

SOME MEASURES DEVELOP CRITICAL THINKING COMPETENCY FOR STUDENT THROUGH TEACHING IN HIGH SCHOOL

Le Quang Dung¹ and Huynh Gia Bao²

¹Physical and Technology team–Go Cong High School, Tiên GiangP rovince, Vietnam

²Faculty of basic science - TienGiang Medical College, TienGiang province, Vietnam

ABSTRACT

Critical thinking is a category of open-minded reasoning. It involves the construction of the right conditions, views and ideas to arrive at the conclusion of the problem. Critical thinking capacity determines the effectiveness of educational activities, the learning outcomes of students, lecturers and in the global education system. With the special importance of the problem, this article presents some measures to develop the capacity of critical thinking for students through teaching in high school.

Key Words: Competence, Capacity development, critical thinking, students.

1. INTRODUCTION

The capacity of critical thinking is an important capacity in learning, research and life, helping students to be autonomous and confident in receiving and processing information. A fully developed person needs to have the ability to think critically, to be able to meet the increasing demands of the society towards forming a global citizen is an urgent requirement of the education sector [1]. The problem of developing critical thinking capacity for students is one of the important requirements in general education. Accordingly, students are not only equipped with knowledge and skills, but also must know how to apply that knowledge and skills to solve problems and create; Not only know how to absorb passive knowledge, but must know how to present their own views and opinions in solving problems and tasks in practice.

Moreover, nowadays, the strong development of audiovisual means makes people sometimes overwhelmed in the sea of information. Students need to develop their critical thinking capacity to choose and master information to succeed in learning and research as well as in everyday life. Therefore, researching the problem to find out measures to develop the capacity of critical thinking for students is a work of profound theoretical and practical significance.

2. CONTENT

2.1. Research history of critical thinking

21.1. In the world

Critical thinking is the kind of higher order thinking. 2000 years ago, Socrates was the person laying the foundations for critical thinking. He focused on the principle of questioning to approach the truth, to evaluate truth by reason. The theory of critical thinking is studied deeply in

the modern world. J.Dewey (1859-1952, USA): The essence of critical thinking is the proactive, comprehensive consideration of information before making judgments. The key element in critical thinking is the ability to reason. Inheriting the achievements of J.Dewey, many other scholars around the world have studied critical thinking in a comprehensive way [2]. Author Robert J. Stenberg (1980), identified the characteristic elements of critical thinking, in which the important skill of critical thinking is problem solving skills, information processing skillfully. skillful and precise to make meaningful decisions and actions for life [3]. Robert H. Ennis (1993), in his research on "Critical thinking Assessment", argues that critical thinkers have 13 characteristics: tend to, hold opinion, be open, know how to consider comprehensively, know how to seek information, know how to select information, process parts of the whole science, seek reasons, find other options, seeks for a clear affirmation of an issue, uses reputable sources of information, appropriate to the characteristics under consideration, is sensitive to the level and affection of everyone [4].

In the early 21st century, there are many works that continue to study critical thinking such as: Critical thinking of A.Fisher (2001) has listed and analyzed the notions of critical thinking "Tools to change your learning and life". Paul R & Elder Linda (2001) defines critical thinking, affirms the importance of critical thinking, identifies 6 stages of thinking and guides critical thinking in a correct, inclusive and fair way. Mathew Lipman (2003), "Thinking in Education" briefly systematized the notions of critical thinking of other authors, at the same time pointed out the characteristics of the critical thinkers, analyzing some characteristics. essential point of critical thinking: products of critical thinking are judgments, critical thinking is standards-based thinking, critical thinking is self-regulating, critical thinking Show context sensitive [2].

2.1.2. In Vietnam

In recent years, a number of research projects on critical thinking have appeared in Vietnam. The author Le Tan Huynh Cam Giang (2011) with "Critical Thinking - Critical Thinking" has explored the concept of critical thinking, summarizing the views of many scholars around the world on critical thinking including the Factors: concept, distinctive characteristics [2]. With the article "Critical thinking in university studies" (2010), author Huynh Huu Tue outlined four main steps of critical thinking; in which he emphasizes the importance of arguments [5]. Author Do Kien Trung (2012), in the study "Solutions to shape a critical thinking style" analyzed the Vietnamese thinking habits, some basic contents of thinking. critical, thereby pointing out mistakes about the form of critical thinking [6]. In the article "The role of critical thinking in social life" (2016), author Nguyen Thi Tuyet Mai has generalized some issues of critical thinking: concepts, goals, forms of critical thinking, stages of critical thinking process, products of critical thinking, principles, requirements, skills, methods of training critical thinking, characteristics of critics critical thinking, and the great role of critical thinking in social life.

In general, the works in the world and Vietnam continue to aim at clarifying concepts and the expressive characteristics of critical thinking, emphasizing the important role of critical thinking in learning. and life. Critical thinking is an important form of thinking of modern people, which has been paid attention to develop in advanced countries, especially in the field of education.

2.2. Critical thinking and critical thinking capacity

2.2.1. Critical thinking

Derived from the term "Critical Thinking" by the ancient Greek philosopher (Socrates), Critical thinking perspectives and definitions are offered. According to Richard Paul: "Critical thinking is a thinking model - about a topic, a problem, any content, in which the subject of thinking improves the quality of his thinking by controlling a to master the available foundational structures of thinking and to impose standards of intellectual action on his thinking process "[7]. Education researcher Hatcher states: "Critical thinking is the type of thinking that attempts to make a judgment after finding a reliable way to substantially assess all aspects of the evidence and arguments "[2]. And author Nguyen Gia Cau said: "Critical thinking is an important value of personality, is a thinking process including analysis, selection, screening and evaluation of an information, an existing problem with another view to clarify and reaffirm the accuracy of the problem "[8]

Currently, critical thinking is defined as a category of open, unrestricted inference, the number of solutions is unlimited, including the construction of conditions, the views. and the right idea to come to the point of the matter. In other words, critical thinking is a thinking process aimed at questioning certain assumptions or assumptions. People use it to prove that a certain statement is right or wrong, thereby making decisions to solve problems.

2.2.2. Critical thinking capacity

2.2.2.1. Competence

According to the psychologists' point of view: Energy is an individual's psychological property consistent with the specific requirements of a certain activity in order to ensure that the activity is highly effective.

Emphasizing on the performance of the capacity, FE Weinert said: "Competence is the capacity to effectively and responsibly execute actions, solve tasks and problems in the professional fields, social or individual in different situations on the basis of applying knowledge, skills, techniques and experience as well as a willingness to act "[9].

According to the general general education program of the Ministry of Education and Training: "Capacity is an individual attribute formed and developed through the available qualities and the process of learning and training, allowing people to mobilize the total combination of knowledge, skills and other personal attributes such as excitement, belief, will, ... successfully perform a certain type of activity, achieve desired results under specific conditions "[10].

From the above points of view, we believe that: "*Competence is the capacity to appropriately apply a system of knowledge, skills and attitudes to successfully perform a job in a certain context*".

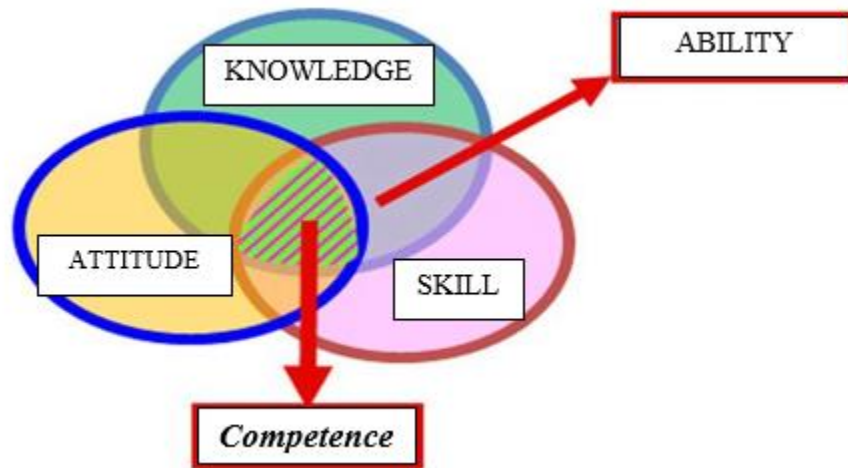


Figure 1.Components of competency

The structure of capacity: According to the structural approach, the general structure of Competence is described as a combination of four component competencies: Professional Competence, Methodological Competence, Social Competence and Individual Competency. The general structure of the competency is depicted by the diagram below:

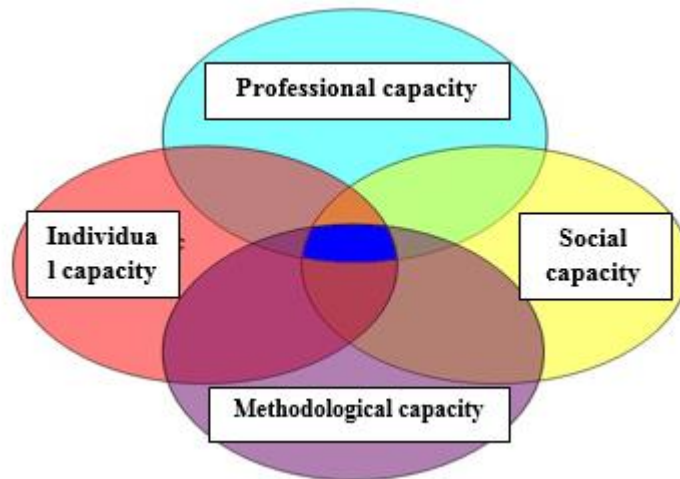


Figure 2.The structural components of the capacity

2.2.2.2. *Critical thinking capacity*

According to Alec Fisher [11]: “The capacity to think critically is the ability to grasp and open up truths to point out lies, to fabricate, to warn misconceptions, risks or possible cases . Appearing needs of criticism, urging subjects to re-aware objects and problems in expertise. The capacity for critical thinking is the ability to detect the inadequacies, irrationalities, ... to be able to perceive it more correctly ”.

According to the author Nguyen Phuong Thao[12], "the capacity of preventive medicine is the ability of human assessment, showing the positive human interaction with the surrounding

world"

Based on the concept, characteristics of competency and critical thinking analyzed above, we conceive: Critical thinking capacity is the synthesis of the ability to reason, analyze, evaluate, relate all aspects of an existing information with a positive skepticism to solve the problem posed, in order to make a clarifying decision, reaffirming the accuracy of the problem with valid arguments.

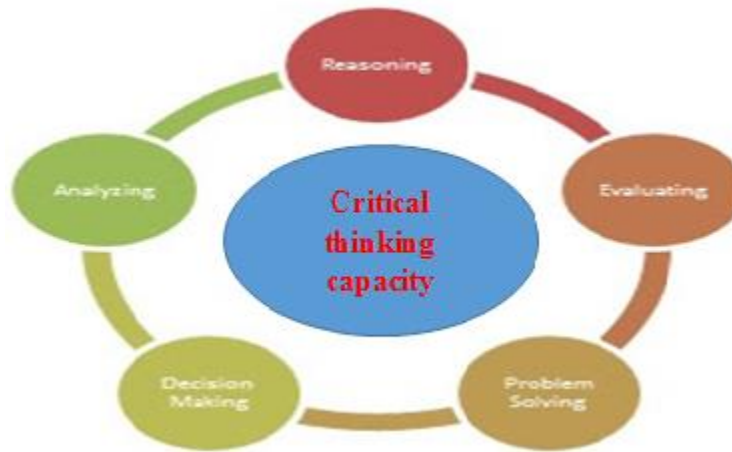


Figure 3.The Critical thinking capacity

Developing the capacity of critical thinking, students will gain a lot of benefits: Out of the patterned, one-way thinking way to try towards new things in science, get out of the way of thinking. , motivates them to always want to ask questions and answer their own way of thinking. When objecting to others' opinions, students will know how to present their opinions with convincing arguments, peaceful attitude, proper gestures, creating a cheerful argument environment.

2.2.2.3 The factors of critical thinking capacity

Critical thinking skills: Is a tool to think and build arguments in a logical, creative, systematic manner.

- + Knowledge of expertise: Is the foundation to build solid arguments with a scientific belief.
- + Critical attitude: Demonstrated in knowing scientific skepticism, the desire to verify one's own views, have a spirit of autonomy, independence in thinking, self-adjustment to approach the truth.

2.3. Signs and manifestations of the students' critical thinking ability in teaching

2.3.1. Signs of critical thinking capacity

Students with critical thinking capacity show some of the following signs:

- (1) Knowing carefully and properly considering conditions, relationships between factors when researching a problem or learning a certain task.
- (2) To be able to ask questions about the problems that they still wonder about and must know how to select important problems, propose solutions and express them in a coherent and clear way.

(3) Always consider different information in disbelief, do not rush to draw conclusions about a problem without really understanding it deeply; must know how to select existing information, synthesize and analyze new information to evaluate the validity of how to detect and solve problems.

(4) Ability to define different evaluation criteria and ready to debate on the basis of relevant knowledge. Only assess when we have gathered enough and correct information.

(5) Discover and select information, remove irrelevant information, mistakes in arguments and resolve contradictions in disputes. From there, identifying important, necessary and accurate information to make a decision.

(6) Having the capacity to think creatively, able to state ideas and summarize them in a concise, concise way, to draw conclusions and problem-solving ways in a precise and reasonable way know which rating is the best one.

(7) Ability to adjust opinions and organize activities to achieve the best results in debates on a certain issue, when many opinions are made.

The signs of the capacity of critical thinking above all have an impact relationship, that combination promotes developmental thinking. People who have the capacity to think critically are also creative thinkers.

2.3.2. Showing the capacity of students to think critically

Based on the concept of competency, the signs of critical thinking, we identify the manifestations of students' critical thinking capacity in the following teaching:

- + Ability to evaluate information: collect, select and process information in many different dimensions, weigh them with a positive skepticism, distinguish right from wrong and confounding factors in information. .
- + Having solid, deep and wide knowledge of engineering and technology
- + Knowing to propose suitable and necessary questions and expressing them correctly and clearly to properly understand technical and technological issues
- + Have a multidimensional view of technical issues: have a lot of approaches, consider, consider, carefully issues, different assessments, have the ability to recognize shortcomings and mistakes in opinion.
- + Ability to evaluate opinions, be willing to comment, argue with convincing arguments and an attitude without prejudice.
- + Ability to adjust opinions, correct mistakes in arguments
- + Ability to solve technical and technological problems, propose suitable solutions on the basis of applying knowledge and

The division of manifestations of critical thinking of students in teaching above is only relative. The determination of the above manifestations is the basis for proposing specific measures to develop the capacity of critical thinking in students.

2.4. Some solutions to improve students' critical thinking capacity in teaching

2.4.1. Self-raising awareness of teachers' critical thinking capacity

To develop the capacity of critical thinking for students, first of all teachers must have full awareness and also have the capacity to think critically. In education, the learner is the center besides the role of the orientation for the activities of the teacher. If teachers do not have the

capacity to think critically, they cannot help students develop this capacity. Without the ability to think critically, teachers cannot pose problems and orient students. To do this, teachers must constantly renew their thinking, positive teaching methods and develop their own critical thinking capacity. And more importantly, teachers must be trained since they are students.

2.4.2. Train students the capacity to find information before a problem poses

Before detecting and raising a problem, teachers need to select and know how to ask appropriate and accurate questions to elicit creative thinking and encourage independent thinking of students. Whether an hour of study is successful or not depends greatly on asking questions at the right time and the right problem of the teacher. Teachers need to ask diverse, open questions that elicit students' independent thinking. The question forms are plentiful and diverse such as: The question requires students to answer immediately in the contradiction of the problem or the question requires students to compare and relate with other problems to find out the nature of the problem. subject under study, etc. The problems raised, students can answer in many different ways but must follow a unified methodology based on a scientific basis, rather than subjective, unfounded inference. . At the same time, the teacher is the guide and the right direction for students in terms of both content and method. Teachers often encourage students to present all their ideas and inferences closely and logically. On that basis, students will have the habit of searching for arguments, prove their inferences and form the capacity of critical thinking.

2.4.3 Creating an environment and conditions for students to participate in class discussions and discussions

Discussion is a very important activity during and after the lesson. Through discussing and arguing issues, students can express their own views and opinions, make arguments on the basis of arguments based on the information they have gathered. During class discussion and debate, students will know their opinions, how your ideas are right and wrong, and draw lessons and experiences for themselves. Students are also trained in thinking manipulations when debating such as comparing, analyzing, synthesizing, evaluating, etc. Those are important manipulations of critical thinking.

Another angle, debate and discussion creates opportunities for students to express themselves, forging basic elements of thinking; create confidence in the capacity of the copy and create motivation for students to surpass themselves and assert themselves. During the process of discussion and debate, there may be many opinions being raised Teachers need good direction and create a happy and comfortable atmosphere for students to freely present. The teacher can also create small groups to perform a certain task. Thereby not only developing the capacity of each student but also training the ability to work in groups, listening to others' opinions. This is one of the important qualities of the capacity to think critically

The above measures are the most important measures in developing the capacity of critical thinking for students. These measures must be implemented at the same time, synchronously, in coordination with each other to bring the best results.

3. CONCLUSION

The article systemizes the theoretical basis of the capacity, critical thinking, critical thinking capacity. Identifying the basic characteristics and skills of critical thinking, the manifestation of

the capacity of critical thinking in general Accordingly teaching to develop the capacity of critical thinking is to create conditions for students to express their views. , correct opinions, train them to see how to comprehensively evaluate phenomena in many aspects, with a proper attitude and valid arguments.

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