





The Influence of the Video Media-Assisted Decision-Making Type Cooperative Learning Model on Students' Critical Thinking Abilities and Learning Outcomes in The Subject of Social Sciences

(Quasi-Experimental Research for Class V Students Basic Material on the Economic Conditions of My Region)

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Abstrak

Penelitian ini dilatarbelakangi dengan rendahnya kemampuan berpikir kritis siswa dan penggunaan model pembelajaran yang masih konvensionan pada pelajaran IPS. Hal ini dikarenakan masih banyak ditemui pembelajaran yan masih berpusat pada guru sehingga siswa kurang dilatih untuk berani berpendapat, bertanya dan juga mengambil keputusan. Dengan demikian penulis ingin berupaya meingkatkan kemampuan berpikir kritis dan hasil belajar siswa dengan melakukan penelitian menggunakan model pembelajaran kooperatif tipe decision making berbantu media vidio pada mata pelajaran IPS di kelas V Sekolah Dasar. Penelitian ini menggunakan metode penelitian kuantitatif jenis kuasi eksperimen. Populasi pada penelitian ini adah siswa kelas V SDN 243 Cicabe dengan kelas VB sebagai kelas eksperimen dan kelas VD sebagai kelas kontrol dengan masing masing kelas berjmlah 25 siswa. Pada kelas eksperimen pembelajaran menggunakan model pembelajaran decision making berbantu media vidio dan pada kelas kontrol menggunakan model pembelajaran problem based learning. Instrumen yang digunakan pada penelitian ini yaitu soal tes pilihan ganda dan angket berpikir kritis. Hasil penelitian menunjukan terdapat pengaruh penerapan model pembelajaran decision making berbantu media vidio terhadap kemampuan berpikir kritis dan hasil belajar siswa. Melalui hasil uji perbedaan rerata pretest dan posttest kelas eksperimen dengan taraf signifikansi (2-tailed) 0.000 atau 0.000 < 0.05 yang berarti terdapat pengaruh penggunaan model pembelajaran kooperatif *tipe decision* making terhadap berpikir kritis siswa dan signifikansi (2-tailed) 0.000 atau 0.023 < 0.05 yang berarti terdapat pengaruh penggunaan model pembelajaran kooperatif tipe decision making terhadap hasil belajar siswa pada mata pelajaran IPS.

Abstract

This research was motivated by the low critical thinking skills of students and the use of conventional learning models in social studies lessons. This is because there is still a lot of learning to be learned and it is still teacher-centred so that students are not trained enough to dare to express opinions, ask questions and also make decisions. Therefore, the author wants to try to improve students' critical thinking skills and learning outcomes by conducting research using a cooperative learning model using video media assisted decision making in social studies subjects in class V elementary schools. This research uses a quasi-experimental type of quantitative research method. The population in this study was class V students at SDN 243 Cicabe with class VB as the experimental class and class VD as the control class with 25 students in each class. In the experimental class, learning uses a decision-making learning model assisted by video media and in the control class uses a problem-based learning model. The instruments used in this research were multiple choice test questions and critical thinking questionnaires. The results of the research show that there is an influence of the application of the video media-assisted decision-making learning model on students' critical thinking skills and learning outcomes. Through the test results of the difference in the mean of the pretest and posttest of the experimental class with a significance level (2-tailed) of 0.000 or 0.000 <0.05, which means that

there is an influence of the use of the decision-making type cooperative learning model on students' critical thinking and a significance (2-tailed) of 0.000 or 0.023 < 0.05, which means there is an influence of the use of the decision-making type of cooperative learning model on student learning outcomes in social studies subjects.

Keywords: critical thinking skills, learning outcomes, cooperative decision making, video media, social studies lessons

Introduction

One of the compulsory subjects in Indonesia is social studies, which students must master, especially in elementary schools. The aim of this social studies subject is that students have the ability to understand concepts related to people's lives and have important skills in the midst of world developments to be able to contribute to creating better living conditions (Desla et all, 2022).

21st skills century are important skills that students must master to face the various opportunities and challenges that exist in the current era of globalization and progress. (Sumodiningrat, G., & Wrihatnolo, R.R., 2005). The role of educators is to develop 21st century skills, one of which is critical thinking skills through social studies learning. This will be successful if teachers use appropriate learning models and methods, namely being able to encourage students to interact with knowledge, to understand, criticize and be able to express their opinions and thoughts. . Students are able to think critically here, namely when students are able to express opinions in an organized way and can express personal opinions

and also the opinions of other people (Elaine B. Johnson, 2009).

The selection and development of social studies learning models is necessary in order to provoke students' critical awareness of solving various social problems that exist in society. Suud (Djabbar and Dela Angreni, 2021). According to the results observations in the article of (Sutisnawati, A., & Maula, L. H, 2023), there are still very low student learning outcomes in social studies learning because many students are found to be lazy because they are less interested in the teaching delivered by the teacher. students are passive and learning is still dominated by one-way learning, as well as minimal use of media in learning.

Learning models and learning media are important things in supporting classroom learning. The use of learning models and media must be in accordance with current developments. From ancient times until now, the use of computers, the internet and cellphones has grown rapidly. This has also caused the way of teaching and learning in the era of revolution to also experience changes. People now not only learn offline but also online (Priyanti, 2019). The solution to this challenge is the teacher's ability to information integrate and communication techniques in learning, namely combining material, pedagogy, and technology, known as the TPACK (Technological, Pedagogical, and Knowledge) Content framework (subhan, 2020). In the TPACK framework, learning material is packaged through a learning model that suits its characteristics and is combined with technology that can be used as learning media including animation systems, web, simulation, and so on (Sutarsih & Misbah, 2021). This TPACK requires teacher skills on how to facilitate student learning of certain content through pedagogical and technological approaches (Schmid et al., 2020).

One of the cooperative learning models that can improve critical thinking skills and students' understanding of social studies subjects is the decisionmaking type cooperative learning model (decision making). This type of decisionmaking cooperative learning model trains students to be critical, diligent, always curious, in seeking information and open to accepting other people's opinions in order to obtain as valid information as possible (Achsani, N, 2020). The Decision Making learning model also allows students to be more responsive to receiving messages from other students and become more active and creative. The Decison Making learning model with a small group approach allows students to work together in choosing the best alternative in solving problems (Malau, S.I, 2020). In its application, students are required to express their opinions and knowledge, apart from that, students are trained to be able to share with each other, teach each other, and learn from fellow students.

One of the learning media that can help in implementing the decision making type cooperative learning model and is in accordance with the application of the TPACK learning approach is video media. Learning video is a medium that has audio (sound) and visual motion elements (moving images) based on Edgar Dale's theory, video is located in the middle because it is included in the "Television" category. This position means that video media is better than image media and audio media (Arsyad, 2006). As a learning medium, video acts as an introduction to information from teachers to students. The ease of repeating videos (replay) and the way information is presented in a structured manner makes video media one of the media that can improve students' ability to understand a concept. The results of research (Irfan, et all., 2016) state that learning activities using video media can provide a pleasant and not boring

atmosphere so that students can focus on videos that contain information about learning material, video media can also present events that are not can be presented physically in the classroom and video media can meet various different learning characteristics, starting from students using audio, visual or audio-visual learning methods.

The achievement of social studies learning objectives is largely determined by teachers in implementing learning at school. However, the fact is that there are still many teachers who are inaccurate in choosing a learning model which in practice is still dominated by the lecture method (conventional method) without involving the active role of students, this results in students just knowing without really understanding the material being studied. As is known, social science lessons are a science that is very closely related to interactions and all forms of daily activities. Therefore, in social studies learning, students should be taught to be able to develop 21st century skills, namely creative thinking skills, critical thinking and problem solving, communication and collaboration or which is usually called the 4C (Ananiadou, K. and Claro, M. 2009).

Method

This research refers to a quasiexperimental quantitative research approach. This experimental research is research to determine whether there are effects of treatment on the subjects being investigated. The way to find out is to compare one or more experimental groups that were given treatment with a comparison group that was not given treatment (Fraenkel et al, 2012).

This research was carried out in two classes, namely the VB class as an experimental class which used a decision making learning model assisted by video media and the control class, namely the VD class which used a problem based learning model. This research was conducted at SD Negeri 243 Cicabe which is located at Jalan Cicabe No. 163a, Bandung City, West Java 40193.

The research instruments used in this study were multiple choice questions about my regional economy critical and а thinking ability questionnaire. These two instruments were given to students before and after the research was carried out, to determine whether there was an influence and difference from the application of the decision making type learning model on critical thinking skills and student learning outcomes.

Test the instrument used before conducting the research, namely

 Validity Test, Validity tests need to be carried out to determine the quality of the instrument in relation to measuring things that should be measured. This test was carried out using SPSS version 21.

- Reliability Test, Reliability test is used to indicate that the instrument is reliable enough to be used as a data collection tool because the instrument is good. This test was carried out using SPSS version 21.
- Question Discriminating Power Test, Discriminating power is a number that shows the difference between the high group and the low group.
- Difficulty Level Test, The difficulty level of a question is a quantity used to state whether a question is included in the easy, medium or difficult category.

Analysis of research data is presented using descriptive statistical analysis methods, namely by describing or illustrating the data obtained as it is without intending to generalize conclusions in general (Muhson, 2006). To analyze these values, the SPSS type 21.0 program was used. Using several statistical tests including:

- 1) Normality Test, used to determine whether the data is normally distributed or not as one of the prerequisite tests for carrying out the t test. The formula used for the normality test is the chi square formula.
- 2) After the data is normally distributed, a homogeneity test is then carried out. The homogeneity test is carried out to find out

whether the two data are homogeneous or not, have the same variance or not. The homogeneity test can be carried out using the Levene test

3) If the data is known to be normally distributed and homogeneous, then the t-test statistical test can be carried out and if it is not normally distributed and homogeneous you can use the Man-Whitney test. This test is used to find out whether there is a difference in the influence of research results in the experimental class and the control class.

Result and Discussion

1. The influence of the Cooperative Learning Model, Video-Assisted Decision Making Type, can Improve the Critical Thinking Ability of Class V Students in Social Sciences Subjects

> Based on the findings obtained in the experimental class with the aim of answering the first problem formulation, namely the influence of the decision making type cooperative learning model on students' critical thinking in social studies subjects, it was obtained from statistical tests that there was an influence of the use of decision making type cooperative critical learning on students' thinking in social studies subjects. social studies lessons. This is proven by the enthusiasm of students in the experimental class after treatment with the decision

making type cooperative learning model. It's not like when the pretest was initially given where students didn't feel interested.

Through the test results, the difference between the pretest and posttest averages of the experimental class with а significance level (2-tailed) of 0.000 or 0.000 < 0.05, which means that there is an influence of the use of the decision making type cooperative learning model on students' critical thinking in social studies subjects. This is similar to research conducted by Research (Indi Syifa Maulidati, et al 2017), which states that the decision making model is a learning model that can improve students' creative and critical thinking abilities and obtain information to or knowledge based on rational considerations and assessments and actions taken can be accounted for.

Based on the results of testing the first hypothesis in this research, to determine the effect of using the decision making type cooperative learning model on students' critical thinking in social studies subjects which focus on the experimental class, you can see a diagram of the average pretest and posttest scores for critical thinking skills, in other words before and after treatment is given as follows:

Tabel 1

Average Value of Students' Critical
Thinking Ability Indicators

Indicators	Pretest	Posttest	Difference
Provide Explanation	11.36	12.6	1.24
Building Basic Skills	6	6.44	0.44
Conclude	8.24	6.2	-2.04
Providing Further Explanation	5.52	6.04	0.52
Develop strategies and tactics	12.48	13.64	1.16

Based on the table above, it can be seen an increase in the average results of students' critical thinking abilities for each indicator measured during pretest and posttest activities in the experimental class. The indicator providing explanations has increased by 1.24, building basic skills by 0.44, concluding has decreased by 2.04, providing further explanations by 0.52, developing strategies and tactics by 1.16.

When students are given the freedom to express opinions according to their understanding, this can strengthen students' critical thinking skills because students are invited to formulate opinions based on their own understanding. Thus, based on this explanation, it can be concluded that there is an influence of the decision making type cooperative learning model on students' critical thinking in social studies subjects.

2. The Influence of the Cooperative Learning Model With Video-Assisted Decision Making can Improve The Learning Outcomes of Fifth Grade Students In Social Studies Subjects

Based on the findings obtained in the experimental class with the aim of answering the first problem formulation, namely the influence of the decision making type cooperative learning model on student learning outcomes in social studies subjects, it was obtained from statistical tests that there was an influence of the use of decision making type cooperative learning on student learning outcomes in the subjects social studies lessons. This is proven by the enthusiasm of students in the experimental class after treatment with the decision making type cooperative learning model. It's not like when the pretest was initially given where students didn't feel interested.

Through the test results, the difference between the pretest

and posttest averages of the experimental class with а significance level (2-tailed) of 0.000 or 0.023 < 0.05, which means that there is an influence of the use of the decision making type cooperative learning model on student learning outcomes in social studies subjects. This is similar to research conducted by Research (Indi Syifa Maulidati, et al 2017), which states that the decision making model is a learning model that can improve critical thinking skills and learning outcomes of class making. This is proven by the difference in average questionnaire results and the difference in average learning outcomes.

Based on the results of testing the first hypothesis in this research, to determine the effect of using the decision making type of cooperative learning model on student learning outcomes in social studies subjects that focus on the experimental class, you can see a diagram of the average pretest and posttest scores for learning outcomes, in other words before and after treatment is given as follows:

Tabel 2

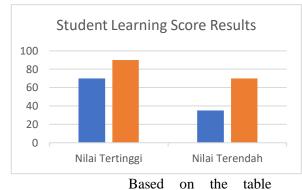
Student Grade Results

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	Highest score	Lowest score
Pretest	70	35
Posttest	90	70

Tabel 3

Graph of Student Learning Score Results



above, it can be seen that the increase in student learning outcomes was measured during pretest and posttest activities in the experimental class. In the pretest, the lowest score was 35 and the highest was 70. Meanwhile, after treatment, the lowest score rose to 70 and the highest score rose to 90.

Learning activities using video media are able to provide a pleasant and not boring atmosphere for students so that students can focus on videos that contain learning material information, video media is able to present events that are physically impossible to present in the classroom, with this students can find out more about In this event,

video media can meet the learning characteristics of different students, starting from students who use audio, visual or audiovisual learning methods. All the research results above explain that video media has an impact on improving student learning outcomes, so that the use of video as a learning media is deemed effective in the learning process, especially for elementary school students. Thus, based on this explanation, it can be concluded that there is an influence of the decision making type cooperative learning model on student learning social outcomes in studies subjects.

3. There are differences in students' critical thinking abilities after implementing cooperative learning using the video-assisted decision making type in fifth grade students in social studies subjects.

> Based on the findings obtained in the experimental class with the aim of answering the third problem formulation, namely that there are differences in students' critical thinking abilities after implementing the decision making type cooperative learning model in social studies subjects, it was obtained from statistical tests that

there were differences in students' critical thinking abilities after implementing the cooperative learning model. type of decision making in social studies subjects. This is proven by the enthusiasm of students in the experimental class after treatment with the decision making type cooperative learning model. It's not like when the pretest was initially given where students didn't feel interested.

Through the results of the test, the difference in the posttest mean of the experimental class and the control class with a significance level (2-tailed) of 0.000 or 0.000 <0.05, which means that there is a difference in students' critical thinking abilities after implementing the decision making type cooperative learning model in social studies subjects. This is similar to research conducted by Research (Indi Syifa Maulidati, et al 2017), which states that the decision making model is a learning model that can improve students' creative and critical thinking abilities and to obtain information or knowledge based on rational considerations and assessments and actions taken can be accounted for.

Based on the results of testing the second hypothesis in this research, to determine the differences in students' critical abilities thinking after implementing the decision making type cooperative learning model in social studies subjects which focus on the experimental class and the control class, you can see a diagram of the posttest average score for critical thinking ability, with the words other things before and after the treatment is given as follows:

Tabel 4.

Differences in Critical Thinking Ability Indicator Values

Indicators	Experimental Class Posttest	Posttest Control Class	Difference
Provide Explanation	12.6	10.84	1.76
Building Basic Skills	6.44	5.6	0.84
Conclude	6.2	7.8	-1.6
Providing Further Explanation	6.04	5.32	0.72
Develop strategies and tactics	13.64	11.2	2.44

Based on table 4, it can be seen that there is an increase in the average results of differences in students' critical thinking abilities after implementing the decision making type cooperative learning model in social studies subjects in the experimental class and control class. The indicator providing explanations experienced an increase of 1.76, building basic skills 0.84, concluding a decrease of 1.6, providing further explanations 0.72, developing strategies and tactics 2.24.

When students are given the freedom to express opinions according to their understanding, this can strengthen students' critical thinking skills because students are invited to formulate opinions based on their own understanding. Thus, based on this explanation, it can be concluded that there are differences in students' critical thinking abilities after implementing the decision making type cooperative learning model in social studies subjects.

4. There are differences in student learning outcomes after implementing cooperative learning using the video-assisted decision making type for class V students in social studies subjects

Based on the findings obtained in the experimental class with the aim of answering the first problem formulation, namely that there are differences in student learning outcomes after

implementing decision making type cooperative learning in social studies subjects, it was obtained from statistical tests that there differences were in student after learning outcomes implementing decision making type cooperative learning in social studies subjects. This is proven by the enthusiasm of students in the experimental class after treatment with the decision making type cooperative learning model. It's not like when the pretest was initially given where students didn't feel interested.

Through the results of the Man Whitney posttest for the experimental class and posttest class with a significance level (2tailed) of 0.000 or 0.014 < 0.05, which means there are differences in student learning outcomes after implementing decision making type cooperative learning in social studies subjects. This is similar to research conducted by Research (Indi Syifa Maulidati, et al 2017), which states that the decision making model is a learning model that can improve critical thinking skills and learning outcomes of class making. This is proven by the difference in average questionnaire results and the

difference in average learning outcomes.

Based on the results of testing the fourth hypothesis in this research, to find out whether there are differences in student learning outcomes after implementing decision making type cooperative learning in social studies subjects which focus on the experimental class and the control class, you can see a diagram of the posttest average value of learning outcome abilities, in other words before and after treatment is given as follows:

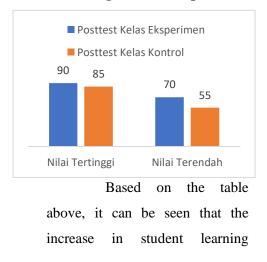
Tabel 5

Posttest Learning Outcomes

Indicators	Highest Score	Lowest Score
Experimental		
Class	90	70
Posttest		
Control Class	85	55
Posttest	65	55

Tabel 6

Posttest Learning Results Graph



outcomes was measured during activities in the posttest experimental class and control class. In the experimental class posttest the lowest score was 70 the highest 90. and was Meanwhile in the control class the highest score was 85 and the highest was 55.

Learning activities using video media are able to provide a pleasant and not boring atmosphere for students so that students can focus on videos that contain learning material information, video media is able to present events that are physically impossible to present in the classroom, with this students can find out more about In this event, video media can meet the learning characteristics of different students, starting from students who use audio, visual or audiovisual learning methods. All the research results above explain that video media has an impact on improving student learning outcomes, so that the use of video as a learning media is deemed effective in the learning process, especially for elementary school students. Thus, based on this explanation, it can be concluded that there are differences in

learning outcomes after implementing the decision making type cooperative learning model in social studies subjects.

Conclusion

Based on the results of research which aims to determine the effect of the cooperative decision making type model on critical thinking and student learning outcomes in social studies learning. So the following conclusions are obtained.

- 1) There is an influence of the decision making type cooperative model learning assisted by video media on students' critical thinking abilities in studies social subjects
- 2) There is an influence of the decision making type

References

- Mufita,dan Desla.dkk.
 (2022)."Analisis faktor faktor penilaian presentasi belajar IPS siswa kelas V sd negeri 44 bengkulu selatan."Diss. universitas islam negeri fatmawati sukarno bengkulu
- Sumodiningrat, G., Nugroho, D, R., dan Wrihatnolo, R. R. (2005). Membangun IndonesiaEmas: Model Pembangunan Indonesia Baru Menuju Negara-Bangsa yang Unggul dalam

cooperative learning model on student learning outcomes in social studies subjects

- 3) There are differences in critical thinking students' abilities after implementing the decision making type cooperative learning model in social studies subjects compared to learning using the Problem Based Learning (PBL) model.
- 4) There are differences in student learning outcomes after implementing the cooperative learning model with the decision making type assisted by video media in social studies subjects compared to learning using the Problem Based Learning (PBL) model.

Persaingan Global. Jakarta: Elek Media Komputindo.

- 3) Schmid, M., Brianza, E., & Petko, (2020). D. Developing a short assessment instrument for Technological Pedagogical Content Knowledge (TPACK.xs) and comparing the factor structure of an integrative and a transformative model. Computers & Education, 157, 103967.
- 4) Priyanti, R. (2019). PembelajaranInovatif Abad 21

http://digilib.unimed.ac.id/view/creato rs/Ph=3ARivolan_Priyanti=3A=3A.ht ml

- Irfan, A., dkk. (2016). Perbedaan Media Audio Visual dan bukan Audio Visual terhadap Motivasi dan Hasil Belajar IPS Siswa Kelas IV. Wahana Sekolah Dasar (Kajian Teori dan Praktik Pendidikan), (Online), 24 (1): 1-8.
- Johnson, Elaine B. (2009). Contextual teaching and learning: menjadikan kegiatan belajar mengajar mengasyikkan dan bermakna.
 Bandung: Mizan Learning Center
- 7) Malau, S. I. (2020). Penerapan Model Kooperatif Tipe Decision Making Untuk Meningkatkan Kemampuan Berpikir Kritis Dan Hasil Belajar Siswa Pada Mata Pelajaran Produk Kreatif Dan Kewirausahaan Kelas XI OTKP DI SMK PAB 2 Helvetia Tp 2019/2020 (Doctoral dissertation, Universitas Negeri Medan).
- 8) Arsyad, A. (2006). Media Pembelajaran. Jakarta: Rajawali Press
- Ananiadou, K. and Claro, M. (2009).
 21st Century Skills and Competences for New Millennium Learners in OECD Countries. OECD Education Working Papers, No. 41 Paris, OECD Publishing
- 10) Achsani, N.(2020). Pengaruh Model Pembelajaran Kooperatif Tipe

Decision Making Terhadap Sikap Ilmiah Peserta Didikkelas X Pada Konsep Perubahan

Lingkungan (Kuasi Eksperimen di SMA Negeri 10 Tangerang Selatan). (Bachelor's thesis, Jakarta: FITK UIN Syarif Hidayatullah Jakarta).

- 11) Angreni,Dela dan Djabbar.
 (2021)."Penggunaan media audio visual untuk meningkatkanhasil belajar IPS peserta didik kelas VIII di SMP 8 Parepare."Diss. IAIN Parepare
- 12) Subhan, muhammad. (2020). Analysis
 of the Application of Technological
 Pedagogical Content Knowledge to the
 Process Learning Curriculum 2013

 in Class V: International
 Journal of Technology Vocational
 Education and Training, 1(2), 174–179
- 13) Sutarsih, E., & Misbah, M. (2021).
 Konsep Pendidikan Profesional Perspektif Undang-Undang tentang Guru dan Dosen. Jurnal Kependidikan, 9(1), 69–82.
- 14) Sutisnawati, A., & Maula, L. H. (2023). Meningkatkan Hasil Belajar Siswa Pada Pembelajaran IPS Dengan Menggunakan Media Miniatur di Sekolah Dasar. Jurnal Ilmiah Mandala Education, 9(3).
- 15) Maulidati, I. S., Dantes, N., & Tika, N.
 (2018). Pengaruh Pembelajaran Berpendekatan Saintifik Berorientasi Science Environment Technology Society Terhadap Kemampuan Berpikir Kritis Dan Hasil Belajar IPA

Siswa Kelas V. PENDASI: Jurnal Pendidikan Dasar Indonesia, 2(2), 59-71

- 16) Fraenkel, Jack. R., and Norman E.Wallen. 2012. How to Design and Evaluate Research in Education 8th Edition. Boston: McGraw-Hill Higher Education
- 17) Muhson, A. (2006). Teknik analisis kuantitatif. Universitas Negeri Yogyakarta. Yogyakarta, 183 -196.

Curriculum Vitae

Nabila Ratri Widya Astuti, Born in Purworejo, 21 September 2001. 8th semester student of the Bachelor of Elementary School Teacher Education Study Program at the Indonesian University of Education. As a student, he has been active in conducting research and writing several scientific articles, and has participated in campus teaching programs held by the Ministry of Education and Culture.