The Effect of Using the Cycle 5E Learning Model Based on Local Wisdom on the Discipline Attitude and Social Sciences Learning

Baiq Maya Lestari; A. Hari Witono; Edy Herianto; Asrin; Siti Istiningsih

Master of Elementary Education, Faculty of Teacher Training and Education, University of Mataram, Indonesia

Abstract

Social Sciences is one of the subjects taught at the elementary school level. One of the goals of Social Sciences education is to develop awareness of the values of citizenship, morals, and state ideology, which can be realized through the development of democratic citizens. This study aims to determine the effect of using the Learning Cycle 5E model based on local wisdom on students' learning outcomes and Social Sciences learning discipline. The research approach used is quantitative research. The type of research conducted The kind of research used is a quasi-experimental type nonrandomized control group pre-test-post-test design. The research design used is to use two class objects, namely one experimental class and one control class. The experimental class was treated using the 5E learning cycle model while the control class was treated with a conventional learning model in the form of a demonstration. The research was carried out at Integrated Islamic Basic Schools of Generasi Muslim Cendikia (GMC) class IVa and class IVb. Class IVa has been used as an experimental class and IVb as a control. The sample in each class IV of GMC is 19 people. The data obtained from the research results were then analyzed using prerequisite tests, namely normality tests and homogeneity tests after being fulfilled, hypothesis testing was carried out with a comparative test between the experimental class and the control class. The results showed that the Learning Cycle 5E learning model based on local wisdom had a positive effect on students' disciplinary attitudes. The application of the learning cycle 5e based on local wisdom had a significant impact on improving student learning outcomes. This can be caused by several factors. The Learning Cycle 5E learning model based on local wisdom also had a significant impact on students' disciplinary attitudes and learning outcomes.

Keywords: *Learning Cycle Learning Model; Local Wisdom; Discipline; Learning Outcomes*

Introduction

Rapid developments in science and technology, as well as rapid changes in socio-culture, pose significant challenges for teachers and students in improving the quality of learning. Every student is faced with the challenge of continuously improving their learning methods by utilizing various sources and media, such as the internet, television, and audiovisual devices, in addition to learning directly from teachers. On the other hand, teachers are challenged to be able to motivate, guide, and provide the learning facilities needed for students. Through their role as teachers, teachers are expected to inspire students to study hard at

various opportunities. Teachers are also expected to be able to develop effective learning methods and habits so that students have high motivation to learn and ultimately achieve the desired results.

As time goes by, the demand for the level of success in the teaching and learning process that can be measured through school quality reports is increasing. From the current data, the results of the quality report in the field of numeracy and literacy are still very low in the West Praya region. The results of the education report are 80% lower than other educational units. This will require teachers to be more active and creative in the learning process at school. One thing that needs to be improved is Literacy which includes social science lessons.

Social Sciences (SS) is one of the subjects taught at the elementary and secondary education levels. According to Somantri (2001), the purpose of teaching SS at the school level is to build awareness of the values of citizenship, morals, state ideology, and religion; prioritize the content and methods of scientific thinking; and emphasize the inquiry process. One of the goals of SS education is to develop awareness of the values of citizenship, morals, and state ideology, which can be realized through the development of democratic citizens.

Sedyawati (2012: 382), explains that local wisdom should be interpreted as "wisdom in traditional culture", with the note that what is meant in this case is the traditional culture of ethnic groups. Every society in a nation certainly has its local wisdom, and the local wisdom of each region is different from other regions. Suhartini (2009) defines local wisdom as a legacy of ancestors related to life values. These life values are united not only in the form of religion but also in culture and customs.

The local wisdom that will be taken here is the local wisdom found in the West Nusa Tenggara region, especially the Lombok area, where the area is very rich in local wisdom and customs that are still strong. The local wisdom raised in this study is the historical heritage found in the Lombok area in general, such as historical heritage in the form of tombs or temples, while the disciplinary attitude that wants to be applied in the study is the pasu attitude which in Indonesian means active and the word pacu which means serious in carrying out tasks here in carrying out school assignments given by the teacher.

Fahmi (2011:280) stated that internal efforts with the community to restore local wisdom values to the surface can be done through education. Education can not only be done formally by teachers in schools but can also be done by learning independently with teaching materials developed by teachers that contain local wisdom values. The education process is a process of developing the potential of students so that they can become heirs and developers of the nation's culture. Through education, various values and cultural advantages in the past are introduced, studied, and developed into their own culture, society, and nation that are by the era in which students live and develop themselves (Kemendikbud, 2012) Education functions to empower human potential to inherit, develop and build future culture and civilization. On the one hand, education functions to preserve positive cultural values, on the other hand, education functions to create changes towards a more innovative life (Suastra, 2010).

The reality in the field is that knowledge about local wisdom has begun to be eroded by the development of the times, especially among the younger generation who do not even know about what local wisdom their region has. This requires the importance of re-raising the values of local wisdom so that local wisdom is maintained and the younger generation has the awareness to preserve local wisdom so that future generations continue to know local wisdom in their region.

In elementary school learning, especially in social studies subjects, it still tends to be theoretical or more dominated by the role of the teacher (teacher-centered) and not many have linked it to local wisdom. Learning in this subject is generally carried out traditionally with the lecture method, which tends to cause boredom in the learning environment because students only become passive listeners (Sulfemi and Nurhasanah, 2018). This situation results in low mastery of the material. Evaluation of students' social

studies learning outcomes is often carried out through the Minimum Completion Criteria as a benchmark for their success in the learning process.

Based on documentation data, this problem is also supported by the fact that the majority of fourth-grade students in Elementary School at Generasi Muslim Cendikia, in the second semester of the 2022/2023 academic year, have not yet achieved the Minimum Completion Criteria (MCC) set by the school, namely an average class of 42.3 with an MCC for social studies subjects of 75. Students have difficulty understanding social studies material and lack interest and motivation in the subject. This is reflected in the lack of enthusiasm and involvement of students during the learning process.

In addition, the results of observations in class IV during social studies learning at Integrated Islamic Basic Schools Of Generasi Muslim Cendikia (GMC) regarding attitudes towards learning discipline showed several findings: (1) many students were involved in playing and talking with their friends, resulting in a lack of focus on the teacher's explanation; (2) lack of politeness in speaking and behaving when discussing in groups; (3) absorption of information during learning was not optimal due to lack of student learning discipline; (4) lack of learning discipline also made students unprepared for sudden tests, because their study time was used to play; (5) some students tended to be late or even forgot to do their assignments, which led to indiscipline in the process of learning social studies. Learning became ineffective and caused no increase in learning outcomes.

To overcome these problems, it is necessary to use innovative learning models to improve the quality of the learning process so that the learning atmosphere becomes more enjoyable, active, and meaningful for students. Sadia (2014) One of the learning models that can support this is the learning cycle (5E) learning model based on local wisdom. "Learning cycle (5E)" is a development of the learning cycle model that includes the exploration stage, concept introduction, and concept application. By combining the learning cycle 5E learning model and local wisdom in the area, it is expected to be able to provide contextual learning for students, as well as increase student interest in social studies learning which is usually done using the lecture method.

This model is not dominated by teachers but involves students actively and creatively. The use of the 5e learning cycle model is a series of stages of activities (phases) that are organized in such a way that students can master the competencies that must be achieved in learning by playing an active role (Ngalimun, 2014).

According to Shoimin (2016) the characteristic of the learning cycle model is that students individually learn learning materials that have been prepared by the teacher. Then, the individual learning outcomes are brought to groups to be discussed by group members and all group members are jointly responsible for the overall answer. The use of the 5e learning cycle model based on local wisdom in social studies subjects can improve student learning outcomes in the cognitive domain and student discipline in the learning process at Integrated Islamic Basic Schools Of Generasi Muslim Cendikia.

According to research conducted by Hardayanti et, al., it shows that the implementation of Learning Cycle 5e has a positive and significant impact. Meanwhile, research conducted by Aditya, et.al. shows that the results of their research show the influence of the implementation of the learning cycle (5E) learning model based on local wisdom on the attitude of learning discipline and science learning outcomes of fourth-grade students of Gugus V State Elementary School, Sukasada District. Based on the results of previous studies, it can be concluded that the innovation used in this study is the local wisdom of the Sasak Lombok tribe. The differences lie in the learning materials and the research location where the research was conducted.

Literature Review and Hypothesis Development

Learning Cycle 5E Learning Model

The learning model is a description of a learning environment, including the behavior of teachers implementing it in learning. Learning models have many uses, ranging from learning planning, and curriculum planning, to designing learning materials, including multimedia programs (Octavia, 2020). According to Arend (in Mulyono, 2018) choosing the term learning model is based on two important reasons. First, the term model has a broader meaning than approach, strategy, method, and technique. Second, the model can function as an important means of communication, whether it is about teaching in class or the practice of supervising children.

According to Parmati and Rediani (2020), the Learning cycle is a learning model that is centered on the learner (student-centered). The learning cycle is a series of stages of activities (phases) that are organized in such a way that learners can master the competencies that must be achieved in learning by playing an active role. The term learning cycle comes from two words, namely learning and cycle. In the English dictionary, learning is defined as learning, and cycle is defined as rotation, circulation, or cycle. Thus, the learning cycle can be semantically interpreted as a learning cycle. In terms of terminology, a learning cycle is a learning model that reflects the stages of activities or a series in the form of a cycle, so that students have the opportunity to be active and can find knowledge on their own. In this case, the learning cycle is a learning model that is centered on students (student-centered).

The development of the learning cycle was first carried out by Robert Karplus in the Science Curriculum Improvement Study (SCIS) in 1970-1974. This model is based on the constructivist view of Piaget who assumes that in learning knowledge is built by the child himself in a cognitive structure through interaction with his environment. The learning cycle is a series of stages of activities (phases) that are organized in such a way that students can master the competencies, which must be achieved in learning by playing an active role.

Initially, the learning cycle learning model was divided into three stages, namely, (1) Exploration, (2) Finding concepts (concept invention) and (3) Concept application. However, today the learning cycle learning model has been developed into five stages, including (1) Interest Development (Engagement), (2) Exploration, (3) Explanation, (4) Elaboration (Elaboration/Extension), and (5) Evaluation.

According to Dasna in Parmati and Rediani (2020), the following is an explanation of the five concepts:

1. Interest Development (Engagement), where activities in this phase aim to gain students' attention, encourage their thinking skills, and help them access the initial knowledge they already have.
2. Exploration, where in this phase, students are allowed to work both independently and in groups without direct instruction or direction from the teacher. Students work to manipulate an object, conduct experiments (scientifically), make observations, collect data, and draw conclusions from the experiments conducted. In this activity, the teacher should act as a facilitator to help students work on the scope of the problem (previously made hypothesis).
3. Explanation, this phase aims to complete, perfect, and develop the concepts obtained by students. The teacher encourages students to explain the concepts they understand in their own words, showing examples related to the concept to complete the explanation. In this activity, it is very important to have a discussion between group members to criticize the explanation of the concept from one student to another.
4. In activities related to experiments, teachers can deepen the relationship between variables or conclusions obtained by students. This is necessary so that students can improve their understanding of the newly acquired concepts.

5. Elaboration, in this phase the teacher can direct students to obtain alternative explanations by using data or facts that they explore in new situations.
6. Evaluation, in this phase the teacher observes changes in students as a result of the learning process. In this phase, the teacher can ask open questions that can be answered using observation sheets, facts, or data from previous explanations that can be accepted.

Overview of Disciplinary Attitudes

According to the Big Indonesian Dictionary (KBBI), discipline refers to a set of rules, obedience to regulations, and a field of study that has certain objects, systems, and methods. According to Hurlock (1978), discipline is a way for society to teach children moral behavior that is approved by the group. Meanwhile, Tu'u (2004) defines discipline as an effort to control oneself and the mental attitude of individuals or society in developing obedience and compliance with regulations and rules, based on the drive and awareness that arises from within his heart.

Discipline is one of the most important attitudes that every individual must have to be accepted in society. According to Hurlock (1978), having a disciplined attitude will give children a sense of security by telling them what they can and cannot do. By being disciplined, children will learn how they should act in the environment they are in at that time. Thus, children will get a positive impact from the disciplined attitude they show, namely, they can live according to the standards set in that environment.

According to (Arikunto and Yuliana, 2009) Teaching discipline to children from an early age will provide many benefits for them in the future. They can become individuals who behave well and can organize their relationships regularly, thus avoiding chaos. In addition, according to (Wiyani, 2013) it is expected that their personality will be formed to behave according to applicable norms.

According to Soedijarto (1989), several indicators or characteristics of a disciplined attitude are as follows:

1. Always be on time, namely a disciplined person will always try to arrive on time, and not be late in attending an activity or event.
2. Doing a task well means that a disciplined person will do his/her task or work seriously and as well as possible by the applicable rules and regulations.
3. Accepting sanctions/punishments if they violate, namely disciplined individuals will be ready to accept the consequences or sanctions if they violate the rules or regulations that have been set.
4. Obeying the rules, namely obedience and compliance in obeying all rules and regulations is the main characteristic of a disciplined attitude.
5. Not interfering with the rights of others, namely a disciplined person will respect and not interfere with the rights or freedoms of others in carrying out activities.
6. Respecting others, namely a disciplined attitude is also shown by respecting and appreciating others, both from the upper and lower classes.
7. Respecting time, namely respecting time by not wasting it, is one form of discipline. So, according to Soedijarto, discipline is not only related to compliance with rules, but also includes respect for time, and others, and willingness to accept the consequences if violated.

Meanwhile, according to Tu'u (2004), several indicators or characteristics of a disciplined attitude are as follows:

1. Orderly and obedient to the rules A disciplined person will demonstrate order and obedience in following the applicable rules or regulations.
2. Punctuality in studying, namely punctuality in carrying out learning activities, such as entering class, collecting assignments, etc., is one indicator of discipline.

3. Have good attention. Disciplined individuals will have good attention to learning, and are not easily distracted or distracted.
4. Not disturbing others A disciplined attitude is also reflected in not disturbing the rights or comfort of others in carrying out activities.
5. Following the teacher's instructions A disciplined person will follow the instructions or directions given by the teacher properly and not argue.
6. Doing tasks well, completing tasks, or working well and optimally is a form of discipline.
7. Having initiative A disciplined individual will have the initiative to do something without always having to be ordered first.
8. Responsibility One of the characteristics of discipline is having a high level of responsibility towards one's duties and obligations.

According to Elizabeth B. Hurlock (1978), the positive and negative impacts of a disciplined attitude are as follows:

Positive impact:

1. Shaping behavior according to patterns approved by social groups Creating an orderly and regular environment
2. Helping children avoid unwanted behavior
3. Developing self-control and self-direction
4. Cultivate the ability to postpone immediate gratification to achieve larger goals.

Negative impact:

1. If discipline is too harsh, it can cause fear and frustration in children.
2. Excessive discipline can result in hostile or resistant behavior toward authority.
3. Children who are too disciplined tend to be shy, have low self-esteem, and are easily nervous.
4. Inconsistent discipline can result in confusion and undesirable behavior in children.
5. Discipline that is too loose or permissive can cause children to become naughty and demanding.

Learning Outcomes

According to Nana Sudjana (2010), learning outcomes refer to the abilities possessed by students after they experience the learning process. Furthermore, Warsito (Depdiknas, 2006), stated that the results of the learning process can be seen through positive and relatively permanent behavioral changes in individuals who are learning. Related to this view, Wahidmurni, et al. (2010), explained that a person's success in learning can be known from their ability to show changes in themselves. These changes can come from various aspects, including aspects of their thinking skills.

According to Benjamin Bloom in Nana Sudjana (2009), learning outcomes can be classified into three domains. First, the cognitive domain is related to intellectual achievement, which includes six aspects such as knowledge, memory, understanding, application, analysis, synthesis, and evaluation. Second, the affective domain refers to attitudes, with five aspects such as acceptance, response or reaction, exploration, organization, and internalization. Third, the psychomotor domain focuses on skills and abilities to act, with six aspects including reflex movements, basic movement skills, perceptual abilities, harmony or accuracy of movement, complex movement skills, and expressive and interpretive movements.

According to Benjamin Bloom in Nana Sudjana (2009: 23-29), the cognitive domain is related to intellectual learning outcomes consisting of six aspects. First, knowledge, such as memory or recall of certain information such as formulas, definitions, terms, or articles in-laws. This is important to memorize and remember as a basis for understanding other concepts. Second, understanding, for example explaining with structured sentences, providing additional examples of what has been explained, or outlining application instructions in other situations. Third is application, namely the ability to apply knowledge based

on real situations in society or the context in the reading text, fourth is analysis, namely an effort to sort integrity into elements or parts so that its hierarchy and/or arrangement are clear. Next, is synthesis, which is the ability to find unique relationships, to make plans or steps to be directed. Finally, evaluation involves assessing the value of something, perhaps based on goals, ideas, work processes, problem-solving, methods, materials, and so on.

The levels of cognitive domain learning outcomes are explained in Bloom's Taxonomy (Anderson & Krathwohl, 2010), which include: 1) Remembering (C1): The ability of students to retrieve knowledge from long-term memory. 2) Understanding (C2): The ability of students to construct meaning from learning materials, including what is written, spoken, and drawn by educators. 3) Applying (C3): The ability of students to apply a procedure in certain circumstances. 4) Analyzing (C4): The ability of students to break problems into their parts and determine the relationship between parts and objectives. 5) Evaluating (C5): The ability of students to make decisions based on certain criteria and standards. 6) Creating (C6): The ability of students to combine parts to form something new and coherent or to create an original product.

Learning Cycle 5E Is Based on Local Wisdom Regarding Disciplined Attitudes

The influence of Learning Cycle 5E on disciplinary attitudes includes the formation of attitudes of responsibility, cooperation, and discipline by using learning methods that integrate practical and theoretical aspects. The Learning Cycle 5E learning model is designed to improve the education system and improve the quality of education in a country. The use of Learning Cycle 5E can guide students toward a deeper understanding of concepts, improve critical thinking skills, and help them become more critical, and responsible individuals. According to Astawan's research (2017), data on the results of students' disciplinary attitudes increased and increased, this is what is being studied in social studies learning which is thought to be able to increase the increase in students' disciplinary attitudes.

H1: There is a significant difference in disciplinary attitudes between grade 4 students taught using the Learning Cycle 5E learning model and grade 4 students taught using the conventional learning model.

Learning Cycle 5E Based on Local Wisdom on Student Learning Outcomes

The application of the Learning Cycle 5E learning model can improve social studies learning outcomes. Based on the results of the study, the use of the Learning Cycle 5E learning model can encourage students to be more active in learning and improve social studies learning activities and outcomes. In addition, the Learning Cycle 5E learning model can also affect students' social skills in social studies. The effect of the Learning Cycle 5E learning model on students' learning motivation in history subjects can also be seen in research that shows a positive effect on students' learning motivation. In addition, linking local wisdom can increase students' interest in social studies learning at school and will increase student learning outcomes.

H2: There is a significant difference in learning outcomes between grade 4 students taught using the Learning Cycle 5E learning model and grade 4 students taught using the conventional learning model.

Learning Cycle 5E Based on Local Wisdom on Discipline Attitude and Learning Outcomes Simultaneously

The influence of Learning Cycle 5E based on local wisdom on students' discipline and learning outcomes in social studies learning in grade IV The influence of the Learning Cycle 5E learning model on discipline and learning outcomes simultaneously can be seen in a study conducted by Ika Eliza Cholistyana. This study aims to determine the influence of the Learning Cycle 5E model on students' learning outcomes on the concept of the excretory system. This study was conducted at MAN 11 Jakarta in the 2013-2014 academic year. The method used in this study is the quasi-experimental method. The sample of this study was students of grade XI Sciences 1 as an experimental class who were given LKS treatment based on Learning Cycle 5E with the Learning Cycle 5E model and students of grade XI Sciences 2 as a control class

who were given student worksheets treatment commonly used at MAN 11 Jakarta with the direct instruction model. The results showed that there was an influence of the Learning Cycle 5E model on students' learning outcomes on the concept of the excretory system. The average posttest score for the experimental class was 79.36 and the control class was 67.00. Data analysis of the process of both groups using the t-test obtained the results of t-count 6.645 and t-table at a significance level of 5% of 1.994, then t-count > t-table. The results of this study indicate that there is an influence of the Learning Cycle 5E model on student learning outcomes in the concept of the excretory system. This study shows that there is an influence of the Learning Cycle 5E model on student learning outcomes achieved.

H3: Differences or influences of the Learning Cycle 5E learning model on learning outcomes and disciplinary attitudes of grade IV students compared to conventional learning models.

Methods

The research approach used is quantitative research. According to Hamdi and Bahrudin (2014), Quantitative research emphasizes objective phenomena and is studied quantitatively, where the maximization of design using this research is carried out with numbers, statistical management, and controlled experiments. The type of research conducted quasi-experimental type nonrandomized control group by pre-test-post-test design. The research design used two class objects, namely one experimental class and one control class. The experimental class was treated using the 5E learning cycle model while the control class was treated with a conventional learning model in the form of a demonstration. The place of research will be carried out at Integrated Islamic Basic Schools Of Generasi Muslim Cendikia (GMC) class IVa and class IVb. Class IVa will be used as an experimental class and class IVb as a control. The reason for choosing this elementary school is because it is by the local wisdom to be studied and the teacher as a volunteer named Suarni, S. Pd is by the criteria desired by the observer. The sample in this study were students of grade IV of GMC, namely class VIa as the experimental class totaling 19 people, and class VI.b as the control class totaling 19 people with a total sample of 38 people. The data obtained from the results of the study were then analyzed using prerequisite tests, namely normality tests and homogeneity tests after being fulfilled, hypothesis testing was carried out with a comparative test between the experimental class and the control class.

Results and Discussion

Student Discipline Attitude Pretest Results

In this study, an analysis was conducted on the initial discipline attitudes of students from the control and experimental classes. Based on Table 1, it can be seen that the average and standard deviation of the discipline attitude values from the class has significant differences compared to the lecture class (control class) and the 5E learning cycle class (experimental class).

Table 1 Data on Students' Initial Disciplinary Attitudes

| Class | Mean | Std. Dev | Mark | |
			Min	Max
Experiment	58.16	8.58	40.00	80.00
Control	56.68	8.32	42.00	81.00

Posttest Results of Students' Discipline Attitudes

After the three classes were given treatment namely the 5E learning cycle learning model for the experimental class and the lecture learning model for the control class, then students were given a questionnaire to determine the students' disciplinary attitudes after being given treatment.

Table 2. Data Final Student Discipline Attitude

Class	Mean	Std. Dev	Mark	
			Min	Max
Experiment	57.84	11.32	35.00	83.00
Control	54.32	10.20	27.00	76.00

Based on Table 2, it can be seen that the average final disciplinary attitude value of the 5E learning cycle class is higher than that of the lecture class.

Gain Score of Students' Learning Discipline Attitude

The gain score obtained from testing SPSS 25 is then poured into the table below as follows:

Table 3. Gain Score of Students' Learning Discipline Attitudes

Class	Mean	Std. Dev
Experiment	4467	08465
Control	2910	04678

Each gain score value is grouped into three categories, namely low ($<g>$) < 0.70, medium $0.70 \geq$ ($<g>$) ≥ 0.30, and high ($<g>$) > 0.70. It can be seen that the average gain score for both the control and experimental classes is in the low category, namely ($<g>$) < 0.70.

Pretest Student Learning Outcomes

In this study, an analysis was carried out on the initial abilities of students from the control and experimental classes. Based on the graph, it can be seen that the average and standard deviation of the pretest scores from the two classes do not have significant differences.

Table 4 Initial Student Learning Outcome Data

Class	Min	St. Dev	Mark	
			Min	Max
Experiment	22.35	10.19	7.00	47.00
Control	25.26	12.59	7.00	53.00

Post-test Student Learning Outcomes

After the pretest was conducted, both classes were given treatment, namely the 5E learning cycle learning model for the experimental class and the lecture learning model for the control class, and the posttest results were obtained as in the table below.

Table 5. Data on Students' Final Learning Outcomes

Class	Min	St. Dev	Mark	
			Min	Max
Experiment	60.00	16.81	33.00	93.00
Control	39.19	12.86	20.00	73.00

Based on Table 5, it can be seen that the average post-test value of the experimental class with treatment using the learning cycle method is higher than the control class using the method.

Gain Score Learning Outcomes

After the pretest and posttest score results were found, the gain score was sought from the learning outcomes and students' discipline attitudes. The results obtained on the gain score by students in the experimental and control classes of this study are presented in the table below.

Table 6. Gain Score Learning Outcomes

Class/Item	N	Minimum	Maximum	Mean	Std. Deviation
Control Class					
N_Gain_learning_control	19	35	68	0.1942	0.06506
Valid N (listwise)	19				
Experimental Class					
N_Gain_Learning_Results_Experiment	19	0.31	0.71	0.5158	0.13687
Valid N (listwise)	19				

Each gain score value is grouped into three categories, namely low ($<g>$) < 0.70, medium $0.70 \geq$ ($<g>$) ≥ 0.30, and high ($<g>$) > 0.70. It can be seen that the average gain score for both the control and experimental classes is in the high category, namely ($<g>$) > 0.70.

Normality Prerequisite Test Results

This normality test is obtained from the gain score pretest data and posttest data of the control class and experimental class. The significance level value or asymp-sig-gain score for lecture class with Kolmogorov Smirnov test is 0.166 and with Shapiro Wilk test is 0.462. The significance level value or asymp-sig-gain score of the demonstration class with the Kolmogorov-Smirnov test is 0.055 and with Shapiro Wilk test is 0.105. The significance level value or asymp-sig-gain score of learning cycle 5E class with Kolmogorov Smirnov test is 0.140 and with Shapiro Wilk test is 0.286 for student learning outcome value, where sig.> 0.05. Thus, it can be concluded that the value of student learning outcome ability has a normal distribution.

Table 7. Normality Test Results

Variables	Class	Kormogolov Smirnov Values	Shapiro Wilk Values
Student Discipline Attitude	Experiment	0.173	0.746
	Control	0.121	0.288
Student Learning Outcomes	Experiment	0.140	0.286
	Control	0.166	0.462

This normality test is obtained from the gain score of the initial discipline attitude data and the final discipline attitude data of the control class and the experimental class. The significance level value or asymp-sig-gain score of the lecture class with the Kolmogorov Smirnov test is 0.180 and with the Shapiro Wilk test is 0.493. The significance level value or asymp-sig-gain score of the demonstration class with the Kolmogorov Smirnov test is 0.200 and with the Shapiro Wilk test is 0.227. The significance level value or asymp-sig-gain score of the learning cycle 5E class with the Kolmogorov Smirnov test is 0.140 and with the Shapiro Wilk test is 0.112. Based on the data in the table above, it can be seen that the results of the normality test in both classes, namely the experimental class and the control class, are normally distributed.

Homogeneity Prerequisite Test Results

This homogeneity test was conducted on the gain score of pretest data and posttest data of the control class and experimental class to determine whether the experimental class and control class have the same data variance. The test results obtained a significance level value or asymp-sig-gain score based on the mean value of 0.995, based on the median value of 0.998, based on the median and adjusted df value of 0.998, based on the trimmed mean value of 0.998 where sig> 0.05. Thus it can be concluded that both classes have homogeneous learning outcomes and gain score variance.

Table 8. Homogeneity Test Results

Student Discipline	Levene Statistics	Sig.
Base On Mean	0.982	0.050
Student learning	Levene Statistics	Sig.
Based on mean	0.995	0.005

This homogeneity test was conducted on the gain score of the initial discipline attitude data and the final data of the control class and the experimental class to determine whether the experimental class and the control class have the same data variance. The test results obtained a significance level value or asymp-sig-gain score based on the mean value of 0.982, based on the median value of 0.973, based on the median and adjusted df value of 0.973, based on the trimmed mean value of 0.973 where sig.> 0.05. Thus it can be concluded that both classes have homogeneous gain score variances of learning discipline attitudes. Based on the data from the Homogeneity test using SPSS 25, the data is said to be Homogeneous because it has a sig value> 0.05 which will then be tested for hypotheses.

Hypothesis Test Results

Simple Linear Regression Test is conducted to answer the hypothesis whether there is an influence of the 5E learning cycle model based on local wisdom on variables. Regression is also used to see how strong the influence of the 5E Learning Cycle is on students' discipline attitudes and learning outcomes. The regression coefficient value provides an overview of the strength of the influence. One by one regression tests are carried out, namely between variable x and variable y1, then testing variable x with y2.

Table 9. Discipline Attitude Regression Test Results Table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	15,504	3.311		4.683	0.000
	learning_cycle	0.857	0.048	0.974	17,764	0.000

Based on the table above, the results of the simple regression test are as follows: $Y = 15.504\beta + 0.857 X$, which means that if the learning cycle variable is equal to 0, then the discipline attitude variable is equal to 15.504β. After conducting the regression test of the independent variable with the first dependent variable, a simple regression test was then conducted with the second dependent variable, namely student learning outcomes.

Table 10. Results of the Learning Outcome Regression Test

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	35,387	8.214		4.308	.000
	learning_cycle	.592	.120	.768	4.946	.000

Based on the results of the regression test conducted on the test of students' learning discipline attitudes, the results obtained were With a sig value = 0.00, it can be concluded that there is a very significant difference between the sample average and the expected value (hypothesis average). These results indicate that the sample tested is significantly different from the hypothesized population value.

Based on the results of the regression test of student learning outcomes carried out on student testing, the results obtained were with a value of $35,387\beta$ and the learning cycle value at 0.592x. It can be concluded that there is a very significant difference between the sample average and the expected value

(hypothesis average). This result shows that the tested sample is significantly different from the hypothesized population value.

The Manova test was conducted to obtain the results of the third hypothesis, namely the effect of learning cycle 5e on discipline attitudes and learning outcomes simultaneously, the test conducted was a multivariate regression test (MANOVA). Multivariate regression testing is a statistical technique used to analyze the effect of one or more independent variables on more than one dependent variable simultaneously. Unlike simple linear regression which only has one dependent variable, multivariate regression allows us to test how independent variables affect several dependent variables at once. The results of the MANOVA test show that there is a difference between one independent variable and another if the significance of the F test is less than 0.05.

Table 11. Multivariate Test Results Table

Effect	Sig
Pillai's Trace	0.000
Wilks' Lambda	0.000
Hotelling's Trace	0.000
Roy's Largest Root	0.000

Based on the results of the multivariate test seen from the results of Wilks' Lambda, the sig data is 0.00 so the data is said to have a significant influence. Wilks' Lambda is used to measure how well the independent variable predicts the dependent variable as a whole. A value close to 0 indicates that the independent model has a strong influence, while a value close to 1 indicates a weak influence.

The MANOVA test output with SPSS shows the results of the multivariate test with the independent variable being the Learning Cycle 5E learning model, and the dependent variable being the attitude of discipline and learning outcomes. The results of the multivariate test show a significance value of 0.000. Because this significance value is smaller than 0.05, H0 is rejected. This means that there is a significant difference simultaneously between the use of the Learning Cycle 5E model and conventional learning methods, in terms of the attitude of discipline and student learning outcomes.

The results of the MANOVA analysis show that the research conducted is by the first hypothesis, namely that there is a difference in the achievement of improving learning discipline attitudes and improving student learning outcomes together based on local wisdom. Based on the research that has been done, the results show that there is an influence of learning with the 5E learning cycle model on student discipline attitudes and learning outcomes. Based on the table of differences in improving student learning outcomes, it is shown that the results of the analysis of the improvement in learning outcomes obtained by students in the experimental class are higher than those in the control class. The results of hypothesis testing with MANOVA on the Test between subject effect show that there is a significant difference in improving student learning outcomes who study with the 5E learning cycle model with the conventional learning model when tested together so that it can be concluded that H0 is rejected and Ha is accepted from both variables.

The results of this study are similar to the results of Elies Septiana Sari, Asim, and Yudyanto (2014) on improving the implementation of learning, improving student activity in the affective aspect, and improving student activity in the psychomotor aspect, indicating that the learning model affects improving student learning activities and achievements. Meanwhile, the latest research by Ali Rusidi (2015) on improving student learning outcomes in the cognitive, affective, and psychomotor domains, is the same as the research conducted by the researcher. Based on the calculation of the gain score of the experimental class and the control class, the average gain score of the experimental class was greater than the average gain score of the control class. The improvement in learning outcomes of the experimental class was higher because the learning used the 5E learning cycle, where in learning students were active in learning activities and could carry out scientific activities to find the concepts being studied.

Slightly different from the experimental class, students in the control class appeared passive. Although during the learning process, Q&A and demonstration activities were still held, students did not show good improvement in learning outcomes. In the control class, students were accustomed to only listening, watching, and taking notes of lessons taught by the teacher, so when a Q&A session was held they tended to be silent because students could not be actively involved in teaching and learning activities and carry out activities where students themselves did and made the activity a valuable experience. The latest research conducted by researchers shows different results from the results of previous research on learning outcomes. Based on the table of differences in student learning outcomes, it is shown that the results of the analysis of the increase in learning interest obtained by students in both the experimental and control classes did not increase. The results of hypothesis testing with MANOVA on the Test between subject effect show that there is a difference in the increase in discipline and learning outcomes of students who study with the 5E learning cycle model with the conventional learning model when tested together.

Conclusion

The results of the study showed that students who learned through the Learning Cycle 5E approach based on local wisdom tended to show an increase in compliance with regulations, discipline in managing time, and responsibility for assigned tasks. The results showed that the use of the learning cycle 5E based on local wisdom had a positive effect on students' disciplinary attitudes. This can be explained as Local Wisdom Values Many local cultures emphasize the importance of discipline, such as the values of cooperation, responsibility, and mutual respect. When these values are integrated into the learning cycle, students tend to internalize the disciplinary attitudes taught through their cultural context. So it can be concluded that the application of the Learning Cycle 5E learning model based on local wisdom has a positive effect on students' disciplinary attitudes.

Students taught with the local wisdom-based 5E Learning Cycle approach experienced increased understanding of the material, critical thinking skills, and the ability to apply knowledge in real situations, all of which were reflected in better academic grades. By using local wisdom, the subject matter becomes closer to students' daily experiences. This makes it easier for students to understand the concepts taught because they can relate new knowledge to the knowledge they already have. The application of the local wisdom-based 5E learning cycle has a significant impact on improving student learning outcomes. This can be caused by several factors.

The learning cycle that actively involves students in the exploration and elaboration process, coupled with the cultural context, makes students more interested and motivated to learn. High motivation usually has a positive impact on learning outcomes. The 5E learning cycle involving local wisdom often utilizes direct experiences or case studies that are relevant to the student's culture. This experiential learning deepens understanding and increases knowledge retention. Students taught with this approach experience increased understanding of the material, critical thinking skills, and the ability to apply knowledge in real situations, all of which are reflected in better academic grades. Therefore, it can be concluded that the Learning Cycle 5E learning model based on local wisdom also has a significant impact on student discipline and learning outcomes.

Recommendation

It is recommended that the Learning Cycle 5E learning model based on local wisdom be integrated into the school curriculum, especially in areas with rich local wisdom. This can help enrich students' learning experiences and improve learning outcomes and discipline. Teachers need to be given adequate training related to the implementation of this learning model, including how to integrate local wisdom into the teaching and learning process. Training should also include classroom management that supports active and constructive learning. Teaching materials used in learning should be adjusted to local characteristics

and needs. The teaching materials developed should include elements of local wisdom that can be used as examples or case studies that are relevant to the subject matter. Further research is recommended to explore more deeply the influence of this learning model on other aspects, such as learning motivation, cooperation between students, and social-emotional development. In addition, research at various levels of education and different subjects will also provide broader insights into the effectiveness of this model.

By implementing these suggestions, it is hoped that the results of this study can be useful in improving the quality of education and character development of students through an approach based on local wisdom.

References

Arikunto, S. (2006). Research Procedures: A Practical Approach. Jakarta: Rineka Cipta.

Astawan, I. G. and Rati, N. W. (2016). The Influence of Quantum Learning Model and Summarizing Technique on Human Reasoning. E-Journal PGSD Undiksh, Volume 3 (pages 1-9). https://media.neliti.com/media/publications/85726-none-ce3fd1f6.pdf accessed on January 18, 2024.

FKIP. (2020). Guidelines for Writing Scientific Papers.Mataram: FKIP Unram

Hamdi, A. S., & Bahruddin, E. (2014). Quantitative Research Methods Application in Education. Yogyakarta: CV Budi Utama.

Hermawan, H. (2006). Innovative Learning Models. Bandung: Citra Praya.

Jakni. (2016). Experimental Research Methodology in Education. Bandung: Alfabeta.

Kusumastuti, A., Khoirin, A. M., & Ali, A. T., (2020). Quantitative Research Methods. Yogyakarta: Deepublish.

Martorella, P. H., (1994). Social Studies for Elementary School Children: Developing Young Citizens. New York: Macmillan College Publishing Company.

Mulyono, N., (2018). Curriculum and Learning. Bandung: Rizqi Press.

Ngalimun. (2014). Learning Strategies and Models. Yogyakarta: Aswaja Pressindo.

Octavia, S. A., (2020). Learning Models. Sleman: Deepublish Publisher.

Parmati, D. P., & Rediani, N. N. (2020). Fun Teaching in Elementary Schools. Jakarta: PT. Raja Grafindo.

Parwanti. (2020). Cooperative Learning Game Model in Junior High School Social Studies Learning. Indramayu: Adab Publisher.

Purnomo, A., et al. 2018. Designing Social Studies Learning. Semarang: Cipta Prima Nusantara.

Riduwan. (2013). Basics of Statistics. Bandung: Alfabeta.

Riinawati. (2021). Introduction to Educational Evaluation. Yogyakarta: Thema Publishing.

Sapriya. (2015). Social Studies Education. Bandung: Rosdakarya

Sardjiyo, et al. (2014). Social Studies Education in Elementary Schools. Jakarta: Open University Publisher.

Shoimin, Aris. (2014). 68 INNOVATIVE Learning Models in the 2013 Curriculum. Yogyakarta: AR-RUZZ MEDIA.

Shoimin, A. (2016). 68 Innovative Learning Models in the 2013 Curriculum. Yogyakarta: Arus Media.

Siregar, S. (2013). Quantitative Research Methods Completed with Comparison of Manual Calculations & SPSS. Jakarta: Prenamedia Group.

Sudaryono. (2016). Educational Research Methods. Jakarta: Kencana.

Sudijono, A. (2011). Introduction to Educational Evaluation. Jakarta: Rajawali Pers.

Sugiyono. (2007). Educational Research Methods Qualitative, Quantitative, and R & D Approaches. Bandung: Alfabeta.

Sugiyono. (2018). Research Methods (Quantitative, Qualitative, and R&D). Bandung:.

Suhadi, I., Mukhadis, A., & Dasna, I. W. 2003. Basics of Research Methodology. Malang: State University of Malang.

Sukardi. (2018). Educational Research Methodology Revised Edition. Jakarta: Bumi Aksara.

Supardi. (2013). Application of Statistics in Research Revised Edition. Jakarta: Change Publication.

Trianto. (2010). Integrated Learning Model. Jakarta: Bumi Aksara.

Umar, H. (2002). Research Methodology for Business Thesis and Dissertation. Jakarta: PT. Raja Grafindo Persada.

Suryani, A.I., dan Ningsih, S.R. 2021. Aplikasi Pembelajaran Bahasa Jepang Berbasis Android. Journal.

Sistem dan Teknologi Informasi.

Copyrights