows the proposed model of integrated pedagogy of Critical Thinking (IPCT) refers to 3 key aspects in the class- teacher, lesson and student. The model based on the experts opinion collected as the primary data and documentation analysis by analyzing previous study reports, articles, books, GOs and NGOs policy prescriptions and other materials. Here the integrated academic and graduate refers to the belonging of particular skills of CT- Interactive, adaptive, analytic, practical, critique, responsive, strategic, willing to adhere the differences and able to brainstorm and make the decision rapidly.

The first segment of the figure demonstrates that a integrated academic will ensure the availability of the educational instruments and materials in the classroom. It includes- projectors, online tools like computer, internet, presentation slides, graphical contents, cliff charts, note pads and etc. Then the teacher will concentrate over the sitting arrangement and

physical structure of the classroom. The teacher will seat just in the middles so that he can communicate and eye contact with each every students of his class. The number of students in the class would also be limited. Teacher will make sure the sitting of weak and good students in combined and appropriate way. The teacher shall also have way of getting into close of every students, gives him the opportunity exchange views, contacts with every students. The teacher will make sure the fearless environment for the students to make response, raise questions, participate in discussion and argue their differences. They also shall be allowed to make their decision based on their understanding and thinking.

The second segment of the figure suggests the well designed teaching contents- videos, graphics, pictures, texts and audios are very much cooperative in making interactive lesson plan for the students. The teacher will provide clues or questions as the food for thought to the students. In looking for the solution or answer, the teacher will assign the students into group work. Thus the way, just after the confirmation of interactive class environment, the teacher will also make sure the lesson plan more interactive, creative and participative.

In the last segments, the activities of students are elaborately discussed. It starts with the dealing of questions, queries and clues. The students will brainstorm the particular queries in order to figure out the solve and answer. The teacher will also help them in reaching out their answer. Teacher will give them particular response. The students will analyze the teachers' response and try to understand the difference between their and teachers' opinions. Here the students will make arguments in favor of their opinions. Thus the students will reach out to a particular level of comprehension on discussed issues. They can dissectify/ identify the main ideas, points, judgemental decisions from the whole process of discussion. This is the way how the students will be learned to think a particular issues from critical perspective.

Following this model, the study also suggests a lesson plan template, diagram of teaching specific lesson, teacher evaluation format and CT scoring rubric for the better uses of this model in the particular class.

An integrated academic and a well round graduate will come out by exercising the model of IPCT (integrated pedagogy of critical thinking) into the practice.

Chapter Six

RECOMMENDATIONS AND CONCLUSION

Based on the study, following are some specific suggestions both for policy level and classroom level:

6.1 Recommendations to the National Policy Level

1. According to Oxford dictionary, a textbook is a book that is used as a standard work for the study of a particular subject. In view of that Textbooks of NCTB (National Curriculum and Textbook Board) should be revised to be the standard of particular age, need, psychology of the children and social condition. It can be assured by following the Education Policy, 2010. NCTB should be more careful about preparing textbooks such as avoiding mistakes and ambiguous pictures. Rather using understandable way to explaining the teaching aids, tools, assessments and subject materials. Relevant, life oriented and sufficient examples should be cited.
2. Government needs to disseminate the idea or steps taken for improving the quality of education such as to make acquainted the teachers with recent curriculum, education policy and teachers' guide through training and workshops.
3. Incorporating the concept of 'Teaching Thinking' in teacher education in order to orient the teachers with critical thinking so that they can adopt this approach in their classroom teaching.
4. Parents or guardians should be made aware along with the teachers to cooperate with school teachers. To materialize this 'Parents- Teacher interactions' program should be scheduled in yearly routine of each school
5. Government has taken several steps in collaboration with some NGOs to improve education system. Such a project is Teachers' Training. Massive training has been provided though some lacking remains. In such case monitoring and mentoring is important.
6. Though the National curriculum has been improved a lot to meet the challenge of vision 2020, it needs to be more revised. The load of study should be minimized by making the curriculum more life oriented and enjoyable. The researchers also believed that, syllabus or curriculum should be designed in a way which encourages a learner to go for critical thinking.

7. Preparing comprehensive teachers' guides/ modules for all subjects which will guide teachers a way to implement teaching thinking strategy in classroom. This will also consider the feasibility for applying those strategies in practical field.
8. Rethinking about the issue of teacher- student ratio, how to reduce this gap. Research study can be conducted to solve this problem. It can minimize appointing more teachers, introducing more sections or shift in schools. Disseminating or decentralizing quality education throughout the country might be some solutions. Also local resources should be utilized to prepare teaching aid.

6.2 Recommendations to the School Management Level

1. School authority should strictly follow the class timing 50 minutes instructed by Education Policy.
2. Coordinators or school head must check the lesson plans before implementing it in classroom by respective teachers.

6.3 Recommendations for the School-Classroom Level

1. Teachers must follow 'Teachers' Guide' provided by the Government of Bangladesh. Along with these guides Science teachers must follow '*hate- kolome Shikkha*' (Hands- on learning) guides.
2. Teachers should think of tasks that would let students link concept to their personal experience or prior knowledge. Connection to real world pave the opportunity to transmit this thinking skills to diverse perspective.
3. Let the students to write arguments or analysis. The teaching of thinking should progress from explicit instruction to guided practice.
4. Let students to have dabate or writing dialogue on the topic of controversy. Thinking skills can advance from simple to complex and may encompass more than one type of thinking skill being applied in a particular situation.

6.4 Conclusion:

Nowadays shockingly Youngers are becoming addicted to devices, social media, and above all drugs. Degradation of social, moral values is in alarming condition. Family bonding are at a risk, youth having lack of respects for parents, teachers and for other also. Thus they are losing their self-respect and integrity. Teachers are facing lot of troubles during class-time to

control the unruly students. In this consequence, teachers suffer a lot to implement a proper teaching method. Teaching Critical Thinking can step ahead to solve all those problems. As Critical thinking fosters resilience, empathy, flexibility of thinking and self-confidence. Such skills offer the best immunization against misinformation, bullying and indoctrination. However, the study conducted mainly aims to find out the problematic situation of critical teaching strategies in Bangladesh. The findings of the classroom observation showed that the proficiency in the target language, time limitation of the class, tendency to do well in the examination, learners knowledge of society and world around she/he is living must be taken into consideration to conduct a class using critical thinking pedagogy. The study also found that due to limited time, skills, experiences, facilities and infrastructures teachers could not apply different methods to upgrade thinking ability of the students. To make the education more life- oriented it should not be only exam oriented but also enjoyable. In this case government, educationists, teachers need to work and plan in collaborative way to improve the education system of Bangladesh.

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APPENDIX- 01: Questionnaire

A. Questionnaire-1 for Secondary School Teachers

Research Objective-I

1. In your own words, explain critical thinking.
2. And is there any certain approach teaching approach you prefer to follow while teaching especially when you teach. Well for example we have different examples of teaching approaches like, communicative approach, inquiry approach.
3. Are you familiar with the critical thinking approach?
4. Would you please explain in what way the textbooks of NCTB promote critical thinking?
5. Why do students need good critical thinking skills?
6. How can good critical thinking skills help you in practical life?

Research Objective -II

1. Do your students ask for further clarification if necessary? If not, Why? Are they inspired to do so?
2. Are they able to articulate their points in a logical manner and able to make connections between ideas?
3. Are they willing to change their mind?
4. Do you encourage the children to comment on what each other says?
5. Have you encouraged students to give reasons for their views?
6. Do your students listen to one another with respect?

Research Objective -III

1. List ways to improve critical thinking skills.
2. What is required for good critical thinking?
3. What is meant by a “biased” statement?
4. What steps should we take to solve problems successfully?
5. Give examples of how you personally can use critical thinking skills in your daily life, tutoring, and school life.
6. Do you think you can implement inquiry technique in your classroom?
7. What are the barriers to implement critical thinking teaching?

B. Questionnaire-2 for Focus Group Discussions (FGD) with Students

Target Group: Secondary Students Selection Criteria: Participation of both male and female students

Research Objective -I

1. In your own words, explain critical thinking.
2. Why do students need good critical thinking skills?
3. How can good critical thinking skills help you in practical life? If possible cite example.

Research Objective -II

1. Do you get opportunity to ask for further clarification if necessary? If not. Why?
2. Are you able to articulate your points in a logical manner? If not? Why?
3. Do you listen to one another with respect? Is it important to show respect for others' opinions.
4. Does your teacher encourage you to comment on what each other says?
5. Have your teacher encouraged students to give reasons for their views?

Research Objective -III

1. What do you think about the ways to improve critical thinking skills?
2. What steps should we take to solve problems successfully?
3. Do you think your teacher can implement inquiry technique in your classroom? How they can?

C. Questionnaire-3 for Pedagogy (Critical Thinking) Expert

1. What are the challenges to implement critical thinking skill in the classroom of secondary education in Bangladesh?
2. What are the suggestions to overcome the barriers to implement critical thinking skill in the teaching of secondary education in Bangladesh?
3. Please provide some specific subject wise guidelines for applying in classroom context.

APPENDIX- 02: Interview with School Teachers**Transcript of Interview with School Teacher- I****Research Objective-I**

Answer 01:

Critical thinking is to think clearly and rationally, understanding the logical connection between the ideas, critical thinking is the subject of much debate, it also means reasoning logic, it also means to think in different way.

Answer 02:

Definitely I preferred the friendly environment in the classroom that should be the approach of a teacher because it will help the student to learn many things without fear and they will feel comfortable to ask any question to the teacher. Learning friendly environment is so important. A teacher should have this type of approach.

Answer 03:

Always we should not allow our students to speak or comments on others sayings because it's not a good habit it's some kind of interrupting others. Sometimes it is a problem while the teacher is giving lesson to the students. But in some cases while it is relevant to the topic and other students can learn from the comment or the question then we can be flexible and we can allow our students to have comments or have question. Otherwise it will be harm for the lesson and creates noisy environment in a classroom.

Research Objective-II

Answer 04:

Yeah but not all the students some of my students ask questions for clarification. We should remember every time there are some students who are in the classroom who don't understand so fast. So we should respond them and clarifying verify their query.

Answer 05:

You know the main barrier for teaching CT is the teacher himself or herself. At first teacher should have CT mind or ability. it's not so easy way to implement critical thinking skills in our classrooms otherwise she or he will not be able to understand her or his students and will

not be able to connect the lessons with critical thinking teaching. Another main problem is the time, we don't have that much time for critical thinking. We have to give much time to all students. And you cannot apply the same theory for all students. Another problem is the planning, our teachers are not that much prepared to take the classes to apply critical thinking. Then the content, our content is prepared like this, that it is in processing memorization of the students and last of all the interests of the students.

Answer 06:

The all we have to be more aware that that is self-conscious is very important. Understand your mental progress. That is we have to be ready to receive Critical Thinking. Then we will proceed it in our brain. Then we can out put it as rational thinking.

Designing the courses properly. Practicing active listening is very important.

Asking question, evaluating existing evidence more over I think don't go for the answers.

If you want to improve your critical thinking stop your abilities definitely you we to think about it different topic ability different angles don't go for the decision or result after some time but the most important thing is how you are thinking. how many ways you are finding sollutions that is important and you will really improve CT skill.

Sometimes someone will get it by born but someone might don't have this ability. definitely he can practice and improve the CT ability. Some process question-answer, storytelling, solving puzzles, dot joiner, reading book, completing stories, mixed with different people. That is when students mix with different people in different environment it will help them to increase their CT skill. Because there will be understanding many things in different situation and how to adjust like that.

Research Objective-III

Answer 07:

I think for ensuring the engagement of all students at first the lesson should be attractive and effective. we have to ensure that students are getting interesting in lecture if not then we will have to change our lesson plan and our lessons. secondly we should know our about our students and their motive, power, their emotions, the history, like if someone is really in a bad mood something happened to his family he will not listen to you. For that reason we have to understand our students. And if someone is really not interested to take your lesson

definitely you have to change the lesson plan, sometime might be the lesson also. As same lesson is not fruitful for all the students. So they are not paying attention.

Pay attention to your students, what they want from you. Which lesson they want and how they that lesson will be interesting that's very important. Use material different way. Like, the teaching aids or tools should be more attractive.

Answer 08:

Sit planning is also important to engage all the students. If someone have eye problem he will not feel comfortable.

Answer 09:

Interactive session is very important. Don't go for lecture method only, participatory method is applicable here. Also give some puzzles in class, quiz not go always like asking questions and answer. Sometime make some fun also. Bring some interesting topic in your class. Definitely it will change your class environment. Students will be quite and calm in your classroom. That's it.

Transcript of Interview with School Teacher- II

Research Objective-I

Answer 01:

Critical Thinking is a term according to me that is used to define forms of learning. It is a central concept in education that describes how teachers have traditionally taught and actually students should be learning. That is to me the explanation of critical thinking and what I mean.

Answer 02:

Not really. But if one is to be said and its communicative approach. Because it is the what in which participatory of both parties that is teacher and students can have the opportunity to be the part of learning process.

Answer 03:

Participatory method is the one in which the learning is focused on increased student participation. So it is basically student centered learning, here students learn through interacting each other.

Research Objective-II

Answer 04:

Obviously. They always do. Whenever they find something difficult or obscure they feel no hesitation for ask for details. Actually I always throw the floor to the students to ask me any question without any hesitation.

Answer 05:

Honest to say the barriers many. I may mention some of them actually. Lack of supportive environment in the classroom, big classroom as well, big numbers of students, lack of command over our language in English, and so on. Actually there are so many to describe. And there are so many that have to be dealt with.

Answer 06:

Of course I do. This is the most influential way to remove the shyness among the students in speaking English. Whenever they will talk to each other they will be able to believe in

themselves “We can” or “I can” actually. That is why I always make them encourage to comment each other whether they do make some mistakes or do something special. I think it’s also helpful for participatory learning as well.

Research Objective-III

Answer 07:

The first one is asking basic questions. That is one which is very much helpful to improve CT. Then question basic assumption. Be aware of mental process, trying to revising the things, that are learnt by the students, And also evaluating the existing evidence they have. Next I should say remembering to themselves so that they can learn by their mistakes, Also if it is followed they also have to understand that no one things critically hundred percent of the time,

Answer 08:

Integration like knowledge, comprehension, application, analysis, synthesis, and evaluation are required for pedagogy.

Answer 09:

For that purpose I use to follow some technique. I always try to make the students feel that the floor is always open, I try to remove shyness as good as I can, I always go with some tasks that encourage the students to be a part of my class and that’s how its go actually.

Transcript of Interview with School Teacher- III

রিসার্চ অবজেক্টিভ-১

১. ক্রিটিক্যাল থিংকিং বলতে আমি বুঝি কোন ঘটনা বা বিষয় সম্পর্কে যৌক্তিকভাবে বিচার- বিশ্লেষণ করা। আমি মনে করি সমালোচনা হচ্ছে কোন বিষয়কে ভালো ও মন্দ উভয় দিক দিয়ে বিচার-বিবেচনা করা। আর সৃজনশীলতা বলতে বুঝি নিজের মেধা, মননশীলতাকে কাজে লাগিয়ে নতুন কিছু সৃষ্টি করা।

২. অংশগ্রহণ মূলক পদ্ধতি আমার পছন্দ।

৩. কোন পার্ঠের উপর ভিত্তি করে শিক্ষার্থীর প্রয়োজনীয় বিষয়ের উপর গুরুত্ব দিয়ে শিক্ষক-শিক্ষার্থীর উভয়ের অংশগ্রহণমূলক কার্যক্রম।

রিসার্চ অবজেক্টিভ-২

১. কিছু শিক্ষার্থীরা করে থাকে কিন্তু সবাই করে না। এক্ষেত্রে আমি নিজেই অনেক সময় তাদের জিজ্ঞাসা করে থাকি তাদের বিষয়টা পরিষ্কার হয়েছে কিনা বা আবার ক্লারিফিকেশন করতে হবে কিনা।

২. কুসংস্কার, ধর্মীয় গোঁড়ামী বা রিলিজিয়াস মিসকনসেপশন, সঠিকভাবে তথ্য না পাওয়া, সমানভাবে সবাইকে গুরুত্ব না দেওয়া, অন্যের কথা মনোযোগ দিয়ে শোনার মানসিক প্রস্তুতি বা ধৈর্য না থাকা, নিজেকে সবজাণ্ডা ভাবা, প্রশ্ন করতে ভয় পাওয়া, ধৈর্য, অনুকূল পরিবেশ না থাকা, মতামতের ক্ষেত্রে যৌক্তিকতা না থাকা, শোনার, বলার ও বুঝার দুর্বলতা ইত্যাদি।

বাংলাদেশের প্রেক্ষাপটে ক্রিটিক্যাল থিংকিং মতবাদটা এখনো জোরালোভাবে প্রতিপাদ্য বিষয় হয়ে উঠেনি। এদেশের শিক্ষা ব্যবস্থা, গণমাধ্যম, বর্তমান চিন্তাশীল, মননশীল সাহিত্যিক ব্যক্তিবর্গের মধ্যে ক্রিটিক্যাল থিংকিং নেই বললেই চলে। প্রচলিত গদবাধা মুখস্ত বিদ্যা, নোটবই, অগণিত পরীক্ষা, নীতিনির্ধারকদের উদাসীনতা ক্রিটিক্যাল থিংকিং থেকে তাদেরকে দূরে সরিয়ে দিয়েছে। আমাদের শিক্ষা ব্যবস্থা এমনভাবে তৈরি যেখানে একটু ভিন্নভাবে, একটু জটিলভাবে চিন্তা করার সুযোগ নেই। বলা হয় যে শিক্ষকরা শিক্ষার্থীদের

চিন্তাকে উসকে দেবেন, কিন্তু বাস্তবে শিক্ষকরা ওই পথ মাদানোর সময় এবং সুযোগ কোনোটাই পান না। প্রথম পর্ব পরীক্ষা, দ্বিতীয় পর্ব পরীক্ষা, প্রথম সাময়িক পরীক্ষা, দ্বিতীয় সাময়িক পরীক্ষা, অর্ধ বার্ষিক পরীক্ষা ও বার্ষিক পরীক্ষা। এছাড়া বোনাস হিসেবে আছে কুইজ পরীক্ষা। এতগুলো পরীক্ষার প্রশ্ন তৈরি করা, খাতা দেখা, রেজাল্ট তৈরি করা এবং আনুষঙ্গিক অন্যান্য কাজ করার পর একজন শিক্ষকের পক্ষে ‘চিন্তা উসকে’ দেয়ার মতো যথেষ্ট সময় ও মানসিকতা থাকে না। বলাবাহুল্য, শিক্ষার্থীদের পক্ষেও এসব পরীক্ষার প্রস্তুতির পর কোনো বিষয় নিয়ে ভিন্নভাবে চিন্তা করার সুযোগ থাকে না। প্রাথমিক শিক্ষা চলছে এই অবস্থায়। মাধ্যমিকে সৃজনশীলতার উল্লতি কোথায়? সেইরকম নিজের আমরা দেখতে পাই না। এমন কি সৃজনশীল প্রশ্নও মুখস্থ করতে দেখা শিক্ষার্থীদের! দেশের গণমাধ্যমগুলোতে ক্রিটিক্যাল থিংকিং করার মতো কিছুই আমরা দেখতে পাই না। এখানে টকশোতে চলে গালিগালাজ! সিনেমা, নাটক, কোন অনুষ্ঠান ক্রিটিক্যাল থিংকিং সম্পর্কে মনকে আন্দোলিত করে না। ফলে তরুণ সমাজ

ফেইসবুক, ইন্সটাগ্রামসহ বিভিন্ন যোগাযোগ মাধ্যমে অলস সময় ব্যয় করছে। যেখানে তারুণ্যই শক্তি সেখানে তা জড়তায় পরিণত হয়েছে। এদেশে তাদের কোন মতামতকে গুরুত্ব দেওয়া হয় না, যদিও সংবিধানে একজন প্রধান মন্ত্রি হওয়ার বয়স ২৫!! পত্রপত্রিকায় প্রবীণদের মতামতের ছড়াছড়ি। তাদেরই একমাত্র সুশীল, বুদ্ধিজীবী সমাজের প্রতিভূ হিসেবে মিডিয়াগুলো বেচে নিয়েছে। ফলে কোন টকশোতে, মতামত যাচাইয়ে তরুণ প্রজন্মকে আমরা দেখি না বললেই চলে। বর্তমান সময়ে প্রমথ চৌধুরী, মোতাহের হোসেন চৌধুরী, রবীন্দ্রনাথ, নজরুলের মত সৃষ্টিশীল, চিন্তাশীল লেখক নেই বললেই চলে যা পাঠক সমাজকে চিন্তার দিকটিকে উস্কে দিতে পারে। বর্তমান মিডিয়া এবং সাহিত্যগুলো মূল বিষয় প্রেম, রোমান্স, গার্হস্থ্য জীবনের নেকামির ছড়াছড়ি। নেই কোন চিন্তাশীলতা, সৃষ্টিশীলতার।

৩. হ্যাঁ

বিসার্চ অবজেক্টিভ- ৩

১. গঠনমূলক চিন্তা করা, মৌলিক প্রশ্ন করতে শেখা, অন্যের কথাতে মনোযোগ দিয়ে শোনা, সমস্যা চিহ্নিত করতে পারা, তথ্য দিয়ে বিচার-বিশ্লেষণ করা, কুসংস্কার বা গোঁড়ামী থেকে বের হয়ে আসা, সবাইকে সমানভাবে গুরুত্ব দেওয়া, সর্বোপরি ইতিবাচক মনোভাব।

২. বর্তমান সময়ে বাস্তব জীবনের সাথে প্রায়োগিক, সৃষ্টিশীল চিন্তার প্রসার ঘটায় এবং ইতিবাচক মূল্যবোধকে জাগ্রত করে এমন অংশগ্রহণমূলক শিক্ষা খুবেই গুরুত্বপূর্ণ।

৩. অংশগ্রহণমূলক পদ্ধতির মাধ্যমে।

একটি বিষয় যখন পড়াই তখন নতুন নতুন শব্দ, উদাহরণ বলার চেষ্টা করি তাদের মনোযোগ আকর্ষণের জন্য, তাদেরকেও সেই শব্দগুলো আলোচনা করতে বলি, দলগত কাজ দেই, বিষয়ের আলোকে অন্য কোন ঘটনা বা গল্প বলে মনোযোগ আনার চেষ্টা করি। তাদের কাজগুলোর প্রশংসা করি এবং আরো কি কি ভাবে করা যায় তাদের চিন্তা করতে বলি। পঠিত বিষয়ে পূর্বে কোন অভিজ্ঞতা আছে কিনা জিগ্যেস করি। পাঠদানের বিষয়গুলো বাস্তবতার সাথে মিলিয়ে চিন্তা করতে উৎসাহিত করি।

উপরোক্ত বিষয়গুলোর আলোকে বলতে পারি ক্রিটিক্যাল থিংকিং মতবাদটি জোরালোভাবে ফলপ্রসূ করতে চাইলে প্রথমেই বর্তমান শিক্ষা ব্যবস্থাকে পরিকল্পিতভাবে সাজাতে হবে। ক্রিটিক্যাল এবং ক্রিয়েটিভ থিংকিং এর উপর জোর দিতে হবে। দেশের গণমাধ্যম এবং শিল্প-সাহিত্যিক, সুশীল সমাজ, সর্বোপরি সরকারকে গভীরভাবে বিষয়গুলো অনুধাবন করতে হবে। এক্ষেত্রে শিক্ষকদের ট্রেনিং এর ব্যবস্থা করতে পারে। বইয়ের বোঝা কমিয়ে তাদেরকে নিজের মেধা এবং চিন্তার জায়গাটিকে প্রায়োগিক করে তুলতে হবে। ক্রিটিক্যাল থিংকিং এবং ক্রিয়েটিভ থিংকিং এর প্রতি মনোযোগ বাড়তে হবে।

Transcript of Interview with School Teacher- IV

Research Objective-I

1| আপনার নিজের ভাষায় যদি বলেন ঈংরঃরপধষ ংয়রহশরহম বাশরষষ আসলে কী?

উত্তর : CT হচ্ছে এমন একটি প্রক্রিয়া বা তথ্য যার মাধ্যমে একজন better একটা Decision নিতে পারে। ভালো একটা জীবনের জন্য সে ভালো একটা সিদ্ধান্ত নিতে পারবে। সে তার সমস্যাসমূহ সমাধান করতে পারবে। তার একটি ability বা ক্ষমতা তৈরি হবে good and sound decision নেয়ার।

2| আপনি শ্রেণিশিক্ষক হিসাবে কি এমন কোন বিশেষ শিখন পদ্ধতি অনুসরণ করেন। যেটা আপনি পছন্দ করেন বা গুরুত্ব আরোপ করেন?

উত্তর : প্রকৃতপক্ষে শ্রেণিকক্ষে আমি যে পাঠ পড়াইনা কেন আমি তার সাথে সম্পর্কযুক্ত শিখন এইড ব্যবহার করি। যেমন যখন আমি environment polution পড়াব তখন Poster নিয়ে যাই।

3| Participatory method বা অংশগ্রহণমূলক পাঠদান সম্পর্কে আপনার কী ধারণা।

উত্তর : অংশগ্রহণমূলক পাঠদানটা আমি গ্রুপ ওয়ার্কের মাধ্যমে করতে পারি, শিক্ষার্থীর বিভিন্ন গ্রুপের মাধ্যমে অংশগ্রহণ করে তাদের পাঠ শিখতে পারবে। অথবা ডিবেট বা তর্কের মাধ্যমে বাড়ির কাজের মাধ্যমে। যদি এমন হয় যে আমি একটা পড়া শিক্ষার্থীদের পড়ালাম। সে এই পাঠটা তার কাছে সহজবদ্ধ হওয়ার জন্য সে এটাতে কিভাবে অংশগ্রহণ করবে, সহজ করে তোলার জন্য আমি মনে করি শিক্ষকদের ভূমিকাটা বেশি। শিক্ষক পাঠটাকে সহজ করার জন্য বিভিন্ন এরিয়া বা Method অনুসরণ করবে। এই মেথডটা ফোলো করার জন্য, ছাত্র-ছাত্রীদের ব্যস্ত রাখার জন্য এই মেথডগুলো ফলো করবে।

Research Objective-II

4| আমি মূলত উপজাতি এলাকায় বাস করি। এরা বাংলা ভাষাটাও বুঝে না। আমি তাদের বুঝানোর চেষ্টা করি, কিন্তু খুবই কম শিক্ষার্থীরাই প্রশ্ন করে, এটা rare, বা তারা প্রশ্নই করেনা।

5| আমি মনে করি শিক্ষার্থীদের মাঝে ভয় কাজ করে, আমি মনে হয় এটা পারবনা। আমি মনে করি তাদের ভয়টা জড়তাটা আগে কাটানো দরকার। পারিবারিক বা family support যদি পর্যাপ্ত পরিমাণে না

থাকে তবে শিক্ষার্থীদের বেড়ে ওঠতে সমস্যা হয়। পড়াশুনায় মন দিতে পারে না। পার্বত্য চট্টগ্রামের একেবারে ত্বসড়ঃব ধৎবধ তে তারা থাকে, সেখান থেকে শিক্ষার্থীরা একা এসে বাবা মাকে ছেড়ে একা রুম ভাড়া করে থাকছে। তাদেরকে দিক-নির্দেশনা দেয়ার মতো কেউ নেই। তাই আমি মনে করি তাদের সঠিক দিক-নির্দেশনার প্রয়োজন আছে। অভিভাবকরাও সন্তানদের পড়াশুনার ব্যাপারে সচেতন নন।

- 6। হ্যাঁ আমি যখন ক্লাস করাই, তখন কেউ একটি কথা Positive বললে, আমি অন্যদের জিজ্ঞেস করি, এর বিপক্ষে করেও কিছু বলার আছে কিনা Debate-র নিয়মে আমি পড়াই স্যার ওরাও চেষ্টা করে। অবশ্যই আমি মতামত প্রদানকে encourage করি।

Research Objective-III

- ৭। শিক্ষক হিসাবে আমার আসলে শিক্ষার্থীদের উৎসাহিত করতে হবে। তাদেরকে বেশি বেশি প্রশ্নের মাধ্যমে আলোচনার মাধ্যমে, যদি কিছু শিখানো যায়, তবে সৃজনশীলতা বা তারা যে কিছু জানে, তাদেরকে সামনে নিয়ে আসার জন্য বেশি বেশি ব্যস্ত রাখতে হবে। তাদেরকে শিক্ষামূলক বিভিন্ন কাজে অংশগ্রহণ করাতে হবে।
- ৮। আমি মনে করি ধর্ম, বর্ণ, নির্বিশেষে সব শিক্ষার্থীরাই এটাতে অংশগ্রহণ করতে পারে। এখানে সবাই অংশগ্রহণ করবে।
- ৯। দলে দলে আলোচনা করার ব্যবস্থা করা। পড়ার মাঝে হঠাৎ করে প্রশ্ন করে তাদের মনোযোগ যাচাই করা। আমি তাদেরকে বলতে পারি, এখান থেকে আমি তোমাদের MCQ দিব, FB দিব এভাবে তাদের মনোযোগ ধরে রাখতে পারি। বিভিন্ন লিখার কাজ তাদের দিতে পারি। ছবির মাধ্যমে নিশ্চিত করতে পারি। যেমনঃ আমি যখন Dialogue পড়াব, তখন বিভিন্ন conversation বা Video laptop বা mobile- এর মাধ্যমে দেখাতে পারি।

Transcript of Interview with School Teacher- V

1. What is your concept about critical thinking?

Answer: In my opinion, Critical thinking is introducing the student with widened knowledge.

It is a process to deliver them in and out of a topic. Critical thinking refers to the ability to analyze information objectively and make a reasoned judgment. It involves the evaluation of sources, such as data, facts, observable phenomena, and research findings. And creative thinking is also showing us a new path to create something new use our own abilities.

2. How can you implement critical thinking in your classroom?

Answer: It 's very important questions.... but answer is not easy.

I know the way of implement of critical thinking but our system , our students and our parents are not ready to accept this type of methods.

Example: I gave an essay to my students and who wrote some new line I will give them extra mark or they will achieve a good Mark.

But parents will call me and told why miss it's not correct if we write same as like book than what's the problem it's not fair.

Though I shall begin with a Question. This is the simplest way to get the students into critical thinking. I may create a Foundation about the topic. Students cannot think critically if they do not have the information they need.

3. What is the present situation of critical thinking teaching in Bangladesh context?

Answer:

- Some teachers are practically thinking about this process.

- The sad truth is that most teachers just rely on delivering lectures,
- not getting the feedback from the students. This may keep them in the clouds forever for every topic.

4. Suggestion regarding critical thinking teaching/ implementation in BD.

Answer:

Teachers should approach to make students-

- a. Understand the links between ideas.
- b. Determine the importance and relevance of arguments and ideas.
- c. Recognize, build and appraise arguments.
- d. Identify inconsistencies and errors in reasoning.
- e. Approach problems in a consistent and systematic way.
- f. To implement critical thinking among students, teachers should be trained.
- g. Teachers' training programme should be arranged regularly by the government. Every school and colleges should arrange in-house training for the teachers to motivate them to explore critical and creative thinking among the students.

Transcript of Interview with School Teacher- VI

Research Objective-I

1। সমস্যা সমাধানে যোগ্যতা বা দক্ষতা। এখানে একজন তার সমস্যার বিভিন্ন সমাধানগুলোর মধ্যে থেকে সবচেয়ে উপযোগীটা বেছে নিবে। এখানে সে কাজে লাগাতে পারে তার ব্যক্তিগত অভিজ্ঞতা, অর্জিত জ্ঞান, নতুন কোন চিন্তা ভাবনা, বর্তমানের সাথে বিষয়টির সামঞ্জস্যতা। প্রভৃতি বিবেচনা করে যে সিদ্ধান্তে উপনীত হবে সেটাই ক্রিটিক্যাল থিংকিং।

২। পার্টিসিপেটরি বা অংশগ্রহণমূলক পদ্ধতিতে গুরুত্ব আরোপ করে থাকি। এখানে শিক্ষার্থীদের অংশগ্রহণটা সবচেয়ে বেশি বোঝা যায়।

৩। পার্টিসিপেটরি অ্যাপরোচ মূলত একটি শিক্ষার্থী কেন্দ্রিক পদ্ধতি। আমি আমার শিক্ষার্থীদেরকে প্রধান ধরেই ক্লাসটা পরিচালনা করি। এখানে শিক্ষার্থীরাই এই ক্লাসের প্রাণ, আর আমি একজন সহকারি বা দিক নির্দেশক হিসেবে কাজ করে থাকি। কোন একটি নির্দিষ্ট বিষয়ে আমি প্রথমে তাদের একটি ধারণা দান করে থাকি। তারপর তারা নিজেদের মধ্যে প্রশ্নোত্তর করে থাকে। এবং পূর্ণাঙ্গ বিষয়টি বোঝার জন্য যতটুকু সময় প্রয়োজন তারা তা নিয়ে থাকে। আমি তাদেরকে কিছু কাজ দিয়ে থাকি। যেমন কিছু একক কাজ দিয়ে দিলাম তাদের তারা তাদের চিন্তাভাবনা থেকে এগুলোর উত্তর দিবে।

Research Objective-II

৪। এখানে আমরা দুই ধরনের শিক্ষার্থী পেয়ে থাকি। একধরনের শিক্ষার্থী যারা অংশগ্রহণ পছন্দ করে অপরধরনের শিক্ষার্থী যারা পার্টিসিপেশনে খুব বেশি স্বাচ্ছন্দ বোধ করে না। তাই যারা পার্টিসিপেশন পছন্দ করে তারা সবসময় প্রশ্ন করে। যারা প্রশ্ন করে না তাদের পার্টিসিপেশনে আনার জন্য আমি মাঝে মাঝে প্রশ্ন করি এবং তাদের মধ্য থেকে বের করে নিয়ে আসার চেষ্টা করি।

৫। আমি প্রথমেই যেটা মনে করি শিক্ষকদের দক্ষতার সীমাবদ্ধতা, প্রথমেই শিক্ষকদের ভাল ধারণা দেয়া প্রয়োজন, সঠিক প্রশিক্ষণের ব্যবস্থা করা। আমরা যেহেতু এটাতে অভ্যস্ত না সেহেতু এটা আমিও সঠিকভাবে প্রয়োগ করতে পারব না। অন্যদিকে আমাদের শিক্ষার্থীরা বজ্জতা পদ্ধতিতে অভ্যস্ত। তাই তারা বজ্জতা পদ্ধতি

ছাড়া অন্য কোন পদ্ধতি সহজে মেনে নিতে চায়না। আমার মনে হয় ৮০% ভাগ শিক্ষকের এই বিষয়ে অর্থাৎ ক্রিটিক্যাল থিংকিং বিষয়ে তাদের ধারণা নাই। আমাদের পাঠ্যক্রমেও এই বিষয়গুলোকে গুরুত্ব আরোপ করে ধরা হয়নি। ভবিষ্যতে যদি তুলে ধরা হয় তবে শিক্ষকদের জন্য আরও সহজ হবে।

৬। আমি যদি ক্রিটিক্যাল থিংকিং বিষয়টাকে গুরুত্ব আরোপ করি তবে আমাকে তাদের স্বতন্ত্র মতামত গুলোকে অবশ্যই নিতে হবে। প্রতিটি মানুষ তাদের চিন্তা-ভাবনা ভিন্ন, তারা নিজস্ব মতামত রাখতে স্বাচ্ছন্দ বোধ করে, এক্ষেত্রে আমি তাদের Individual মতামতগুলোকে আগে নেয়ার চেষ্টা করি। আপনি যে ভাবে বলছেন কথার পিঠে কথা বা মতামত আমি এভাবে না যেয়ে আমি যখন দেখি যে, ঈড়হঃধফরপঃডুু হয়ে যাচ্ছে তখন সবার মতামতই শুনি। আমি আসলে স্বতন্ত্র মতামত বিশ্বাসী। প্রতিটা মানুষকে আমি স্বতন্ত্র মতামতে প্রাধান্য দিয়ে থাকি। এভাবে আমি বোর্ডে নোট ডাউন করি। এভাবে যদি ৫টা উপসংহার পাই, যে যেখান থেকে আবার সবার মতামতের ভিত্তিতে উপসংহার বেছে নেই।

Research Objective-III

৭। আমাদের শিক্ষার্থীরা মূলত পাঠ্যবই ভিত্তিক পড়াশুনা করে এর বাইরে তেমন কিছু নিয়ে তারা নাড়াচাড়া করতে পছন্দ করেনা। এখানে যদি আমরা শিক্ষার্থীদের পাঠ্যসূচির বাইরেও কিছু চর্চার চেষ্টায় উৎসাহিত করতে পারি, তবে আমার মনে হয় আমরা ক্রিটিক্যাল থিংকিং উন্নয়নে সহায়তা করতে পারি। উৎসাহিত করতে পারি।

৮। বিভিন্ন ধর্ম,বর্ণ নৃগোষ্ঠীর মানুষকে একই শ্রেণীতে একই পাঠের আওতায় নিয়ে আসা হলে ক্রিটিক্যাল থিংকিং উন্নয়ন সহজ হবে। কারণ এদের প্রত্যেকের ভাবনা ভিন্ন, এদের সবাইকে একত্রে নিয়ে আসা হলে আমরা অবশ্যই ভাল কিছু পাব। তারপর যদি সহ শিক্ষকের কথা বলি, তবে এক্ষেত্রেও শিক্ষার্থীরা মাল্টি কালচার সম্পর্কে ধারণা লাভ করবে। সেখান থেকে আরও বেশি কিছু শিখবে। ক্রিটিক্যাল থিংকিং উন্নয়নে বিশাল সুযোগ এখানে। আরেকটা করা যেতে পারে প্রজেক্ট বেসড লার্নিং এর মাধ্যমে শিক্ষার্থীরা আরও বেশি কিছু পাবেনতুন জ্ঞান অর্জনে উৎসাহিত করা যেমন বর্তমানে ওঈএঃ ডড়ৎষফ, তাদের ওঈএঃ বিষয়ে ধারণা দেওয়া যেতে পারে। বাংলাদেশের ইতিহাস, ঐতিহ্য সম্পর্কে ধারণা দেওয়া যেতে পারে। বিশ্ব সম্পর্কে ধারণা। এতে তাদের চিন্তন দক্ষতা অনেক উন্নতি হবে। তারপর পর্যবেক্ষণ দক্ষতা বাড়ানো। যেমন বেশি বেশি প্রজেক্ট ভিত্তিক কাজ করানো। তখন তারা পর্যবেক্ষণ কিভাবে করতে হবে বিশ্লেষণ করার সূক্ষ্ম ধারণা লাভ করবে। নতুন বিষয় নিয়ে স্বপ্ন দেখানো। যেমন এখন বাংলাদেশে মেট্রোরেল হচ্ছে সেই বিষয়ে তাদের ধারণা

দেওয়া। নতুন বিষয় নিয়ে চিন্তা ভাবনার খোড়াক দেওয়া। কিভাবে মেট্রোরেল চলছে? মেট্রোরেলের পর দেশের উন্নয়নে আমরা কি করতে পারি? নতুন নতুন বিষয় সম্পর্কে তাদের চিন্তা করার জন্য বলে আমি আশা করি।

৯। অংশগ্রহণ মূলক পদ্ধতিগুলো যদি আমরা অনুসরণ করি, তবে ক্রিটিক্যাল থিংকিংটা অনেকটা সহজ হবে। যেমন- প্রশ্নোত্তর পদ্ধতি, জোড়ায় কাজ, দলগত কাজ, একক কাজ ইত্যাদি বিষয়গুলোর ওপর যদি আমরা গুরুত্ব আরোপ করি, ক্রিটিক্যাল থিংকিংটা আমরা সহজে ইমপ্লিমেন্ট করতে পারব বলে মনে করি।

Transcript of Interview with School Teacher- VII

Research Objective-I

১. CT বলতে পাঠ্যপুস্তকের বাইরেও শিক্ষার্থীদের যে আবেগ, ভাবনা, চিন্তা, সব কিছুর সমন্বয়ে অতিরিক্ত কিছু মনোনিবেশ করানোই হল ঐএঃ দক্ষতা।
২. শ্রেণিকক্ষের অবস্থান, শিক্ষার্থীদের অবস্থান, শিক্ষার্থীরা কেমন পরিবেশে আছে, শিক্ষার্থীরা কী চাচ্ছে, এই সকল কিছু বিবেচনা করেই, পাঠদানের পদ্ধতি আমি মনে করি। বক্তৃতা পদ্ধতি আমি কিছুটা অনুসরণ করি, পাশাপাশি শিক্ষার্থী কেন্দ্রিক পদ্ধতি ব্যবহার করি। যেমন শিক্ষার্থীদের সামনে আমার জায়গায় নিয়ে আসি, তাদেরকে দিয়ে ক্লাশ করাই, শিক্ষার্থীদের মাধ্যমেই আমি বিষয়টা সকলের কাছে উপস্থাপন করাই। শিক্ষার্থীদের মনে ভিতর ভয়, ভীতি, দুর্বলতা যাই কিছু থাকুকনা কেন তারা যেন মন খুলে কথা বলতে পারে অব্যবস্থাটাকে প্রাধান্য দিচ্ছি। এখানে শিক্ষার্থীদের অংশগ্রহণমূলক পদ্ধতিটাই বেশি প্রাধান্য পাচ্ছে।
৩. যে কোনো অধ্যায়ের উপর আলোচনা যতটুকু হওয়ার ততটুকু হবে, পরবর্তীতে শিক্ষার্থীরা গ্রুপ অনুযায়ী কাজ করবে। অর্থাৎ, প্রথম কিছুটা বক্তৃতা দিয়ে পরবর্তীতে শিক্ষার্থীদের দলীয় কাজের মাধ্যমে অংশগ্রহণ করানো।

Research Objective-II

৪. জি শিক্ষার্থীদের প্রশ্ন করার সুযোগ দেওয়া হয়।
৫. উপকরণের অভাব, শ্রেণিকক্ষ যেরকম হওয়া উচিত সেরকম শ্রেণি কক্ষ নাই, শিক্ষকদের নিজেদের বিষয়ভিত্তিক জ্ঞানের অভাব। শিক্ষকদের এই বিষয়ের উপর আলাদা প্রশিক্ষণ করলে ভালো হবে। পরিবেশটাও মুখ্য বিষয়। পরিবেশটা ঠিক হলে ভাল কিছু পাওয়া যাবে।
৬. অবশ্যই, কেননা শিক্ষার্থীদের যে ভাবনা উজ্জীবিত হল সেটাই কিছ্র যে প্রকাশ করার চেষ্টা করছে এবং পাঠটাকে নিয়ে যাওয়া চেষ্টা করছে।

Research Objective-III

৭. দলীয় কাজ, একক কাজ, ছোট ছোট প্রশ্ন করে সবার মাঝে ছড়িয়ে দেই। যেমন- প্রশ্ন করা যেতে পারে ওঐএঃ ব্যবহার করে বাংলাদেশে কী কী কাজগুলো সহজে করা যাচ্ছে।

৮. দুর্বল শিক্ষার্থী এবং মেধা সম্পন্ন শিক্ষার্থীদের একসাথে বসানো। দুর্বল শিক্ষার্থীরা সাধারণত একা থাকে তারা ভাবে স্যার যেন আমাকে না দেখতে পায়। কিন্তু দলীয় কাজ হলে সব শিক্ষার্থী একত্রে থাকে তবে সমন্বিতভাবে ভালো কাজ হবে। অর্থাৎ ভালো শিক্ষার্থীর সাথে দুর্বল শিক্ষার্থী থেকে আলোচনার সাপেক্ষে তারা যে মতামত, বা মত বিনিময় করে তা গুরুত্বপূর্ণ।
৯. প্রজেক্টোরের মাধ্যমে পাঠ উপস্থাপন করব, তখন শিক্ষার্থীরা মাল্টিমিডিয়া চালানোর জন্য আগ্রহী হয়ে ওঠে। এভাবে তারা নতুন একটা কাজ শিখতে পারে। তাছাড়া ছোট ছোট প্রশ্ন করা। প্রশ্ন করার মাধ্যমে সবাইকে ব্যস্ত রাখা।

APPENDIX- 03: Focus Group Discussion

Target Group: Secondary Students (Total: 06 Students)

Research Objective- I

1. In your own words, explain critical thinking.

Response:

Sp 01: Clearly thinking, thinking differently

Sp 02: Thinking rationally, extensively

SP 03: details thinking, creative thinking

Sp 04: Brain Storming/ Thinking outside box

Sp 05: To know about anything clearly, minutely, in details

Sp 06: To decide rationally and proper thinking

2. Why do students need good critical thinking skills?

Sp 01: It is a skill. In our life we may face several problems to face or solve all the problems we have to think and judge which is right and wrong.

Sp 02: Students life is an important stage in our life. We have to take so many major decisions in this life. So we have to think properly and in right track. And practicing thinking properly from this stage will also help us to take proper decision in future also.

Sp 03: Students can decide about their aim in life. They are for our exam also. We can also help our parents to take any decisions with proper reasoning. It will help students study also to have clear concept in every subject.

Sp 04: CT is also important for our exam also to write CQs. It is also important for different factors of our life.

Sp 05: CT helps us to understand ourselves in different situation.

Sp 06: What help it will do if I continue to think other than working?

Research Objective- II

3. Do you get opportunity to ask for further clarification if necessary? If not. Why?

Sp 01: Sometimes. One teacher gave us the opportunity to think then answer the questions.

Sp 02: Yes. We get opportunity to ask question.

Sp 03: Some teachers do not give us opportunity for further clarification. Then we have to remain in confusion. And we have to suffer. So I think we should have opportunity.

4. Are you able to articulate your points in a logical manner? If not? Why?

Speaker 01: Yes

Sp 02: No, I don't think so. Some teachers don't try to accept our logic. Teachers try to establish their points keeping us shut that we have to listen only.

Sp 03: It depends on teachers. Those who give us opportunity, we can express ourselves there. But some teachers don't and we can't express ourselves there.

5. Does your teacher encourage you to comment on what each other says?

Sp 01: Yes

Sp 02: Yes. But not all the teachers give us opportunity. Sometimes teachers have negative comments also.

Sp 03: No

Sp 04: No

Research Objective- III

6. What do you think about the ways to improve critical thinking skills?

Sp 01: By giving us the opportunity to talk, think or share.

Sp 02: Think about new things, discovering something, exploring.

Sp 03: Have to read many books, not only school books.

Sp 04: Have to avoid arrogance, ego, and embrace knowledge openly.

Sp 05: Have to be open-minded. Read more and more.

7. Do you think your teacher can implement inquiry technique in your classroom? How they can?

Sp 01: It is possible but our teachers never give us the opportunity to do so.

Sp 02: We get less opportunity to express ourselves. We have got only one teacher who used enquiry technique or other different methods in classroom.

Sp 03: Teachers don't take our opinion.

Sp 04: We gain diverse knowledge while we do project works but we don't get opportunity to present those.

APPENDIX- 04: Classroom Observation

Transcript of Class Observation- I

Subject: English

Institution: Jalalabad Cantonment Public School and College (JCPSC)

The teacher stated the class with greeting ‘Assalamulalaikum and very Good Morning. This is Abdul Muhit, welcome you all to my class.’ He also continued that in our first class we have discussed about 1st lesson of nit 1 and here it is 2nd lesson. After greeting the teacher has started the class showing a picture to the students “This is the man with huge reputation in Bangla literature, Who is he, do you know him? Right this is Jashim Uddin, who is called the Polli kobi of Bangladesh who born in 1983 and died in 1976.”

Teacher continued, do you know some of his famous work? Nokshi Kantha is one of his famous work, greatest work of all the time actually, it is regarded as one of the best writings of Bangladesh. ‘Nokshi Kanthar Math’ was published in 1923 and another great writing you would think it ‘Sujon badiar Ghat’ which was published in 1933. From the first lesson we have been we knew the traditional things of Bangladesh it is no different in the lesson number 2 here we start our 2nd lesson Nokshi Katha. Let's move on.

look at the picture and the questions and answer the questions with your partner this is a picture of a rural life I should say this has been universalized in our country now a days. What do you see in the picture? What is it called? Have you used number? Have you seen it before? Where is it now used? Last of all, what do we do with it? I hope at the end of the class we will be able to answer all this. So be with me, so let's start with me the particular lesson.

So lets start with the new words of this particular lesson. I always emphasize on the use of new words, their meaning and also their uses in the sentences. Because the new words will make you strong to be skillful in English. Whenever you know the vocabulary that will you help you to make something new whether it is in speaking or in writing.

So always give proper emphasize on new words. Here is the first word is quilt, a noun. This is the picture of a quilt. Here are some meaning, which is, cover, blanket, comforter, which will give you some comfort. It is also means bedding.

That is a word can be used in different situation in different meaning. The next one is artistic, this is an adjective. It is an artistic view of a quilt. It means creative, imaginative, and

inventive; as well it means something that is created newly. That is new invention, imaginative invention or creative invention is related to artistic. Sentence related to the word in this particular lesson is in this text “Nokshi Katha is made with artist design”. Here you can see there is a design that is designed in an artistic way.

Next one is commercially. You can see some business around here. Commercially means in business purpose. So we made for business purpose that is we call commercial made. The word is used here as “Nokshi Katha is now made commercially earlier it was made for personal use”. Nowadays it has been made to do some business purpose.

Next word is traditional. Here we can't explain this particular word with this picture. The meaning is old fashioned or old style or we may tell something which we have been doing for a long that is related to the past glory is called traditional. The sentence here is: “Nakshi kantha is a kind of traditional craft.” That means the craft is very much attached with our tradition for a long or to our culture.

The next one is Demand. What is demand, you can see in the picture, the demand of the quilt. People are coming here to buy it so what does it mean? Want, call, request, also a word has variety of use and that can be used in a different way, different meaning in different context as well. So here in this text the meaning of demand is want I should say. “There is a great demand of nakshi kantha.” the use of the particular word in the sentence.

Pattern: the students of class 8 come across the word better I know because you started your mathematics with ‘Pattern’. Pattern means design. “Here a nice Pattern is used, looks beautiful for particular pattern.” easy used which looks beautiful with this particular pattern so you are very much familiar with the word pattern.

Now, What is pattern? It means designed, shaped or format. A regular format, a regular design is called pattern that makes something beautiful the pattern in the sentence beautiful. What does the use of pattern in the sentences: “It looks beautiful because of its artistic pattern.”

Embroidered: Embroidery work is done in this picture. So embroidered meaning beautified, ornamented or decorated. That means if you want to make something beautiful you need to embroider it. i.e. make it beautiful. Use in a sentence: “Quilt is embroidered with thread and needle.”

Then what is Nokshi Kantha? Let us know more about Nokshi Kantha.

Now let us read the text.

Nokshi Kantha is a kind of embroidered quilt. The name was taken from the Bengali word 'Nakha' which means artistic pattern. It is a traditional craft and it is said to be indigenous to Bangladesh and West Bengal in India. This quilt is very much attached with our culture and it has been used by the rural people for so long. This is very much indigenous means native. what is a country's or Nations own thing that is called indigenous of that particular country.

This art has been used for rural Bengal for centuries, Shatabdi. In Bangladesh Nokshi Kantha became popular after the poem of Jasimuddin 'Nokshi Katha' published in 1929. It got revolutionary popularity after the publication. And it has crossed the border. Traditional kanthas are made for family use. old or new cloths are used to make this quilt. A very interesting thing even old cloth can be used to make a nokshi Katha

Mymensingh, Rajshahi, Jamalpur, Feni, Bogura and Joshur are most famous for this craft. Now it is produced commercially. These are the place where nokshi Katha is famous. Remember this for question answer.

you can find them in many expensive handicraft shops in cities also. the quilts are now increased demand because of colorful patterns and design embroidered on them. so let's move on. here is a test for you question number C.

"Describe how looks Katha is made. Start like this "... old or new cloth and color thread, needles are needed. First the cloth is folded then..." That mens there is a starting of a paragraph you can start it with this Hint or you may use any of their other points to see paragraph start your paragraph

I am showing here some pictures that can be used as clues for writing paragraph. Let's try to make paragraph.

Here is a question for you.

D. Do you like an ordinary kantha? Why or why not?

I have given the homework. Write it in your lecture-sheet. See you in the next class. Thank you.

Transcript of Class Observation- II

Subject: Bangladesh and Global Studies, Teacher: Ashraful Alam Sarkar

Institution: Bangladesh International School and College, Nirjhor

dear students our topic preparation for the Liberation war full stop on struggle and images of Subway in Bangladesh submarine Bangladesh that is page number 19 of your textbook chapter 2 after today's you will be analyse the importance of oration of 7th March in achieving the Liberation of Bangladesh. you can evaluate the role of the mujibnagar government commanding the Liberation war. and you will be able to evaluate the roles of various political parties student professionals groups, women, mass media and general people in Liberation war.

at first we will discuss about the historical speech of 7th March. how the formal journey has been started Vino bangabandhu Sheikh Mujibur Rahman delivered our historical speech on 7th March at-risk course ground presently known as Sohrawardy Uddyan. In his speech he has delivered some glorious background of the political history of Bangalees and detail account of oppression, misrule and deprivation of Bengali by the West Pakistani Government. Especially the 7th March oration is the historical representation of Bangladesh and preparation of the war. Bangabandhu just clearly declared the independace of Bangladesh in this speech. Because of clear indication to the independence the people got motivated they started to take preparation for the liberation war. And on 30th October 2017 UNESCO added this speech at the memory of world register as documentary of Heritage. This part is important for your Creative Question because you have to understand the importance of this historic speech.

Next part is the formal journey of Independence; it was actually started after the call of Bangabandhu Sheikh Mujibar Rahman. He has said that, build force in every house and face the force with whatever you have. As we have sacrificed our life, we will do it again, we will liberate our country InshaAllah. This struggle is the struggle for our freedom, this struggle is the struggle for our liberation. So you have to learn the speech given by Bangabandhu on 7th March. This part is also important for question answer of B.

Next one is the formal journey to independence so how it was started, what was the background of our liberation war, or the incidence before the liberation war started. So because of the Bangbandhu Sheikh Mujibar Rahman's call or declaration to independence

people responded to the call for the independence and all offices, educational institution, judiciary department, factories, industries were closed sine die. Yahia and Bhutto, was the then president of Pakistan. Asked one student, “Mahbuba, who was Bhutto?” Can you remember the last class? I said it in the last class about Julfiker Ali Bhutto. Yes, I can help you. Mahbuba answered, he was a leader of Pakistan Peoples’ Party (PPP). Yes, thank you.

You can see in the picture Sheikh Mujibor Rahman, Bhutto and Yahia Khan, the martial law administrator of Pakistan at 1971 also the president of Pakistan so they both came to Dhaka to talk with Bangabandhu Sheikh Mujibar Rahman. Actually both of them were passing the time. They were pretending that ok, they were trying to solve the problems. That they are going to fix the problem what is happening in the East Pakistan. Actually they were wasting time in the name of meeting and other holding talks and also during this time they also secretly assembled arms, soldiers, ammunition from west Pakistan to East Pakistan. Two Army officers like Tikka Khan and Rao Farman Ali they both designed a blue print on 26 March, 1971 named “Operation Searchlight” and killed unarmed Bangalis around the country and they killed around 20 to 30 thousand people. People were killed at the midnight at Dhaka city, also the Pakistani army launched attack on the innocent people and indiscriminately killed people. They also killed at the police line of Rajarbag and the EPR camp of Pilkhana i.e. presently known as Boarder Guard Bangladesh (BGB). Also attacked as University of Dhaka and other modern establishment of Dhaka city and committed genocide. That was the operation Searchlight and that part was also important for Creative Question.

Then the declaration of Independence. Look at the Declaration: “This may be my last message, from today Bangladesh is Independent. I call upon the people of Bangladesh wherever you might be and with whatever you have, to resist the army of occupation to the last. Your fight must go on until the last soldier of the Pakistan occupation army is expelled from the soil of Bangladesh and final victory is achieved.” By this Bangabandhu declared the formal independence of Bangladesh. And we celebrate our Independence day on 26th March. Though Bangabandhu gave that declaration at after midnight of 25th March and it was the early hour of 26th March that is why it is celebrated on 26th March. And it is also important that the language of Declaration was in English. Bangabandhu delivered it in English so that the people around the world may understand it.

After the M. A. Hannan, a leader of Chattogram Awami League broadcast the declaration of Independence by Bangabandhu at noon through Chattagram Radio Station and Kalurghat Radio Station in the evening of 26th March. Please remember these two Radio Station name. Since Bangabandhu was arrested by the Pakistani Army, Ziaur Rahman read out the declaration of Independence on behalf of Sheikh Mujibar Rahman in the evening of 27th

March from the Kalurghat radio station. Is that clear, Barshan. The student answered, “Yes sir.”

Now we are at page number 22, “The Commencement of the War of Liberation and Activities of Mujibnagar Government”. We all should know about the Mujibnagar Government, You already know about Mujibnagar government, I know. When did it form and when did it take oath. Ok, so after the Operation Searchlight or just before it Bangabandhu Sheikh Mujibar Rahman discussed with its close associate the situation that prevailed and give the directives to resist if the Pakistani Army would attack. And he imparted important instructions also to the elected representative. These elected representatives of 1970s general election. He gave the direction of formation of Mujibnagar Government and other matter during the liberation war. So after the declaration of war of Independence we know West Pakistani Army arrested Bangabandhu and sent him to the prison of Pakistan. But with the direction of Bangabandhu Sheikh Mujibar Rahman a government was formed on 10th April 1971 and they took oath at 17th April 1971. The place was Mango grove of Baidyanathola of Meherpur was named Mujibnagar after the name of Bangabandhu Sheikh Mujibar Rahman. And the government is called Mujibnagar government.

Now what was the formation of this government?

Now look Bangabandhu was the President and Commander in Chief of the Liberation War. But the Chief Commandant was Major General M. A. G. Osmani. So be careful if the question is who is the Commander in Chief the answer would be Bangabandhu Sheikh Mujibar Rahman. But if the question is who was the Chief Commandant of Liberation war the answer would be Major General M. A. G. Osmani.

Next one is Vice President you can see the picture the Vice President is Syed Nazrul Islam and the Prime Minister is Tajuddin Ahmed. Syed Nazrul Islam is the acting President in absence of Bangabandhu. M. Mansur Ali was the Finance minister, A. H. M. Kamaruzzaman was the Home, Relief and Rehabilitation minister. Foreign and Law minister was Khondoker Mostaq Ahmed. You can see in the last paragraph of page number 22 an Advisory committee was formed to provide necessary suggestions and guidance to the government of Independent Bangladesh.

How did they guide? They formed muktibahini and 11 sectors or divided Bangladesh in 11 sectors to conduct the liberation war. Now the Role of general people and professional in the liberation war. Sometimes in Creative question we can see your teacher can give you any creative question to identify the role of any political party, student community, or mass people. If you want to identify what type of organization or what type of people are playing

that role you have to know the characteristic of those peoples or communities. The first one is the Political Parties. Awami League played the role as main political party to led the war. There were some other parties like Natinal Awami Party (NAP- Bashani), Natinal Awami Party (NAP- Mozaffar), the Communist Party, the National Congress etc. They played significant role along with the Awami League.

But in the 3rd para of 25th number page it is described that some people or parties or Bangalees betrayed with us in the liberation war. And they joined with the opposition. They were specially the leaders and followers of Muslim League, the Jamat-e-Islami, the PDB and some other political parties. They formed the militant cadres called Shanti Committee, Rajakar, Al- Bodor and Al Shams. These forces were engaged in anti- human activities like killing, looting, arson, and raping. Besides these anti- liberation forces killed the intellectuals of the country as a part of implementing the blueprint of making the nation intellectually barren. Because of their direction though they are Bangalees they join the opposition.

The next one is the role of the Students' Community. They played a vital role. During the 24 years of Pakistani Rules they took part in different major movements like, Language movement in 1948 and 1952, and the movements against the Education Commission Report in 1962 and 1964, 6 point demands in 1966, 11 point demands in 1968, mass uprising in 1969 and general election of 1970. Last one is the direct participation in liberation war. Many students of our country martyred during the liberation war.

Next one is the professionals, Many professionals of our country like teachers, doctors, engineers, artists, writers, journalists, bureaucrats, scientists, government officers and other officials actively or passively participated in liberation war. A large section of the professionals either actively or passively participated in the liberation war. The professional played an important role in the war by forming a planning cell, and representing the authentic picture of liberation war to the International Community sought their cooperation, campaign for their support in different international forum.

Next part is the participation of women. This part is also important for Creative Question. They actively participated. Look at the picture which is given in your textbook also. They participated after getting trasining especially the female students in Shangram Parishad or Action Committee constituted at the beginning of March 1971. They collected information, gave shelters to freedom fighters and nursed them. Nearly 3 laks women were molested by Pakistani army. Bangabandhu gave them the title of honor Biranganan (the Heroic Women). In 2016 the Awami League Government declared them as Freedom Fighters.

Transcript of Class Observation- III

The researcher observed a class conducted by English teacher with the students of class VI at one of the school, Dhaka and noted down the findings on critical thinking pedagogy. The teacher opted the discuss lesson: 'Pronoun' from English Grammar.

At first teacher asked the students to tell 5 sentences about his / her mother. One student told the 5 sentences and the teacher wrote down those sentences in white board and marked that the student began the first sentence with 'My mother' but he used different words in subsequent sentences instead of 'my mother' like 'she' or 'her'. Then the teacher declared the topic "Pronoun" and defined it: 'A pronoun is a word that is used instead of a noun.'

Then explain with example:

- Like a noun, a pronoun can refer to a person, place, thing, or idea.
- The word that a pronoun refers to is called its antecedent.
- For Example:

- Maria was lost. She didn't panic.

- She checked the flashlight. It still worked.


Subsequently teacher described the Types of Pronoun:

1. Personal Pronoun
2. Demonstrative Pronoun
3. Interrogative Pronoun
4. Relative Pronoun
5. Indefinite Pronoun
6. Distributive Pronoun
7. Reflexive Pronoun
8. Reciprocal Pronoun

Personal pronouns always refer to people. Teacher then describes the chart below:

PERSONAL PRONOUN

Personal pronouns always refer to people.

PERSONAL PRONOUNS		
SINGULAR		
Nominative	Objective	Possessive
I, you he, she, it	me, you him, her it	my, mine, you, yours, his, her, hers, its
PLURAL		
Nominative	Objective	Possessive
we you they	us you them	Our, ours your, yours their, theirs

Teacher then asked the students: “Are you afraid of a monster?” Some students answered affirmatively and some in negative. Then teacher declared:

To remember “demonstrative”, think of a monster pointing at you!

With my giant demonstrative teeth,
I’m going to eat this, then that,
then these and those!!!

Teacher then declare the definition: **Demonstrative pronouns demonstrate or point out things like people, places, objects, or ideas.**

Teacher asked examples from students and students answered:

- This is a beautiful flower.
- These are very useful things.

Teacher then introduces Relative Pronouns and Interrogative pronouns:

- Relative pronouns introduce subordinate clauses.
- Interrogative pronouns introduce a question (?).

Examples of Relative Pronoun: that, which, who, whom, whose

Examples of Interrogative Pronoun: what which, who, whom, whose

Next the teacher introduces reflexive pronouns as ‘They REFLECT the action of the verb.’ Teacher shows the examples through PPT slide and read it out: myself, herself, himself, itself, yourself, yourselves, ourselves, themselves.

Teacher then define: “Indefinite pronouns refer to a person, a place, or a thing that is not specifically named.” Read out the examples: all, another, any, anybody, both, each, either, everyone, few, many, more, most, someone, something, several.....

Teacher then show a picture and read the sentence: “Each of them had a ball.” Here each refers to every person separately. It is a Distributive Pronoun. It refers to a persons or a things one at a time. Example: Each, Either, Neither.

Then comes the “Reciprocal Pronoun”. It always used when the subject consists of two or more people. Example: My dog and cat love each other. They all support one another.

Teacher then played a song “Take me Home, Country Roads” by John Denver and gave students the lyrics to identify the Pronouns. Thus assessing the students understanding teacher conclude the class.

Transcript of Class Observation- IV

Assalamualaikum, dear students this is Sazzad Hossain. Again welcome you all to my English 1st paper online class. I hope you are passing a very good time staying at home and you are involving yourself with study. I think this is a prime time so you should continue your study according to the direction of your teachers.

Today my class is on English 1st paper and this class is very important for students of class 9 and class 10. First of all you have to open your book. Today I am going to discuss Unit- 04, Lesson -05. Name of the topic is 'Lets become Skill Work Force'. It is an important topic because your motto should be to become a skill worker after completing the study.

So you should know how you can be a skill workforce. For being a skill workforce, you should have some criterion, which I have written here:

1. **Knowing Global Language:** If you want to be skill work force you must know Global Language. Do you know what Global Language is? Global Language is the language by which most of the people of the world talk commonly. You are appointed with global language. You can also name this as an International Language. So, "Global Language is the language by which people of the globe/ world communicate with each other." So you have to get the clear idea about global language if you want to be a skilled work force. You can have question 'why?.' Because most of the books of higher education written in a specific language. And this language is English. So at present global language or mostly accepted language is English. If you know English you can prove yourself to be a skill worker.
2. **Second idea is Technological Knowledge:** You must have clear idea about technological knowledge. You must study technology. You must know how you can use technology practically. If you become the owner of the technological knowledge you can prove yourself as a Skilled Worker and you can get a job very easily.
3. **Third Involving with Practical Work:** If you have technological knowledge, if you have clear idea of Global Knowledge then you can involve with practical work. You can get a job easily.

These are the criteria for a Skill Workforce. If you able to become earn money you will be able to contribute in family and country. So dear students you have to be a skill workforce and to become skill workforce you have to follow these criteria. You will be able to prove yourself to be a competent and skill worker.

Now we should go to through the book. Now I am reading open the book page number 53. At first I am reading, I will try to explain each line, keep your fingers on main book.

I think all of you are ready, open your copies also, try to note down the new vocabulary according to my discussion.

Today there are many jobs where you need English. So English is a main precondition to get a good job. If you know English you will able to get a good job. Because the world is becoming smaller.

Now the question is how the world is becoming smaller. It is becoming smaller by the contribution of technology. So today's world is the world of technology, world of internet. We can share our ideas within the shortest period of time. Vast distances are shortened by speedy transport. So we can communicate with the whole world. English made this communication easier. For example: Your relatives are staying at America you can contact with him/ her by using internet. Another example, in an emergency you need to contact with a Chinese person but you don't know Chinese then how can you communicate. But if you know English you can communicate through English. English will help you a great extent. So you must know English.

Write down 2 questions. And write down the answer.

- i. Why is the world getting smaller?
- ii. Why do you think English is important?

In next class I will discuss the rest of the part from the book. Next class I will discuss how to improve your English. You have to read the main book clearly. Do well. Allah- hafez.

Transcript of Class Observation- V

‘The Ferry Boat’ (page-38, 39) from the English Text Book for classes IX and X.

‘The Ferry Boat’ roughly and briefly discusses the problem of over-population through the analogy of overcrowded small country ‘Ferry Boat’ which sank in the river. The teacher asked the students to read out the whole passage and when that was done they participated in group discussion. Then the students come up with sharing their experiences and knowledge they have gathered from their discussion. The teacher asked them to discuss/tell whether they find any incident occurred in their life or society and the sinking of the boat given in the passage. At this, a number of students participated in the discussion, they talked about the road accidents and sinking of launches in the Meghna river or some similar accidents and losses of lives and property that they have either witnessed or read in the newspaper. But no one came up with comparing or small overcrowded boat with small country struggling with too much population and the boat man with the leader of a country and told them to open at page no. 40 and 41 and go through lesson 2: Are we too many? It generated a list of interests among the learners and many come up with interesting discussions. They also discussed the problems a small country with too much population faces. The students who had a good command in English were still participating in the discussion enthusiastically and spontaneously. When the discussion was over the teacher again asked them whether they find any dissimilarity between the sinking of a small overcrowded boat and a country with too much population. The teacher invited the learners to discuss whether it is fair to compare a small country boat to an overpopulated country. He asked them to think the matter from the other end as critical thinking encourages comparing, contrasting and going beyond the text. The teacher asked the learner whether population can be treated as an asset as well. A heated discussion followed as many talked of using manpower positively at home and in the foreign lands while many others opposed the idea of using or managing too many people positively. Those who supported the idea argued that skilled manpower are assets for a country and they can earn bread from foreign countries as well. But those who opposed the idea argued that a container cannot contain water beyond its capacity. It will overflow and can never be managed. If paddies, jutes and plants are planted too densely, the yields of crops hamper. Things must have a logical proportion otherwise it will culminate into disastrous consequences. The teacher thanked the participants and left the class.

APPENDIX- 05: Interview with Pedagogy Experts

Transcript of Interview with Pedagogy Experts- I

We are going to conduct an interview with Professor M Yusuf Islam, former Vice Chancellor of Daffodil International University. Currently he is the Professor and dean of Engineering faculty at Independent University of Bangladesh. We know that Professor Yusuf is contributing a lot in the Teacher's training program over the country that's why we have decided to conduct an interview with him. Thank you sir

Question 01. First of all I would like to know from your side “What are the major issues in promoting critical thinking among learners of Secondary Education?” “What do you mean by CT, they should be adopted or accommodate in our pedagogy of Secondary learners?”

Response 01. OK, the term that you used Critical and Thinking both means involving the brain any student has to use his or her brain. Let me talk about thinking, thinking happens where? In students' brain. Teachers' have to know the function of the brain. In teaching learning and thinking has to take place when thinking takes place learning takes place.

Question 02. Thank you Professor. It's all about the brain. How the brain works and how we can engage our brain whether it teachers or the students? Are there any issues or any major component that can contribute to the promoting critical thinking?

Response 02. There is a saying that in real life there are problems and trying to solve the problem we learn a lesson. But in the classroom we teach lessons then we give them the problem. So classroom situation is revers. But in the reality what theories and lessons we teach whatever is discovered by people who face these problems in real life. Condense these problems into theories and solution. Everyone's brain is the same and regard to student we have to engage them and give them practical and they have to face problems which they need to solve. Through solving the problems they will learn from the experiences. And also how to transfer the knowledge. Basically we can bring in the real work through the class.

Also we can give one example when a mother for the first time says words: “dudh kheyee nao”, these words/ letter the child has never heard these words before. How does the child response? Did the Child say mother, “I have never had this words before. I don't know meaning. Can you give me some notes.” What does the child say, I don't understand. What is a childhood? The child has to guess. I have to saying something, do something so I do something wrong. After a while mother notices that the child hasn't taken the milk. And again “ei dudh khete bollam.” A slight annoying voice. The children realize that to do something again. Thus trial and error method continue. The child knew it is the correct and knows because the mother is happy. The words perhaps the child doesn't even understand the words phrase for the child now is able to link this phrase activity the puzzle of what the mother was saying. There is no mother gives the child dictionary or notes on how to drink milk.

Question 03. Thank you. Now I am going to 2nd issue “How can teacher engage the brain of the students in classroom activities?” Are there any specific techniques?

Could you please tell us some classroom strategies or techniques?

Response 03. So here you use the word engage. So how do we engage the brain? Over the past 10-12 years research has been done that how the brain reacts to questions. The entire brain gets involved to find out answers. When the question is asked the brain cannot do anything else other than finding the answers. Also a chemical serotonin is released in the brain to help the brain relax from stresses. The answer might not be right but brain remains engage to find the answer.

So the question is what type of question we ask? Sometime we ask formative questions, what are formative questions? These are the question is we teach a little bit then we ask how much have the students understood. So we give a little bit of material then we question then again more material and question. Finally, it is the summative question. So do the formative questions engage students? These questions judge how much the students have learnt. But, engaging is something different. How we use internet, how we use computer database? Engaging brain means to find through the question, the correct area in the brain that deal with that topic. So it is like a Google query. If you want to find a website, if you want to become a member of the website, you have to find out the website at first. After we find out the website then we look if this website is correct or wrong.

The first question has to be like a query. To find out what students know, what does they know about that particular topic. So we have to find out ways to engage the brain on to that concept so that we can dealt upon that question. This is more like constructivism. After the first query question is asked then we build upon that question and through question, through practical work.

Question 04: Again as you mentioned Question pattern is needed. What type of Question is needed to add or engage students? How to get students to make question?

Response 04: So the first part is teaching asking question, engaging students. So students can build question. We know that if students need to be motivate in the concept. In case once students are interested they start asking question. Because every neuron in the brain, once it has Question 10,000 tentacles of neurons get active to find answers. So when it looks for answers it need Questions. If I give examples, “How to read?” As you know students don’t want to read, whether it in schools, universities or colleges. How to motivate them? Ask them to prepare question from the text. Or, let them read the story and design their own question.

Question 05: You know in our classrooms teachers get only 40 to 45 minutes. How can one teacher make the class fruitful in this limited time?

Response 05: Excellent! When the teacher ask question? After the attendance. Whenever you take the attendance, its time consuming, boring. It’s a boring exercise. Students mind wonders. He try to get into but students mind are elsewhere. So when the students say good

morning. The teacher should launch the class. If the teacher can do that right away. It's in the design of launching question. Then the 45 minutes is utilized properly. Attendance can be taken at the end along with khata or papers. Any other system can be adopted but attendance not at the beginning.

Question 06: Do you think there are any more challenges?

Response 06: Biggest challenge is the teacher themselves because of their background. They grew up like never asking questions. They were not allowed to ask question by their parents, their own teachers. Their mind set is not for asking question. So how they can teach the students to ask. As example, n university as a VC I went around for checking question paper. Some students complained that teacher copied questions from the previous semester. Students did that for another reason, because they had expected that they will get question from last year. When I investigated I found that teachers don't prepare questions themselves rather copy them from others.

Question 07: Way out to overcome the situation, How can we develop teacher's skill?

Response 07: Get the teachers to sit in pairs. The teachers themselves will come up with a model with the same methodology for subject material because now everything is available in books, in internet. Give them a problem to solve. So we have to utilize the teacher in same way. If they are engage in utilizing students' brain they will be motivated, they will have ownership and in their own class they might start changing. But if we just give them theory, lecture, nothing will happen.

Question 08: Are there any specific strategies to apply in specific subjects to conduct in classroom?

Response 08: Subject based, for example if we say that we want to teach "Romeo and Juliet". Automatically the brain moves into understand the meaning of the passage and then the students will develop the question. So I ask my students their opinion about designing the question. They answer: "Without understanding the material or text entirely we will not be able to prepare question." So we have to teach them how to design question. 3, 4 years old children how many questions they ask, and how many each of us ask questions. As we grow up, we become teenagers, adults we stop asking questions. Because we are discouraged by parents, teachers, religious people. Nobody likes questions. So a child ultimately stops questioning. But to connect neuron we need asking questioning and answers. We deprive our children from their proper development.

Ask your students to write a play, or story. They will write and present those. Now compare your own story with the stories of other language. Their language, thinking, everything will develop.

Let me talk about law. Let ask students you see marriages, breakage. What should be the marriage law you think. Write it. You design your law and then compare.

Model like "Mind Mapping" and "Fish Bones" should be used.

Transcript of Interview with Pedagogy Experts- II

Interview with Ranjit Podder (Pedagogy Specialist)

জাতীয় শিক্ষা ব্যবস্থাপনা একাডেমি (নায়েম)এ এবার ১৫টি গবেষণা দল বিভিন্ন বিষয়ে কাজ করছে। আমরা ১১ নম্বর দলে কাজ করছি। আমাদের গবেষণা টাইটেল “Developing an integrated model of teaching method for promoting critical thinking among learning’s of secondary education”। আমাদের টিম লিডার; বাংলাদেশ ইনস্টিটিউট অব ইসলামিক থ্যাট (বিআইআইটি)র নির্বাহী পরিচালক ডঃ এম আব্দুল আজিজ, এডভাইজার হিসেবে আছেন আইইআর (ঢাবি)র সাবেক পরিচালক প্রফেসর ডঃ আব্দুল আওয়াল খান এবং বাংলাদেশ ইন্টারন্যাশনাল স্কুল এন্ড কলেজের শিক্ষক মিসেস রওশন জান্নাত। আপনার ইন্টারভিউ নিব একজন Pedagogy Expert হিসেবে

প্রশ্ন ০১

আমরা জানি আপনি British Council এ Critical Thinking বিষয়ে বেশ কিছু কাজ আপনি করেছেন। ক্লাসরুমে Critical Thinking বাস্তবায়নের বিষয়টি কি ধরনের Challenge মোকাবিলা করছে?

উত্তর:

আমি মনে করি আমাদের Curriculum এ Flexibility কম। শিক্ষক চাইলে এটি করতে পারেন, কিন্তু তাঁরা এটাকে কষ্টসাধ্য বা Risk মনে করে থাকেন। পাঠ্যবইয়ের অনুরূপ পড়াতেই তাঁরা স্বাচ্ছন্দ্য বোধ করেন। Critical Thinking হলো একই জিনিস ভিন্ন ভিন্ন দৃষ্টিভঙ্গিতে দেখানো। আমাদের শিক্ষকগণ লিপিবদ্ধ সিলেবাসের বাইরে যেতে চাননা। উদাহরণ স্বরূপ বলা যায়, ২০ জন শিক্ষার্থী আলাদা ভাবে নিজের ভাব প্রকাশ করে উত্তর দিতে সক্ষম, কিন্তু তাঁদের (Mindset) হল বইতে যা আছে সেভাবে না লিখলে (Full Marks) পাওয়া যাবেনা।

সাম্প্রতিক গবেষণায় দেখা গেছে ভুল হওয়া ও নাম্বার কম পাওয়ার আশংকা থেকে শিক্ষার্থীরা নিজ থেকে লিখার চেষ্টা করেনা। আবার শিক্ষকরাও মূল্যায়ন জটিলতা, সময়ের অভাব ইত্যাদি কারণে এই বিষয়ে যথাযথ গুরুত্ব দিতে চাননা। যার ফলশ্রুতিতে ছাত্ররা Critical Thinking এর সুফল থেকে বঞ্চিত হচ্ছে। শিক্ষকদের মতে, ক্লাসরুম সংকট, বেশী ছাত্র ছাত্রী, সময় মাত্র ৪০ মিনিট। সময় কম ও শিক্ষার্থী বেশী হওয়ায় এর চর্চা করা প্রায় অসম্ভব। Critical Thinking এর যথাযথ প্রয়োগের জন্য সময় বেশী প্রয়োজন। এই ব্যাপারে আমাদের একটি গবেষণা ও রয়েছে, যার উপর ভিত্তি করে NCTB ২০০২ সাল থেকে পাঠদানের জন্য সময় ৪৫ মিনিট থেকে বাড়িয়ে ৬০ মিনিট নির্ধারণ করে। এটি ডবল শিপ্টের স্কুলগুলোতে প্রয়োগ করার

সুযোগ ছিলোনা সময় স্বল্পতার জন্য। তাঁরা প্রথম পিরিয়ড ৬০ মিনিট (১ ঘন্টা) ও পরেরগুলো ৫০ মিনিট করে ঠিক করেছিলেন। কলেজ গুলোতে এর প্রয়োগ হয়েছিল।

এই সময় বাড়ানো নিয়ে শিক্ষকদের মধ্যে বিরূপ প্রতিক্রিয়াও দেখা গিয়েছিল। আমার পরামর্শ হল শিক্ষার্থীদের স্বাধীন ভাবে চিন্তা করার সুযোগ দিতে হবে এবং শিক্ষক প্রশিক্ষণের সময় শিক্ষকদেরকেও নিজস্ব চিন্তা বিকাশের সুযোগ করে দেয়া উচিত। তাহলেই Critical Thinking এর কার্যকর প্রয়োগ সম্ভব। ইংরাজিতে একটা কথা আছে Knowledge is co-constructive। সামাজিক বিজ্ঞানেও নলেজ আরেকজনের সাথে শেয়ারের মাধ্যমে পূর্ণতা পায়। কিছু সংযোজন বিয়োজনের মাধ্যমে মৌলিক বিষয়টি উঠে আসার সুযোগ তৈরি হয়। শিক্ষকরা এটি ক্লাসরুমে প্রয়োগ করার চেষ্টা করবেন এবং বিভিন্ন ট্রেনিংয়ে তাঁদেরকে এই বিষয়টি জানাতে হবে। Training, Monitoring & Mentoring এই তিনটি জিনিস Critical Thinking এর জন্য অতীব জরুরী। ট্রেনিং থাকলেও পরের দুটির অভাবে Critical Thinking পূর্ণতা পায়না বেশীরভাগ সময়। বিশেষ করে Monitoring এর অভাব সবচেয়ে বেশী। আর Mentoring এর মাধ্যমে শিক্ষার্থীদেরকে সঠিক ভাবে গড়ে তোলা সম্ভব। তাঁদেরকে ভালমন্দ ধরিয়ে দেয়া যায়। আমাদের শিক্ষকদের সঠিক Critical Thinking এর অভাবে ২৫ বছরের অভিজ্ঞতাকে ১ বছরের সমান অভিজ্ঞতা ধরা যায়। কারণ তাঁরা নিজেদেরকে গতানুগতিক ধারা থেকে বের করে আনতে পারেননা। Monitoring & Mentoring সঠিক ভাবে করা গেলে- মানসম্মত অনেক শিক্ষিত গড়া সম্ভব। আমাদের দীর্ঘদিন ধরে চলে আসা গতানুগতিক ধারা সেটি হতে দিচ্ছেনা।

প্রশ্ন ২

আপনি ইংরেজীর শিক্ষক হিসেবে এই বিষয়ের সুনির্দিষ্ট পরামর্শ কি?

উত্তর:

সব বিষয়ের ক্ষেত্রেই Critical Thinking বিষয়টি জরুরী, আলাদা করে ইংরেজীর জন্য বলতে গেলে; Comprehension, letter, essay, application ইত্যাদি বিষয়ে Critical Thinking এর যথেষ্ট সুযোগ রয়েছে। উল্লেখিত বিষয়গুলোতে শিক্ষকরা যদি শিক্ষার্থীদেরকে মুখস্থ করতে না দিয়ে বরং বিষয় এবং কিছু মৌলিক ধারণা দিয়ে তাঁদেরকে নিজের মত করে লিখার সুযোগ দেয় তাহলে তাঁদের মাঝে Critical Thinking এর বিকাশ ঘটবে। কেউ হয়তো বেসিক বিষয়ে নিজের মত করে লিখবে আবার কেউ আরো গভীর ভাবে চিন্তা করে আরো মান সম্মত যেমন, শিক্ষকদের গুনাবলী, আদর্শ ক্লাসরুম কেমন হওয়া উচিত ইত্যাদি। শিক্ষকগণ শুধুমাত্র কিছু মৌলিক ধারণা দিবেন বাকীটা যদি শিক্ষার্থীরা নিজের মত করে লিখতে পারে তাহলে তাঁদের মেধা বিকাশের সুযোগ হবে।

দক্ষিণ এশিয়ার শিক্ষকদের মাঝে একধরনের ভুল ধারণা রয়ে গেছে যে, তারাই শুধু শিক্ষার্থীদের শিখাবেন। শিক্ষার্থীদের থেকেও কিছু শিখা যায় এটা তাঁদের ভাবনার অতীত। কিন্তু ব্যাপারটা আসলে সেরকম নয়, বরং

তারাও ছাত্রদের কাছ থেকে ভালো অনেক কিছু জানতে পারেন শেয়ারিং এর মাধ্যমে Critical Thinking এর সঠিক প্রয়োগের মাধ্যমে।

প্রশ্ন ৩

Pedagogy নিয়ে আরো কোন পরামর্শ আছে কি?

উত্তর:

Critical Thinking হল অন্যের চোখে নিজেকে দেখা। আমি যেটা ভাবছি সেটা অন্যের দৃষ্টিতে সঠিক নাও হতে পারে। তাই অন্যের দৃষ্টিতে নিজেকে যাচাই করার জন্য Critical Thinking এর প্রয়োগ অত্যন্ত জরুরী। শিক্ষকদের দৃষ্টি সুদূরপ্রসারী হওয়া চাই, কাছে দূরের সব বিষয় তাঁর গোছরে থাকতে হবে। যাতে করে নিজের দুর্বলতা বুঝার জন্য শিক্ষার্থী, সহকর্মী সহ অন্য যে কারো সমালোচনা ইতিবাচকভাবে নিতে পারেন। অন্যের ভাবনাকে নিজের ভাবনার মধ্যে নিয়ে আসার নামই Critical Thinking। Nottingham University তে পড়ার সময় আমার যেটা বেশী ভুল হত তা হল, অন্যের ভাবনাকে নিজের বলে চালিয়ে দেয়ার প্রবণতা কারণ সেখানে Argument কম থাকতো।

পরিশেষে গবেষণা দলের সবাইকে অশেষ ধন্যবাদ।

APPENDIX- 06

Diagram of Teaching Science and Mathematics of Secondary Education Based on Fishbone Model

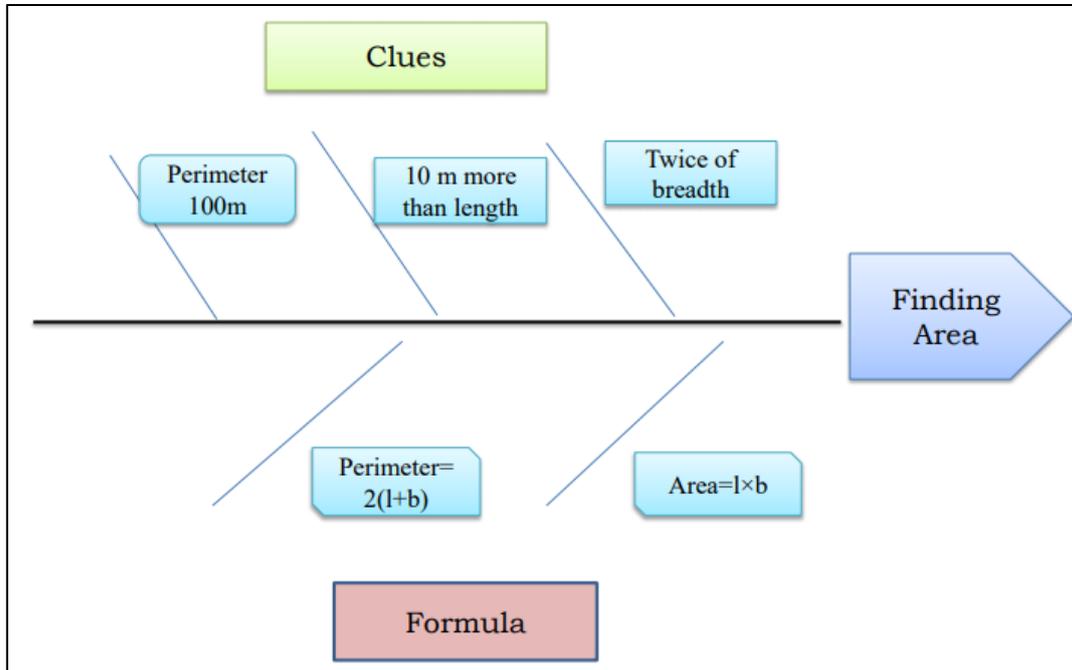
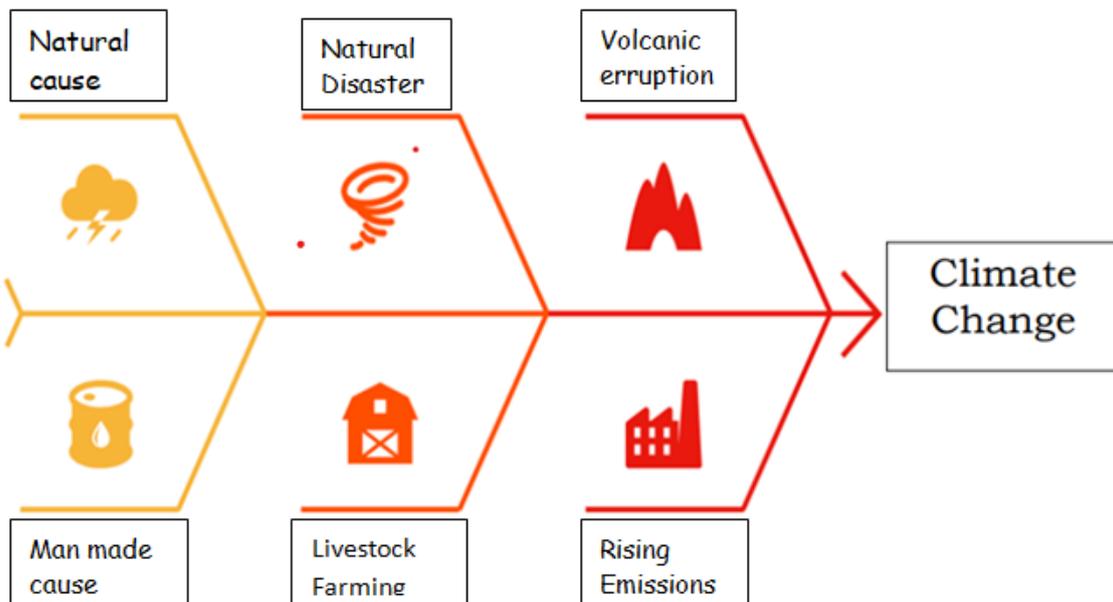


Diagram of Teaching Secondary Mathematics



Example of Teaching Secondary Science

APPENDIX- 07

Sample Lesson Plan

Bangladesh and Global Studies, Class: VIII, Topic: Social Problem of Bangladesh		
	WHAT AND WHY?	HOW?
Stimulus material	A story: A story on Juvenile Delinquency, Story of Yasin Arafat opu	Read individually (Take turn)
Lines of inquiry	<ol style="list-style-type: none"> The concepts of juvenile delinquency causes and effects of juvenile delinquency 	
Discussion plan	<ol style="list-style-type: none"> What are the meanings of difficult words? Explain in your own words, what the story is about? <p>LOI 1 What is juvenile delinquency? Why?</p> <p>LOI 2 Do you think Yasir Arafat Opu was right about his activities?</p> <p>LOI 3 Why has police arrested him?</p>	Read the story taking turn. Raise questions of interest
Learning outcomes	Students should be able to: <ol style="list-style-type: none"> clarify the concepts of Juvenile Delinquency. (Economically and in manners). explain the phrase According to Tagore, teenage is “In his heart of hearts, a young lad most craves for recognition and love: and he becomes the devoted slave of anyone who shows him consideration.” clarify the concepts of rich and poor (Economically and in manners). 	
Warm-up activity (Set Induction)	Based on the title, teacher asks students to guess what the story is about.	Ask students: <ol style="list-style-type: none"> What is a ‘model’? What is to be ‘famous’?
Initial development	Read the text, summarize the story and then raise questions regarding the text.	Students take turn reading and raise questions which are written on the blackboard
Organizing the questions.	Seek themes from the questions raised. Classify and pick a LOI that students have most interest in.	Students identify the themes, discuss the questions with the teacher as the facilitator.
Deliberation	Examine the questions ONE theme at a time	Students decide the question to discuss.
Activities for practice Closing	In groups of 3, students discuss the following statements and justify their answers: <ol style="list-style-type: none"> Do you need to be rich in order to be successful? Which one is more important in our lives, family, attitude or money? 	After the activity for conclusion, request a student to express what he or she has learned from the lesson.

APPENDIX- 08

Teacher Evaluation Format

Instruction: Please evaluate your students’ skills using the scale below:
 4= Excellent 3 = Encouraging Progress 2 = Needs greater focus 1 = Needs serious focus

A	Speaking and Listening				
1	Listen to other students’ opinion respectfully	1	2	3	4
2	Speak calmly when they have differences of opinion	1	2	3	4
3	Request for more clarification when necessary	1	2	3	4
4	Build up and expand other student’s ideas	1	2	3	4
5	Challenge other student’s idea	1	2	3	4
6	All students participate in the deliberation	1	2	3	4
B	Reasoning				
7	Able to express their views logically	1	2	3	4
8	Able to give arguments and evidence	1	2	3	4
9	Able to examine other students’ argument critically	1	2	3	4
10	Willing to change their mind	1	2	3	4
11	Able to make relationship between ideas/concepts	1	2	3	4
C	Metacognition				
12	Able to use words related to inquiry concepts such as “I AGREE; want to ASK; want to ADD	1	2	3	4
13	Able to use the concept/terminology appropriately	1	2	3	4
D	Discipline in a community of inquiry				
14	Discuss in a respectable manner (raise hands, take turn)	1	2	3	4
15	Feel ‘safe’ to give any opinion	1	2	3	4
E	Open-mindedness				
16	Accept reasonable criticisms	1	2	3	4
17	Welcome hearing “the other side of the case”	1	2	3	4
18	Respect others and their rights	1	2	3	4

APPENDIX- 09

The Critical Thinking Scoring Rubric

A Tool for Developing and Evaluating Critical Thinking

Peter A. & Noreen C. Facione

<p>Strong 4 -- Consistently does all or almost all of the following:</p> <ul style="list-style-type: none"> ✚ Accurately interprets evidence, statements, graphics, questions, etc. ✚ Identifies the most important arguments (reasons and claims) pro and con. ✚ Thoughtfully analyzes and evaluates major alternative points of view. ✚ Draws warranted, judicious, non-fallacious conclusions. ✚ Justifies key results and procedures, explains assumptions and reasons. ✚ Fair-mindedly follows where evidence and reasons lead.
<p>Acceptable 3 -- Does most or many of the following:</p> <ul style="list-style-type: none"> ✚ Accurately interprets evidence, statements, graphics, questions, etc. ✚ Identifies relevant arguments (reasons and claims) pro and con. ✚ Offers analyses and evaluations of obvious alternative points of view. ✚ Draws warranted, non-fallacious conclusions. ✚ Justifies some results or procedures, explains reasons. ✚ Fair-mindedly follows where evidence and reasons lead.
<p>Unacceptable 2 -- Does most or many of the following:</p> <ul style="list-style-type: none"> ✚ Misinterprets evidence, statements, graphics, questions, etc. ✚ Fails to identify strong, relevant counter-arguments. ✚ Ignores or superficially evaluates obvious alternative points of view. ✚ Draws unwarranted or fallacious conclusions. ✚ Justifies few results or procedures, seldom explains reasons. ✚ Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.
<p>Weak 1-- Consistently does all or almost all of the following:</p> <ul style="list-style-type: none"> ✚ Offers biased interpretations of evidence, statements, graphics, questions, information or the points of view of others. ✚ Fails to identify or hastily dismisses strong, relevant counter-arguments. ✚ Ignores or superficially evaluates obvious alternative points of view. ✚ Argues using fallacious or irrelevant reasons, and unwarranted claims. ✚ Does not justify results or procedures, nor explain reasons. ✚ Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions. ✚ Exhibits close-mindedness or hostility to reason.

APPENDIX- 10

Letter to Seek Permission for Data Collection



গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
জাতীয় শিক্ষা ব্যবস্থাপনা একাডেমি (নায়েম)
মাধ্যমিক ও উচ্চশিক্ষা বিভাগ
শিক্ষা মন্ত্রণালয়
নায়েম রোড, ধানমন্ডি, ঢাকা-১২০৫
www.naem.gov.bd



Consent Letter

February 01, 2021
The Principal/ Head Master,

Subject: Request for data collection of “DEVELOPING AN INTEGRATED MODEL OF TEACHING METHOD FOR PROMOTING CRITICAL THINKING AMONG LEARNERS OF SECONDARY EDUCATION” study.

Dear Sir,
Present study is under the project (financial year 2020- 2021) of Research Division of National Academy of Educational Management (NAEM).

Research Team consists of:

Team Leader: Dr. M. Abdul Aziz, Faculty, IUT
Advisor: Dr. Md. Abdul Awal Khan, Ex- Director, IER, DU
Member: Sheikh Mohammad Ali, Training-Specialist, NAEM
Member: Rowshan Zannat, Teacher, BISC, Nirjhor

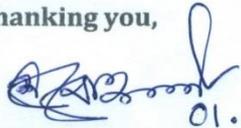
To achieve the objectives, this study intends to collect data by interview of teachers, Focus Group Discussion (FGD) of students and class observation of 16 different Secondary Schools of National curriculum of Bangladesh both from rural and urban area.

Your assistance in encouraging participants (mentioned above) to take part in this study is crucial. We need to gather information from your esteemed institution in order the information to be accurate and representative. You are welcome to have further information on procedures and data collection process when needed.

The interview itself should not take more than 30 minutes and class observation for 40/ 50 minutes. Whoever administers the survey should not interfere in anyway. The participants have the right to refuse to participate or withdraw from the study.

Any Assistance rendered to this study is greatly appreciated.

Thanking you,


01.02.2021

Sheikh Mohammad Ali
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