S. TOULMIN'S ARGUMENT MODEL- BASIS FOR DEVELOPING CRITICAL THINKING COMPETENCY IN TEACHING READING COMPREHENSION: A CASE STUDY OF VIETNAM

Nguyen Dieu Thuong, Nguyen Thi Hoang Giang

University of Education, Thai Nguyen University, Vietnam

ABSTRACT

While critical thinking has been studied extensively with many approaches around the world, in Vietnam, understanding and applying critical thinking in general as well as in specific fields are still limited. This article studies the situation of developing critical thinking competency in teaching reading comprehension of literary texts to students. On that basis, Toulmin's argument model is proposed as a tool for building a system of questions to develop critical thinking competency in teaching reading comprehension.

KEYWORDS: S. Toulmin's model, critical thinking, reading comprehension, literary text

1. INTRODUCTION

1.1. Critical thinking is an important skill for success in any field [4], [6]. The document on critical thinking has its roots in two major disciplines of philosophy and psychology (Lewis & Smith, 1993) which are derived from the Socrates and the Socratic method [9], [13]. In addition, Sternberg (1986) also noted that a third of critical thinking is mentioned in the field of education [9]. The definition of critical thinking is mentioned by most researchers and is summarized in a number of works [2], [5], [7], [9], [13] ...

It can be generalized that critical thinking includes the component skills of analyzing arguments, building arguments using rules of logical reasoning (induction, deduction, and analogy), judgment, evaluation of the correctness, completeness, importance of the relevant data and argument (considering the data, supporting arguments and rebuttals) to make a decision or to solve a problem. In particular, background knowledge is a necessary but not sufficient condition for critical thinking in a particular field. Critical thinking involves cognitive skills, attitudes, or habits of mind (including the ability to fair thinking, sensitivity, inquisitiveness, flexibility, desire to find reasons, eagerness to be understood, respect, and readiness to approach different points of view).

Many researchers on critical thinking argue that critical thinking skills and competencies can be taught. Halpern (1998) provided evidence through two curricula with the aim to improve the skills and critical thinking competency of university students. Kennedy (1991) concluded that teaching and improving students' critical thinking skills, in general, gave positive results. From an analysis of 117 empirical studies examining the effects of instructional interventions on students' skills and critical thinking, Abrami et al. (2008) found that these interventions, in general, have a positive effect. The level of impact and effectiveness depends on the methods, experimental measures, and experimental subjects [9].

In Vietnam, critical thinking has also been mentioned in studies from specific fields in education, including teaching Philology [3], [10], [12]... This process still mainly provides a way to comment and evaluate critical thinking competency based on a number of discrete and unsystematic manifestations, and especially, tools to build and analyze comprehensive assessment. Competency assessments are based on scores and have not been divided into scales associated with thinking processes. In order to evaluate critical thinking competency, it is necessary to examine both the thinking process (the internal - inside the reader's mind and the external interaction with others in the debate process).

1.2. The general objective of Literature in the general education curriculum in Vietnam [14] refers to the task of developing students' critical thinking competency. The objectives of the secondary school program are "through reading and understanding texts, students know how to listen attentively, ask different questions about an object or event. They can also detect and state problematic situations, new and positive elements in the opinions of others, know how to search and select information, form ideas based on existing information sources, know how to recognize, pay attention to evidence, evaluate things from different perspectives when writing and speaking". The objectives of the high school program are "reading comprehension requires the development of critical thinking and formation of independent reading ability".

Reading comprehension is also a cognitive thinking process. For effective analysis and evaluation of reading comprehension, it is necessary to perform the manipulations of the critical thinking process well (the relationship between critical thinking and reading comprehension has been mentioned in [11], [13]). In fact, in the general education curriculum in Vietnam, there is no separate subject for critical thinking. Therefore, basic research to develop critical thinking competency in teaching reading comprehension of literary texts in Vietnam is necessary and urgent.

2. RESEARCH QUESTION

- What is the current situation of developing critical thinking competency in teaching reading comprehension of literary texts for students in Vietnam?
- What are tools to teach and develop critical thinking competency in teaching reading comprehension of literary texts for students?

- Is the tool teacher is using to develop students' critical thinking competency in the process of teaching reading comprehension of literary texts suitable for the thinking process, and has it fully developed the components constituting critical thinking competency?
- What tools can be used to effectively form and develop critical thinking competency for the process of teaching reading comprehension of literary texts?

3. RESEARCH METHODS
3.1. Methods of investigation and survey
To conduct this study, we analyzed the factors affecting critical thinking competency in teaching reading comprehension to students. On that basis, we proposed a survey for teachers and students based on the evaluation criteria for organizing reading comprehension activities with the orientation of developing critical thinking competency.

We conducted a survey based on data collection from google forms (for 70 teachers of Philology and 70 students from a number of schools in the provinces of Thai Nguyen, Cao Bang, Bac Kan, Vinh Phuc, Phu Tho, Tuyen Quang, and Lao Cai).

In addition, we also studied 9 lesson plans of teachers from the above provinces to determine the methods, measures, and models of teaching reading comprehension that the teachers use in practice.

3.2. Methods of interviewing and collecting experts' opinions
This method was used to interview and consult experts (10 experts are university lecturers and researchers majoring in Philology - the subjects of program development and training for teachers).

3.3. Methods of theoretical research
Based on the study of S. Toulmin's argument model and the quality of critical thinking competency, the article analyzes the relationship between S. Toulmin's model and critical thinking competency and proposes a system of questions to develop critical thinking skills.

4. RESEARCH RESULTS AND DISCUSSION
4.1. The need to provide a tool to form, develop and evaluate critical thinking competency in general and in teaching reading comprehension in particular
The results of the survey show that there are many factors affecting the critical thinking competency of students in Vietnam, such as family, culture, personality, logical thinking, background knowledge, and teachers' competency for teaching organization to develop critical thinking in reading and understanding literary texts... For the question "Besides personality and context factors, what other factors hinder the reading comprehension of students? If yes, please specify". There are 11 in 70 opinions could not express their views, 15 in 70 said that there were no other factors affecting, only 2 said that the method of teaching is very important. According to the theory, the teachers' competency in organizing teaching has a directional role, which can affect the remaining factors. Thus, most

teachers have not paid enough attention to their role in developing critical thinking competency in teaching reading comprehension to students.

According to the interview results, 100% of experts said that teachers have been equipped with a number of methods, measures, and techniques to organize teaching and develop common competencies for students in combination with reading models (top-bottom, bottom-top, combination of top-bottom and bottom-top or interactive reading model). However, the practical application is still limited, especially for old and ethnic minority teachers. In the past decade, Philology teachers have been trained to apply Bloom's Revised Taxonomy to set standard output levels for the subject. In theory, based on taxonomy, teachers can develop students' critical thinking competency by building a system of appropriate questions. However, these questions are often not systematically, closely, and thoroughly considered in terms of all aspects of the problem with specific tasks (this is reflected in 9 lesson plans). Forming critical thinking competency based on the taxonomy reveals many limitations. For example, to assess learners' ability, teachers often ask questions that define, analyze, apply, and evaluate but these questions belong to different contents without considering the continuity in specific content and task. Teachers do not thoroughly devise a system of concentric questions which is aimed at solving a common task. The application of this scale has not actually seen the wholeness, the close relationship between the layers of meanings in the text and the thinking process.

In addition, 57.1% of teachers surveyed said that they were still confused about the concept of "critical thinking". Teachers who thought that they understood critical thinking (accounting for 42.9%) did not specifically explain their understanding of this concept. It is 42.9% of these teachers when answering open-ended questions about the components of critical thinking or the relationship between critical thinking and reading comprehension... showing that they have not really understood as they claimed. For the assessment perspective on the relationship between critical thinking ability and reading comprehension performance, most of the teachers considered it to be influential. However, 8.6% of respondents thought that critical thinking has little effect on reading comprehension results. Through other related answers, it can be seen that teachers still attach great importance to forming knowledge for students and the testing and evaluation have not yet properly and fully assessed learners' abilities (This is similarly reflected in the survey results for students). Therefore, in the last survey question (about the suggestions and wishes of teachers for developing critical thinking competency in teaching reading comprehension for students), besides 62.9% had no comment or they needed time to think, 13.4% had the opinion that they needed to be trained in critical thinking, especially they needed a specific tool with clear processes to form, develop and evaluate critical thinking for students. The above situation requires finding effective tools suitable for practical needs.

4.2. S. Toulmin's model - the basis for developing critical thinking in teaching reading comprehension
4.2.1. S. Toulmin's six-element model of argument structure

The structure of the argument according to S. Toulmin's model consists of six components: data, warrant, claim, qualifier, rebuttal, and backing of warrant. This argument model is presented in the following diagram:
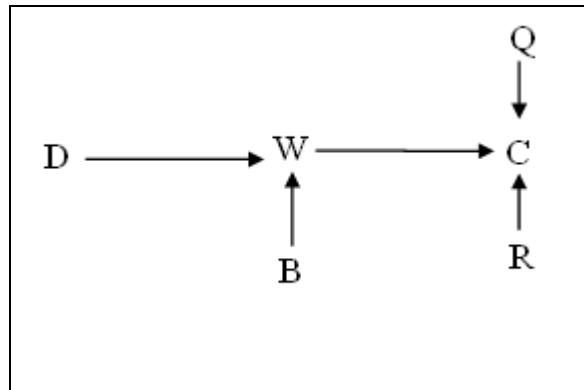
The role of the components in this argument model is considered in detail in [11].

4.2.2. The relationship between S.Toulmin's model and critical thinking in teaching reading comprehension

S.Toulmin's model can be applied to build, test predictions, consider, analyze, explain possibilities, evaluate, and confirm opinions/opinions (explicit and implicit meanings) related to reading comprehension of literary texts. Identifying components in S. Toulmin's argument structure (associated with the levels of Bloom's Revised Taxonomy) can contribute to helping students draw conclusions that are appropriate to reading comprehension tasks with a dialectical view. Then, the entire reading comprehension text is a major argument. Each reading comprehension task is the minor argument that is the basis of proof for the final conclusion in the major argument. The text is layers of arguments, therefore, in order to have good critical thinking, at any level of reasoning, it is necessary to consider the factors according to S.Toulmin's diagram.

Consider the following case:

In the excerpt "Thuy Kieu repays favor and revenge" (Excerpt from the work: Tales of Kieu - Nguyen Du [Philology 9- Volume 1]), there is content that shows Thuy Kieu "repays favor" to Thuc Sinh and "revenge" Hoan Thu. The task of reading comprehension is to learn about the character of Hoan Thu (through the excerpt). In order to draw conclusions about this character, it is necessary to make different predictions when dealing with the text. For example, some people think that Hoan Thu is a smart and wise person. Other people think that Hoan Thu is a cunning and terrible person. To make a convincing argument, students need to answer the following questions in the following order:

- How does the excerpt show the character of Hoan Thu? (Answering this question means that the student *has identified data for a generalized conclusion*).

The convincing answer will be the character of Hoan Thu is shown in this excerpt through a dialogue with Thuy Kieu. If the student has a different answer and/or *assumes a different answer*, *additional data to support this claim should be identified*:

- In the passage, does Hoan Thu do anything other than verbal actions?

Students identify the words "*rằng*" *(say that)* and "*nghĩ cho*" *(think for)* are actions expressed in words by the character.

There may be students who determine that, in addition to the presentation, Hoan Thu also has actions of "*chẳng theo*" *(do not follow)* and "*gây việc chông gai*" *(cause trouble).*

At that time, teachers/students can ask a question: Is the idea that Hoan Thu still "*chẳng theo*" *(do not follow)* and "*gây việc chông gai*" *(cause trouble)* in this passage true or false? *(a question about data reliability).*

Students can verify by analyzing the language and placing the excerpt in context. Then, the phrases that suggest the above actions are followed by the words "*nghĩ cho'' (think for)* and the position of the excerpt shows that the actions of "*chẳng theo*" *(do not follow)* and "*gây việc chông gai*" *(cause trouble)* are just actions in the past *(students identify data about the location of the excerpt)* and recalled by Hoan Thu. From the *consideration of the above hypotheses*, students can compare the weight of the data and can draw conclusions: in the passage, the character of Hoan Thu is depicted through words *(affirming the correct conclusion).*

The creation of different hypotheses to *test the statement* about how Hoan Thu's personality is expressed is an operation to develop students' *multi-dimensional thinking* ability. At the same time, through that, students have determined *the solidity of the conclusions*.

From the initial assessment, Hoan Thu's personality is expressed through speech acts. Students are directed or self-directed to learn about the relationship between this character's words and personality.

- In the same way, teachers orient or students themselves step by step inference to self-criticize, identify, analyze, and evaluate words that reveal Hoan Thu's personality. *(identify data)*:

To complete this task, students need to ask sub-questions that identify data, warrant, rebuttal, qualifier, or conclusion in the lower-level inference process. For example:

+ What is the purpose presented in Hoan Thu's words?

+ What context are Hoan Thu's words in?

+ What types of speech acts are used by Hoan Thu?

+ What is Hoan Thu's reasoning?

+ How does the reasoning fit into the context of the excerpt?

+ What is the relationship between the data/ reasoning that Hoan Thu raises?

+ Is that reasoning good?

+ What is the role of each type of reasoning in Hoan Thu's argument?

+ What is the most important reasoning?

+ Are there any factors that qualify or refute Hoan Thu's argument?

+ Is Hoan Thu's argument convincing?

+ Analyze the persuasion in Hoan Thu's words.

+ What data confirm that Hoan Thu is a sharp, intelligent and wise person?

+ Is there data to confirm that Hoan Thu is a cunning and terrible person?

+ What is your conclusion about Hoan Thu's personality *shown in this excerpt*?

+ Is your conclusion based on an objective assessment?

+ If you were Thuy Kieu, would you forgive Hoan Thu? Why? If you forgive, what can that confirm about Hoan Thu's argumentative language? If you don't forgive, explain why?

(In this extended assessment task, students can make their own assumptions about two conclusions: *forgive* and *not forgive*, or the teacher can organize two groups to argue.)

4.3. The system of questions to form and develop critical thinking competency in reading and understanding literary texts from S.Toulmin's argument model

4.3.1. Principles of construction

- The system of questions must ensure that the components of critical thinking competency and levels of thinking are associated with the skills of identification, analysis, interpretation, evaluation, and decision-making.

- The system of questions must ensure different cognitive levels associated with the identification, analysis, and evaluation of factors according to S.Toulmin's model.

- The system of questions (about the components of the argumentative diagram) is built on the concentric axis (with the same direction to serve the objectives - argument/conclusion) from the internal structure of the minor argument and argument structure at the textual level.

4.3.2. Process of construction

- Identify reading comprehension tasks for specific texts (general tasks and specific tasks).

- Set out questions to make judgments related to the tasks.

- Formulate questions about elements of S.Toulmin's model to create inferences about initial hypotheses to solve the tasks.

Note: When performing the teaching process, the teacher/student must rearrange the system of questions in the appropriate order (according to the concentric axis and consistent with the lesson progress).

4.3.3. The system of questions to develop critical thinking competency in teaching reading comprehension from S.Toulmin's model

Within the article, we define a system of questions that orient the development of critical thinking competency in teaching reading comprehension of literary texts from S.Toulmin's argument model. Thereby, each group of questions promotes the thinking process to identify, analyze, evaluate, compare, and assert related to the components of S.Toulmin's argument structure (cognitive process, inference process, and confirming conclusion). This system of questions is divided into the following groups. It is noted that this is a definite set of questions for a specific task. Each text can have assigned tasks of different levels. However, a group of questions can be used one after the other, at the respective levels.

- Group of prediction questions to build judgments

This group of questions can help students make judgments - explicit judgments on implicit meanings associated with general and specific tasks to proceed to text discovery. This group of questions could be:

+ What is the subject and theme of the work?

+ What is the explicit meaning and implicit meaning (if any) of the work?

+ What genre is the work written in?

+ How is the layout and structure of the work determined?

+ What is the art of the work?

+ What is the linguistic art used in each paragraph of the work?

+ What is the content of each paragraph?

+ What is the relationship between the passages of the work?

+ What are the author's feelings and attitudes through the language in the work?

- Group of defining questions (data and reasoning- warrant)

From the group of prediction questions, students construct judgments and need to perform the next task of proving the statements made in that judgment. Corresponding data-defining and argumentative questions might be:

+ Based on what basis (what words in the text, details, images in the text, which arguments are used...) that you can identify the topic and theme of the work?

+ On what basis (form, content, characters…) can you determine the genre of the work?

+ On what basis (form of paragraph breaks, story plot content, author's ideological circuit content...) can you determine the layout and structure of the work?

+ On what basis do you think the work has such art?

+ On what basis do you think that the work uses that art?

+ What are the grounds for you to make a statement about the content of each paragraph?

+ On what basis do you determine the relationship between the paragraphs?

+ On what basis do you determine the author's feelings and attitudes?

The data supporting conclusions about genre, texture, art, etc. will depend on the specific work. In terms of argument, students must mobilize background knowledge about the genre, genre characteristics, author, and writing situation to determine the argument - the basis of inference to the conclusion.

- The group of questions to assess the role and strength of each type of data and reasoning (warrant) given for the argument.

From the questions identifying data and reasoning, teachers/students can set up questions that assess the role and strength of each type of data and reasoning:

+ What impact does the data have on the conclusion?

+ What impact does the reasoning have on the conclusion?

- The group of questions to assess the reasonableness, soundness, sufficiency, strength/weakness of the data and reasoning- warrant

+ Is the data (words, details, images, rhetoric devices, etc.) appropriate, reliable, and correct with the given conclusion?

+ Is the reasoning suitable, reliable, and correct with the given conclusion?

+ Are there other data and reasoning that support the conclusion that has not been mentioned?

+ In those data, which data plays an important and key role?

+ Which reasoning plays a decisive role?

- Group of questions to determine the relationship between the data (relevance)

+ How is the data related?

+ Does the data have a positive or negative relationship?

+ Which data has a positive relationship?

+ Which data has a negative relationship?

- The group of questions to identify the backing of warrant

+ Is that warrant strongly supported?

+ Specifically, by what factors is that warrant supported?

- The group of questions to determine the existence of the qualifiers for the conclusion

+ Are the conclusion and hypothesis true for all cases or only under what conditions?

+ Does the conclusion guarantee certainty?

- The group of questions to identify the rebuttals

+ Are there other possibilities that lead to the opposite hypothesis?

+ What are the possibilities that lead to the opposite hypothesis?

- The group of questions to assess the ability to make decisions/ claims/ conclusions after the thinking process (compare and consider the rationality of arguments/judgments)

+ What is the final conclusion?

+ Clearly state an argument to show the final conclusion.

5. CONCLUSION

In fact, the development of critical thinking competency in teaching reading comprehension of literary texts for students in Vietnam still reveals limitations. The development of critical thinking competency is also mainly based on a number of discrete teaching techniques, which do not fully assess the qualities constituting thinking competency. The development of this competency depends on the experience of teachers, which even teachers do not have a deep understanding of. In particular, teachers and students

do not clearly identify useful tools to form and develop critical thinking competency. Within the article, we have shown the relationship between S.Toulmin's argument model and the development of critical thinking competency in teaching reading comprehension of literary texts in general and the case of Vietnam in particular. With this model, teachers can easily see the factors and processes of developing thinking competency in teaching reading comprehension associated with semantic levels - characteristic features of literary texts. On that basis, we have proposed a system of questions to develop critical thinking competency that can be used in teaching reading comprehension of literary texts to students in Vietnam.

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