RESEARCH ON THE RELATIONSHIP BETWEEN READING COMPREHENSION QUESTIONS, BLOOM'S TAXONOMY, AND CRITICAL THINKING COMPETENCE TO ADAPT TO THE PRACTICAL NEEDS OF TEACHING READING COMPREHENSION DEVELOPING CRITICAL THINKING: A CASE STUDY OF VIETNAM

Nguyen Dieu Thuong and Nguyen Thi Hoang Giang
University of Education, Thai Nguyen University, Vietnam

ABSTRACT
The General Education Program in Literature (2018) of Vietnam is oriented toward capacity development for learners. Meanwhile, critical thinking is still a new and difficult problem for Vietnamese teachers. According to the survey results, they do not understand or do not know how to comprehensively assess critical thinking, including assessing critical thinking capacity in teaching reading comprehension. Those teachers assess students' cognitive ability mainly through the system of reading comprehension questions according to Bloom's taxonomy. By qualitative research method, the article has determined the correlation between reading comprehension levels and thinking levels (according to Bloom's taxonomy) and the levels of critical thinking competence, the correlation between reading questions comprehension (according to Bloom's taxonomy)) and the levels of critical thinking competence, the correlation between reading comprehension questions (according to S.Toulmin's model) with Bloom's taxonomy, stages of critical thinking.

Key Words: Reading Comprehension Levels, Reading Comprehension Questions, S. Toulmin's Model, Bloom's Taxonomy, Stages Of Critical Thinking.

1. INTRODUCTION
1.1 Statement of the problem
Many researchers believe that critical thinking is a "skill of the new century", a "core skill of the future", a skill that determines success in one's life. Therefore, critical thinking should be taught to students as an independent or integrated subject. Vietnam has undergone many years of educational reform in the direction of "student-centered" but this transformation still has many limitations. In 2018, the Ministry of Education and Training issued *the General Education Program*. This is a program that represents a change with the point of view of creating a "breakthrough" in education. In particular, the Philology program has shown an awareness of the importance of critical thinking ability. That is emphasized in the goal at the secondary level: "Through reading comprehension, students know how to listen attentively and ask different questions about an object or event. They are able to detect and state problematic situations, new and positive elements in the opinions of others. They know how to search and select information, form ideas based on existing information sources. They know how to recognize, pay attention to the evidence, evaluate things from different perspectives when writing and speaking". Training critical thinking is to train students in the most logical and objective way of thinking and evaluating problems. From there, students can see the problem quickly, easily find the key problem to handle

the problem well, know how to behave, speak, write properly, and be highly persuasive. Thereby, they can enhance the sense of autonomy and responsibility. Thus, the goal of the new general education program has determined that the reading comprehension process is essentially also a critical thinking process.

In reading comprehension, in order to help learners actively and effectively receive the text, teachers need to direct learners to a system of prompting questions associated with reading comprehension tasks. In fact, in teaching reading comprehension, there are still cases of question and answer at a low level of awareness, understanding and application, lacking implicit inference and deep connection.

Survey data in the research work [23], [61] shows that Vietnamese teachers only know Bloom's taxonomy when formulating reading comprehension questions. They are still confused because they do not have an effective and thorough solution to the question: how can they ask the question in order to fully assess the standards of critical thinking? How is the relationship between specific questions and critical thinking levels determined? How can students develop critical thinking competence in teaching reading comprehension? In addition, S.Toulmin's model of argumentation is an effective model that can be used to build a group of questions to develop critical thinking competence that has not been known to teachers yet. Based on this set of specific questions, teachers can develop critical thinking competence in teaching reading comprehension more accurately and effectively.

The above reasons show that it is necessary to determine the relationship between reading comprehension questions according to S.Toulmin's model, Bloom's taxonomy and critical thinking competence to prepare for the process of developing critical thinking competence in teaching reading comprehension for students in Vietnam.

2. RESEARCH METHODS

To determine the relationship between the question system according to S. Toulmin's model, Bloom's taxonomy, and critical thinking competence, we have implemented a qualitative research method. The article presents a summary of critical thinking, manifestations, and cognitive levels through a system of text reading comprehension questions based on S. Toulmin's model and reading comprehension level. From there, we compare and generalize the correlation between reading comprehension levels and thinking levels (according to Bloom's taxonomy) and the performance of people with critical thinking competence, the correlation between reading comprehension questions (according to Bloom's taxonomy) and the performance of people with critical thinking competence, the correlation between reading comprehension questions (according to S. Toulmin's model) with Bloom's taxonomy, stages of developing critical thinking competence.

3. RESEARCH RESULTS
3.1. Critical thinking
3.1.1. Research on critical thinking in the world

The ancient philosopher Socrates emphasized the importance of looking for evidence, rigorously testing arguments and assumptions, analyzing fundamental concepts, and finding the implications of not only spoken language but also action [28]. Later, Aristotle and the Greek skeptics supplemented Socrates' theory by indicating the issue of systems thinking and questioning

to determine the true nature behind what is explicitly shown [28]. Later, there are different interpretations of critical thinking [55], [35], [36], [37], [64], [42].

It can be generalized that critical thinking is not just "critical" opinions as the name suggests. Activities in the critical thinking process typically include stating and defending opinions, using appropriate evidence, making connections between ideas, evaluating, analyzing, synthesizing, categorizing, comparing, pointing out difficulties and ways to overcome. A critical thinking process is considered good when the following criteria are met: clarity, coherence, accuracy, consistency, brevity, relevance, appropriate explanation and reasoning, objectiveness, comprehensiveness and dept. Critical thinking involves many skills, such as the ability to listen and read carefully, the ability to evaluate arguments, the ability to search and uncover the underlying assumptions, the ability to map out the consequences of a statement and the ability to express one's point of view convincingly.

Critical thinking has been studied in different aspects, such as the philosophical aspect, cognitive psychology aspect and educational aspect [35]. From the understanding of critical thinking, some authors have affirmed that critical thinking competence is a collection of meanings within the concept of critical thinking. In general, right from the beginning, scholars around the world have assessed the importance of critical thinking and the need to develop critical thinking competence in learning and life [54]. Richard Paul and Linda Elder defined critical thinking, affirmed the importance of critical thinking, identified the six stages of critical thinking, and guided how to think critically.

In "*Thinking in Education*" (2003) [50], Mathew Lipman generalized the concepts of critical thinking of other authors, and pointed out the characteristics of people with critical thinking, analyzed some essential characteristics of critical thinking. Accordingly, the products of critical thinking are judgments, critical thinking is a type of standards-based thinking, critical thinking is a self-regulating type of thinking and critical thinking demonstrates sensitivity to context [6].

The second research direction on critical thinking is applied research in specific fields. Some studies are applied to develop critical thinking for students and in teaching math, language, reading comprehension... [48], [52], [52] 51], [25], [33] [46], [64]... At that time, critical thinking is the core tool for forming and developing learners' specialized competencies.

In fact, the critical thinking process is also the process of argument [according to 41]. Therefore, some logicians refer to critical thinking through the term argumentation. The authors have developed argument models and built a way to apply arguments in debate (S.Toulmin [59], D. Walton [62]).

3.1.2. Research on critical thinking in Vietnam

It can be seen that, in Vietnam, critical thinking is mainly mentioned in studies from specific fields in education. For example, "The student's critical thinking competence is the ability to perform an action of the nature of exchange in an objective and reasonable manner to solve or identify (true or false) a certain problem, on the basis of observing, analyzing, synthesizing, comparing, interpreting, evaluating and inferring. A person with critical thinking competence needs to know how to confirm the problem, be able to analyze, evaluate and consider different points of view to come up with their own conclusions, arguments, and views, and know how to ask questions. Critical thinking has a close relationship with basic thinking operations (analysis, synthesis, comparison…)

and logical reasoning" [11]. In addition, there are a number of other works that also mention the ways of acquiring critical thinking by Vietnamese researchers such as [10], [13], [15], [16]...

We agree with the view that: "Critical thinking includes the component skills of analyzing arguments, building arguments using rules of logical reasoning (induction, deduction, analogy), judgment, assessment of right and wrong, completeness, importance of data, relevant arguments (considering data, for or against arguments) to make decisions or ways to solve problems. In particular, background knowledge is a necessary but not a sufficient condition for critical thinking in a particular field. Critical thinking involves cognitive skills, attitudes, or habits of mind (including the following abilities: fair thinking, acumen, inquisitiveness, flexibility, propensity to seek reasons, eager to be understood, respected and ready to approach different points of view)" [28].

3.1.3. Stages of critical thinking

The work [54] mentioned the stages of critical thinking development. These stages also reflect the critical thinking ratings from low to high. They have been presented by the author according to the following model:…

To become a critical thinker, we must go through the above stages of critical thinking. These stages can be understood in detail as follows:
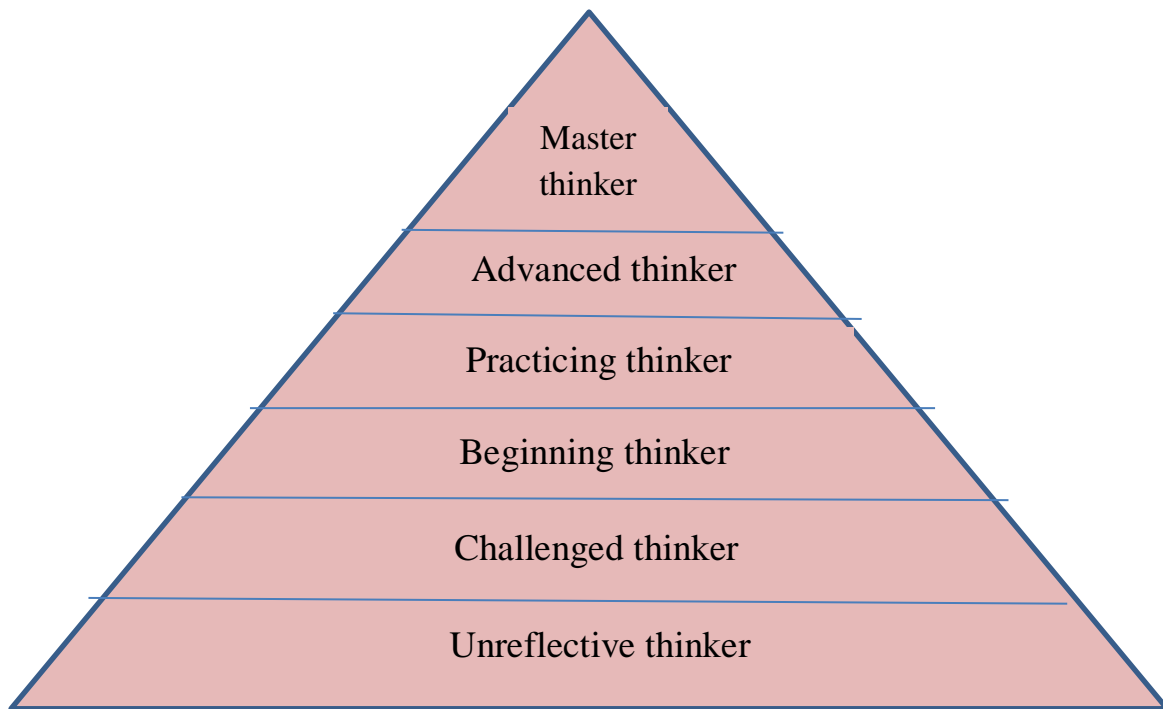

Figure 1. *The stages of critical thinking*

- *Stage 1* (unreflective thinker): do not pay attention to thoughts/opinions. The passive thinker does not know what is important in his thinking.

- *Stage 2* (challenged thinker): always knows how to set "challenges", aware of the "problems" in his thinking.

- *Stage 3* (beginning thinker): try to improve, but don't practice often.
- *Stage 4* (practicing thinker): recognize the need for regular practice.
- *Stage 5* (advanced thinker): progress according to practical experience.
- *Stage 6* (master thinker): mature skills, deep thinking of nature.

Thus, Richard Paul and Linda Elder mainly determined the level of critical thinking of a person according to the process (especially from stages 3 to 6). This is very suitable for assessing the change when it has been experimental for a while to see the change in thinking. To evaluate the practice of solving a particular task, Bloom's scale can be used. Bloom's rating scale also includes 6 levels as shown in Figure 2.
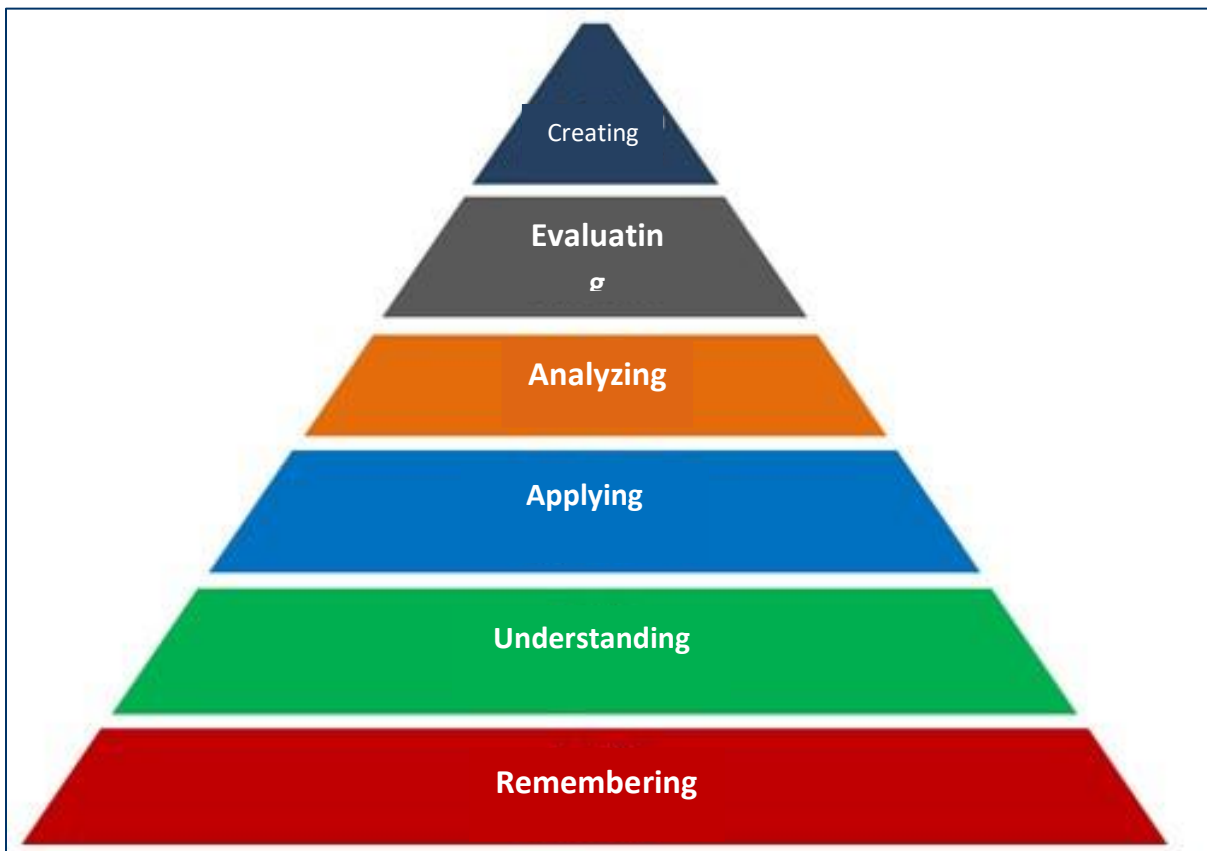

Figure 2. *Bloom's Taxonomy*

- *Level 1* (Remembering): is the ability to record and recall relevant knowledge (mainly about knowledge) (defining, listing, memorizing...).
- *Level 2* (Understanding): is the ability to reinterpret the meaning of the message (describe, recognize, classify...).
- *Level 3* (Applying): is the ability to apply learned knowledge to a situation (proving, explaining, etc.).

- *Level 4* (Analyzing): is the ability to separate the information considered in an overall structure (relationship, comparison, contrast...).
- *Level 5* (Evaluating): is the ability to make judgments based on criteria and standards (evaluating, determining, criticizing, considering...).
- *Level 6* (Creating): is the ability to combine existing knowledge and information into new structures with new information (design, construction, etc.)

3.2. The relationship between critical thinking and reading comprehension
3.2.1. Relationship between reading comprehension, Bloom's taxonomy and critical thinking

Reading comprehension is one of the necessary skills of learners when approaching any text. Reading comprehension is reading combined with the formation of the ability to explain, analyze, generalize, and argue logically, that is, combined with the ability, thinking and expression. In literary works, to read comprehension means that the reader needs to grasp the unspoken things in the text and the vestiges of the unconscious, the associations that illuminate the thinking of the work. When reading, the reader realizes not only the hidden layers of meaning but also the beauty in the art of words, sees things that not everyone can see, knows how to defend the opinions that they perceive in the text. When reading works, they can respect the opinions of others.

Critical thinking is one of the factors that play an important role in teaching reading comprehension because it helps teachers as well as learners not to go into a rut in thinking, go beyond the existing pattern, follow new things, form an active attitude, progress in thinking and action. Critical thinking creates multi-dimensional thinking for learners, avoids subjectivity, one-sidedness. It helps learners listen, respect the opinions of others when debating, try to understand the nature of the problem first and dare to admit the truth of others.

When reading, learners can't just passively receive all the knowledge that the teacher conveys and can't always assume that knowledge they learn is absolutely correct. That is why critical thinking needs to appear and become an integral part of the reading comprehension process. The reading comprehension levels reflect the corresponding thinking levels as shown in the following table:

Table 1. *The table shows the correlation between reading comprehension levels, verbs associated with thinking levels (according to Bloom's taxonomy) and critical thinking ability.*

No.	Reading comprehension levels	Verbs associated with thinking levels (according to Bloom's taxonomy)	Critical thinking competence
1	Literal comprehension	Remembering	Unreflective thinker
2	Interpretertive comprehension	Understanding	Unreflective thinker / Challenged thinker
3	Application and reaction	Applying	Beginning thinker
4	Critical analysis	Analyzing	Practicing thinker
5	Evaluative Comprehension.	Evaluating	Advanced thinker

6	Creative thinking	Creating	Master thinker

3.2.2. Relationship between reading comprehension questions according to S.Toulmin's model, Bloom's taxonomy and stages of critical thinking

In the article [61], we have generalized the system of reading comprehension questions into groups according to the elements required in S.Toulmin's argument structure. So, the questions are: *How can these questions develop critical thinking competence in the process of teaching reading comprehension of literary texts? How is the level of critical thinking competence assessed through these questions?* To answer these questions, we can see the similar relationship between the question groups in S.Toulmin's model and the stages of critical thinking development associated with the tasks as follows:

Table 2. *The table shows the correlation between reading comprehension questions (according to S.Toulmin's argument model) with Bloom's taxonomy, stages of critical thinking*

No.	*Reading comprehension questions (according to S.Toulmin's argument model)*	*Bloom's taxonomy*	*Stages of critical thinking*
1	*Group of prediction questions to build judgments*	Understanding	Challenged thinker
2	*Group of defining questions (data and reasoning- warrant)*	Remembering	Unreflective thinker
3	*The group of questions to assess the role and strength of each type of data and reasoning (warrant) given for the argument*	Evaluating	Advanced thinker
4	*The group of questions to assess the reasonableness, soundness, sufficiency, strength/weakness of the data and reasoning- warrant*	Evaluating	Advanced thinker
5	*Group of questions to determine the relationship between the data (relevance)*	Analyzing	Practicing thinker
6	*The group of questions to identify the backing of warrant*	Analyzing	Challenged thinker
7	*The group of questions to determine the existence of the qualifiers for the conclusion*	Evaluating	Advanced thinker
8	*The group of questions to identify the rebuttals*	Evaluating	Advanced thinker
9	*The group of questions to assess the ability to make decisions/ claims/ conclusions after the thinking*	Evaluating/ Applying	Master thinker

	process (compare and consider the rationality of arguments/judgments)		

In specific cases, based on table 2 above, by determining which group the questions belong to, teachers can also provide evaluation criteria for critical thinking and rating scales appropriate to the right level of development according to competence. Thereby, there will be measures of positive impact in depth.

4. CONCLUSION

By studying the nature of critical thinking, and levels of reading comprehension, Bloom's taxonomy, the article has determined the relationship between reading comprehension questions according to S. Toulmin's model, Bloom's taxonomy, and stages of critical thinking. This is the necessary basis for Vietnamese teachers to understand these basic concepts. In addition, teachers can apply the practice to build rubrics to assess learners' competence and propose specific measures to orient the development of critical thinking in teaching reading comprehension.

REFERENCES

References in Vietnamese

1. Ministry of Education and Training (2018), Overall General Education Program, Available: https://moet.gov.vn, [Accessed: Oct.10, 2021].
2. Nguyen Gia Cau (2013), "Promoting and developing critical thinking for students in the teaching process", Viet Nam Journal of Education (311), pp.27-29.
3. Nguyen Duc Dan (2021), "Introduction to the S.Toulmin argument model", Viet Nam Journal of Linguistics, No. 01, pp.34-44.
4. Nguyen Thi Anh Dao (2017), "Developing critical thinking capacity for students in teaching Vietnamese short stories in the period after 1975, grade 12 Literature program", Master's Thesis, University of Education Education, National University.
5. Le Tan Huynh Cam Giang (2011), "Understanding critical thinking", Available: https://www.nguyenthanhmy.com/courses/2013/Tu_Duy_Phan_Bien.pdf, [Accessed: Nov.15, 2021].
6. Truong Thi Giang (2019), "Training critical thinking in teaching social discourse literature for good students", Available: https://text.123doc.net/ document/5573064, ren-luyen-tu-duy-phan-bien-trong-day-hoc-van-nghi-luan-xa-hoi-cho-hoc-sinh-gioi-van.htm [Accessed: Feb.3, 2022].
7. Pham Thi Minh Hai, "A brief introduction to Toulmin's argument model", Science Journal (16), Ho Chi Minh city University of Education, No. 5, 2019, pp.186-190.
8. Nguyen Thanh Hung (2002), Reading and receiving literature, Publishing House. Education, H.
9. https://zim.vn/ky-nang-tranh-bien-la-gi-va-cac-ky-nang-tranh-bien-can-co, [Accessed: Oct.10, 2021].
10. Cao Kieu Khanh (2020), "Developing critical thinking capacity in creating social discourse texts for high school students: some studies from Vietnam", Viet Nam Journal of Education (484)), pp.28-31.
11. Nguyen Thi Kieu (2020), "Developing critical thinking capacity for primary school students in teaching Mathematics", Viet Nam Journal of Education (477), pp.32-36.

12. Nguyen Thi Hong Nam, Duong Thi Hong Hieu (2016), Textbook of Methods of Teaching Text Reading, Can Tho University Publishing House.

13. Bui The But (2010), Promoting students' critical ability in teaching literature, Available: https://hocthenao.vn/, [Accessed: Oct.10, 2021].

14. Tran Thi Ngoc (2020), "Some methods of teaching reading comprehension of multimodal texts in Literature", Viet Nam Journal of Educational Science (31).

15. Nguyen Van Thai (2020), "Some measures to develop critical thinking capacity in teaching reading comprehension of the text "Chiếc thuyền ngoài xa" by Nguyen Minh Chau", Viet Nam Journal of Education (469), p. .27-30.

16. Nguyen Thi Le Thanh (2019), "Using debate activities in teaching reading comprehension texts to develop critical thinking and critical capacity for high school students", Viet Nam Journal of Education (2019) 259), p.197-200.

17. Do Ngoc Thong, Bui Minh Duc, Do Thu Ha, Pham Thi Thu Hien, Le Thi Minh Nguyet (2019), Teaching and developing Literature in high school, Hanoi National University of Education Publishing House.

18. Bui Loan Thuy (2012), "Teaching and practicing critical thinking skills for students", Journal of Development and Integration (7), pp.76-80.

19. Bui Loan Thuy, Pham Dinh Nghiem (2012), Curriculum for critical thinking skills and problem solving skills, UEF.

20. Dang Thi Da Thuy, Nguyen Thi Dieu Phuong (2020), "Designing questions to practice critical thinking for students in teaching Ecology (Biology 12)", Journal of Education, Special Issue April, 2020, pp.143-148.

21. Nguyen Dieu Thuong (2018), "Introduction to research trends on arguments (Part 1)", Viet Nam Journal of Dictionaries and Encyclopedias (06), pp.24-29.

22. Nguyen Dieu Thuong (2022), "Arguments on the National Assembly forum through questioning sessions", Doctoral dissertation, Thai Nguyen University of Education.

23. Nguyen Dieu Thuong (2022), "Developing critical thinking and debating capacity in teaching reading comprehension of literary texts for junior high school students", Basis thesis, CS.2021.09, Thai Nguyen University of Education.

24. Do Kien Trung (2012), "Solutions to shape a critical thinking style", Available: http://thuvienso.vanlanguni.edu.vn/handle/Vanlang_TV/ 21215, Accessed Mar. 14, 2022.

25. Huynh Huu Tue (2010), "Critical thinking in university learning", accessed April 15, 2021, https://vnu.edu.vn/btdhqghn/?C2140/N9921/Tu-duy -phan-bien-trong-hoc-tap-dai-hoc.htm.

26. Lam Thi Thanh Tuyen, Tran Thi Nau (2016), "Developing critical thinking capacity for students through teaching reading comprehension in Literature subject", Journal of Education and Society (66), pp. 33-36.

References in English

27. Abdulmohsen S.Aloqaili (2012), The relationship between reading comprehension and critical thinking, Journal of King Saud University- Language and Translation, Issue 24, pp.35-41.

28. A brief history of the Idea of critical thinking, Available: http://www.criticalthinking.org, [Accessed: April.15, 2021].

29. Alec Fisher (2001), Critical thinking, An Introduction, Cambridge University Press, United Kingdom.

30. Anahuac Valero Haro, Omid Noroozi, Harm Biemans & Martin Mulder (2022) "Argumentation Competence: Students' Argumentation Knowledge, Behavior, and Attitude and their Relationships with Domain-Specific Knowledge Acquisition", Journal of Constructivist Psychology, 35:1, pp.123-145, DOI: 10.1080/10720537.2020.1734995

31. Cheak, M., J. (1999). The development and field testing of an instrument designed to measure critical thinking in environmental education. Carbondale, IL, Marie Jaegle Cheak.

32. Courtney, R. M. & Simpson, R. E. (2002). Critical thinking in nursing education: Literature review. International journal of nursing practice, 8 (2), pp. 89-98.

33. Dehler, G. E., Welsh, M. E., & Lewis, M. W. (2001). Critical pedagogy in the _New Paradigm'. Management Learning, 32(4), pp. 493–511.

34. D'Souza, C. (2013), "Debating: a catalyst to enhance learning skills and competencies", Education + Training, Vol. 55 No. 6, pp. 538-549.

35. Emily,R.Lai. (2011), Critical thinking: A Literature review, Research Report, Pearson Publishing.

36. Edward M. Glaser. (1941). An Experiment in the Development of Critical Thinking, Teacher's College, Columbia University.

37. Facione, P. A. (1990). Critical thinking: A statement of expert consensus for purposes of educational assessment and instruction—The Delphi report. Millbrae, CA: California Academic Press.

38. Facione, P.A. (2007). Critical thinking: What it is and why it counts. Insight Assessment. Milbrae, CA: The California Academic Press, Available: http://www.insightassessment.com/articles.html, [Accessed: Oct.10, 2021].

39. Fahim, M., Barjesteh, H., Vaseghi, R. (2012). Effects of Critical Thinking Strategy Training on Male/Female EFL Learners' Reading Comprehension. English Language Teaching, 5(1), pp. 140-145.

40. Farhady, H. & Mirhassani, A. (2001). Reading through interaction. Tehran: Zabankadeh.

41. Freeley AJ, Steinberg DL. (2014). Argumentation and debate: critical thinking for reasoned decision making. 13th ed. Belmont, USA: Wadsworth.

42. Florea, N. M., & Hurjui, E. (2015). Critical thinking in elementary school children. Social and Behavioural Sciences, 180, pp. 565-575.

43. Flynn, L. (1989). Developing critical reading skills through cooperative problem-solving. The Reading Teacher, 42(9), pp. 664-668.

44. Gerald M. Nosich, Learning to Think Things Through A Guide to Critical Thinking Across the Curriculum, Prentice Hall Publisher.

45. Ghazali Mustapha. (1998). An Investigation into Teachers 'Questions and Tasks to Develop Reading Comprehension -The Application of the COGAFF Taxonomy in Developing Critical Thinking in Malaysia. Unpublished Ph.D. Dissertation, University of Leicester, U.K.

46. Jenkins, E. K (1998). The significant role of critical thinking in predicting auditing students' performance. Journal of Education for Business, 73 (5), 274.

47. Kyung Hee Chun, Young Hwan Lee (2015), "Improvement of debate competence: an outcome of an introductory course for medical humanities", Korean Journal of Medical Education, DOI: 10.3946/kjme.2016.13.

48. Lehmann, I. J. (1963). Changes in critical thinking, attitudes, and values from freshman to senior years. Journal of Educational Psychology, 54(6), pp. 305-315

49. Lipman, M. (2003). Thinking in Education (2nd ed.). Cambridge: Cambridge University Press, Doi:10.1017/CBO9780511840272.

50. Lipman, M. (2003). Frontmatter. Thinking in Education (pp. I-Iv). Cambridge: Cambridge University Press.

51. McMillan, J. H. (1987). Enhancing college students' critical thinking: A review of studies. Research in Higher Education, 26 (1), pp. 3-31.

52. Pascarella, E. (1985). College environmental influences on learning and cognitive development: A critical review and synthesis. In J. Smart (Ed.), Higher education: Handbook of theory and research pp. 123-135, New York: Agathon Press.

53. Paul, R. Elder, L. & Bartell, E. (1997). California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Policy Recommendations: the State of California, California Commission on Teacher Credentials.

54. Paul, R. Elder, L (2002). Critical thinking: Tools for Talking Change of your learning and your life, Financial Times Prentice Hall.

55. Paul, R. Elder, L. (2005). Critical thinking standard, Available: https://www.criticalthinking.org/files/SAM_Comp%20Stand_07opt.pdf, [Accessed: April.17, 2021].

56. Paul, R. Elder, L. (2008), The Miniature Guide to Critical Thinking Concepts and Tools, Foundation for Critical Thinking Press.

57. Paul,R, Elder, L. and Bartel,T; Reza Vaseghi, Reza Gholami, Hamed Barjesteh (2012), Critical Thinking: An Influential Factor in Developing English Reading Comprehension Performance, Advances in Asian Social Science (AASS) 401 Vol. 2, No. 1, 2012, pp.401-410.

58. Reynders, G., Lantz, J., Ruder, S.M.*et al.* Rubrics to assess critical thinking and information processing in undergraduate STEM courses. Ị STEM Ed7, 9 (2020). DOI: 10.1186/s40594-020-00208.

59. Toulmin, S. E. 1958. *The Uses of Argument*. (first edition). Cambridge: Cambridge University Press.

60. Thanh, P. T. H. (2010). "Implementing a student-centered learning approach at Vietnamese higher education institutions: Barriers under layers of Casual Layered Analysis (CLA)". *Journal of Futures Studies*, 15(1), pp. 21-38

61. Thuong, N.D, Giang, N.T.H (2022). "S.Toulmin's argument model- basis for developing critical thinking competency in teaching reading comprehension: a case study of Vietnam", *International Journal of Education and Social Science Research (IJESSR)*, 5 (2): 377-388 , DOI: http://dx.doi.org/10.37500/IJESSR.2022.5224

62. Walton, D. 2008. *Informal Logic: A Pragmatic Approach*. (second edition). Cambridge: Cambridge University Press.

63. Nancy Njiraini, (2016), *Critical thinking as a core competence for the future*, Available: https://www.dvv-international.de/en/adult-education-and-development/editions/aed-832016-skills-and-competencies/section-4-this-is-what-you-need/critical-thinking-as-a-core-competence-for-the-future, [Accessed: Oct.10, 2021].

64. Simpson và Courtney, 2002) Simpson, E., & Courtney, M. (2002). Critical thinking in nursing education: Literature review. International Journal of Nursing Practice, 8, pp. 89-98, DOI: dx.doi.org/10.1046/j.1440-172x.2002.00340.x

65. Snider AC. "The code of the debater: introduction to the way of reason" [Internet] Debate Central; 2004, Available: http://debate.uvm.edu, [Accessed: Sep. 1, 2021].

66. Shin H. "A case study on "presentation and debate" course of Sookmyung Women's University for leadership and communication skill". Proceedings of the Korean Speech & Communication Academic Symposium; [place unknown]: Korean Speech & Communication Association; 2006. pp. 92-119.

67. Vaseghi, Reza & Gholami, Reza & Barjesteh, Hamed (2012). "Critical Thinking: An Influential Factor in Developing English Reading Comprehension Performance". *Advances in Asian Social Science (AASS)*. No.2. pp.401-410.

68. Yingjie Li, "Critically Question 'Questions on Critical Thinking'", *English Language Teaching*, Vol.13 No 6 (2020)

69. *15 Questions to Encourage Crithical Thinking*, Available: www.hunschool.org, [Accessed: Sep. 1, 2021].