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Cooperative Learning with Local Wisdom Integrated Through Online Media and the Impact on Student Critical Thinking Skills

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ABSTRACT

Critical thinking Skills expressed as essential skills in 21st century society, That made critical thinking should be integrated in the learning process. Critical thinking can be implemented through a cooperative learning model integrated with local wisdom. The inclusion of local wisdom in learning process was a manifestation of the national education mandate. The outbreak of Covid-19 requires learning process carried out online. The purpose of this study was to determine the impact of cooperative learning integrated local wisdom through online media on the student critical thinking skills. The research method based on nonequivalent pretest-posttest control group design, sample determination using census techniques, data collection using multiple choice tests, and data were analyzed using the MANOVA test using SPSS 16.0. The test results produce an average pre-test of Critical Thinking skill in the experimental group of 37.5 while the value of the control group is 53.57 then the average results of the Post-Test of Critical Thinking ability in the experimental group are 67.14, while the control group 57.5. The results of the Test Between Subject Effect analysis yielded a significant value of critical thinking skills of 0.004. Based on these results it can be stated that there is an cooperative learning integrated wisdom through online media has an positive impact on student critical thinking skills in class X at SMAN 8 Mataram.

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INTRODUCTION

The outbreak of Corona Virus Disease (Covid-19) Made the government provide various policies that affect various fields, included the education. Isolation, social and physical distancing, large-scale social restrictions (PSBB) had been implemented.

Quarantine is also applied, which is limiting the movement of people suspected of having contacted infectious diseases but not feel sick, either because they are not infected or because they are still in the incubation period (Smith & Freedman, 2020). The present of this phenomenon made challenges for educational institutions, especially SMAN 8 Mataram, which must conduct online learning.

Online learning provides solutions in order to carry out learning in pandemic situation because does not require physical contact between students and teacher. Khasanah et. al. (2020) explain online learning as being effective in achieving learning goals even though it is still done at home. Online learning can be used as momentum to face of 21st century learning that is thick with technology.

21st century learning characterized by aimed to prepare the students for life challenges, one of the things that needs to be prepared from this goal is to improve individual skills in the form of effective critical thinking (Balakrishnan et al, 2016). The 2013 curriculum places great emphasis on forming students' mindset, especially critical thinking. Critical thinking provide students can apply the knowledge and skills that have been developed during learning in a new context (Brookhart, 2010).

The results of interviews with Dra. Suharti as a class X biology subject teacher at SMA Negeri 8 Mataram showed the Covid-19 pandemic caused schools to carry out online learning by giving assignments to students. The observation of the 2019 odd midterm tests in 5 classes majoring in MIA showed that students' critical thinking skills were still low, because there were 4 classes with an average grade below the KKM.

The critical thinking skill can be implemented through cooperative integrated local wisdom learning. Cooperative learning believed to be practical pedagogic to improve the learning process, critical thinking style, social behavior as well as caring for students who have different backgrounds and needs. On the other hand, the inclusion of local wisdom in learning is a manifestation of the mandate of national education. Sudiana (2015) states that the development of materials and learning models integrated with local wisdom is one of the national education goals of national cultural values. This is confirmed in Law No. 20 of 2003 that the national education objective expressly states that educational institutions must be able to produce people of global competence but still stand on the nobility and cultural values of their nation.

The local wisdom used in this research is "Awik-awik Desa Adat" which means the entire law governing shared life. Awik-awik Desa Adat originates from the village of Sesaot Lombok, West Nusa Tenggara. The application of the wisdom of the Awik-awik Desa Adat serves to protect the natural forest area of Aiq nyet from the introduction of the community that can damage the forest.

The effect of online learning process on critical thinking skills is still very difficult to find information. Moreover, the integration of local wisdom in learning is a hot issue discussed today. That makes it necessary to research "cooperative learning with local wisdom integrated through online media and the impact on student critical thinking skills".

METHODOLOGY

This type of research was quasi experiment based on cooperative learning integrated local wisdom for the experimental class and conventional model based learning in the control class. The design based on nonequivalent pretest-posttest control group. Cooperative learning is carried out through online media (WA Group). The entire video content accordance with cooperative syntax, the local wisdom integrated in the learning video. the implementation of group counseling is carried out in a Special WA Group consisting of 4-5 students who describe the syntax of cooperative learning. The population in this research were all students of class X MIA (165 people) of SMAN 8 Mataram in the academic year 2019/2020. Retrieval of data based on total sampling techniques or census techniques with X MIA 1 as an experimental class and X MIA 2 as a control class. Research implementation based on WA Group classes and WA Group special groups, the implementation of learning contained in the learning video in accordance with cooperative and conventional syntax (Figure 1). Critical Thinking Skills data collection based on multiple choice test types instrument. Analysis data based on MANOVA test using SPSS 16.0.

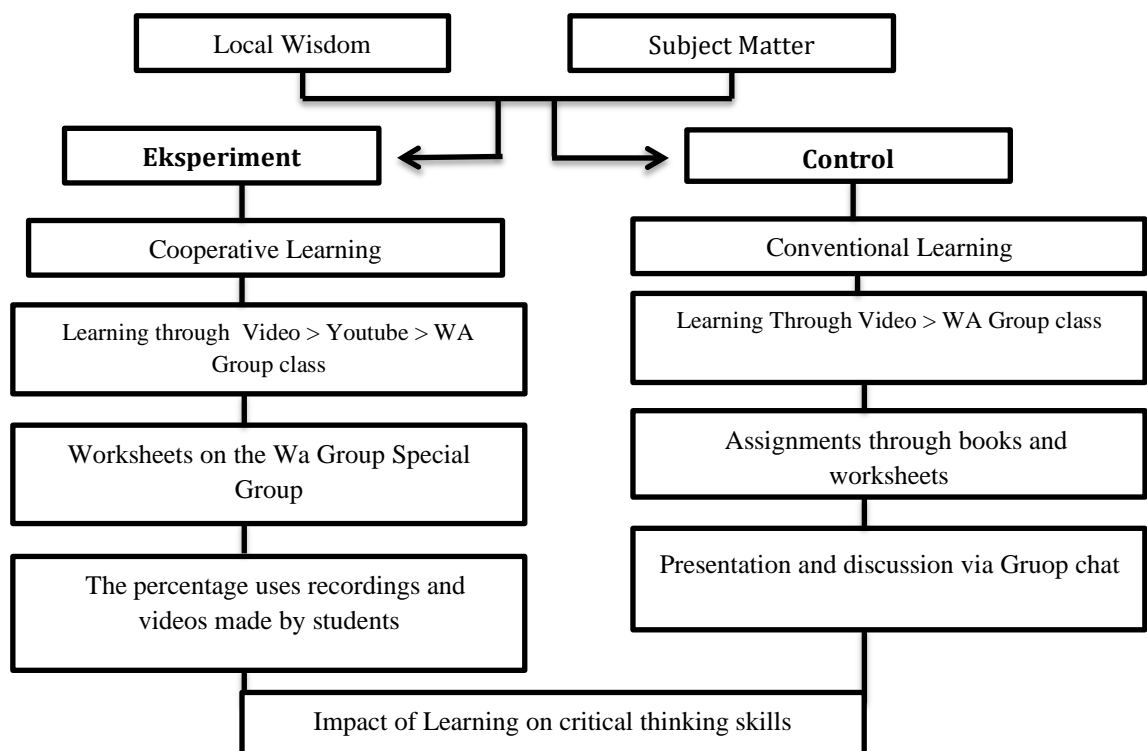


Figure 1. Chart of Learning Implementation

RESULT AND DISCUSSION

Critical thinking skills Analysis showed differed result between the experimental and control groups (Table 1). The average of pre-test value of the control group is higher than the experimental group, but the average value of the post-test experimental group higher than the control group. The pre-test average value of the experimental group was 37,5 while the control group 53,57. Post-Test of experimental group showed 67.14 while the control group showed 57,5.

Table 1. Pre-test and Post-test Critical Thinking Skills

Critical thinking skills	N	Min	Max	Mean	SD
pre-test of experimental group	28	15	80	37,5	13,71
post-test of experimental group	28	55	80	67,14	5,99
pre-test of control group	28	10	85	53,57	15,63
post-test of control group	28	20	90	57,5	16,18

The results of *Test Between-Subject Effect* showed significant value regarding to the effect of cooperative learning with local wisdom integrated on critical thinking skills with 0.004 value. Based on the p-value (Sig) it can be stated there is an cooperative learning integrated local wisdom through online media has an impact on the critical thinking skills grade X at SMAN 8 Mataram.

The implementation of cooperative learning models integrated local wisdom on the experimental group increase the Critical thinking skills, because its trains the students to learn with groups, formulate and solve problems, provide arguments and make decisions or actions that can hone the Critical thinking skills. In line with Dewi et. al. (2017) stated that learning based on local wisdom can significantly improve students' Critical thinking skills and process skills, then Saputra et. al. (2013) reported that Cooperative GI models oriented to local wisdom showed higher critical thinking skills result compared to conventional models.

Table 2: Results Test of Between-Subject Effect

Tests of Between-Subjects Effects						
Source	DV	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	KBK	1301.786 ^b	1	1301.786	9.134	.004
Intercept	KBK	217501.786	1	217501.786	1.460E3	.000
Kelas	KBK	1301.786	1	1301.786	9.134	.004
Error	KBK	7696.429	54	142.526		
Total	KBK	226500.000	56			
Corrected Total	KBK	8998.214	55			

Local wisdom integrated in learning process initiate meaningful learning. Local wisdom facilitated learning outcomes can be explained by students in real life, include 'awik-awik' Sesaot Village in preserving the forest ecosystem in the area. Dewi et. al. states learning based on local wisdom makes learning more meaningful and easier to understand the subject matter. Sya'ban (2014) Learning conducted by linking to students live or relating to the real situation of the world around students will make learning more meaningful.

Cooperative learning is believed to be pedagogical practice to improve learning processes, higher-order thinking skill styles, social behavior as well as caring for students who have different backgrounds and needs (Reddy, 2019). The application of cooperative learning through online media is carried out with cooperative syntax consist of delivering goals and providing motivation, presenting information, organizing, guiding groups, evaluating learning outcomes and giving awards (Khairunnisa & Riswanto, 2018). The cooperative learning model initiates collaborative learning which small groups of students with different levels of ability work together to complete tasks, triggering students to group discussions and solve problems themselves so that increase the critical thinking skills. Beni et. all (2019) stated that the application of cooperative learning has an effect on students' critical thinking skills. Then according to Trisiantari and Yunita (2018) states cooperative learning can improve student learning outcomes.

The implementation of cooperative learning online does not reduce its effectiveness in increasing students' critical thinking skills. Abidin et. al. (2020) states that online learning synergized with the right learning base will provide a more optimal learning effect. confirmed by Sholihatin et. al. (2019) states that the increase in students' higher order thinking skills is due to treatment in the form of a series of online activities for discussion, clarification, evaluation and ideas.

Some limitations in this study are learning biology provided to students cannot be accompanied by practice, the implementation of cooperative learning cannot be fully controlled by researchers because students are in their respective homes, then the research constraints in the form of internet access owned by students are lacking adequate when conducting online discussions, not all members of the group fully followed the discussion activities until the end of the assignment, another obstacle encountered was that the meeting and teaching activities in this study were also very brief, namely three times a series of online activities. These constraints are an obstacle similar to the research of Firman and Rahman (2020) Online learning also has its own challenges. one of them is the availability of internet services and cost constraints, they have to pay more to buy internet data quota.

CONCLUSION

Based on the results and discussion, it can be concluded that there is an cooperative learning with local wisdom integrated through online media has a positive impact on the critical thinking skills of class X students of SMAN 8 Mataram.

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