

**21ST CENTURY LEARNING FRAMEWORK: USING CONTEXTUAL TEACHING AND LEARNING TO ENHANCE STUDENT CRITICAL THINKING SKILLS**

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**ABSTRACT**

Innovation learning is needed to improve students' critical thinking skills. In the 21st century, critical thinking skills are one of the life skills that students must have to be ready to compete in the global world. This study aims to explore the potential of implementing contextual teaching and learning approaches to improve students' critical thinking skills. The result of the study showed that applying the CTL approach to learning could improve students' critical thinking skills, characterized by increased students' ability to identify problems, analyze, conclude, provide an in-depth explanation, evaluate, and self-regulation.

**KEYWORDS:** 21st Century Learning, Contextual Teaching & Learning, Critical Thinking

**1. INTRODUCTION**

Critical thinking skills are one of the skills that students must have in the 21st century. The 21st century is characterized by the rapid development of information and communication technology. It demands the world of education to prepare human resources with global competitiveness, namely the generations that are critical, creative, innovative, and communicative. Among these skills, critical thinking skills are basic skills that are essential for students to have before developing other skills.

Critical thinking skills can be integrated into school learning processes so that students are accustomed to using their critical thinking early on, not only to solve problems related to learning materials, but also to solve problems related to daily life. Students who are accustomed to using their critical thinking skills will be more sensitive to the problems surrounding them and try to find alternatives to solving those problems. Decision-making of solutions taken was also accompanied by strong reasons and proofs and have been considered good and bad.

Integrating aspects of critical thinking skills in learning will be easier through a precise learning approach. Contextual Teaching and Learning (CTL) is one of the learning approaches that can improve your critical thinking skills (Johnson, 2002). The study aims to analyze the relationship between contextual learning components and aspects of critical thinking skills that can be improved.

**2. LITERATURE REVIEW**

The 21st century is known as a century that demands its generations to be a qualified generation and be able to compete in the global world (Wijaya, Sudamulet, & Nyoto, 2016). The 21st century is characterized by the rapid development of information and communication technology. In this

regard, one of the challenges in education is to prepare quality human resources. To be a qualified generation, 21st-century generations must possess 21st-century skills. Trilling & Fadel (2009) describe 21st-century skills in a scheme called 21st-century Knowledge-skills rainbow. These three skills include (1) Life and career skills, (2) Learning and innovation skills, and (3) Information media and technology skills.

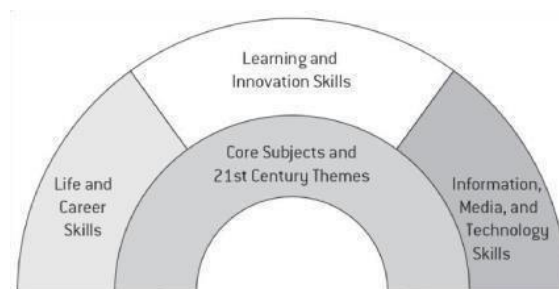


Figure 1. 21st Century Knowledge-Skills Rainbow  
Source: (Trilling & Fadel, 2009)

Further, Trilling & Fadel (2009) explain that through life and career skills, students are expected to adapt and establish good relations with the environment and surrounding communities. Through learning and innovating skills, students are expected to overcome problems using a critical, systematic, innovative, and creative way of thinking and being able to communicate and collaborate well. Through the mastery of technology and information media skills, students are expected to be able to utilize information and communication technology effectively and efficiently and be able to develop creative and innovative information and communication technology media. It is in line with the opinions of Osman, Hiong, & Vebrianto (2013) stating that the skills of the 21st century have five primary domains: digital literacy, intensive thinking, effective communication, high productivity, and spiritual and moral value. According to the Partnership for 21st Century Skills Framework, competencies that must be mastered by students include critical thinking skills, creative thinking skills, communication skills, and collaborative skills known as 4C Competence (Zubaidah, 2018).

Based on experts' opinions on the skills of the 21st century, it can be known that one of the most important skills is critical thinking skills. Ennis (2011) defines critical thinking skills as the ability to reflective and reasoned thinking as a basis for decision-making about a thing to believe or do. According to Zubaidah (2018), critical thinking skills are a fundamental skill in solving problems. Through these skills, a person will be able to examine and find solutions to problems that occur in his/her life. Changwong, Sukkamart, & Sisan (2018) also explain that students who master critical thinking skills will get better learning outcomes than students who have low critical thinking skills. To find out the level of students' critical thinking skills, Facione (2015) formulated six-core critical thinking skills that can serve as an indicator of students' critical thinking skills. The six indicators are

(1) interpretation, (2) analysis, (3) evaluation, (4) inference, (5) exportation, and (6) self-arrangement.



**Picture 2. Core Critical Thinking Skills**

**Source: (Facione, 2015)**

Interpretation is a skill to understand and reveal the meaning of various experiences, situations, data, events, statements, rules, or criteria. Analysis is a skill to identify inferential relationships between statements, questions, concepts, and all forms of representation of data or events. The evaluation is a skill to assess the credibility of a statement or representation of a person's perception of an incident. Meanwhile, the inference is a person's skill to identify specific things needed as a basis for decision making. In addition, critical thinking skills are also characterized by a person's skill to provide a specific and thorough description or explanation of a thing, or so-called explaining/explanatory skills. Lastly, the level of students' critical thinking skills can be seen from his or her skills in monitoring his or her activities or called self-regulation (Facione, 2015).

Given the importance of critical thinking skills for students, learning at school should not only aim to improve cognitive learning outcomes but also aims to cultivate students' critical thinking skills. Synder & Synder (2008) state that critical thinking skills are a type of skill that can be learned. The ways to help improve students' critical thinking skills are through a learning strategy that invites active students to use their critical thinking skills, focus on the learning process, and use more challenging assessment techniques for students to think harder. Further, Burbach, Matkin, & Fritz (2004) add that students' critical thinking skills could be improved through active learning.

One of the learning strategies that can be applied to improve students' critical thinking skills is Contextual Teaching and Learning (Hasanah, Rosana, & Susilowati, 2016). Contextual Teaching and Learning (CTL) is defined as strategies for teaching materials to students using a variety of activities that invite students to be active in learning so that students can analyze the knowledge they have had

to synthesize new knowledge (Hudson & Whisler, 2012). CTL is also a learning concept that helps teachers find relationships between learning materials and situations that occur in everyday life. In addition, through CTL, students are also more motivated to find the linkage between the knowledge they get in school with the experiences they have in everyday life (Sears, 2003).

CTL can be used to improve critical thinking skills because CTL has components that, if implemented with strategic steps, then students' critical thinking skills can be increased (Johnson, 2002). The CTL components are constructivism, questioning, inquiry, learning community, modeling, reflection, and authentic assessment (Muslich, 2007). Each of these components can improve students' critical thinking skills on specific indicators. The linkage between the CTL component and the indicator of the critical thinking skills can be improved can be seen in Table 1 below.

**Table 1. Linkages between CTL components and indicators of critical thinking skills that can be improved**

CTL Component	Description	Indicators of critical thinking skills
Constructivism	Learning prioritizes the process so that students are able to form new knowledge based on experience and knowledge that has been previously possessed (Hudson & Whisler, 2012).	Interpretation, inference
Questioning	Questioning trains students to be more sensitive to surrounding problems, expanding their insight/knowledge, and improving critical thinking skills (Rashid & Qaisar, 2016).	Interpretation, analysis
Inquiry	Inquiry invites students to find concepts based on investigations/experiments that correspond to the steps of scientific methods and familiarize students with	Interpretation, analysis, explanation, inference

CTL Component	Description	Indicators of critical thinking skills
	critical thinking (Suryant, Arifin, & the Majesty, 2018).	
Learning Community	Learning community increases the level of student thinking, storing information longer, and is responsible for the knowledge they possess (Gokhale, 1995)	Analysis, explanation, self-regulation
Modeling	Modeling presents teachers, students, media, or other learning resources, for example, so that students can better understand abstract concepts (Dance & Rosana, 2019).	Interpretation, analysis
Reflection	Reflection directs students to control their learning activities, and their abilities, also, recognizes shortcomings and benefits during the learning process (Sears, 2003).	Self-regulation, evaluation
Authentic Assessment	Authentic Assessment not only uses diverse assessment techniques and suits student activities but also facilitates students to use high-level thinking to solve more challenging questions (Sears, 2003).	Evaluation, analysis, self-regulation

### 3. CONCLUSION

Based on the literature study above, it can be concluded that one of the skills in the 21st century that needs to be developed is a critical thinking skill. Contextual Teaching and Learning (CTL) is one of the learning strategies that can be applied at school to improve students' critical thinking skills through its seven components.

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