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Developing Critical Thinking and Communication Skills in Students: Implications for Practice in Education

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Abstract

Critical thinking and communication competence are recognized by educators as vital skills required for mastery of school subjects. However, it is observed that these two skills are underdeveloped in students. In order, to fill this void, this paper aims at constructing a framework that would be employed by teachers in developing those skills. Teachers can make use of five step model to develop students towards critical thinking: determine learning objectives; Questioning techniques, allow practice, review refine, and improve teaching, provide feedback. Teacher should promote communication competence in students through task – based activities, such as group work, task work and information gap activities. It is therefore recommended that teachers' need a solid understanding of the critical

thinking, communication competence and its importance for effective teaching and learning; teachers must learn to think critically and must employ techniques that will enhance critical thinking in student. In-service training, Capacity Building workshops for professional development should be organized for teachers at all level on techniques to develop critical thinking, and communication competence in students.

Key words: Developing, Critical thinking, Communication skills, Students, Educational practices.

Introduction

Thinking is a natural process, but left to it, it is often biased, distorted, partial, uninformed be cultivated (Seriven and Paul 2004). While critical thinking is the ability to analyze and evaluate information. Critical thinking is also regarded as intellectually engaged, skillful, and responsible thinking that facilitate good judgment because it requires the application of assumptions, knowledge and competence and the ability to challenge one's own thinking. Unlike other forms of thinking, critical thinking requires the use of self-correction and monitoring to judge the reasonableness of thinking as well as reflexivity. When using critical thinking, individuals pause and reflect on the quality of that thinking.

Critical thinker is not only evaluating, analyzing and interpreting the information, he or she is also analyzing inferences and assumptions made regarding that information. Critical thinkers use these skills appropriately and usually without prompting. They are generally predisposed to think critically, to evaluate the outcome of their thought processes. Critical thinkers raise vital questions and problems, formulate them clearly, gather and asses relevant information, use abstracts ideas, think open-mindedly, and communicate effectively with others. Therefore, in order to think critically, there must be a certain amount of self-awareness and other characteristics present to enable a person to explain the analysis and interpretation and to evaluate any inferences made. Like critical thinking, communication skills are also recognizing as a vital tool in all areas of human life.

Communication is an integral feature of human activities. It is a pillar which maintains the structure of peaceful co-existence and mutual understanding. Communication can be described as the process of transmitting and receiving ideas, information and messages. It is used to persuade; to influence relationships; to inform; and to share, discover and uncover information. Thus, it is not surprising that communication, and how to communicate is so

important to daily life that it has spawned an entire industry of books, articles and seminars explaining how to do it better.

Despite the importance of critical thinking and communication skills, it is observed that these two skills are underdeveloped in students. In order to fill this void, this paper aims at constructing a framework that would be employed by teachers in developing those skills. Specifically, there are two questions to provide direction to this paper. What are the strategies for providing critical thinking in students? What are the strategies for providing communication skills in student?

Theoretical framework
The development of critical thinking has been a focus of educators at every level of education for years. According to Hatcher and Pencer (2005), critical thinking is an important and necessary skill because it is required in the workplace, it can help in dealing with mental and spiritual questions, and it can be used to evaluate people, policies, and institutions, thereby avoiding social problems. Educators can use various instructional methods to promote critical thinking and problem solving skills in students. Although, educators value a student who thinks critically about concepts, the spirit or disposition to think critically is unfortunately, not always present in all students. To ensure that students develop this competence, the education curriculum must use pedagogical methods that provide evidence of its development such as:

a.   explicit discussion of the meaning, importance, an application of critical thinking.

b.   use of questions by instructors that require students to analyze problem etiology, compare and evaluate alternative approaches, provide rationale for plans and actions, and predict outcomes;

c.   prospective simulations in which students perform decision making;

d.   retrospective critiques of cases in which decisions are reviewed to identify errors, reasons for errors, and exemplary performance;

e.   assignments that require students to analyze problems and discuss alternatives theories about etiology and solutions, as well as to defend decisions made;

f.   asking students to analyze and discuss work products, to compare how outcomes correspond to best evidence or other professional standards and

g.   demonstration of the use of active learning methods, such as case analysis and discussion of critical appraisal of scientific evidence.

The taxonomy offered by Benjamin Bloom some 50 years ago offers a straightforward way to classify instructional activities as they advanced in difficulty (Bloom, 1956). The lower level require less thinking skills while the higher levels require more. The theory of critical thinking began primarily with the works of Bloom (1956) who identified six levels within the cognitive domain each of which related to a different level of cognitive ability; Knowledge focused on remembering and reciting information; Comprehension focused on relating and organizing previously learned information. Application focused on applying information according to a rule or principle in a specific situation; Analysis was defined as critical thinking focused on parts and their functionality in the whole; Synthesis was defined as critical thinking focused on putting parts together to form a new and original whole. Evaluation was defined as critical thinking focused upon information. In this write up critical thinking is deemed to take place when students are required to perform in the Analysis, Synthesis, and Evaluation levels of Bloom's taxonomy.

To provide the greatest benefit to students; teachers should provide many opportunities for students to engage in the upper levels of Bloom's taxonomy where critical thinking takes place. While most teachers believe that developing critical thinking in their students is of primary importance (Albrecht & Sack, 2000), few have an idea exactly what it is, how it should be taught, or how it should be assessed (Paul, Elder & Batell, 1997).

On the other hand, communication competence will enhance critical thinking; this is because communication is a dynamic interactive process that involves the effective transmission of facts, ideas, thoughts, feeling and values. It is not passive and does not just happen. Students must actively and consciously engage in communication in order to develop information and understanding requires for effective learning. It is dynamic because it involves a variety of forces and activities interacting over time. Based on this premise, critical thinking affects all forms of communication-speaking, listening, reading, and writing and as such the teacher can develop both critical thinking and communication skills along side in every interaction with students in the classroom. Communication is seen by Hybels and Weaver (2001) as any process in which people share information, ideas and feelings which involves not only the spoken and written word but also body

language personal mannerisms, and styles, anything that add meaning to a message. Therefore, development of communication skill is not a separate activity from problem solving, creativity, or collaborative learning, because the students will use communication skills for logical presentation of facts in oral or written form. While student must be a good listener before he/she can learn, effective and good reading skills will aid comprehension of printed materials; based on these important roles of communication on effective learning. Therefore, for any students to become a critical thinker he/she must have good communication skills so that they can function effectively in the academic and professional setting.

Communication is an interactive process and it is crucial to teaching and learning in general. However, it should be noted that ineffective use of communication contributes significantly to the problems that occur during instructional process. Without a framework or methodology to follow and practice in developing communication skills in students, improving academic performance becomes much more difficult. The efforts that students put into becoming more effective communicators and developing the skills associated with communication will be of great value to them in personal, social and academic contexts. Realizing many benefits that can be derived from possessing good communication skills, Krumsee and Baehu (1996) suggested a framework for developing communication skills.

1. Identify Audience   - Define the characteristics of your audience

2. Select Topic   - Define the topic, purpose, and scope of your communication.

3. Set objective and criteria- Set objectives to measure the outcomes and effect of your communication.

4. Gather information   - find sources and gather information for your communication.

5. Select medium   - Decide what you will use to deliver your communication.

6. Develop structure of message - Create your message and determine how it will be best communicated.

7. Test and Revise   - Practice, test, and revise communication

8. Deliver communication - Send the communication

9. Assess message and process - Assess the received message and the communication

What are the strategies for providing critical thinking in students?
Teachers can make use of the following Five-step model to move students toward critical thinking.

Step one is for the teacher to determine learning objectives that is the teacher should first identify the key learning objectives that define what behaviours students should exhibit when they exist in the class. To make critical thinking happen these learning objectives, as well as the activities and assessments, must include those tied to the higher levels of Bloom's (1956) taxonomy. A well written objective should include a behaviour that is appropriate for the chosen level of the taxonomy. Bloom's knowledge level requires an answer that demonstrates simple recall of facts, who and what to describe, state and list. Comprehension requires an answer that demonstrates an understanding of the information. Question at this level might ask students to summarize, explain, paraphrase, compare and contrast. Application requires an answer that demonstrates an ability to use information, concepts and theories in new situations. Questions at this level may ask students to apply, construct, solve, discover and show. Analysis requires an answer that demonstrates an ability to see patterns and classify information, concepts, and theories into component parts. Questions at this level could ask students to examine, classify, categorize differentiate and analyze. Synthesis requires an answer that demonstrates an ability to relate knowledge from several areas to create original work. Questions at this level might ask students to combine, construct, create, role-play and suppose. Finally, evaluation requires an answer that demonstrates ability to judge evidence based on reasoned argument. Questions at this level may ask students to assess, criticize, recommend, predict and evaluate. Thus a well written lesson plan should target a specific behaviour, and end with the learner exhibition of the behavioural response. The development of well-written questions will greatly accelerate a learner's movement into critical thinking.

The second model to move students toward critical thinking is to teach through questioning. Questioning is a vital part of the teaching and learning process. It allows teacher to establish what is already known and then to extend beyond that to develop new ideas and understandings. Questions can be used to stimulate interaction between teacher and learner and to challenge the learner to defend his or her position that is to think critically, Clasen and

Bonk (1990) posited that although there are many strategies that can impact student thinking, it is teacher questioning that have the greatest impact. He went further to indicate that the level of student thinking is directly proportional to the level of questions asked. When teachers plan, they must consider the purpose of each question and then develop the appropriate level and type of questions to accomplish the purpose.

Teachers can make use of different questioning techniques to foster the thinking ability of students. One simple method is for teacher to use the general categories of convergent and divergent questions. In addition to these two general methods of questioning teacher can make use of other methods, such as an assortment questioning tactics to promote critical thinking. Depending on how a question is asked the student may use various critical skills such as interpretation, analysis and recognition of assumptions to form a conclusion. Mills (1995) suggested that the thoughtful use of questioning may be the quintessential activity of an effective teacher.

Another type of questioning technique that can be used by teacher is the Socratic questioning, Socratic questioning is defined as a type of questioning that deploys or explores the meaning, justification or logical strength of a claim, position or line of reasoning, (Paul, 1995). Questions can be asked to investigate assumptions, viewpoints, consequences, and evidence. Question methods such as calling on students who do not have their hands up can enhance learning by engaging students to think. The Socratic Method focuses on clarification. A student's answer to a question can be followed by asking a fellow student to summarize the previous answer. Summarizing the information allows the student to demonstrate whether he or she was listening, had digested the information, and understand it enough to put it into his or her own words.

Another type of questions that can be used by teacher is a provocative question. Mills (1995) suggested that provocative questions should be brief and contain only one or two issues at a time for class reflection. It is also important to provide deliberate silence, or "wait" time, for students upon asking questions (Dillon, 1990). Waiting at least five seconds allows the student to think and encourages thought. If a thought question is asked, time must be given for the students to think about the answer. In addition to using these questioning techniques, it is equally important to orient the students to the type of classroom interaction that will take place. Therefore, to develop critical thinking in students, teachers must become highly skilled questioners.

Another step that can be taken by teacher to encourage critical thinking among students is to allow practice before assessing. In the past decade, a major shift has taken place in education, that shift is toward active learning. Bonwell and Eison (1991) described active learning as involving the students in activities that cause them to think about what they are doing. To make learning more active, teacher needs to learn how to enhance the overall learning experience by adding some kind of experiential learning and opportunities for reflective dialog. According to Fink (2003) there are two guiding principles that should be considered when choosing learning activities. First, activities should be chosen from each of the following three components of active learning; Information and ideas, experience and reflective dialog. Information and ideas include primary and secondary sources accessed in class, outside class, or online. Experience includes doing, observing, and simulating; Reflective dialog includes papers, portfolios and journaling.

Whenever possible, teacher should make use of direct kinds of learning activities such as classroom discussion and debates to carry out the various learning activities. Bernstern (1985) developed a negotiation model in which students were confronted with credible but antagonistic arguments. Students will be challenged to deal with tension between two arguments.

This tension is to be one component that can drive critical thought. Controversial issues can be presented and discussed in the classroom, students can be asked to argue for or against on a particular topic. Debate can be used to promote critical thinking in students, after debating, students would have seeing improvements in searching for literature, and making evidence – based decisions. Regardless of the teaching methods used, students should be exposed to analyzing the costs and benefits of issues, problems, and solutions to help prepare students for real-life decision making.

Teacher can also develop critical thinking in students by making use of daily newspaper clippings directly related to current classroom content this will allow the teacher to incorporate discussion into the classroom activities. News from the newspaper will afford the teacher an opportunity to discuss the affective components involved. The students can also be encouraged to list any assumptions made by the article or follow-up questions they would ask if they could interview the journalist. This will provide a forum to enlighten students to think for themselves and realize that not each person in

the class perceive the article the same way. In the same vein, teaching of critical thinking can be done through online discussions. The amount of information we receive daily through newspapers, radio, television, and the internet is increasing at an unimaginable rate. Having information so readily available brings with it the expectation that each of us can and will increase our knowledge base. With the availability of online discussion and presentation tools, teachers can engage their students in a wide range of activities that can contribute to their intellectual growth. Through e-mail, teacher can communicate with students one-on-one or one-to many, this can give students practice in sharpening their analytical skills. Whatever the approach taken, debates and discussion will be useful to promote thought among students.

Another step to be taken by teacher in order to promote critical thinking among students is that teacher needs to review, refine and improve on teaching activities. Teachers should strive to continually refine their courses to ensure that their instructional techniques are helping students develop critical thinking skills. To accomplish this, teachers should monitor the classroom activities very closely. To track student participation, a teaching dairy can be kept that identifies the students that participated, describes the main class activities, and provides an assessment of their success. Student feedback is also an important tool to be used in the improvement of a course. Angelo and Cross (1993) suggested numerous methods for collecting key information related to students learning and response to instructional techniques. One of such method is to ask the students to read a passage for few minutes and ask them of the most important point learned. Teachers can review the comments and use them in future classes to emphasize issues identified.

Memory matrixes are also useful in the collection of student feedback; students are asked to fill in two-dimensional cells with labels related to a concept. The teacher can look for patterns among the incorrect responses and decide what might be the cause(s) these types of activities can also have positive benefits for the students. Students will become better monitors of their own learning. Students may also find the need to alter study skills to improve their success in the course. In-class and out-of-class assignments can also serve as powerful vehicles to allow students to expand their thinking processes. Emig (1983) believed that involving students in writing serves their learning uniquely, because writing as process and product, possesses a

cluster of attributes that correspond uniquely to certain powerful learning strategies.

The fifth step that can be taken by teacher to develop critical thinking in students is to provide feedback and assessment of learning. Teacher feedback, like assessment, compares criteria and standards to student performance in an effort to evaluate the quality of teaching and learning. However, the purpose of feedback is to enhance the quality of student learning and performance, rather than to grade the performance, and importantly, it has the potential to help students learn how to assess their own performance in the future.

Teachers should provide good feedback to their students through frequent opportunities to practice whatever they are expected to do at assessment time. Teacher should spend ample time helping students to understand what the criteria and standards are and what they mean. Student peers may also provide feedback and evaluation. Each of these techniques help students learn to distinguish between satisfactory and unsatisfactory performance. When providing feedback, teachers should be both thoughtful and purposeful. Teacher should provide feedback that is informational to students.

What are the Strategies for Developing Communication Skills in Students?
In an attempt to promote communication competence in students, communication skills teaching should focused on the four skills of reading, writing, listening, and speaking, and breaks each skill down into its component micro skills. For instance, the teacher may break down the skill of listening into the following micro skills:

- ❖ Recognizing keywords in conversations
- ❖ Recognizing topic of a conversation
- ❖ Recognizing time reference of an utterance
- ❖ Following speech at different rates of speed.
- ❖ Identifying key information in a passage.

In addition, teacher should make use of integrated skills approach to the teaching of the communication skills since in real life the skills often occur together, they should also be linked in teaching. The overarching principles of teaching communication skills can be summarized as follows:

❖ make real communication the concept to be learned.

❖ provide opportunities for learners to experiment and try out what they know.

❖ be tolerant of learner's errors as they indicate that the learner is building up his or her communicative competence.

❖ provide opportunities for learners to develop both accuracy, and fluency.

❖ link the different skills such as speaking, reading and listening, together since they usually occur together in the real life.

In applying these principles in the classroom teacher should make use of activities that requires learners to negotiate meaning and interact meaningfully. The teacher should focus on classroom activities that could be used to implement a communicative approach, such as group work, task work, and information gap activities. These could be achieved through the following activities:

▪ Task-completion activities: puzzles, games, map-reading and other kinds of classroom tasks in which the focus will be on ability to use communication   skills to complete a task.

▪ Information gathering activities: student will conduct surveys, interviews and searches in which they will use the communication skill to collect information.

▪ Opinion-sharing activities: activities where students compare values, opinions, beliefs.

▪ Information-transfer activities: these require learners to take information that is presented in one form, and represent it in a different form.

▪ Reasoning gap-activities: these involve deriving some new information from given information through the process of inference and practical reasoning.

▪ Role plays activities: activities in which students are assigned roles and improvise a scene or exchange based on given information or clues.

Therefore, for teacher to ensure effective communication skills among students, the teacher should make use of the following core activities:

- Discussion/debate: This core activity should run frequently. The students should engage in a formal/informal discussion/debate activity on an assigned   topic. This activity is completely student-led, students will play all the roles (conductor,   observer,   group presenter, and participating members). The   discussion/debate activity includes both group discussions and debates, including   a little bit of oral presentation. After performance, students will be given feedback individually. They should be informed about the errors   they committed. So that they take care of the errors committed in the next performance. In this way they improve a lot gradually.

- Oral presentations: in between the discussion/debate activity, the students are asked to prepare a topic assigned to them and present in the class. Students will make formal presentations. Each presentation will be followed by a question/answer period and concluded by the teacher's comment.

- Role-play: For this activity, the students will be asked to make group of three or five students. They will be given situation and will be asked to perform the role in the class.

The students will find all these activities to be rewarding, intrinsically interesting and educationally beneficial.

Recommendations

Teachers should make use of five step model to help students learn critical thinking skills this will bring about fundamental change in instructional technique from that of the traditional lecture-based format, such innovation will lead to learning experiences which are more enjoyable, effective and valuable to students and teacher and it will have positive effect on learning process. Teacher should make use of task-based approach to teach communication competence has much potential in encouraging critical thinking among students. The Government and Education Commission Boards on Education should organized workshop, refresher courses of teachers for professional development on the techniques to develop critical thinking and communication competence in students.

Conclusion

The paper emphasis the strategies needed by the teacher to develop critical thinking and communication competence in students; since the most important goal of schooling is learning, and learning is a consequence of thinking. Students' success in school is heavily dependent on their inclination as well as their ability to think skillfully and also the students need communication skills to present their facts both inside and outside the school. The classroom environment should be a motivating place for learners to express their views without fear of intimidation, but with fairness, tolerance, dialogue, negotiation, care, active participation, and respect for each other's opinion which are the hallmarks of a thinking and communicative classroom. However, active cooperative learning as a pedagogical approach to encouraging critical thinking and communication skills can be effectively used in conjunction with lectures. According to Bonwell and Eison (1991),

> When using active learning students are engaged in more activities than just listening. They are involved in dialog, debate, writing, and problem solving, as well as higher-order thinking, such as analysis, synthesis, and evaluation.

The encouragement of critical thinking can be accomplished in any content area by modification of lectures and the incorporation of simple active techniques.

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