Improving Social Science Learning Outcomes of Class V Elementary School Students through the TPACK Approach

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Abstract

The main problem in this study is the low learning outcomes of fifth grade students in social studies at a private elementary school in East Jakarta, Indonesia. This is because the learning approach used in these schools is still conventional. The purpose of this study was to improve social studies learning outcomes for fifth grade students using the technology pedagogical content knowledge (TPACK) approach. By using classroom action research, this research was conducted in three cycles involving 10 students. Each cycle consists of planning, implementing, acting, observing, and reflecting. Data collection was carried out using a test consisting of a pre-test and post-test. The test results data were then analyzed using descriptive statistics. The results showed that based on the post-test results in cycle I, only 6 students or 60% fulfilled the KKM. In cycle II the percentage of student learning completeness increased to 70% or 7 students fulfilled the KKM. In cycle III, student learning completeness again increased to 82%. Therefore, it can be concluded that the use of the technology pedagogical content knowledge (TPACK) approach in social studies learning is effective in improving student learning outcomes.

Keywords: *social science learning outcomes, TPACK approach, elementary school students.*

Abstrak

Masalah utama dalam penelitian ini adalah rendahnya hasil belajar siswa kelas V IPS di salah satu sekolah dasar swasta di Jakarta Timur, Indonesia. Sebab, pendekatan pembelajaran yang digunakan di sekolah-sekolah tersebut masih konvensional. Tujuan penelitian ini adalah untuk meningkatkan hasil belajar IPS siswa kelas V dengan menggunakan pendekatan technology pedagogi konten pengetahuan (TPACK). Dengan menggunakan penelitian tindakan kelas, penelitian ini dilaksanakan dalam tiga siklus dengan melibatkan 10 siswa. Setiap siklus terdiri dari perencanaan, pelaksanaan, pelaksanaan tindakan, observasi, dan refleksi. Pengumpulan data dilakukan dengan menggunakan tes yang terdiri dari pre-test dan post-test. Data hasil pengujian kemudian dianalisis menggunakan statistik deskriptif. Hasil penelitian menunjukkan bahwa berdasarkan hasil post-test pada siklus I, hanya 6 siswa atau 60% yang memenuhi KKM. Pada siklus II persentase ketuntasan belajar siswa meningkat menjadi 70% atau 7 siswa yang memenuhi KKM. Pada siklus III ketuntasan belajar siswa kembali meningkat menjadi 82%. Oleh karena itu, dapat disimpulkan bahwa penggunaan pendekatan teknologi pedagogi konten pengetahuan (TPACK) dalam pembelajaran IPS efektif dalam meningkatkan hasil belajar siswa.

Kata kunci: *hasil belajar IPS, pendekatan TPACK, siswa sekolah dasar.*

INTRODUCTION

National education functions to develop capabilities and shape dignified national character and civilization in the context of educating the nation's life, aiming at developing the potential of students to become human beings who believe and fear God Almighty, have noble character, are healthy, knowledgeable, capable, independent, and become democratic and responsible citizens

The purpose of social studies education is aimed at developing students' basic knowledge and skills that are useful for their daily lives. Social Science Learning (IPS) is very closely related to the preparation of students to play an active role or participate in the development of Indonesia and be involved in the association of the world community (global society). IPS must be seen as an important component of the overall education of children. Social Studies plays a significant role in directing and guiding students towards democratic values and behavior, understanding themselves in the context of today's life, understanding their responsibilities as part of an interdependent global society.

IPS learning in elementary schools is an integrated study material which is an organized simplification, adaptation, selection, and modification of historical, geographical, sociological, anthropological, and economic concepts and skills. Studies that pay attention to how people build a better life for themselves and their family members, how to solve problems, how people live together, how people change and are changed by their environment.

However, so far social studies subjects have always been underestimated by some people, and many say that social studies is a boring and less challenging subject because most of the material is just rote memorization, and this is a problem for the social studies subject itself. This problem is even more serious when confronted with the fact that so far social studies subjects have not received the attention they deserve. Even though social studies is actually a very important subject because learning social studies can guide students to adapt in their social environment, and can help students deal with social problems that occur in society more wisely.

The first step that must be taken is to move towards updating the social studies learning system in elementary schools with this approach technology pedagogical content knowledge (TPACK) To improve the quality of educational staff. They need to be equipped with integrated social studies learning patterns in which social studies learning has a strategic meaning for national development or the life of the nation and state.

Based on the results of the research, the use of TPACK can improve social studies learning outcomes for fifth grade elementary school students, using classroom action research carried out in 3 (three) cycles. TPACK has been given in the first cycle, then continued in the second cycle. Entering the third cycle, students have exceeded the KKM. Social studies learning success has reached a maximum level

Based on the results of observations and research results, it shows that the low social studies learning outcomes after the learning process in the first cycle stage has not shown maximal results, and must still be continued to the next cycle. According to researchers (Turmuzi & Kurniawan, 2021), learning outcomes are changes in behavior experienced by students as a result of participating in learning activities. Several factors can affect the low social studies learning outcomes (1) Ineffective Teaching Methods: Teaching methods that are less interactive, less interesting, and not in accordance with student learning styles can hinder students' understanding and interest in IPS material (Pas & Wardani, 2022). (2) Lack of Learning Resources: Textbooks that are inappropriate or too complex, as well as a lack of interesting learning resources such as multimedia, additional material, or field trips, can make it difficult for students to understand the material (Nuraini et al., 2022). (3) Teacher Quality: Teachers who do not understand social studies material or are poorly trained in using effective teaching strategies can have a negative impact on student learning outcomes (Amalia et al., 2021).

TPACK (Technological Pedagogical Content Knowledge) is a conceptual framework that integrates technology knowledge (T), pedagogical knowledge (P), and content knowledge (C) in a learning context. The TPACK approach refers to a deep understanding of how technology can be integrated effectively in teaching and learning by considering appropriate content and pedagogical strategies (Zakiah et al., 2017). The main components of TPACK are as follows: (1) Content Knowledge (Content Knowledge - CK): This includes an understanding of the material or learning content. Teachers must have in-depth knowledge of concepts, principles, and theories in certain subjects, such as social studies (Ulfah et al., 2022). (2) Pedagogical Knowledge (PK): This relates to an understanding of effective teaching strategies and pedagogical approaches to communicate and teach material to students. This knowledge includes teaching methods, learning strategies, and classroom interactions (Mairisiska et al., 2014). (3) Technological Knowledge (Technological Knowledge - Kindergarten): This includes an understanding of technology and tools that can be used in learning. Teachers need to know how to utilize technology such as software, hardware and applications to support learning. (4) Pedagogical Content Knowledge (Pedagogical Content Knowledge - PCK): It combines the knowledge of how to teach certain content in an effective way. PCK involves the teacher's ability to connect learning materials with appropriate teaching strategies (Rizqiyah, 2021). (5) Pedagogical Technology Knowledge (Technological Pedagogical Knowledge - TPK): It focuses on understanding how to use technology in teaching. Teachers must know how to select and apply relevant technological tools to achieve learning objectives (Unaida & Fakhrah, 2022). (6)

Technological Content Knowledge (TCK): This involves combining knowledge of technology with an understanding of learning content. Teachers must be able to identify the most appropriate technological tools to support students' understanding of certain content (Glowatz & O'Brien, 2017).

The strength of the TPACK approach is that it enables teachers to design richer and more relevant learning experiences by combining knowledge of content, technology, and teaching strategies. With TPACK, teachers can avoid using technology carelessly and integrate it in a more meaningful way in the learning process. This approach also helps teachers to design learning that is more in line with the needs of students and the latest technological developments, so that it can help improve learning outcomes in social studies subjects and other fields.

In the era of technological development 4.0, teachers must improve their ability to find out about the latest technology that can be used in implementing learning. Technology is currently growing rapidly. Students are familiar with technological tools such as gadgets. Thus, teachers must be familiar with using software technology such as Microsoft Power Point (PPT). In relation to TPACK, the teacher's ability to organize learning by integrating learning strategies and technology becomes important. This distinguishes the depth of mastery of the competence of each subject teacher. TPACK is TK optimization (Technology Knowledge) which is used in learning by integrating CK (Content Knowledge), PK (Pedagogical Knowledge), and PCK (Pedagogical Content Knowledge) into one unit that can produce an effective and more interesting learning process (Wahyudiati, 2022).

Several studies have investigated various topics related to the TPACK method. Rizqiyah's study (2021) criticizes the development of student learning independence through TPACK-based paragraph writing material. By using a case study design, this study tries to explain the use of TPACK-based paragraph writing teaching materials to increase student learning independence. This research was carried out in a paragraph writing class using blended learning (Arbianto, Widiyanti, & Nurhadi, 2019). Another study was conducted by Wahyuni (2020) to find the implementation of technological pedagogical content knowledge as an example of education modernization. The study findings reveal that implementing TPACK, a new learning approach in education, requires mastery of technology, pedagogy, and knowledge of learning topics. In addition, by using a quantitative descriptive method, research by Abiyanto, et al. (2019) found that "there is a significant effect of TPACK on learning outcomes, so that students can compete with other nations in the learning system".

Jamalulail and Rochmiyati (2023) examined the application of learning using TPACK to improve social studies learning outcomes for fourth grade elementary school students. The results of the study reveal that TPACK illustrates the basics of effective teaching using technology, by applying pedagogical techniques through constructive techniques to apply knowledge and technology content. TPACK can help students solve various problems and improve thinking skills. A study by Asniar (2020) investigated the use of the TPACK approach to teach elementary school students. The results of the research show that the learning process used by the teacher allows students to find the essence of a lesson. The students began to use the use of technology in the learning process.

A study by Lestari et al (2021) also examined the TPACK approach for teaching elementary school students. The results of the study show that the TPACK approach allows students to be actively involved in learning so that they can improve their learning outcomes.

Meanwhile, Tiwan & Tutuk Ningsih (2022) examined student innovation in social studies learning through TPACK. The results of the study show that in social studies planning and learning in elementary schools, teachers have implemented TPACK so that they are able to integrate learning technology into learning activities. Idris et al. (2019) examined the effect of the problem-based learning model on the process skills and learning outcomes of students studying social studies. Through the application of a problem-based learning model, students can improve their skills and knowledge about social studies learning materials. Some of the research above shows that the TPACK approach can increase student creativity in the social studies learning process. It can more effectively use ICT technology. Thus, student learning outcomes can be improved. In addition, TPACK also assists teachers in carrying out the learning process so that students can participate actively and effectively in the learning process.

To fill in the gaps in previous research, this research focuses on improving social studies learning outcomes through the TPACK approach in the era of society 4.0 in an elementary school. The focus is on the integration of ICT technologies into technology pedagogical content knowledge (TPACK), taking into account the latest trends in the era of society 4.0. The findings of this study are expected to increase creative thinking capacity among social studies teachers in elementary schools. The aim is to increase the effectiveness of teaching by utilizing ICT and TPACK technology. Thus, it can improve critical thinking skills among social studies teachers in elementary schools. The purpose of this study was to improve social studies learning outcomes for fifth grade elementary school students by using the method Technological Pedagogical Content Knowledge (TPACK).

METHODS

This Classroom Action Research collaborated with teachers teaching social studies subjects in elementary school high grades. The subjects were students from class X with a total of 10 respondents, the research referred to the Kemmis & Mc action research model. Taggart, by using the stages in class action with repetition: (1) Planning *(Planning)*: (2) action *(Action):* (3) Service observation *(Observation)*: and (4) Reflection, an overview of the following cycle.
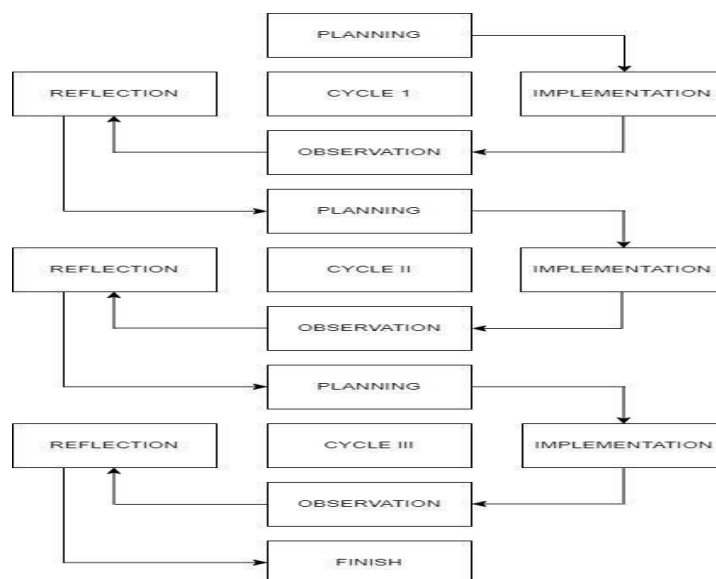

Figure 1. Arikunto's basic model of classroom action research (Arikunto et al, 2010)

Figure 1 The basic model of classroom action research developed by (Arikunto et al, 2010) is a research approach carried out by teachers in order to improve learning practices in class. This model refers to structured steps to identify problems, plan corrective actions, carry out actions, observe results, and reflect on the learning process. According to Junaedah et al. (2020), this research design uses an action research paradigm which includes four steps: planning, implementing, observing, and reflecting. The outline of the research cycle according to Arikunto (2010) is as follows: (1) planning: activities that can be carried out, namely: (a) creating learning scenarios, (b) making observation sheets, (c) designing evaluation tools. This observation activity involves applying observation sheets made by researchers during the preparatory stage (Heller et al., 2011). During this observation procedure, the researcher captures everything related to the learning characteristics that are the subject of research in the classroom (Heller, 2017).

CAR cycles are repeated several times (usually three or more) to develop and improve learning actions. Each cycle allows teachers to see changes in learning and to adapt their approach based on the results obtained. Through CAR, teachers not only address concrete problems in learning, but also develop a better understanding of effective learning practices. PTK enables teachers to be actively involved in their professional development while improving the quality of learning in the classroom.

This research involved fifth grade students of a private elementary school in East Jakarta, Indonesia. The research was conducted from October to December 2022. Data was collected using a post-test in each cycle. Used to assess student learning outcomes both before and after the action. The data analysis used is descriptive quantitative, namely characterizing learning outcomes, if there is an increase in student learning outcomes above the minimum completeness criteria (KKM), with an average grade of 70 completeness.

The focus of the activity plan is based on the difficulties and fundamental problems of fifth grade students who have not fulfilled the KKM. The action process consists of several stages, namely: (1) The level of instructor competence in making lesson plans based on TPACK and HOTS; (2). Teacher difficulty in identifying problems; (3) The readiness of teachers to solve the causes of problems; (4) the teacher's presentation stage in assisting students in solving problems and analyzing their causes; (5) Mastery of learning methodologies, models, approaches, and modalities. Learning is considered effective if the specified indicators obtain findings that meet the minimum completeness criteria (KKM), and student learning outcomes have followed the Technical Pedagogical Content Knowledge (TPACK) method, reaching 70% on the KKM score. The following is a summary of science and technology, as well as research steps using the TPACK technique.
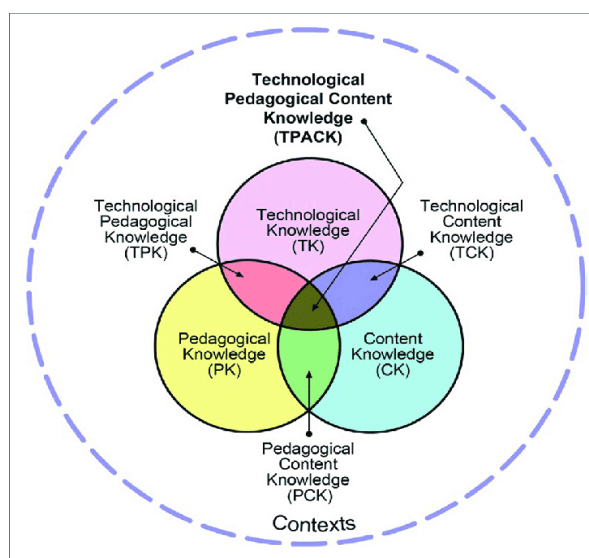
TPACK learning media platform technology (Prayogo, 2014)

Figure 2. The TPACK learning media platform technology refers to an educational approach that combines technological knowledge, pedagogical knowledge, and subject content knowledge to create effective and meaningful learning experiences for students. The platform combines these three key components to design and implement digital tools, resources and environments that enhance teaching and learning processes. The following details the components of the TPACK learning media platform technology: Technological Knowledge (TK): This component focuses on understanding various technologies, tools and software that can be used in educational contexts. This includes proficiency in using digital devices, applications, and multimedia resources to enhance teaching and learning. Pedagogical Knowledge (PK): Pedagogical knowledge involves understanding effective teaching methods, strategies and approaches. This includes how to design lessons, manage classes, engage students, and facilitate learning experiences that meet educational goals. Content Knowledge (Content Knowledge - CK): Content knowledge relates to a deep understanding of the material being taught. Within the context of the TPACK framework, this involves mastery of specific subject content, concepts, and theories. Pedagogical Content Knowledge (PCK): This component incorporates knowledge about how to teach specific content in an effective manner. PCK involves the teacher's ability to connect learning materials with appropriate teaching strategies. Knowledge of Pedagogical Technologies (Technological Pedagogical Knowledge - TPK): This component focuses on understanding how technology can be seamlessly integrated into teaching practice. Teachers must know how to combine teaching methods with technological potential to achieve learning goals. Technology Content Knowledge (Technological Content Knowledge - TCK): This involves bringing together knowledge of technology with an understanding of learning content. Teachers need to understand how technology can be used to represent, present, and illustrate specific content to make it more understandable and attractive to students. Content Pedagogical Technology Knowledge (Technological Pedagogical Content Knowledge - TPACK): TPACK is a comprehensive integration of technological knowledge, pedagogical knowledge, and content knowledge. It represents the ability to create learning experiences that make appropriate use of technology, enhance pedagogical practice, and ensure deep understanding of material. TPACK's learning media platform technology involves designing

educational tools, resources, and digital environments that align with these components. For example, this could include interactive multimedia presentations, online collaboration platforms, educational apps, virtual simulations and other digital resources that engage students, increase understanding and encourage active learning. By integrating technology with pedagogy and content knowledge, educators can create more effective and engaging learning experiences that suit diverse learning styles and preferences, increasing subject matter understanding and retention.

RESULTS AND DISCUSSION

This research begins with preliminary research, with *pre-test.* Researchers collaborated with class teachers on thematic social studies subjects in grade 5 of a private elementary school in East Jakarta, Indonesia. The curriculum used is Curriculum 2013. By using the Pedagogical Content Knowledge Technology (TPACK) approach, researchers obtained research data from three cycles. Cycle II was carried out with economic material, while cycle III was carried out with thematic learning. To complete the KKM with an average score of 70, three cycles were carried out with a total of 10 students using the TPACK technique. Cycle I examine topics 4 sub-themes 2 learning 2. Cycle II examines social studies cooperative economics material. Cycle III examines theme 5 sub-theme 2 learning 2.

What was examined in this study was student learning outcomes in social studies learning. The following are the stages of the cycle:

Cycle I

Research in cycle 1 was carried out in 4 stages.

a. Action Planning Stage (Planning)
　1) Researchers make lesson plans that will be applied in the teaching and learning process.
　2) Researchers designed learning strategies and active learning scenarios that were implemented using the TPACK approach.
　3) Researchers determine indicators of success in learning.
　4) Researchers compiled research instruments for the data collection process consisting of assessment and observation sheets.

b. Level of Action Implementation (Implementation)

　　Implementation of learning in cycle I (first) is carried out with the Technological Pedagogical Content Knowledge (TPACK) approach. The participants were fifth grade students from an elementary school in East Jakarta. Researchers collaborated with class teachers on Monday, November 7, 2022, from 7 to 10 am. The researcher compiled a Learning Implementation Plan (RPP) with the 2013 Curriculum guidelines. The following are the activities of researchers in cycle I:

1) The researcher explains the learning objectives that will be given to students.
2) Researchers used the TPACK methodology to carry out learning exercises. In this case, the instructor uses IT resources including computers, projectors,
3) Microsoft PowerPoint, and instructional films to facilitate learning.
　Researchers provide evaluation questions that are used for assessment.

　　In this activity, the researcher conducted a pre-test in cycle I. The initial learning material was about the local economy related to the environment. It is used to assess students' critical thinking skills (HOTS). One of the synergies of using the TPACK

approach in learning is the delivery of information by the instructor that describes economic conditions through video and PowerPoint (PPT) media. Students fill in the blanks on the LKPD for teacher questions. Students give answers in class after working on the LKPD. It was meant to elicit a temporary response from students. The teacher provides reinforcement based on the responses given by students. Teachers and students do question and answer exercises regarding information that has not been understood.

For the second learning topic, namely cooperative economic content, researchers used PPT as a TPACK strategy to link responsibility material with cooperative economic material. In this exercise, students watch a learning film about cooperative economics and listen to a video program. They then discussed it with the group before presenting it to the group. In closing activities, teachers and students reflect on learning together, and make conclusions, close learning by praying and following up, as well as closing greetings.

c. Observation Stage

During the observation stage, the researcher observed and documented all the data and information collected during the action research learning process. Observation guidelines are used to determine the success of the learning process using the technology pedagogical content knowledge (TPACK) approach and are used to make observations of students and instructors in cycle I.

Recapitulation of student learning outcomes in cycle I shows that the average student only gets 54.5. None of them met the Minimum Completeness Criteria (KKM). Furthermore, at the end of the learning process the researcher conducted a posttest in cycle I (one). the results of the study showed an average score of 68 percent, with a total of 10 students, achieving 60% or 6 students completeness, while 40% or 4 students did not complete, with a class action research approach based on technology pedagogical content knowledge (TPACK). in collaboration with the class V teacher. It must be continued in cycle II (two). Table 1 shows the recapitulation of pre-test and post-test learning outcomes in cycle I.

Table 1. Recapitulation of Student Learning Outcomes in Cycle I

| No.	Student's name	Pre-Cycle	Information	Post Test Cycle I	Information
1	FROM	52	Not completed	65	Not completed
2	AA	53	Not completed	70	Complete
3	AS	47	Not completed	65	Not completed
4	MS	58	Not completed	70	Complete
5	MF	45	Not completed	60	Not completed
6	TN	60	Not completed	70	Complete
7	RH	61	Not completed	72	Complete
8	RK	61	Not completed	73	Complete
9	AND	55	Not completed	65	Not completed
10	SS	53	Not completed	70	Complete
	Total	545		680	
	Rate-rate	54,5		68	
	Highest Score	61		73	
	Lowest Score	45		60	
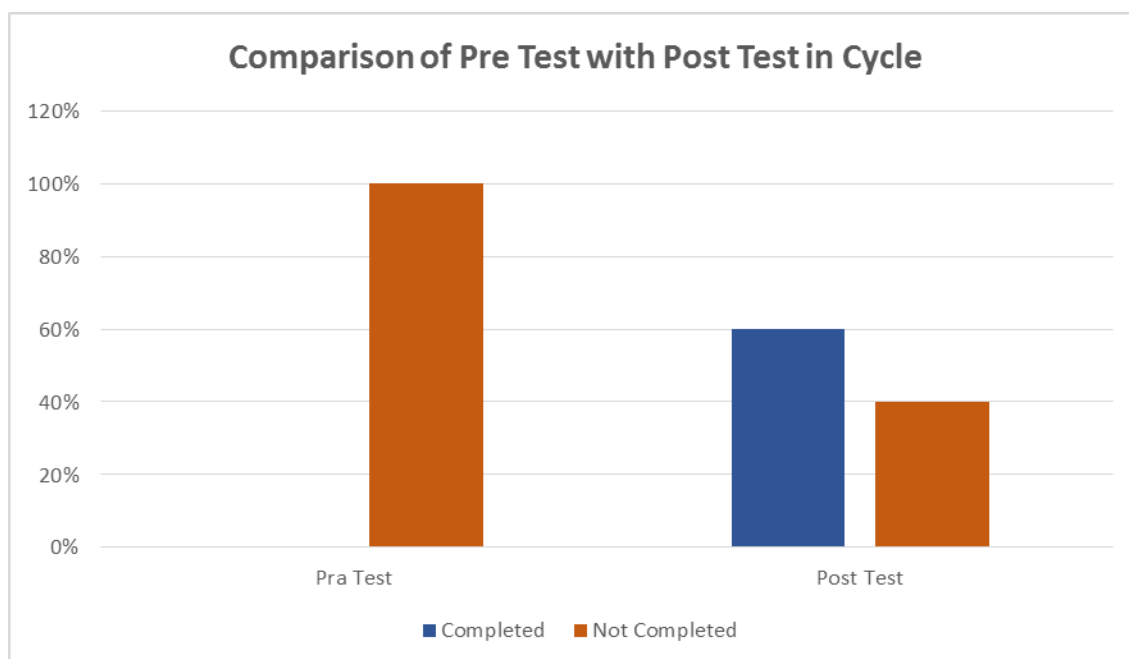
Figure 3. Comparison of Pre-Test and Post-Test in Cycle I

Based on Figure 3, the percentage of pretest and posttest comparisons in cycle I was not 100% complete. Therefore, researchers continue to strive to carry out the learning process using TPACK to improve student learning outcomes in social studies subjects.

d. Reflection

The results of the analysis and assessment of the first cycle showed that the social studies learning process in grade 5 had not yet reached the KKM. So, it must be continued to cycle II, using classroom action research techniques with the Pedagogical Content Knowledge (TPACK) approach.

Cycle II

In class action research cycle II, the researcher completed four parts of the learning process: planning, implementing, observing, and reflecting. The following are the specifics of the four stages:

a. Action Planning Stage (Planning)

1) Researchers make lesson plans that will be applied in the teaching and learning process.

2) Researchers designed learning strategies and learning scenarios that were implemented actively using the TPACK approach.

3) Researchers determine indicators of success in learning.

Researchers compiled research instruments for the data collection process consisting of assessment and o Students are invited to think critically (HOTS) by watching cooperative economic learning videos on millennial Indonesian economic lifestyles at the planning stage of cycle II (two), using classroom action research methods and knowledge of technology pedagogic content (TPACK) approach. This encourages active student thinking patterns by watching and listening to learning video shows, after which students can analyze the patterns observed in groups.

The instructor makes teacher observation guides, log books as observation notes, and prepares multiple choice assessment instruments as part of the learning design, which are prepared based on the plans that have been prepared in the RPP with the application of the

RPP. TPACK. In cycle II (two), two meetings were held, each meeting lasting 2 x 35 minutes.

b. Level of Action Implementation (Implementation)

On Monday, November 14 2022, the researcher carried out the second cycle stage by carrying out learning activities based on technology pedagogical content knowledge (TPACK). With the action steps continuing the previous cycle II, the researcher carried out 3 (three) stages of implementing the action, as follows:

1) The researcher explains the learning objectives that will be given to students.
2) The researchers used the TPACK methodology to conduct a learning exercise. In this case, the instructor uses IT resources including computers, projectors, and Microsoft PowerPoint to facilitate learning.

R Cycle II takes place on Monday, 17 October 2020, from 07.00 to 10.00 WIB. The TPACK technique, which incorporates technology into learning, is used to facilitate learning. In the core activity, the researchers worked with classroom instructors to teach social studies. Students practice critical thinking about cooperative economics through group discussions. The teacher distributes LKPD, while students present their answers in front of the class. Other friends responded to each other, and the researcher prepared LKPD as material for discussion and evaluation and prepared materials with a PowerPoint design. Participants evaluate their own learning to determine its success.

c. Observation Stage

At this stage in the action research process, the researcher observes and documents every bit of data and information from the learning process to determine whether the learning process follows the design that has been developed or not. Recapitulation in cycle I (one) based on table 3 shows an average student score of 68 percent, with 6 students fulfilling all requirements (60%) and 4 students not completing all requirements (40%).

The classroom action research method of learning with technology pedagogical content knowledge (TPACK) in collaboration with class V teachers resulted in an average score of 72.8 percent in cycle II. 70% of students are considered complete (7 students) while 30% (3 students) are still incomplete. Student learning outcomes in cycle II can be seen in Table 2 below:

Table 2. Recapitulation of Student Learning Outcomes in Cycle II

NO.	Student's name	Cycle I	Information	Cycle II	Information
1	FROM	65	Not completed	68	Not completed
2	A A	70	Complete	72	Complete
3	AS	65	Not completed	75	Complete
4	MS	70	Complete	66	Not completed
5	MF	60	Not completed	78	Complete
6	TN	70	Complete	65	Not completed
7	RH	72	Complete	75	Complete
8	RK	73	Not completed	76	Complete
9	AND	65	Complete	77	Complete
10	SS	70	Complete	76	Complete
	Total	680		728	
	Rate-rate	68		72,8	
	Highest Score	73		78	

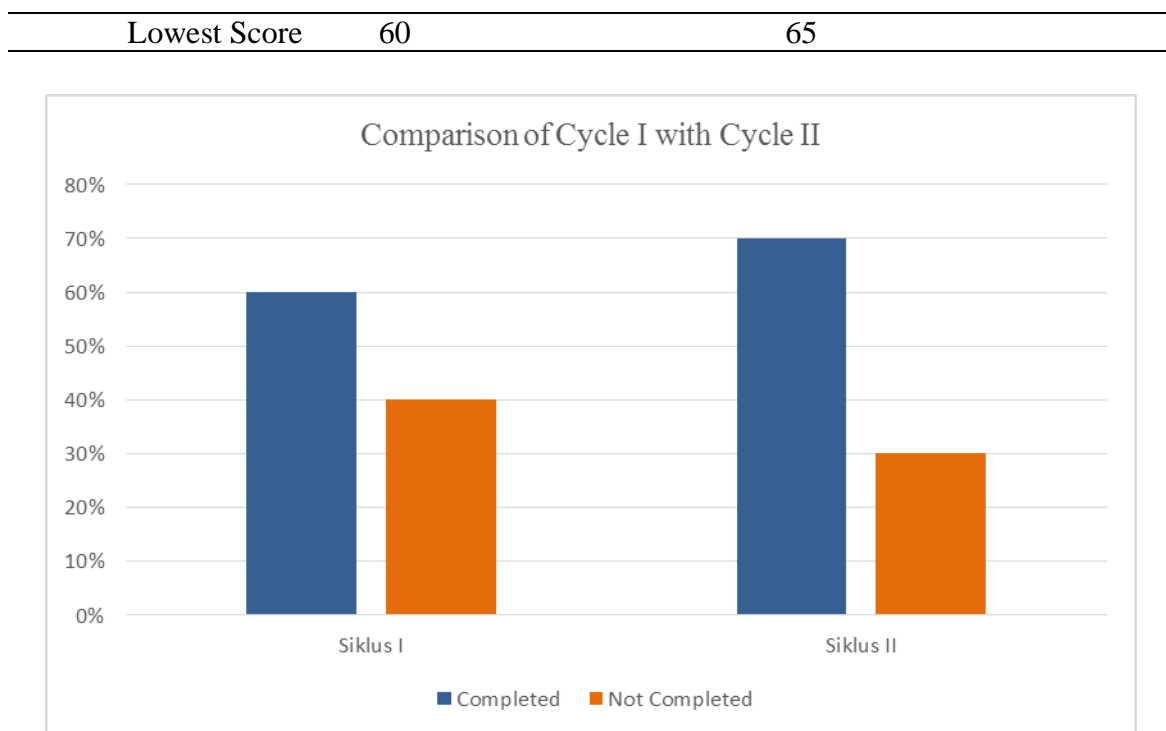|		
Lowest Score	60	65

Figure 4. Comparison of Cycle I and Cycle II

Based on Figure 4 it can be seen that 40% of cycle I participants did not complete compared to 60% who completed. Meanwhile, 30% of participants in cycle II did not complete, and 70% of participants completed. There was an increase from cycle I to cycle II, meaning that cycle III must achieve 100% completeness.

d. Reflection Stage

The activities carried out at the reflection stage include carefully reviewing the actions that have been taken or those that have not been carried out. Researchers evaluate learning outcomes, make assessments through evaluation, then discuss the facts obtained. Improvements are made in the next cycle if student learning outcomes still require completeness.

After completing one or more basic competencies, evaluation activities are carried out to measure student competency achievement on an ongoing basis in the classroom action learning process (CAR). These activities include monitoring progress, making improvements to learning, and assessing student learning success (KD).

By identifying students who have mastered the learning objectives and those who have not, the teacher can use assessment activities to assess the correctness of the information presented and the level of achievement of the learning objectives. Then, based on the assessment findings, the teacher grades the students.

Students look interested, motivated, and more able to assimilate the information offered during learning cycle II (two). The student's average grade increased to 78 percent. Seven students (7/10 x 100% = 70%) achieved learning completeness or a high level of knowledge, with scores between 72 and 76 (above KKM). While 3 students still have low understanding or have not completed their learning (3/10 x 100% = 30%), with scores ranging from 65 to 68 (under KKM). From these data it can be seen that improvements are still needed in cycle III (three). Because cycle II (two) is considered successful in learning, researchers should continue to cycle III.

Cycle III

The planning stage, the implementation stage, the observation stage, and the evaluation and reflection stage are the four steps of the activation process carried out in cycles I and II in the third cycle of action cycles. The following steps can be explained in more detail:

Teachers feel that drug use prevention programs in their schools are not always evaluated effectively, and reports of their implementation in schools are sometimes questioned. Another challenge is that there is not always enough budget available for drug use prevention programs.

a. Planning Stages

1) Researchers make lesson plans that will be implemented in the teaching and learning process.
2) Researchers designed learning strategies and scenarios that would be implemented using the TPACK approach.
3) Researchers determine indicators of achieving success in learning.
4) Researchers compiled research instruments for the data collection process consisting of assessment and observation sheets.

b. Action Implementation Stages

1) The researcher explains the learning objectives that will be given to students.
2) Researchers carry out learning activities using the TPACK approach. In this case, the teacher carries out the learning process using IT such as laptops, projectors, Microsoft PowerPoint, Smart Phones, and learning videos.
3) Researchers provide evaluation questions that are used for assessment.

The third learning cycle will be held on Monday, 21 November 2022, from 07.00 to 10.00 WIB. The learning that is carried out involves learning the IPS theme (IPS). The TPACK strategy that incorporates technology into learning is carried out by utilizing IT such as laptops, projectors, Microsoft PowerPoint, smart phones, and videos. This is used by researchers to implement learning in this session.

When using the TPACK technique, the instructor integrates model syntax into the foundations of learning. The teacher introduces the material by showing videos and films on the cooperative economy in Indonesia. Students watch and evaluate film shows using Student Worksheets (LKPD) in groups. It allows teachers to relate learning to the current economic situation in Indonesia.

c. Observation Stage

To find out whether the learning process follows the design that has been developed, the researcher observes and records all data and information in the learning process during the action study at this stage. At this point, an assessment is carried out to determine the extent to which the learning objectives for students are met. The list of cycle III learning objectives is presented below:

The recapitulation of student learning outcomes in cycle II (two) in Table 4 shows that out of a total of 10 students in grade 5, 7 students (or 70%) completed and 4 students (or 40%) did not complete. The student's average grade was 72.8 percent. In cycle III (three) it shows that with 10 students the average score has reached 82 percent. It has experienced 100 percent completion. 10 students have exceeded the completeness criteria (KKM), using the classroom action research model (PTK) and the technology pedagogical

content knowledge approach (TPACK), in collaboration with the class V teacher. The data can be seen in Table 3 below.

Table 3. Student Learning Outcomes in Cycle III

| No.	Student's name	Cycle II	Information	Cycle III	Information
1	FROM	68	Not completed	75	Complete
2	AA	72	Complete	75	Complete
3	AS	75	Complete	80	Complete
4	MS	66	Not completed	73	Complete
5	MF	78	Complete	90	Complete
6	TN	65	Not completed	85	Complete
7	RH	75	Complete	84	Complete
8	RK	76	Complete	83	Complete
9	AND	77	Complete	83	Complete
10	SS	76	Complete	87	Complete
	Total	728		820	
	Rate-rate	72,8		82	
	Highest Score	78		90	
	Lowest Score	65		73	
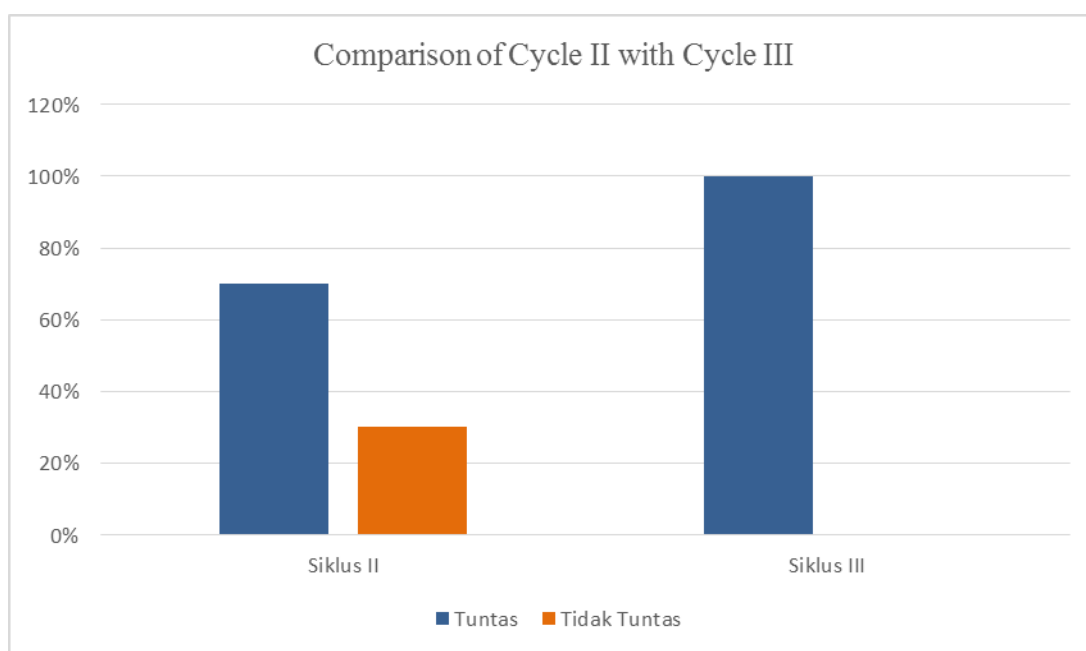
Figure 5. Comparison of Cycle II and Cycle II

Based on Figure 5, in cycle II out of 10 students 30% did not fulfill the KKM while 70% had to repeat using the TPACK technique in cycle III. As shown in the bar graph above, in cycle III, 100% completeness must be achieved.

Students are more active and easily understand information when learning in cycle III using the TPACK technique. Average student learning outcomes are 82 percent, while the highest score is 90. 10 students have completed the completeness level above the KKM.

Recapitulation of pre-cycle 1 test results, and final tests in cycle I, cycle II, and cycle III can be seen in Table 4.

Table 4. Recapitulation of Learning Outcomes Cycle I, Cycle II, Cycle III

| No.	Student's name	Pre-Cycle	Of the	Cycle I	Of the	Cycle II	Of the	Cycle III	Of the
1	FROM	52	Not completed	65	Not completed	68	Not completed	75	Complete
2	AA	53	Not completed	70	Complete	72	Complete	75	Complete
3	AS	47	Not completed	65	Not completed	75	Complete	80	Complete
4	MS	58	Not completed	70	Complete	66	Not completed	73	Complete
5	MF	45	Not completed	60	Not completed	78	Complete	90	Complete
6	TN	60	Not completed	70	Complete	65	Not completed	85	Complete
7	RH	61	Not completed	72	Complete	75	Complete	84	Complete
8	RK	61	Not completed	73	Not completed	76	Complete	83	Complete
9	AND	55	Not completed	65	Complete	77	Complete	88	Complete
10	SS	53	Not completed	70	Complete	76	Complete	87	Complete
				65	Not completed	728		820	
	Total	545							
	Rate-rate	54,5		70	complete	72,8		82	
				65	Not completed	78		90	
	Highest Score	61							
	Lowest Score			70	Complete	65		73	
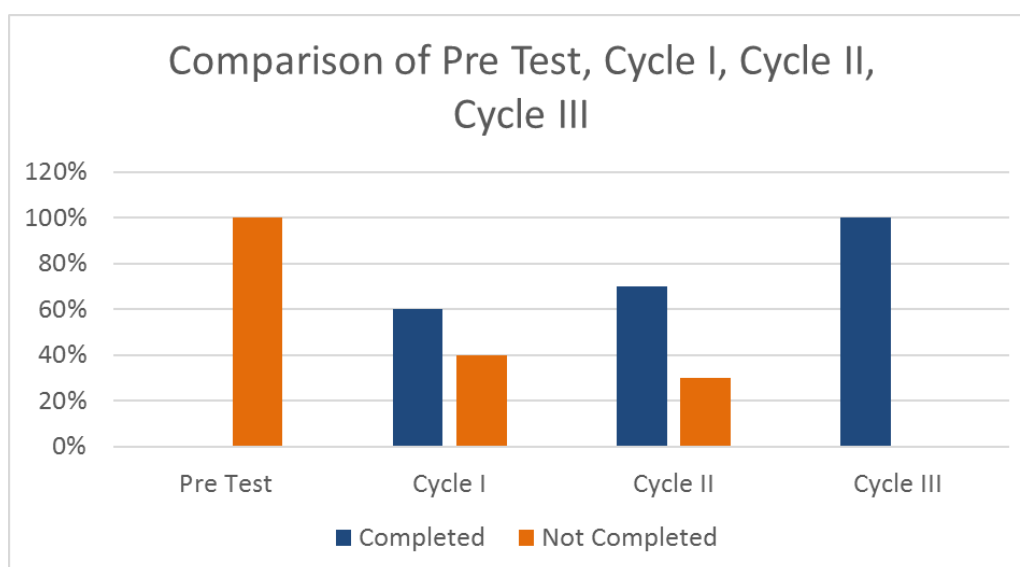
Figure 6. Comparison of Pretest, Cycle I, Cycle II, Cycle III

Based on Figure 6, the percentage of student learning outcomes in the first cycle pretest has not reached the completeness criteria. There are still 0% of the total 10 students who reach the KKM. In the first cycle, learning completeness with the TPACK approach reached 60%.

In cycle II there has been an increase of 70%, but it is still not complete. Must be continued again in cycle III in order to achieve 100% completeness. Of the 10 students, one student has achieved a score of 90. In cycle III all students scored above the KKM, so this research can be completed in cycle III because it has experienced 100% completeness, with an average score of 82. Based on the results of research that has been described above, learning with the TPACK approach in the learning process can involve students actively by thinking critically and effectively, so that students can learn creatively and have fun. The results of this study were also confirmed by Suardipa & Primayana (2020). Learning outcomes are a process to see how far students can master learning after participating in the learning process or the success achieved by students after participating in learning activities.

In addition, related to Ghimby's research (2019) also revealed that learning outcomes are abilities that individuals acquire after the learning process takes place. This can provide changes in the behavior of both knowledge, understanding, attitudes and skills of students so that they become better than before. Learning outcomes are one indicator of the learning process. Learning outcomes are changes in student behavior that are obtained after experiencing learning activities. One indicator of whether or not the learning process is achieved is by looking at the learning outcomes achieved by students. Meanwhile, research by Hasibuan et al. (2023) revealed that there is a significant influence on TPACK learning outcomes, so that students can compete with other nations in the learning system, using the Technological Pedagogical Content and Knowledge (TPACK) approach.

CONCLUSION

Based on the description of the research results, the use of TPACK can improve social studies learning outcomes for fifth grade elementary school students, using classroom action research conducted in 3 (three) cycles. TPACK has been given in the first cycle, then continued in the second cycle. Entering the third cycle, students have exceeded the KKM. Social studies learning success has reached a maximum level, with increased criteria (KKM). Improving social studies learning outcomes through the TPACK approach in an elementary school in East Jakarta has been achieved in cycle III.

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