

LITERATURE STUDY: THE ROLE OF FLIPPED CLASSROOM LEARNING ON STUDENT'S CRITICAL THINKING SKILL IN THE DIGITAL ERA

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Abstract. In this modern era, technology has developed rapidly and spread widely, technology supported by digital platforms is in great demand and has many users and it's increasing from time to time. Many sectors have been integrated with technology, ranging from infrastructure, banking, transportation and many more. The enthusiasm of the wider community for the presence of technology in people's lives cannot be denied anymore because in essence and ideal conditions technology exists to facilitate human life. Education is a sector that has a strategic position to be integrated with technology, this is because so that the goals of education and learning can be achieved optimally and properly. This paper is the result of a literature review conducted by the author to show the role of Flipped Classroom on students' critical thinking skills in the digital era. The purpose of this research is to find out the role of Flipped classroom on students' critical thinking skills in the digital era. This literary study was conducted because the author has an interest in learning models and methods that are relevant in the digital era. The method used by the author in making this article is a literature review. The conclusion from this literature review is that by utilizing technological facilities by using digital-based platforms, especially by using flipped classroom learning in the education and learning process in schools is considered very important in its influenced on students' critical thinking skills in schools and the use of technology with digital platforms. Digitalization presumably has an urgency to be intensified and implemented, especially in the digital era as it is today, as students who take part in learning at school at this time are students who live in the digital era.

Keyword: Flipped Classroom, Critical Thinking, Digital

1. INTRODUCTION

In the 21st century, technology is growing rapidly in line with the progress of the times. Therefore, students in schools as the younger generation have the obligation to have various skills that are useful and needed in the 21st century so that they can compete in the global situation. The Importance of 4C skills mentioned in Khoiri, Evalina, Komariah, Utami, Paramarta, Siswandi, Janudin, Sunarsi (2021, hlm. 1) stated that 4C's expertise as a solution to global challenges. One of the skills that students must have is critical thinking skills. This critical thinking ability is one of the 4C competencies. 4C has 4 competencies, Critical Thinking, Communication, Collaborative, Creativity). As stated by Redhana (in Partono, Wardhani, Setyowati, Tsalitsa & Putri, 2021, p.42) The skills that must be possessed by workers in the 21st century include 4C (Critical Thinking, Communiaction, Collaborative, creativity). This is intended so that students are ready to solve any real problems and have competencies for work and social life in the 21st century and become qualified human resources. From several statements stated above, it means, In facing the 21st century, students must learn several skills that can support students in future so all of students be able to be good human being and ready to compete in modern and new times and eras.

In line with the times, technology in the world of education is claimed to be entering its 3rd revolution. This was stated by Fletcher (in Strayer, 2007, pp. 16-17) claims that we are in

the midst of the third technological revolution in education. The first one is development of written language. The second revolution was ushered in by the printing press. This second development in education allow mass production of high-quality inexpensive texts made the content of learning widely available, anytime and anywhere. The third revolution involves the use of computers in education. From this statement it can be interpreted that the technological revolution in the world of education went through 3 phases. The first phase is development through writing. The second phase places more emphasis on printing, in this phase it produces printed teaching materials that can be disseminated and can be reached anywhere and anytime. The third phase is a revolution that uses computers or technology in the realm of education and learning, this makes students have access to good learning materials and learning instructions wherever and whenever.

Therefore, critical thinking skill is one of something important that student have to learn in this era. Therefore, this paper will emphasize more on how to improve critical thinking skills using technological assistance in education, in this case using flipped classroom learning.

2. LITERATURE REVIEW

If we look at the most important advantages of technology, we will find that technology was created to make human life easier. Technology is also expected to be able to solve problems in various fields that previously could not be solved by humans alone, for example in the term of education. Strayer (2007, p. 16) argues that the history of computer technology has been filled with high expectations and deep disappointments for those who care about education. Further stated by Molnar (in Strayer, 2007, p. 16) educators have expected computers to help solve various problems. From this quote it can be interpreted that when viewed from the history of technology development has high expectations and deep disappointment. And when viewed from the educational aspect, technology is expected to solve various problems in the world of education.

If you look at the world situation that has shifted to the digital era, it is not impossible for the world of education to utilize the potential of technology as effectively and efficiently as possible to solve problems in the world of education. One of the applications of technology in the world of education can be seen in flipped classroom learning. As stated by Bishop (2013, p. iii) That flipped classroom is a kind of new pedagogical method, which employs various example of the implementation, such as asynchronous video lectures, practice problems as homework, and active, and group-based problem-solving activities in the classroom. Furthermore Hasanudin & Fitrianiingsih (2019, p. 31) state, that flipped classroom initially introduced in 2007 by Bergmann and Sams. Flipped Classroom is a Student-Centered based method by reversing learning conditions. School, which was originally a place for teachers to provide material, only became a place for discussion and finding the true meaning of the material that had been sought, while at home, which was originally a place for doing homework (Homework), it became a place for learning material independently. This is in line with the statement In recent years, there has been a new trend towards a student-centered learning in learning environments.

Student-Centered Learning Student-centered learning has quite a good reputation in the terms of education, this is shown in several quotes such as, Ardian & Munadi (2015, p. 466) which states that students who take classes with student-centered learning have a higher level of creativity than classes that do not use this learning. Furthermore, Larasati (2018, p. 156) state that the relation between student-centered and speaking skill is relevant. In line with those statement, Dong, Wu, Wang, Peng (2019) state that TSDCLS and SCLS contribute to the development of reading comprehension permormance. From those statements can be interpret that student-centered learning Student-centered learning has many advantages and benefits to be applied to learning in schools.

In many research studies on effective and fruitful learning methods, we often see a new term called 'flipped classroom' Thai, De Wever, & Valcke, 2017; Wang, 2017; Zhai, Gu, Liu, Liang, & Tsai, 2017 (in Hava, 2018, p. 391). The flipped classroom model is a learning method which enables students to learn subject matters before apply those knowledge in classroom Long, Cummins, & Waugh (in Hava, 2018, p. 391). When reversing learning, the teacher has

extra time in the classroom. The extra time can be used by the teacher to carry out learning activities with students. As stated by Freeman, Eddy, McDonough, et al., 2014; Michael, 2006; Prince, 2004 (in Låg & Sæle, 2019, p. 2) However, there appears to be sound logic behind the idea of making time for more learning activities, because evidence is accumulating that teaching for active learning leads to better student performance and lower failure rates than lecture-based teaching.

Flipped Classroom is also a model that has benefits in adjusting with the pace of students when they learn the learning material. Bergmann & Sams (2012, p. 28) Flipping the class showed us just how needy many of our students were and how powerful the flipped classroom is in reaching students all along this broad range of abilities. Based on this statement, it can be interpreted that one of the advantages of Flipped Classroom learning is that it is friendly to differentiation. From the results of implementing the flipped classroom in various studies that the researchers found, positive results were obtained. Nouri (2016, p. 8) The students in the study's sample were found to generally appreciate the flipped classroom. The most commonly valued reason for this is that the students appreciate learning through using video material, the opportunity to study at their own pace, flexibility and mobility brought about by accessible video lectures, and that learning is easier and more effective within the frame of the flipped classroom. From the statement above it can be interpreted that learning using the flipped classroom framework, students can better understand the learning material because through the implementation of the flipped classroom, students have the opportunity to learn according to their abilities and speed. Chen, Monrouxe, Lu, Jenq, Chang, Chang, Chai (2018) The FC method is associated with greater academic achievement than the LB approach for higher-level learning outcomes, which has become more obvious in recent years. Evans, Thompson, O'Brien, Bryant, Basaviah, Prober. (2016, p. 698) the blended curriculum had a positive impact on student satisfaction and mastery of the core material. From the statement above it can be interpreted that from several studies with the application of flipped classroom learning it has a positive impact on learning outcomes even on student mastery of a material.

In addition, Rapi, Suastra, Widiarini, Widiani (2022, p. 358) in their research suggested that Flipped classroom-based project assessment influences concept understanding, critical thinking skills, and physics learning outcomes simultaneously and partially, in line with the statement above Widodo (2022, p. 473) states that Critical thinking aspects related to providing explanations, making deductive arguments, and making inductive arguments were developed through online inquiry activities in the form of investigating gas simulations in closed spaces. From the two research statements above, it can be interpreted that learning by implementing a flipped classroom can influence students' critical thinking skills with significant results. In addition, the implementation of the flipped classroom can significantly improve students' critical thinking skills. As stated by Atwa, Sulayeh, Abdelhadi, Jazar, Eriqat (2022, p. 746) that Flipped Classroom implementation results in statistically significant in Critical Thinking Skills, Math and PS.

As stated before that flipped classroom is new a kind of student-centered approach. Xhomara (2022, p. 102) stated that student-centered teaching approach has main idea of when student build actively knowledge through support of lecture. Furthermore Xhomara (2022, p. 115) stated that Student-centered Teaching approach correlates positively and highly with critical thinking skills. In addition, Suhariami, Hariani, Firdaus (2019, p. 7) stated that Student-Centered learning has significant influence to promotes critical thinking skills for students. From statement above, it means, flipped classroom that has characteristic of student centered approach has positive correlation with student's critical thinking skills. It means the implementation of flipped classroom in school by teacher is important and urgent if we see from the perspective of this 21st century era, because in this era, critical thinking skills is one of must-have skills for students. So they can compete both in globally and locally

Critical thinking skill is one of a competency that student must learn especially in 21st century. Costa & Kallick (in Changwong., Sukkamart., Sisan., 2018, p. 39) state that critical thinking is a mental process. Furthermore, Galinsky (in Changwong et al, 2018, p. 39) state, that critical thinking skill has been identified as an essential life skill. From the overview above,

it can be interpretation, critical thinking skill is a mental process that student must have to cope with real life problem especially in 21st century era.

In classroom, critical thinking has many benefits. Student who implements critical thinking skills in classroom tend to have a good characteristic. Murawski (2014, p. 27) state that Students who implement critical thinking skills approach the courseware in a more thoughtful and effective manner, ask more challenging questions and participate in the learning process more intensely. The statement above can be interpreted that by applying critical thinking skills, students will get some benefits that will be obtained and this will certainly affect their life outside the classroom when they face problems.

3. RESEARCH METHODS

This Research used Literature study/Literature review for research methodology. this research used research-based articles that have been done before to add and compare various concepts and the results from those research. After collecting and comparing several concepts, the last step is making conclusions from these various concepts

4. RESULT AND DISCUSSION

The result from this literature review research as we can see from the previous literature that already been cited, we can conclude several statements that underline flipped classroom is student-centered learning that use digital device for learning support. Several quotes have also explained about advantages of implementing flipped classroom learning in schools, one of a kind is how flipped classroom promotes student's critical thinking skill which is one of very important skills that student must have in this era. Furthermore, from the literature review that has been cited above, flipped classroom learning is also have another advantages in learning, such as flipped classroom is fairly flexible, so, students can learn learning material and theory with their own pace and abilities with the support of digital devices. The flexibility of Flipped Classroom is allow student to learn their learning material everywhere they want and every condition they like. From that perspective, we can see that teacher has more time during class time and that allow teacher to do more learning activity with student in class and knowing student better.

CONCLUSION

From several concepts that have been cited and discussed, and even compared, it can be concluded that the Flipped classroom is a new way in the world of education, especially the student-centered approach involving technology that is suitable for application in the modern era and has significant result in influencing students' critical thinking skills. where the ability to think critically is also needed in the modern era in facing the 21st century.

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