

Enhancing Higher Order Thinking Skills through Utilization of Technology in Social Studies

Hasni^{1*}, Nana Supriatna², Sapriya³, Murdiyah Winarti⁴, Jumadi⁵

¹Departement of Social Science Education, Faculty of Social Science Education, Universitas Pendidikan Indonesia

²Departement of History Education, Faculty of Social Science Education, Universitas Pendidikan Indonesia

³Departement of Social Science Education, Faculty of Social Science Education, Universitas Pendidikan Indonesia

⁴Departement of History Education, Faculty of Social Science Education, Universitas Pendidikan Indonesia

⁵Departement of History Education, Faculty of Social Science Education and Law, Universitas Negeri Makassar

Abstract. This article departs from the author's analysis that, in building a new paradigm of Social Studies Education, learners as human beings are seen as subjects who think, act, are creative, constructive, and manipulative. The abilities that need to be developed in digital learning are: the ability to think related to cognitive aspects with a touch of technology. The purpose of this article is (1) to find out the strategies of social studies teachers in improving high level thinking skills (2) to study social studies material through the use of technology in improving the ability of students to think at a high level. The research method used is a qualitative method with a descriptive explanatory approach. Data collection was carried out through observation, interviews and literature reviews. The data analysis technique used is qualitative descriptive analysis with data collection, data presentation, data reduction and conclusions. The results of the study found that (1) Teachers are able to apply strategies to improve higher-order thinking skills in social studies learning with interpretation, analysis, evaluation and reference (2) Material that can be developed through the use of technology that is able to improve the ability to think at a high level in social studies learning is: Application of the problem solving model as innovative learning in Basic competencies (KD 3.4) with material Integrated pre-literacy life video viewing media and digital literacy.

Keywords: Higher Order Thinking Skills, Technology, Social Studies

1 Introduction

The approach in social studies learning is a way of learning that trains students to have social concerns by developing analytical and critical thinking skills. This research is based on [1] [2], that the development of global information and communication technology in the 4.0 era that changed the world order and had a broad effect on some of the world's society also affected students wherever they were. Social studies educators must take a proactive stance to embrace technologies that allow them to live and learn in a better way than before they had technological innovation [3] [4]. Creative teacher pedagogy is a new paradigm in social studies learning that must be developed in facing challenges in the 21st century [5].

Social studies teachers not only include global issues but also equip skills in responding to the use of opportunities in this era. [6], Creativity for the 21st Century skills offer the development of creativity are: inspiration, imagery, imagination, insight, intuition and incubation. In building a new paradigm of Social Studies Education, learners as human beings are seen as

subjects who think, act, creatively, constructively, and manipulatively. Learning in schools should be educational, educational, arouse children's activities and creativity, effective, democratic, challenging, fun, and exciting. Especially in social studies subjects, which if the teacher is not able to present the material properly and correctly, will make students saturated and boring. [7], that thinking ability consists of critical thinking, creative thinking, and caring thinking. Learning through digital technology towards quality and forms of learning that can be activated through access to digital technology [8].

Teacher skills in the 21st century must be able to answer challenges to equip students with 4 skills 4C [9] namely: communication, collaboration, critical thinking and problem solving, as well as creativity and innovation. Three must-have skills in the 21st century [10]. 21st Century Skills: Learning for Life in Our Times. According to [10] namely: life and career skills, learning and innovation skills, and information media and technology skills. In addition, digital literacy is very necessary in the social studies learning process, by including these skills, teachers facilitate students to

* Corresponding author: hasni@upi.edu

understand local issues that often go unnoticed by teachers and even the developers of the 2013 Curriculum.

But in fact, social studies are not materially an interesting subject and is able to make and build students' personalities well. According to [11] social studies lessons are considered not stimulating or do not train students' ability to think, or there is a presumption that views social studies as a "second grade" lesson that is easier to learn compared to other lessons. This phenomenon according to the author is proven that macro-wise, most learners do not take social studies subjects seriously. This is inseparable from the history of IPS which was originally used as a teaching medium in the formation of good citizens in accordance with the existing concept of citizens. Even though the ability to think critically is a demand of the 21st century that must be possessed [12].

The phenomenon mentioned above, occurred in the school of SMP Negeri 13 Makassar, Indonesia, social studies learning has not been able to reach the level of students thinking creatively. What is learned, known, or known is still limited in memory, the ability to process information has not yet occurred [13]. Therefore, teachers need to help the thinking process of students by demonstrating the concepts being studied by elaborating innovation media in learning. Previous research [14], Technological Pedagogical Content Knowledge (TPACK) in social studies learning is believed to be a role model of learning that is oriented towards change and guidance in the 21st century in responding to the era of knowledge. The results of relevant research also conducted by [15] show that learning media based on information and communication technology can improve student learning outcomes.

To anticipate that this social studies learning will not be saturated and boring for students, it is hoped that creative teachers at SMP Negeri 13 Makassar, Indonesia will be able to create learning conditions that can produce quality learning goals, innovate and analytically motivate. One of them is the use of technological media in the design of teaching materials that are able to train high-level thinking skills. Previous research was only the use of technology in learning and has not yet come to an increase in the ability of students to think at a higher level in social studies learning.

2 Methods and Research Design

This research uses qualitative methods with a descriptive-explanatory approach. This method was chosen as an effort to find a detailed explanation of how the pedagogy of creative teachers at SMP Negeri 13 Makassar, Indonesia in signing material through the use of technology to improve higher order thinking skills in social studies. With the explanatory method, informants are given freedom in exploring social studies material through the use of technology.

The data sources in this study consist of primary data and secondary data. Primary data is a data source that provides data directly or is an original source, is a

social studies teacher at SMP Negeri 13 in Makassar City, Indonesia. While secondary data is data obtained from other sources relevant to the problem [16]. The authors analyze the data using flows [17], with stages of data collection, data reduction, data presentation and conclusions.

3 Finding And Discussion

3.1 Social Studies Teacher Strategies in Developing Higher Order Thinking Skills

Teaching Creative social studies teachers are those who are willing to use their thinking potential to make learning more interesting, meaningful for students in achieving learning goals. Based on the results of an interview of a social studies teacher at SMP Negeri 13 Makassar, Indonesia, that:

In planning high-level thinking learning, the obstacle that often arises is to prepare conditions for student learning characteristics that support the creation of a low-key effective thinking process. This happens, as a result of not being trained in reasoning and there is still a sense of fear of asking questions (Wina, Interview data, Excerpt#1).

According to (Indara, Interview data, Excerpt#2) things that need to be considered in developing higher-order thinking skills in social studies learning:

It lies in the content or material of the learning material and the context of the readiness of the learner. One of the frequently carried out steps provides a previously acquired initial stimulus with the new knowledge to be taught.

In line with the (Rahman, Interview data, Excerpt#3) it is said that :

Critical thinking is a mental process for analyzing or evaluating information. Such information can be obtained from the results of observations, experiences, common sense or communication. Critical thinking is also one of the stages of higher-order thinking. However, this is still difficult because students have not been able to analyze every problem from the material. Despite the difficulties faced by teachers in improving higher-order thinking skills, teachers always strive to provide stimulus in order to stimulate the thinking of students, such as the results of interviews (Wina, Interview data, Excerpt#1), that:

Promoting the ability to think at a high level does lie in the content of the teaching material. If students are not ready to perform high thinking skills, it is necessary to first build a bridge between the low-level thinking process (C1) and the level of "remembering" to high thinking (C4) with the level of "analysis".

The findings above are relevant to [18], that a teacher needs to prepare for a real situation that can stimulate the process of higher-order thinking by creating dilemmas, confusion, challenges and ambiguities from the problems that are planned to be faced by students. The indicators of developing higher-level thinking skills are interpretation, analysis, evaluation and reference [19]. This process can be done by establishing thinking activities with content through

material collaboration, making conclusions, building representations, analyzing and building relationships between concepts [20].

The ability to think at a high level is very urgent, because learners who have a good high level of thinking ability will be able to become critical consumers of science [21]. [22], that learning can be said to be successful and quality if most students are actively involved, both physically, mentally and socially in learning. In the educational process, especially in learning social sciences is the right means of cultivating higher-order thinking skills. This is reinforced by the characteristics of material belonging to the social sciences in the field of social studies studies can be categorized as two general groups, namely the social science structure group and the generalized science structure group [23]. Teachers in intractive teaching can develop affective questioning techniques, conduct creative dialogues and ask questions to students to improve creative thinking skills in dealing with problems [24].

Based on the results of observations, it is still found that social studies teachers at SMP Negeri 13 Makassar, Indonesia has been able to make strategies in improving the high-level thinking ability of students. This was done in order to change the transitional conditions from the habits of the teaching style " speech" and the culture of learning "memorization". This finding is supported by the purpose of social studies education is to help the growth of social scientist thinking and understand its concepts, as well as help the growth of good citizens [25]. The results of the study [26], show that one of the dimensions of student potential that must be developed by the curriculum is intellectual (intelligent) potential. Teachers in intratractive teaching can develop affective questioning techniques, conduct creative dialogues and ask questions to students to improve creative thinking skills in dealing with problems [27] [28].

The strategy is that social studies teachers need to involve students to raise problems that will be discussed in learning, after the teacher has clearly stated the goals to be achieved. It then develops a temporary answer to the problem and collects and analyzes the data, tests the interim answer, draws conclusions and implications and applies it in other situations.

3.2 Social Studies Material through the Use of Technology to Improve the Ability to Think at a High Level of Students

To produce a creative learning process requires the ability of teachers to develop technology-based learning media. There are several innovation-based learning models [29] are problem solving and decision making, inquiry, coloborative inquiry, and social inquiry methods as relevant models in the 21st century and to facilitate students' higher-level thinking skills. This is in accordance with the findings at SMP Negeri 13 Makassar, Indonesia, that so far social studies teachers have used innovative learning models, such as the class VII problem solving model in Basic Competencies (KD 3.4) with material on pre-literacy life. Innovative steps taken through the use of technology in improving

higher-order thinking skills by packaging media-based teaching materials through learning video shows, such as links <https://www.youtube.com/watch?v=0m-yhAzsrU>.

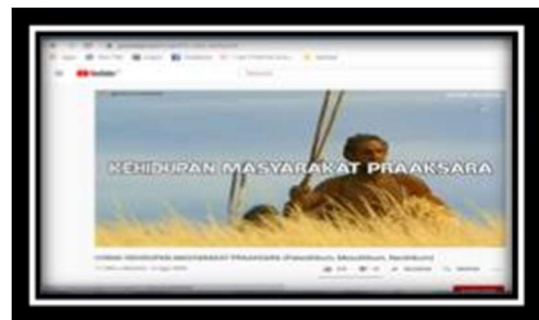


Fig. 1. Sources of processed research results

In addition to the video views above, other sources are also embedded, if students cannot access the video due to the influence of the network with the link: <https://www.kompas.com/skola/read/2020/07/01/180000069/kehidupan-manusia-praaksara-di-indonesia?page>.



Fig. 2. Sources of processed research results

The steps taken by social studies teachers at SMP Negeri 13 Makassar, Indonesia to develop higher-order thinking skills through the use of technology in social studies materials in accordance with indicators: (a) the achievement of listening to videos and digital literacy is the ability of students to understand and analyze material, both in the form of text, images or illustrations, as well as audio visual related to material in everyday life. Indicators (b) analysis, the ability to identify between questions, statements, concepts and facts. Indicators (c) evaluation are the ability to assess a problem that is being faced comprehensively, while the reference indicator (d) is the ability to draw conclusions. This step aligns with starting a higher-order thought process that begins with identifying problems, exploring, prioritizing, and integrating [30].

The above findings are relevant to the abilities that need to be developed in digital learning are: the ability to think related to cognitive aspects, namely (1) knowing the culture, work, environment, and needs of society, (2) solving engineering problems, (3) analyzing engineering systems, (4) designing and making engineering products, (5) knowing, mastering and understanding learning technology, (6) knowing and proficient in computer operations and other learning

technology devices that support learning, (7) know educational techniques using learning technology [31]. The results of a survey conducted by The American Historical Association that, most historians are deeply immersed in the new medium and think critically about its influence on the way they conduct history [32].

The ability to reason based on reading the subject matter (reading), reasoning in the form of understanding (understanding), and reasoning using logic (arithmetic), as found in this study, is appropriate in learning in the 21st century [5]. The ability to design or make things (wrighting) is the core of the way of thinking that puts creativity and innovation as the first order [33].

The use of media in social study learning in the form of videos plays an active role in the learning process that is able to improve the high-level thinking ability of students, and is easy to study material through video presentations and digital literacy media.

4 Conclusion

Based on the results of research and discussion, as for the conclusion and this research, that creative teachers do not only translate the real word problem regarding global issues in various regions of the world. But the teacher must be able to develop the real problem with an environment that is close to the learner. The teacher will invite students to see the problems faced in the surrounding environment through learning the five-M in Curriculum 13 as an effort to improve higher-order thinking skills.

Social studies learning with teacher creativity pedagogy, must be able to facilitate students the ability to create and update (creativity and innovation skills), develop creativity to produce creative and innovative ideas, higher-order thinking skills, solve problems, communicate and cooperate, utilize innovation technology and learn consequently.

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