

Improving Critical Thinking Skills of students in SLIATE: Empirical Evidence and Recommendations

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Abstract:- Critical thinking (the ability to think clearly and rationally and see logical connections between ideas) has become one of the most covetable skills for success in education, life, and work. The ability to utilize critical thinking cognitive skills and be proactive has become a benchmark for employability in various industries around the world. However, even though technology is said to be advancing, lack of critical thinking is said to be a major problem for modern students. Therefore, since today's complex society requires human resources who can make judgments and decisions based on careful evaluation of evidence, the development of critical thinking skills is important in higher education to form responsible citizens. It is also related to the goals of educational systems in several countries have developed policies and practices that provide students with opportunities to engage authentically in discussion, debate, and evaluative thinking that help develop the skills and mindset of critical thinkers. It is clear that a number of changes are needed in Sri Lanka's education system to develop a workforce that can think critically and analyze in response to today's demands. Additionally, the Sri Lankan education system should aim to inculcate analytical skills in students while encouraging originality and creativity. Students should be encouraged to express their opinions boldly. They need to learn to express and defend their opinions while accepting constructive criticism. This study examined practical methods that teachers can use to improve critical thinking skills in post-secondary students.

I. INTRODUCTION

A. Background and Justification

Critical thinking is the ability to think clearly and rationally about what to do or believe. This includes the ability to think reflectively and independently. The ability to think clearly and rationally is especially important for students to achieve their educational goals. If students have critical thinking skills, they definitely have the following advantages:

- Critical thinking improves speaking and presentation skills.
- Critical thinking fosters creativity.
- Critical thinking is essential to self-reflection.

Critical thinking is a metacognitive skill. This is a higher-level cognitive skill that involves thinking about thinking. In Lorin Anderson's Taxonomy of Cognitive Domains (a revised version of Bloom's Taxonomy, adapted

for the 21st century by Lorin Anderson in 1990), "creativity" was placed at the top.

Critical thinking has become one of the most sought-after skills for success in education, life, and work today. The ability to utilize critical thinking cognitive skills and be proactive is a measure of employability in a variety of industries around the world, and is considered essential to the development of informed and solid global citizenship. Nevertheless, educational systems in some countries have developed policies and practices that provide students with opportunities to truly participate in discussion, debate, and evaluative thinking that help develop the skills and mindset of critical thinkers.

Sri Lanka lags behind many countries in many areas for a number of reasons. For these reasons, there is no doubt that the education system is a major factor in our backwardness. Students are forced to pursue mere paper qualifications, thereby missing out on the life skills they need to become productive employees. German Ambassador Dr. Jürgen Molhardt at the Germany-Sri Lanka Economic Council stated: "It's time to turn things around" "Young artisans in shorts, T-shirts and flip-flops like you see in soap operas. They should be respected because they have the technical and technological skills needed in today's industries and markets." Therefore, developing human resources who can think critically and analyze according to today's requirements is a vital factor. It is very clear that our education system needs to undergo many changes. Furthermore, our education system should aim to provide students with analytical skills while encouraging originality and creativity. Students should be encouraged to express their opinions boldly. Public speaking and presentation skills also need to be taught from a young age. They need to learn to express and defend their opinions while accepting constructive criticism.

B. Problem Statement

Even though the concept of critical thinking is an important concept in the field of education, the majority in the field complains that students today are lacking 'creative thinking and further they state that this leads to a lot of related issues in the field of education. Hence, it had been a timely need to enhance the creative skills of students.

C. Research Objectives

In an attempt to measure the validity of this hypothesis and to reach some pedagogical implications, the following objectives are expected to be achieved by the researcher.

- To investigate the awareness of the teachers on the concept of critical thinking.
- To investigate how far teachers focus their teaching on the improvement of critical thinking
- To understand the existing critical thinking power of the students
- To identify the appropriate methods to improve critical thinking
- To observe the results on critical thinking after the usage of these methods

D. Hypothesis

This study, 'Improving Critical Thinking Skills of students in SLIATE: Empirical Evidence and Recommendations' is carried out on the basis of the hypothesis that the critical thinking of the students can be developed by the teacher when s/he uses appropriate methods.

II. REVIEW OF LITERATURE

The wide range of definitions in the literature provides a variety of views on critical thinking. According to the Oxford dictionary (2015), critical thinking is, "The objective analysis and evaluation of an issue in order to form a judgement", whereas according to Davies and Barnett (2015), "critical thinking is about having skills of a certain sort" (p. 7). What is interesting is that the first definition considers critical thinking to be substantive, whereas the second definition describes critical thinking as a set of skills. Many of the definitions refer to critical thinking as a process: "a cognitive activity that involves the use of the mind" (Cottrell, 2005, p. 1); "analytical and argument thinking" (Whitehead, 2004, p. 54); "hunting assumptions" (Brookfield, 2012, p. 7); "a form of self-development" (Barnett, 1997, p. 3), "a disciplined act" (Jones, 2015, p. 169). One of the definitions of critical thinking described critical thinking as the art of thinking about thinking while thinking in order to make thinking better (Paul & Elder, 2006). Lipman (1988) defines critical thinking as, "skillful, responsible thinking that is conducive to good judgement because it relies upon criteria, it is self-corrective and it is sensitive to context" (as cited in Nosich, 2012, p. 3). Ennis (1998) has defined critical thinking as, "reasonable, reflective thinking that is focused on deciding what to believe or do" (p. 16).

III. METHODOLOGY

The main objectives of the study are to identify the methods of developing students' critical thinking skills and to use these strategies to enhance the critical thinking power of the students studying at Sri Lanka Institute of Advanced Technological Education (SLIATE).

A. Participants:

This study took place at the Advanced Technological Institute (ATI) - Kurunegala. The sample was taken from a population of 200 students who were following the Higher National Diploma in English as Full Time students and Part

Time students and the seven permanent lecturers and five visiting lecturers who were conducting the lectures for them.

B. Research Design:

This research is a mixed-method inquiry. A mixed method combines quantitative and qualitative methods in the same study to get a full understanding of the phenomenon under study. This research comes under the category of 'qualitative' as it explores attitudes, behaviour and experiences through methods such as semi-structured interviews. And also, this becomes 'quantitative as this generates through a large-scale questionnaire. Thus, the research can be named mixed-method research.

C. Procedure:

The relevant data for the research was collected from different sources. As this research previewed the concept of critical thinking from two perspectives (i.e. learners' perspective as well as teachers' perspective) both the lecturers and students of higher national diploma in English, ATI, Kurunegala were taken as samples. In the study, the participants were given a questionnaire about the concept of critical thinking. (Two different questionnaires were given separately to the lecturers and the students.) Sample groups to distribute these questionnaires were selected based on the random sampling method which is a very common sampling method under probability sampling. With probability sampling methods, each population element has a known chance of being chosen for the sample. Under this method, randomly selected 200 students following HND in English at ATI Kurunegala got a chance to answer the questionnaire which was prepared for the students. And also 12 lecturers (permanent and visiting) got a chance to answer the questionnaire which was prepared for teachers. Well-planned semi-structured interviews were chosen for the purpose of allowing an element of flexibility. Semi-structured interviews with teachers were used in this research as another instrument for gathering data. The participants for the interviews were selected based on the purposive sampling technique under the non-probability sampling method. Accordingly, semi-structured interviews were held with the participation of five (05) lecturers who were selected under the purposive sampling technique. Twenty (20) students who were selected according to the purposive sampling method were interviewed in semi-structured interviews with students. Interviews were conducted in the medium of English and they were expected to be audio recorded with the permission of the interviewees. The same participants were taken to gather information about the methods of improving critical thinking skills too. To investigate the methods of improving critical thinking skills, some experimental activities were carried out with the participation of the students and with the support of the lecturers.

The researcher quantified the data gathered from questionnaires and turn them into statistical manipulation with the help of the Statistical Package for Social Science (SPSS). Even though both thematic analysis and content analysis are abundantly used in qualitative data, here in this research the researcher used only the thematic analysis for

qualitative data, she gathered from semi-structured interviews.

IV. RESULT & DISCUSSION

The researcher implemented six methods to enhance students' critical thinking as follows.

A. Develop Various Rules.

Before class begins, teachers should review the class rules. However, rules should not be binding instructions from teachers to students. Rather than imposing demands, it is more effective to discuss the rules of the lesson and give students a say. Students are more likely to act when they feel responsible for the rules.

B. Creating Different Relationships

To make classroom education more engaging, the teacher's role has shifted from being a lecturer to facilitating learning in the classroom. Don't just talk about history or science when students are struggling to pay attention. Their critical thinking skills improve as they learn more actively. Talk about the topic of the day, ask questions about its importance, challenge you and perhaps invite them to talk about something related to the topic that might be of interest to them.

C. Ask Different Types of Questions

Instead of forwarding fact-based questions, teachers can use questions that begin with "why." This will quickly become good questioning practice, as will asking follow-up questions that make the topic more interesting. The questions are designed to encourage students to think critically about people's actions and how similar actions affect the world.

D. Equip Students with a Variety of Skills.

A better approach is to work on students' critical thinking skills by giving them different tasks depending on what skills they need to improve. Assign some students to write about her one topic, and others to prepare an oral presentation on another topic.

E. Give Students Different Types of Tasks.

Giving everyone the task of analyzing Shakespeare's sensational works may not improve students' critical thinking if they produce poor quality work due to boredom. Why not write or talk about a book or article that interests you and have them analyze it? The short stories that interest students may be as silly as Shakespeare's plays with archaic language, but the goal is, among other things, to formulate arguments in a logical, organized, and understandable way. It is to improve students' critical thinking by improving their abilities. in an academically challenging way.

F. Invite a Variety of Students to Collaborate.

In the "real world" people work together on projects, so it's important to assign more group projects. It is not only important to collaborate with friends, but also to help students improve their problem-solving skills by collaborating with students with different personalities and

abilities. It is important to explain to students that successful collaboration provides the basis for working with others on future tasks.

When the researcher integrated the above methods into her teaching, students appeared very energetic and enthusiastic in involving in the lesson. They became very innovative and logical in responding.

V. CONCLUSION

The hypothesis that the critical thinking of the students can be developed by the teacher when s/he uses appropriate methods is true with the key findings of the research. When the researcher implemented the above-mentioned six methods it was apparent that students' critical thinking power improved enormously.

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