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CHARACTER EDUCATION OF ELEMENTARY SCHOOL STUDENTS ON ONLINE LEARNING

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Abstract: This research is motivated by a change in the learning system to be online and has an impact on practicing character education to elementary school students. This is because of the implementation of character education that was previously exemplified directly, but the result of these changes cannot be implemented and creates obstacles and strategies carried out by teachers and parents. The purpose of this study is to identify and identify the strategies and obstacles experienced during the implementation of character education learning in online learning during the Covid 19 pandemic. The research method used was descriptive qualitative research, data collection was carried out through interviews with informants in this study. That is the way teachers and parents, about what processes and obstacles are experienced during online learning. The results of this study are in the form of strategies that have been implemented by schools and parents to deal with obstacles to online character learning, including the implementation of character education learning through habituation at-home activities that reflect discipline and responsibility.

Keywords: Character Education, Online Learning, Elementary school students

INTRODUCTION

Character education is a form of human activity in which there is an educational action aimed at students. The purpose of character education itself is a form of action aimed at shaping a person's self-improvement continuously and training self-skills towards a better life. Efforts to implement character learning at official institutions in shaping and fostering the character of students are needed. A pattern of leadership from the leader of educational institutions and educators will influence the effectiveness of the character education process for students (Ramadhani, 2014). Based on Law No. 20 of 2003 concerning the national learning system in article 3, which reports that national education plays a role in increasing capabilities and shaping the character and civilization of a dignified nation in the context of the intellectual life of the nation.

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The character itself is values of human attitudes related to God Almighty and oneself, fellow human beings, surrounding environment, and nationality which are manifested in thoughts, behavior, feelings, words, and actions sourced from religious norms, laws, etiquette, culture, and customs. COVID-19 pandemic has had an impact on all aspects of life. The Indonesian government has decided to implement Large-Scale Social Restrictions (PSBB), which will limit activities and reduce socialization with others in the fields of religion, economy, and even education. In school education from elementary, middle, and high school or university through the ministry of education has issued a circular regarding learning from home (Kemendikbud, 2020).

The implementation of online education has also led to a change in the pattern of character learning education. Character education during the COVID-19 pandemic is difficult to implement because it is constrained by many things, however, character education must continue to be carried out considering character education is very important.(Hartati, et al 2019). Character education of students before the COVID-19 pandemic, elementary school students generally imitated the teacher's attitude which was directly imitated by these students. Exemplary is an important aspect to realize character education during the Covid 19 pandemic considering character education as a form of personality that must be implemented in real terms (Rachman, 2020). Doing online learning can affect the character (Suasthi, 2020). The teacher's role which is usually carried out at school must be replaced by someone who accompanies students studying at home. By giving simple real examples amid existing limitations, it is one of the important things to improve student behavior and character changes (Cahyaningrum, et al 2017). If someone's role who accompanies students to study at home cannot play the teacher's duties properly so that the student character created between students who study directly and students who study online will be different (Kemendikbud, 2020).

The application of this education is carried out through the interaction of teachers with students in an atmosphere of learning scope. This education essence is mentoring by educators to deliver knowledge to students. Therefore, education can simply be interpreted as an enlightenment process carried out by teachers to help students obtain education and be able to master the learning materials provided. This paradigm of the learning essence has become a classic with the Covid-19 crisis which has changed the paradigm of learning and education in the world (Fatmadewi, 2020).

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This education system certainly has many obstacles to be experienced by students, parents, teachers let alone schools. These barriers are fundamental in supporting the online education system. Teachers and students in Indonesia do not fully understand the use of technology as a certain obstacle in online learning and besides that, the quota push from the government is also not comprehensive, some of the students do not get a learning quota at all (Putria et al, 2020). These obstacles that have been described show that learning condition which passed online is still not optimal with the expectations and goals set by the government. There are also mistakes above that need to be followed up more deeply so that the online system can run efficiently and effectively to shape the character of students following the educational goals to be achieved. The author collects obstacles and errors that should be predictable so that students can have a responsible character for themselves, especially in their learning.

METHOD

This research is descriptive qualitative research, which is used to describe everything related to strategies and obstacles in the implementation of character education at SDN Tenggilis Mejoyo 1 Surabaya during the Covid-19 pandemic. This research is classified as field research, namely research that is directly carried out on respondents. This research was carried out during the Covid-19 pandemic in online learning, from November to December 2020.

As for in this study the authors grouped the data sources into two forms:

1. Primary data is the main data analyzed and sourced from observations of student activities and direct interviews with teachers and student guardians related to the impact, character education strategies in the implementation of online learning during the Covid-19 pandemic.
2. Secondary data is complementary data that is still related and connected to the research intend. This secondary data was obtained from data taken from school profiles, conditions of teachers and students, and parents of students at SDN Tenggilis Mejoyo 1 Surabaya.

In this study, the data collection technique used was an observation on 30 students, and interviews were conducted on a sample of 10 parents and a homeroom teacher. The

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instrument used to interview parents is based on family conditions and parents' educational background. The parents' background of the students interviewed was seen from the parents' occupation aspect and the parents' education level. In observation, the instruments used are the constraints of online teaching and learning activities and the online learning process as the inculcation of character education in schools. The data analysis technique used is data reduction, data display, and verification and in this study, the data analysis used is descriptive analysis to describe and introspect data on the implementation of character education during the Covid-19 pandemic learning period at SDN Tenggilis Mejoyo 1 Surabaya.

RESULTS

The COVID-19 pandemic has changed the teaching and learning system that was originally implemented in schools, now into online learning at home. Online learning is customized to the school's ability. Giving assignments through social media is considered quite effective in online learning practice. However, this creates a new problem in teaching character education, where the teacher who should be a direct example is now having difficulty in implementing it in online learning.

This study is a description of the data exposure that has been obtained from the documentation results and interviews and observations with parents and guardians of students. The data obtained are children's data, teacher personal data and what reasons and obstacles have been obtained, how the learning process from discipline character education and responsibility is carried out by students whether there are obstacles or not. The following table is an aspect that is assessed.

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Table 1. Observation Table

No	Aspect	Evaluation			
1	**Discipline**	P1	P2	P3	P4
		1-4	1-4	1-4	1-4
	Paying close attention to the teacher	2	3	3	4
	Uniforms for online learning	3	2	3	4
	Enter Zoom class on time	3	3	3	3
	Collect assignments on deadline	2	2	4	3
2	**Responsibility**	1-4	1-4	1-4	1-4
	Responsible for schoolwork	2	2	3	4
	The seriousness of the teaching and learning process	2	3	4	4
	The responsibility of helping parents, (sweeping, cleaning the house, etc	2	4	4	4
P= ×100$\frac{m}{n}$		57%	67%	85%	93%

Source: t-test attachment test 10

Information

P = Total percentage

M = Total value

N = Total score

In this study, several aspects were observed for the running of online learning in the implementation of character education for elementary school students in the habituation of discipline and responsibility. These aspects assessed are aspects of discipline and responsibility, which were carried out for 4 meetings. It is expected that at each meeting every student can show the changes.

In this case, the author chooses a character in the habituation aspect of discipline and responsibility because discipline and responsibility are things that every character must-have for his life. This point is considered very important because every work, word, and deed will always be associated with discipline and responsibility. Because learning is done online, students will usually be more relaxed so that most of them forget the discipline and responsibilities of students like at school, because learning is not done face-to-face. Students will be more relaxed and do as they please because they

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feel that if they study at home there are no written rules that must be obeyed like at school. This is what will be the observations of researchers who will later be observed.

The aspect indicator observed is a marker used by teachers and parents in planning to implement and evaluate schools played by parents because of online education as a result of Covid-19.

Knowing that a school has implemented character education, indicators of discipline and responsibility aspects are set. There are seven aspects observed in this study, these aspects were observed during fieldwork practices involving researchers, these seven aspects were assessed with seven values, namely the first was not good, the second was quite good, the third was good and the fourth was very good.

DISCUSSION

From the student's activities result that have been described, it is known that seven aspects are observed and assessed during the research process in teaching and learning in character education for elementary school students in online learning. It is known that from day by day there has been an increase, although it is not significant. Because for a child's habit it must be under his feelings and desires. There are times when a child is diligent, his feelings become good, when the child's feelings are not good, he will tend to be angry and lazy.

In that table, it can be seen that at the first meeting with a low percentage of criteria, it can be stated that students are still lazy and some of them have not obeyed the rules because they think they are allowed to act freely if they go to school at home. Looking at the number of observations on the second, third to the fourth day, students showed progress in obeying the rules and regulations in online learning. The parent's responsibility in increasing this requires habituation when the child is SFH (School from home).

Then it can be explained about the strategies and obstacles to implementing character education for elementary school students during the Covid 19 pandemic at SDN Tenggilis Mejoyo 1 as follows:

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a. Strategy for implementing character education for elementary school students in the COVID-19 pandemic

1.) Cooperate well with teachers and parents so that students' character education can run and make a really good character. This strategy for implementing character education requires support and guidance from the closest people which the teacher's role when the child is at home is their parent consisting of father and mother. Without harmony between character education at school and outside school, the child's character will not run optimally (Maunah, 2016). This also makes children have a sense of responsibility from the habits taught by parents at home. This is in line with what was stated by (Lickona, 2013) that to invite parents in moral education, everything must begin with discipline. Collaboration between parents and teachers can be learning that shapes the development of students to develop knowledge (cognitive) and parental involvement (Setiawan, 2021). This collaboration can be done by sending a copy of the plan or collaboration between parents and teachers to make the teacher know what behavior is being carried out.

2.) Giving awards to students is a form of motivation for the character of learning discipline and student responsibility so that it becomes a habit that is always done by students. This is in line with what was stated (Kosim, 2012)that giving rewards or prizes can be used as an educational tool for children to achieve targets and do good attitudes or things. These rewards can also be a motivation to do positive things.

3.) Online learning was changed from the original one-hour subject, which was minimized to a maximum of 30 minutes so that students did not boredom and the rest of the time was used for discussion. Changes in online learning time to avoid boredom and ineffectiveness in learning. Online learning conducted for elementary school children is considered less effective if it is presented only about 70%.(Purwanto, 2020)

4.) Providing infrastructure for online learning is also in line with the opinion (Purwanto, 2020)which stated that maximizing the use of infrastructure such as learning media is very influential in the online teaching and learning process. To maximize the parents' role to strengthen character education for

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students, a strategy is needed that can maximize the parents' role in efforts to strengthen character education for students (Christian, 2018). The family becomes a party that has an important role in character development, when children are noticed for their existence and their needs are fulfilled by parents, their character education will grow well. (Simarmata, 2017)

5.) Because true character education will be shaped in children if the guidance and habits of their parents are also created. This habituation is also carried out so that children do not forget and continue to carry out habits as taught at school so that children also continue to carry out their obligations as students as they are done at school. (Sabidah, 2015) stated that realizing a culture of character in schools that is horizontal can be done through a habituation approach, example, and a persuasive approach or subtly asking school members, by giving reasons and good prospects that can convince them. Exemplary is also an important aspect in realizing character education because character education is a form of personality that must be done in real life and not only speaking but must be proven in the form of exemplary carried out by all parties.(Santoso, 2020).

b. Obstacles in learning character education in the online system during the COVID-19 pandemic for elementary school students

1.) Not familiar with the online system, according to the opinion of parents and guardians of students interviewed, on average, they think that online learning is not working optimally. It can be seen from the practice that this online learning seems straightforward and impromptu because of the conditions that cause this. There are still many teachers and parents who do not understand the application media used for online schools. This is in line with what was stated (Fatmadewi, 2020) that the existence of distance learning methods makes students need time to adapt and they face new changes that will indirectly affect their learning absorption. Another impact felt by teachers is that not all are proficient in using internet technology or social media as a learning tool.

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2.) The parents role who are less assertive in the implementation of children's character education in the implementation of discipline and responsibility character education is very needed for students. This lack of firmness in the role of parents can create obstacles in the implementation of student character which causes children to rely on others to do their work so that their sense of discipline and responsibility is not embedded properly. This is in line with the opinion(Lickona, 2013)that the parent's role is very important in forming a good moral character. So the firmness and discipline of parents will affect the forming of a child's character.

3.) The habit of supporting discipline and responsibility character education is not effective and efficient because it is done at home while children are usually just playing at home and forgetting about responsibility and discipline like what is taught in school when face-to-face at school. Whereas character education in learning during this pandemic should be able to develop good student character and can be implemented in social life (Intania, 2020). But in fact, according to (Syarbini, 2014) character education in the family environment is not optimal or has not been properly conceptualized. It is also proven in this study that parents are less effective in implementing this habit of discipline and responsibility because the rules at home are not written and regulated as they are in school, so children will tend to disobey them. This was also conveyed by parents that children tend to be more spoiled and argue with parents who are very different from teachers. There is also a positive relationship between the positive behavior of parents and children's attitudes.(Marhoja, 2014). Parents also should not be tired and must remain enthusiastic in making every effort to improve behavior and personality based on character values(Supreme, 2018).

4.) Infrastructure facilities for the implementation of online education that is not yet complete implement character education not going well, parents who complain about the facilities and infrastructure that should be prepared for their children in online learning, because they have to alternate with the interests of their parents or sometimes take turns with their brother or sister so that they cannot collect assignments or take online lessons optimally and on

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time, this also hinders the implementation of discipline character education in children. Parents also complained about the internet quota that not all parents and guardians of students received the quota assistance. In addition to this, based on the results of interviews with parents or teachers, quotas are one of the main factors inhibiting this online learning because there is still an uneven internet quota from the government. The lack of smoothness of online learning also makes the implementation of character education hampered in this online learning period. In line with what was said by(Fatmadewi, 2020) that one of the obstacles for parents is the additional cost of buying an internet quota which causes an increase in the burden of parental expenses.

5.) Cultivation of character education habituation of discipline and responsibility that is less than maximum. The inculcation of discipline and responsibility carried out by parents is recognized if the child will be more spoiled at home to his parents and the guardian's parents will also spoil him. Although parents apply a system of sanctions to their children if they do not behave in a disciplined and responsible manner, some parents leave children. According to (Muslihkin, 2020) mentioned that parents lack awareness in character education for their children, parents' busyness, parental ignorance, and how to form good children's character. This is in line with research conducted by (Krisnawati, 2016) in this study, it is explained that the supporting and inhibiting factors of teachers in fostering cooperation with parents form the character of students' discipline and responsibility.

The teacher's efforts in shaping a student's character include socializing with parents, making agreements to combat the impact of using media, establishing good communication between parents and teachers.

CONCLUSION

Based on research on the implementation of character education for elementary school students during online learning as a result of Covid-19, it is concluded that the practice of character education carried out by online learning certainly has many obstacles because learning if not face to face with the teacher will cause a lot of

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misunderstandings between teachers with students, teachers with parents of students who cause these obstacles, when meeting face-to-face with teachers and their friends who are usually competitors so that they have their learning spirit, less effective of online learning for character education for students at SDN Tenggilis Mejoyo I Surabaya, which where there are still many practices that have not been implemented in character education.

Implementation of character education discipline and responsibility of the students of SDN Tenggilis Mejoyo I in online learning, there is a strategy carried out in learning character education through online, namely teaching if the school will fully teach the implementation of education then every value that will be instilled must always be conveyed by teachers through direct learning (as a subject) in which the values of character education must be strengthened by the values of environmental management and activities in the school environment which are replaced with activities in the home environment.

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APPLICATION OF STEM-BASED ON FLIPPED LEARNING IN NATURAL SENSITIVITY COURSES

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Abstract: The research aims to describe the application of flipped learning-based STEM in Sensitivity to Nature courses for PGSD students. The method used in this research is descriptive qualitative. The research data is described in the form of a description that describes the application of STEM-based on Flipped Learning in Sensitivity of Nature course. The application of STEM-based flipped learning in Sensitivity of Nature courses is carried out in 4 phases, the independent learning phase through LMS, the phase of completing assignments in the online class, the discussion phase in the online class, and the understanding test phase in the class through the LMS. STEM components are mapped based on the constituent subjects of STEM, science, technology, engineering, and mathematics. The results of mapping become a reference in the preparation of lecture materials and activities. The results of this study imply that the application of STEM-based flipped learning can be applied to courses that have a relationship with STEM subjects.

Keywords: STEM, flipped learning, nature sensitivity.

INTRODUCTION

The Nature Sensitivity course in the Academic Manual of PGSD STKIP Al Hikmah Surabaya (2018) examined future science materials and learning as well as environmental and global environmental problems. The topics discussed lead to the projection of nature in the future and the problems that continue to arise. This requires the lecture process carried out to be able to explore lecture topics from various perspectives. One approach that can be applied to accommodate the achievement of a complete view of a topic is the STEM approach. Moore et al (2014) stated that STEM is an approach and effort in integrating several STEM subjects based on relationships between subjects and real-world problems. Subjects in STEM include Science, Technology, Engineering, and Mathematics.

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Subjects combination in STEM makes it easier for students to achieve one of the competencies required in the Nature Sensitivity course, which is the ability of students to solve problems. Students who have abilities based on STEM subjects can develop good strategies in dealing with complex situations to produce a solution (Basham & Marino, 2013). Science is knowledge of nature that contains facts, concepts, procedures from the disciplines of physics, biology, chemistry. Technology is a system that involves the use of scientific products. Engineering is engineering knowledge by utilizing concepts from science. Mathematics is the knowledge that relates various quantities, numbers, and spaces. The combination of the four STEM fields encourages the knowledge received to be more meaningful when integrated into the lecture process.

During the Covid-19 pandemic which began in early 2020, the lecture process implemented full online learning. Several learning models are applied to provide an interesting lecture process so that students can achieve competence in each subject, including the Nature Sensitivity course. Various models in online learning include blended learning, distance learning, and flipped learning (Hamdan & Knight, 2013). These various learning models aim to provide innovation in responding to the form of lectures that have changed from face-to-face in the classroom to online lectures, both in the form of virtual face-to-face and based on the Learning Management System (LMS). One of the online learning models that have been widely studied is flipped learning. The principle of learning in the flipped learning model is that activities that are usually carried out outside meeting hours are better carried out in class meetings. Furthermore, listening to the lecturer's explanation can be done independently outside of lectures through videos that are loaded on online learning platforms or other online broadcast media. In flipped learning, the presentation of the material is given outside of face-to-face before learning begins, while assignments or discussions are carried out face-to-face on the learning schedule (Bergman & Sams, 2012).

A thorough study of the STEM component has a weakness, that it is needed a longer time in the learning process. This weakness can be overcome by implementing a learning process that systematically combines activities during and outside of learning, namely flipped learning. The application of STEM-based flipped learning has optimal steps in online learning. An attractive presentation in an online platform provides a new alternative in structuring the latest learning. Therefore, the purpose of this study was to

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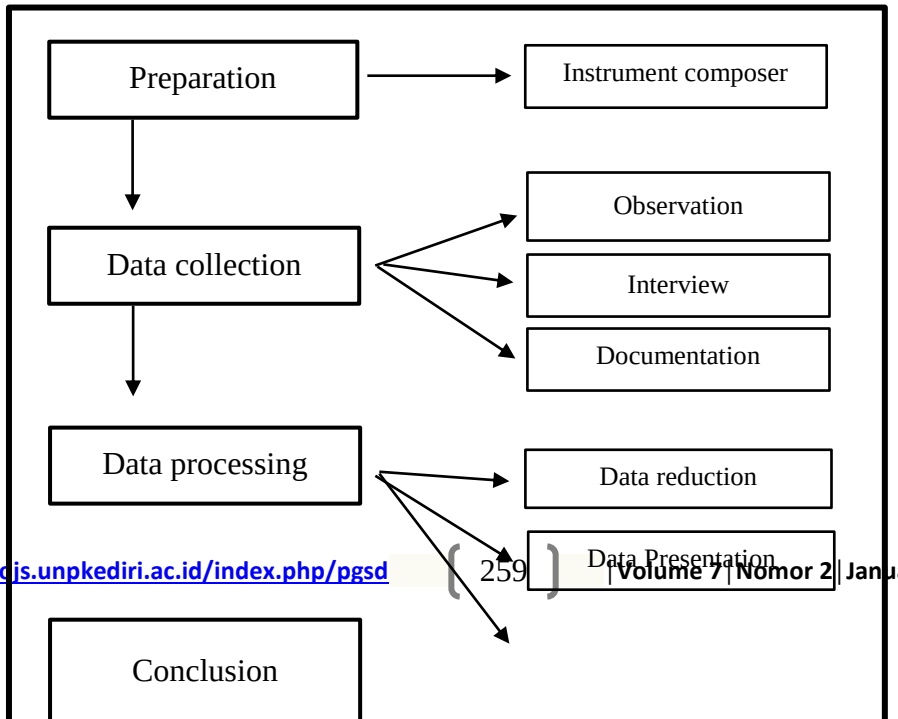
describe the application of STEM-based flipped learning in the Nature Sensitivity course at the S1 Elementary School Teacher Education Study Program (PGSD) STKIP Al Hikmah Surabaya.

This study aims to describe the application of flipped learning-based STEM in Nature Sensitivity courses for PGSD students. Flipped learning is implemented in 4 phases, they are Phase 0 in the form of students learning independently, phase 1 students attending class to learn and complete the assigned tasks, phase 2 students applying their abilities in a project assignment or simulation in class, and phase 4 understanding students are tested with tests conducted in class at the end of the subject matter (Bishop, 2013). Through these four phases, it is hoped that the advantages of flipped learning provide opportunities for students to actively participate in learning. The advantages of flipped learning are increasing discussion time in class, providing flexible learning opportunities, a student-centered learning experience, there is more interaction between students and lecturers, increased learning motivation, and more varied learning resources (Basal, 2015).

METHOD

This research used the descriptive qualitative method. The data collected are various systematic phenomena in the application of STEM-based on Flipped Learning in the Nature Sensitivity course. The subjects of this study were 6th-semester students of Nature Sensitivity course programmers at the S1 Elementary School Teacher Education Study Program, STKIP Al Hikmah Surabaya. The research lasts for one semester, which is the even semester of the 2020-2021 academic year. In this study, researchers were directly involved in the application of STEM-based Flipped Learning.



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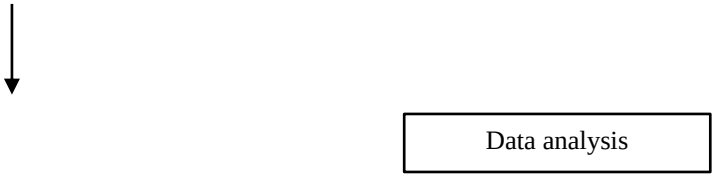

Figure 1. Research Procedure

The research procedure includes the preparation stage, data collection, data processing, and conclusion drawing. Data collection techniques using the method of observation, interviews, and documentation. The research instrument was an observation sheet on the implementation of learning and an interview sheet. Data analysis was carried out by data reduction, data presentation, and concluding (Miles & Hubberman, 2012). Testing the validity of data is done by using the data triangulation technique, namely source triangulation. The research procedure is presented in Figure 1.

RESULTS

The application of flipped learning-based STEM begins with the preparation of the Semester Lecture Plan (RPS) in the Nature Sensitivity course. Based on the results of interviews and documentation, on each topic of lecture studies, the STEM components are mapped in the form of tables that contain each material in each STEM component. For example, at meeting 2, the topic of the lecture study was an earthquake, so facts, concepts, or an application related to the topic of earthquakes were chosen. The science component on the topic of earthquakes is the concept of the occurrence of earthquakes, types of earthquakes, and the impact of earthquakes on the environment and living things. The technology component is a web-based earthquake zoning map in Indonesia with the name Spektra Indonesia. Engineering components in the form of how the seismograph works is a tool used to measure the strength of an earthquake. The mathematical component is an interval of earthquake strength on the Richter scale which is generated from a mathematical equation. In summary, the mapping of STEM components at the initial five meetings is presented in Table 1.

Table 1. Mapping of STEM Components in Nature Sensitivity Courses

Topic	*Science*	*Technology*	*Engineering*	*Math*

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Earthquake	The process of occurrence, type, and earthquake impact	Indonesian Spectra	How a seismograph works	Earthquake magnitude
Landslide	process occurs, types, and impacts of landslides	*inclinometer*	Slope area management design	Land tilt angle
volcano eruption	The process of occurrence, type, and the impact of a volcano erupting	Arduino Microcontroller Based Early Warning System	Tiltmeter	*Volcanic Explosivity Index* (VEI)
Tsunami	The process of occurrence, impact, and efforts to reduce the impact of the Tsunami	INATEWS	Beach Area Building Design	Tsunami Numerical Modeling
Coastline	Definition, causes of change and their effects	Remote Sensing	Measurement of Shoreline Change	*Generalized Model for Shoreline simulation*

Source: Doc. Writer

The next preparation is an organization of LMS with a Schoology platform to implement flipped learning. Based on the results of interviews and documentation, the LMS is arranged in folders according to the number of topics or meetings for natural sensitivity courses. There are 14 study topics and 2 summative assessments. On each topic, lecture material is provided outside of face-to-face online lecture hours. Presentation of material in the form of powerpoint material and a video explanation of the material or video learning. Folders presentation and activities on each topic are arranged according to the schedule of the lecture plan. The purpose of the broadcast arrangement is to allow students to listen to reference material before the online face-to-face lecture is held. The presentation of lecture material on LMS is shown in Figure 1 below.

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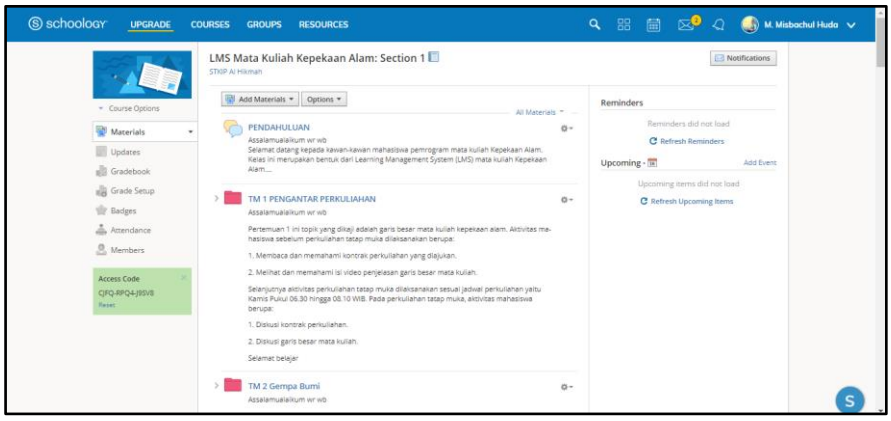

Figure 2. Presentation of Flipped Learning in LMS

Source: Doc. Writer

*Reminder*s to students the day before the lecture which is equipped with a link to attend the online face-to-face lecture. Based on the interview results and documentation, with the lecture link being distributed the day before the face-to-face lecture, it encourages students to prepare for a better lecture process. Another benefit of having a reminder is to remind students to listen to the reference material presented by the course lecturer. Students can write notes or even compose a mind map of lecture material at this stage.

In phase 0, students learn independently, the time to access reference material in the LMS is not limited. Students can determine independently the best time to listen to lecture material references. Based on observations and documentation, not all students listened to the material that had been presented in the LMS completely. Network constraints are the main cause of this finding. Some students have experienced blackouts, so when the time for lectures arrives, they are not involved in online lecture activities.

At the implementation stage, lecture activities are in the form of project completion and discussions, both discussions between students and students with the course lecturer. At this stage, phase 1 to phase 3 of flipped learning is also carried out. During the discussion session, questions often arise from students related to technology and mathematics components. Students need repetition to better understand the two difficult STEM components.

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Phase 1, learning activities are carried out in online classes using the zoom meeting room platform, students are divided into several groups randomly to do tasks related to the material that has been studied at home and are also asked questions at the beginning of learning to measure students' initial understanding when studying independently. Furthermore, in phase 2, the chosen lecture activity is to conduct discussions in groups that are arranged randomly. The lecturer's role is to facilitate discussion. The lecturer also prepares several questions from the material studied in each topic, then what is meant by projects in this learning session are activity sheets that are completed or tried by students to apply their understanding abilities.

Based on the results of observations and documentation, in learning activities, there is an increase in aspects of student attitudes and skills in applying the concepts studied, as well as being more actively involved in problem-solving activities. In the face-to-face phase in flipped learning, students are more confident in classroom activities, ready to accept learning activities with better motivation than the usual learning model. This shows that flipped learning-based learning can increase students' motivation, activeness, and learning skills (Damayanti and Sutama, 2016).

In the last phase, based on the results of interviews and observations, students do questions that test their understanding during face-to-face learning activities. The teacher acts as a facilitator in this phase 3. The questions are in the form of quizzes that are packaged in an integrated manner in the LMS of the Nature Sensitivity course. This feature provides various forms of questions that the lecturer can choose according to their needs. The following is a display of the contents of the LMS in the application of STEM-based flipped learning in the Nature Sensitivity course.

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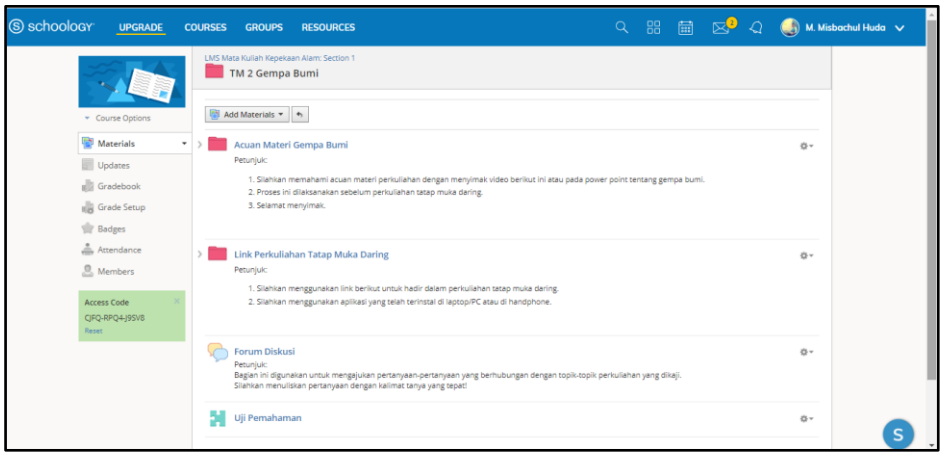

Figure 2. Format of LMS Content for Nature Sensitivity Course

Source: Doc. Writer

DISCUSSION

The preparation stage is the application of STEM-based flipped learning, which is an activity carried out to provide a reference for STEM material that will be accessed by students starting before lectures until face-to-face lectures. The lecture materials organization combines STEM components, that is science, technology, engineering, and mathematics. The integrated application of STEM in learning can improve students' academic and non-academic achievements (Lou, IU, & Shih, 2011). At this stage, material and lecture activities have been mapped following each STEM component. STEM learning is an integration of Science, Technology, Engineering, and Mathematics and the four disciplines should not be taught separately (Torlakson, 2014).

Reference material in the form of power points and learning videos uploaded to the LMS before lectures. The reference material becomes the student's self-study material before a face-to-face lecture is carried out. Independent learning is one component in the application of flipped learning. Independent learning is defined as an activity of a learner at a different place and time with class conditions (Chaeruman, 2018). Flipped learning has the main characteristic of reversing the learning process, that is from ordinary learning to learning that presents material before face-to-face classes and provides activities that are carried out together during face-to-face activities (Bergmann & Sams, 2012).

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There are 4 phases in the application of STEM-based on flipped learning, they are the independent learning phase through the LMS, the phase of completing assignments in the online class, the discussion phase in the online class, and the understanding test phase in class through the LMS. This phase is following the flipped learning step according to Bishop & Verleger (2013). The four phases of flipped learning are in line with the steps of flipped learning according to Basal (2015), namely planning material references, selecting class activities, selecting task models, and presenting student assignments. Subagia (2017) also stated that the steps for implementing flipped learning are independent learning at home, the formation of random groups, class discussions, and comprehension tests.

The independent learning phase through LMS is a step to provide students with knowledge about the topic being studied. This is following the learner-based learning paradigm so that students are more active in the process of knowledge formation (Hamdan & Knight, 2013). Independent learning activities provide opportunities for students to carry out the reasoning process which is an important process in problem-solving (Khan & Ullah, 2010).

The task completion phase in an online class is carried out for 2 credits according to the weight of the Nature Sensitivity course. The interaction process occurs between students and between students and courses lecturers. flipped learning has a fundamental goal to enable more effective use of time in the classroom and teachers can directly provide feedback to students (Lo and Hew, 2017). The interaction process that aims to solve a problem requires the application of knowledge that has been obtained and testing it. This competency is appropriate to the competency needs of students in facing 21st-century life (Maolidah et al, 2017). In this phase, the principle is to reduce the capacity of learning activities in the classroom by optimizing interactions between students and also students and lecturers (Johnson, 2013).

The discussion phase in the online class was carried out in the form of a presentation and continued with the discussion process. This stage requires various communication skills and the application of knowledge from students. Flipped learning provides various advantages and challenges in learning, the benefits that can be obtained include increasing online learning interactions, increasing interest, and increasing professional abilities (Ilgu, et al, 2017). The existence of a discussion phase

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in class can improve students' creative attitudes, responsibility, and learning skills (Damayanti & Sutama, 2016).

The understanding test phase in the classroom through the LMS aims to test students' understanding of each topic. In flipped learning, the assessment is not only carried out at the end of competency but is carried out during the learning process in the classroom. Formative and summative assessments should be included in meaningful face-to-face learning activities (Enfield, 2013). A comprehensive assessment is an integral part of flipped learning, this activity includes assessing the understanding process, the application process, and analyzing through presentation activities (Zhou, 2014).

CONCLUSION

The application of flipped learning-based STEM in Nature Sensitivity courses is carried out in 4 phases, namely the independent learning phase through the LMS, the phase of completing assignments in the online class, the discussion phase in the online class, and the understanding test phase in the class through the LMS. STEM components are mapped based on the constituent subjects of STEM, namely science, technology, engineering, and mathematics. The results of the mapping become a reference in the preparation of materials and activities for Nature Sensitivity lectures. The application of STEM-based flipped learning uses a Schoology platform as an LMS and a zoom meeting room as an online face-to-face platform. The results of this study imply that the application of STEM-based flipped learning can be applied to courses that have a relationship with STEM subjects.

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MULTILITERACY LITERATURE MODELS: SOLUTIONS FOR READING LEARNING MODELS IN THE COVID-19 PANDEMIC ERA

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Abstract: This study aims to examine the effectiveness of the literature multiliteracy model on the students' ability to understand illustrated fairy tales in elementary school students. The quasi-experimental method was used in this study. The sample of this research is elementary school students in Bandung city who were selected by purposive sampling technique. The instrument used is a product assessment sheet that retells fairy tales in the form of a zig-zag book. The results showed that the multiliteracy literature model was effective in improving students' ability to understand illustrated fairy tales in elementary school students. Based on this, the literature multiliteracy model can be used as an alternative model in learning in elementary schools.

Keywords: literature multiliteracy model, reading comprehension, pandemic era

INTRODUCTION

The ability to read and understand is an important ability possessed by all humans in the 21st-century era. A deep understanding of a concept is a basic thing in developing other abilities, both thinking skills and the ability to communicate and collaborate. The importance of reading skills in the 21st century is stated explicitly by Concannon-Gibney & McCarthy (2012) that all students in this century need good reading skills to solve increasingly complex life problems.

However, for Indonesian students, the reading comprehension ability is still a problem in itself along with the fact that their reading ability is still low. This is reinforced by the results of PISA 2018 (OECD, 2019) which stated that the reading skills of Indonesian students are still low, which is only up to level two proficiency. This ability proves that Indonesian students are only able to identify the main idea of a medium-length text, only able to find information that is explicitly contained in the text, and only able to reflect on the purpose of a text whose information is stated in that text.

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The weak reading comprehension ability of students is also indicated by the tendency of students to answer they don't know when students do a question based on a story. In addition, students also have not been able to retell the stories contents they have read and there are even some students who are lazy to read stories (Kharizmi, 2015; Dewi, 2015; Hidayah, 2011). Other studies even prove that the low reading comprehension ability of students is also associated with low scientific literacy skills and mathematical literacy (Diana, Rachmatulloh, & Rahmawati, 2015; Nofiana & Julianto, 2017; Laily, 2014).

This low reading comprehension ability is certainly caused by several factors, including students who are not familiarized and introduced to reading materials, reading learning activities are not optimal, and the use of models or methods used by teachers is not appropriate and not optimal. Teachers tend not to use any models or methods in reading learning, causing students to be less interested and lazy to read because reading activities are carried out monotonously and do not attract students' interest in reading.

Based on the problems above, efforts that can be done are to use an innovative model that is suitable for the pandemic conditions in particular. One of the models that researchers use as a solution to the problems above is the multiliteracy literature model. This model is innovative because in addition to improving student's reading comprehension. Several studies have also revealed that this model can make learning meaningful and fun; increasing student activity in reading comprehension and being able to increase student creativity and make students enthusiastic about reading (Rahman & Damaianti, 2019; Jaenudin, Puspitasari, & Cahyaningsih, 2019; Dafit, 2017; Astuti & Iku, 2020).

This study aims to determine the effectiveness of the multiliteracy literature model on increasing students' understanding of illustrated fairy tales. The results of this study can be important information about whether or not the multiliteracy literature model can be used during a pandemic to improve students' ability to understand illustrated fairy tales so that teachers can use the right model for reading learning during a pandemic.

METHOD

This study used quantitative research and the research method used is experimental research, the type of pretest-posttest design is not equivalent. This design

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involves at least two sample groups whose subjects are not randomly selected (Creswell, 2015). In practice, each group received 5 times of learning treatment with a balanced time and composition of tasks. Learning is carried out face-to-face using various communication channels, including zoom meetings and Whatapps in line with the ongoing Covid-19 pandemic.

The population that will be used in this research is all 3rd-grade students in the 2021/2022 academic year at SDN in Bandung city. Samples used by the researcher are class 3 B and class 3 A as the experimental and control classes. The reading product assessment sheet was used as an instrument in this study. The learning product outcome was a zig-zag book that contained a retelling of the text read.

This study used inferential statistical data analysis techniques, that is concluding results of data. This analysis is quantitative, that is acquisition of student score data from two sample classes. The test was carried out using a mutually exclusive t-test to determine the effectiveness of the applied model in learning in the pandemic era.

RESULTS

This research was carried out first by doing a pretest for two sample classes. The pretest was conducted to provide confidence that the understanding of sample students was relatively the same. The data were obtained then analyzed by researchers using descriptive statistical tests with the following results.

Table 1
Descriptive Statistics of Pretest Score

Descriptive statistics						
	N	**Minimum**	**Maximum**	**Average**	**Std. Deviation**	**variance**
Control Pretest	20	15	52	32.85	7.386	54,555
Experiment Pretest	20	16	56	36.25	8,577	73.566

(Source: Research Result Data Analysis)

Based on the data above, it can be seen that the average pretest value in the experimental class is greater than the pretest value in the control class. There is a difference between the pretest scores in the two classes, which is 3.41. The average value of the two sample groups can be seen in the boxplot in Figure 1

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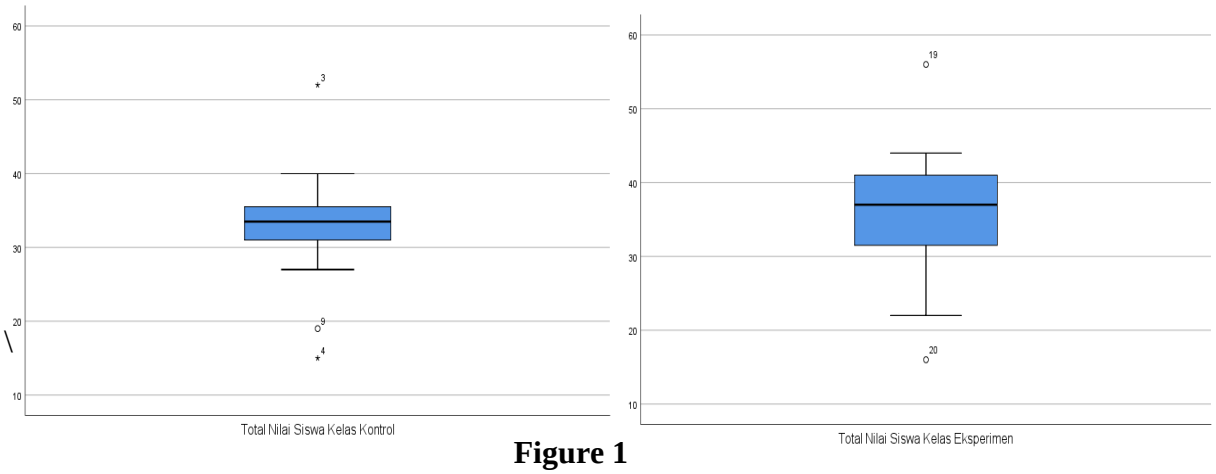

Figure 1
Boxplot Pretest Score

To determine the effectiveness of the two models used, an average difference test was conducted. Based on the prerequisite test of analysis of the data normality test, it is known that two samples of data are not normally distributed. Therefore, the difference average data was carried out using the Mann-Whitney test with the following results.

Table 2
Table of Differences average in Pretest Score

	Total Pretest Score
Mann-Whitney U	130,000
Wilcoxon W	340,000
Z	-1,900
asymp. Sig. (2-tailed)	.057

(Source: Research Result Data Analysis)

Based on a test using the Mann-Whitney test, the U value is 130,000 with a significance value of 0.057 which is greater than the normal level set (0.05). These results indicate that there is no statistically significant difference between the ability of control and experimental students in reading comprehension of illustrated fairy tales in early classes.

After it was known that the student's abilities in the two classes were relatively the same, the study continued by carrying out 5 times learning treatment in experimental class applying the multiliteracy literature model and using the Know Want to Learned (KWL) model in the control class. After the treatment was carried out in a fair and balanced manner, then a post-test was conducted to determine the students' reading

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comprehension skills in illustrated fairy tales in both post-treatment classes. Two data were processed descriptively with the following results.

Table 3
Descriptive Statistics Pretest Score Posttest Score

Descriptive Statistics						
	N	Min	Max	Average	Std. Deviation	variance
Control Class Posttest	20	24	61	43.50	11,642	135.526
Experiment Class Posttest	20	41	72	61.60	8,792	77.305

(Source: Research Result Data Analysis)

Based on the data above, it can be seen that the average posttest score in the control class is 43.50. The average score of posttest score in the experimental class was 61.60. When compared with the pretest data, students in both classes experienced an increase in reading ability. In the experimental class, students experienced 10.65. The average score of the two sample groups can be seen in the boxplot below.

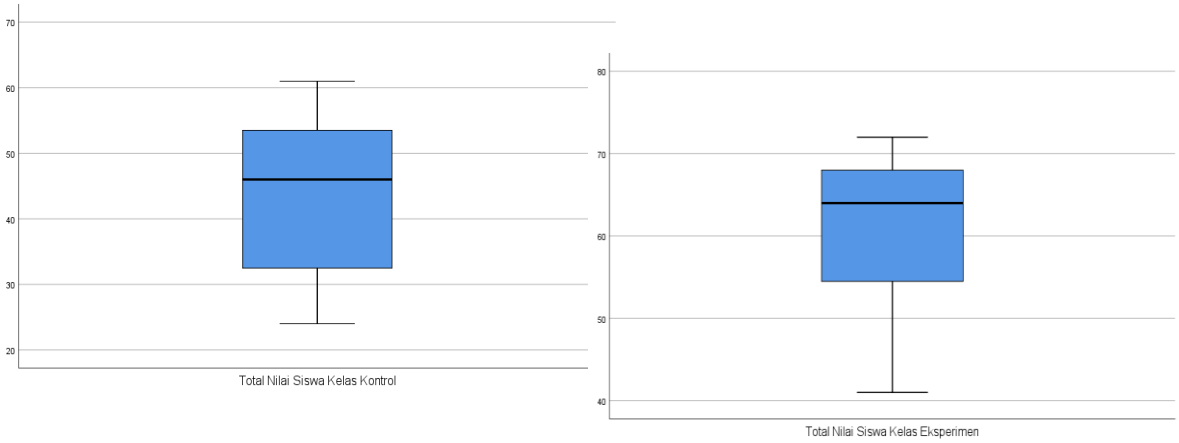

Figure 2
Boxplot of Posttest Values for Experiment Class and Control Class

To answer research questions, an average difference test was conducted. Based on the results of the pre-requisite analysis of the two pairs of normal and homogeneous data, an independent sample t-test was conducted. The test results are stated as follows.

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Table 4
Test Independent t-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Posttest Results	Equal variances assumed	2.286	.139	5.548	38	.000	18,100	3.262	11,496	24,704
	Equal variances not assumed			5.548	35,354	.000	18,100	3.262	11.480	24,720

(Source: Research Result Data Analysis)

Based on this calculation, the t score is 5, 548 with a sig. score (2-tailed) of 0.000 which is smaller than 0.05. On this basis, it can be interpreted that the literature multiliteracy model applied in the experimental class is more effectively used to improve understanding than the KWL model used in the control class.

DISCUSSION

Based on the analysis results of pretest data and posttest data that has been carried out on the two sample groups, it can be seen that the literature multiliteracy model in the experimental class and the KWL model in the control class are equally influential in each class. However, if you look at the analysis results further, it shows that the results of the posttest average score of the experimental class are higher, it is 61.60 while the average posttest score of the control class is lower, that is 43.50 so this indicates that the multiliteracy literature model is more suitable and effective to be applied in learning reading comprehension in illustrated fairy tales.

The different effect of the two models used shows that the learning step with the multiliteracy literature model is more effective in improving students' ability to understand a text. On this basis, it is necessary to discuss in depth the reasons why the multiliteracy literature model is considered more capable of improving students' abilities.

In experimental class, learning begins with the stages of exploring students' schemata. The process of digging schemata is done to revive students' prior knowledge

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before reading fairy tales. At this stage, teachers and students conduct questions and answers to provoke students to convey their ideas. The process of digging schemata is important to do because, with the initial abilities students have, it will be easy to understand a text they are reading. Al-Issa (2006) stated that one's understanding is determined by how much initial knowledge one has when reading. The more knowledge students have, the more understanding students will experience. Abidin (2015) further stated that reading activities to gain understanding are strongly influenced by the initial knowledge or schemata that students have. Students who have schemata will also find it easier to draw the meaning or message contained in a text.

This second stage is making predictions. Before making predictions, teachers read some of the fairy tales to the part where problems begin to arise. Students are asked to make predictions or guess what the story will be like. At this stage, students make predictions with the knowledge they already have. Based on the research findings, at this stage some students have difficulty in making predictions, some students can make predictions, so they need a stimulus from the teacher so that students can make predictions. Whereas in Damaianti's view (2021) the ability to make predictions in reading activities will provide a better understanding of the reading content.

Entering the reading stage to find out if the students' answers are correct or not, teachers give a text to students to read as a whole. When this reading process they have a few obstacles, teachers are difficult to condition students in reading. However, this can be resolved properly because teachers provide two options for students to be able to read the reading text through a file sent by them on Whatsapp and the second option for the teacher to display the text through a powerpoint which is shared on a zoomed screen. Teachers give 5-7 minutes for students to read the fairy tale text. Students are asked to concentrate when reading and in silence. However, based on the findings, some students did not turn off their microphones so they heard disturbing sounds. This reading activity through zoom has a deficiency, but the teacher can overcome this, and learning is carried out well.

The next stage is students analyzing the intrinsic elements of fairy tales. In this activity, students write it down in the LKPD which is distributed by the teacher. This is to make it easier for students to write down important information such as writing background elements. In the study findings, when students analyzed a text, students did

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not have difficulties, even though students had time to ask their teacher about the setting of the atmosphere, but learning was still going well. In addition, students are asked to write down the characters and analyze their characteristics of the characters. This written information can help students when students rewrite the story using their language. This is in line with the statement of USAID Prioritas (2014) which stated that the use of LKPD to write down children's reading results will be able to become a basic guide for children to rewrite the contents of reading in their language.

The next stage is that students are asked to transform a text they have read. In this case, students rewrite the story using their language. Students write their understanding in writing into a post-reading work. When students can write stories using their own language, it can be seen that the level of students' understanding of the reading contents is good. Dalman (2013) stated that when a reader can retell the reading contents either implicitly or explicitly, a reader is said to have understood a text he has read because he can rewrite the story both orally and written. Students are also asked to analyze the messages/moral value contained in the fairy tales that have been read. The message/moral value of this fairy tale is related to the daily life of students.

The last stage is the students are asked to pour all the information that has been obtained previously into work in the form of a zig-zag book. In a zigzag book, students retell the contents of a fairy tale they have read using their own language. Students are also asked to describe the characters in the story. In describing characters, students can see the pictures in fairy tales, because this fairy tale is an illustrated fairy tale. This activity stimulates students to distribute their talents in drawing or it can be said that students with good visual abilities can express their talents when they are drawing. In this regard, Susilo & Garnisya (2018) stated that reading is a complex activity that involves mental activity so that by making this product students not only get important information from texts, students can also create a work or creative product. This creative product is the result of reading students' understanding of illustrated fairy tales. This is reinforced by Abidin, Mulyati & Yunansyah (2017) who said that reading is a form of experience; The reader has the opportunity to know the author's thoughts through the text he wrote so that it will produce a complete understanding based on the meaning contained in the text he reads. This understanding is creative so that when

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students produce a product, the product is an extension of the understanding that they get.

The final scores of students both increased, but the increase was higher in the experimental class. In each indicator, it seems differences in students' reading comprehension abilities, it can be seen that the average score of the two classes is quite different. There is a one almost equivalent indicator, namely the indicator of writing titles. Thus, it is clear that the literature multiliteracy model is more suitable and effective to be applied in the reading learning process. In line with the results of the comparison above, the research of Nuraeni & Rohendi (2016) has also proven that the literature multiliteracy model has proven to be effective in increasing students' understanding of reading legends. Based on his research results, it is known that the literature multiliteracy model can make learning more interesting and creative and make students more fond of reading, especially reading legends. Eriyan (2018) also proved that the literature multiliteracy model is more suitable to be used to improve students' understanding of fictional texts. This model also familiarizes students with writing and familiarizes students with making works, that is retelling the contents of readings that have been read using their own language.

Despite the successes achieved, this research certainly has its drawbacks. These shortcomings include, learning through zoom has a high risk, such as signals, the availability of gadgets owned by students so that it affects student participation in learning; limited learning time; and teachers find it difficult to condition the class (Sarifudin, et al. 2021). However, in the research that has been done by researchers, learning can be said to be quite effective. This is because students can follow the lesson well. It's just that not all students can take part in the learning so that learning is only attended by 20 students out of 28 people.

Another weakness is at the stage of making a work of student understanding in the form of a zig-zag book. The stage of making work takes quite a long time. Although students are very enthusiastic about making zigzag book works, students are still focused on making pictures and decorating the zigzag book. To overcome this, students are advised to write the story first and then to draw the characters and decorate the zigzag book. Due to time constraints, some students continue to make works outside of Zoom. On this basis, further consideration is needed in choosing post-reading works

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that save more time, such as mini books, story calendars, and other creative media that remain interesting and challenging for students.

CONCLUSION

This study concludes that the literature multiliteracy model is effectively applied in the pandemic era through online learning to improve students' understanding of reading illustrated fairy tales. This effect is seen after 5 times of learning treatment as evidenced by the different abilities of students in the experimental class and the difference in posttest scores between the two sample classes. Thus, the literature multiliteracy model was effectively applied in the experimental class and more effective when compared to the comparison model in the control class.

Based on these conclusions, this study recommends teachers be able to use this model so that reading learning, especially reading comprehension, becomes more interesting and meaningful. This model can be used as an innovation for teachers because through this model students are not only able to answer questions but are also able to pour their understanding into creative works. For the weakness of the stage of making works, it is recommended that further research be able to choose the type of reading product that is more creative and saves time such as mini books and or the use of digital media.

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IMPROVING THE ABILITY TO ANALYZE SOCIAL PHENOMENON WITH THE INTERDISCIPLINARY APPROACH OF THE GROUP INVESTIGATION MODEL

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Abstract: Based on the observation results of social studies learning materialon social phenomena at PGSD UN PGRI Kediri, it can be concluded that most students are less responsive to problems that occur in society in an interdiciplinary manner. This will reduce the meaning of learning social science. Based on some of these shortcomings then classroom action research (CAR) is carried out by applying an interdisciplinary approach and the learning *Group Investigation* model, because this learning model requires students to be more active in developing their attitudes and knowledge about social studies learning, especially social phenomena material that is in accordance with their respective abilities in constructing their own knowledge. This research design uses Classroom Action Research (CAR) with the stages of planning, implementing, observing and reflecting. The subject of this study were students of PGSD UN PGRI Kediri class 2B, odd semester of the 2019/2020 academic year. The data taken in this study are data from the results of investigation reports and learning outcomes data in the form of tests on the assessment sheet. The results obtained after applying an interdisciplinary approach with the *Group Investigation* model on the material of social phenomena, namely learning have been successful. It is evident in the results of student performance that there has been an increase from the first cycle, namely the average score is 74.4 and the second cycle the average score is 89.3. Then the student learning outcomes also experienced an increase in scores, namely from the first cycle with an average score of 79.5 and the second cycle average score of 94.

Keywords: Social Studies, Interdisciplinary, *Group Investigation*, Social Phenomena

INTRODUCTION

The current paradigm shift in learning has brought improvements to the mindset of higher education in Indonesia. Higher education is currently directed at producing students who are competent in their fields to answer current and future needs. According to Suwartini, S. (2017, vol.4, no.1) explained that competent and skilled students will be the capital of extraordinary development of the country. Therefore, learning as a form of education implementation must be able to prepare student to be ready to face the challenges of the present and the future.

One of the shifts in mindset in the implementation of learning is that student are expected to have the ability to deal with various situations in society, because of the role of student as *social control* in society where student are control controllers or barometers

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if social problems occur as a result of social changes in society. So that student are expected to gain knowledge and skills so that when they return to society, student are able to solve social problems through learning experiences in lectures.

One of the learning experiences that can improve problem solving skills at the tertiary level is learning social studies. Social studies learning is learning that examines social issues with elements of the study in the context of events, facts and generalizations (Nurhasanah, A. 2016, vol. 2, no. 1). Social studies learning is an interdisciplinary science from several social science disciplines, namely history, economics, geography, sociology, anthropology, social psychology, and politics. Then the material studied in social studies learning is phenomena that occur in society, both past, present and future phenomena.

In this phenomenon, students are expected to be able to analyze a social phenomenon, make considerations in solving social phenomena, and finally be able to make the right decisions in solving these social phenomena. Because currently there are many problems or social phenomena that occur both in the surrounding community and in Indonesia. Therefore, good learning is learning that should be able to improve students' abilities in solving a problem, not only deepening theory but also having to balance it with practice (Sukardi, T, 2015, vol. 8, no. 1). This is in accordance with the objectives of social studies learning, namely (1) recognizing concepts related to people's lives and their environment, (2) having basic abilities for logical and critical thinking, curiosity, inquiry, problem solving, and skills in social life, (3) have a commitment and awareness of social and humanitarian values, and (4) have the ability to communicate, cooperate, and compete in a pluralistic society at local, national and global levels (Kemendikbud 2013: 2).

In this regard, observations and interviews related to social studies learning were carried out at several universities. Observations and interviews were conducted in the PGSD UN PGRI Kediri, STKIP Nganjuk, and STKIP Tulungagung study programs in order to obtain information about the attitudes and mindsets of students during social studies learning with social phenomena material. Then based on the results of observations and interviews, it was concluded that when studying social phenomena in social studies courses, many students were less responsive to problems that occurred in society. This is proven by the fact that many students are sleepy, daydreaming, and playing with their cell phones until they are confiscated by the lecturer. Then, based on interviews conducted with lecturers, it was found that most of the students were less interested in social phenomena because they considered the learning less interesting, felt less challenged, only listened and saw from the lecturer's powerpoint.

Based on some of the shortcomings of the learning process, it can be concluded that learning material for social phenomena in social studies courses is less attractive to students so that students feel bored, they do not understand the importance of learning a problem. Meanwhile, in everyday life, student must have skills in dealing with problems, both problems around them and even personal problems. This is supported by some data from student assignment scores which are still 52% or below the KKM (70%).

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Based on this, classroom action research was conducted by applying the *Group Investigation* (GI) learning model because this learning model requires student to be more active in developing their attitudes and knowledge about social studies learning, especially social phenomena material that is in accordance with their respective abilities in constructing their own knowledge. (Imron, Ilmawati Fahmi & Kukuh Andri Aka, 2018:103). Cooperative interactions among peers will achieve the best results if done in small groups so that cooperative attitudes can last forever. In the learning model, the *Group Investigation* (GI) lecturer only acts as a facilitator and resource person during lectures. Lecturers only supervise the course of group investigations that occur, to see if they can manage their tasks, and help any difficulties they face in group interactions, including problems in performance on tasks related to learning (Slavin, 2011:217).

In addition, the advantages of the *Group Investigation* (GI) learning model are that the learning model is able to improve high-order thinking or *High Order Thinking* (HOT) students (Asyari, M., Al Muhdhar, MHI, & Susilo, H, 2016). *High Order Thinking* (HOT) is an abstract ability that is in the cognitive domain of the taxonomy of educational targets which includes analysis, synthesis, and evaluation. If student have achieved higher-order thinking skills, then students have the ability to think critically, creatively, logically, and openly. If this already exists in student, then student will experience independence in the learning process. Learning independence is the basic capital for student to be responsible for solving various problems, both personal and social problems (Youngest, Kindergarten, Vilardi, M., Akbar, P., & Bernard, M, 2019).

Based on some of the considerations above, a classroom action research was conducted which aims to determine the increase in the ability to analyze social phenomena with the interdisciplinary approach of the model *group investigation* in PGSD student entitled "Improving the Ability to Analyze Social Phenomena with the Interdisciplinary Approach of the *Group Investigation* (GI) Model". It is hoped that with this research, students' ability to analyze social phenomena with an interdisciplinary approach will increase and be able to train critical thinking skills to solve problems in society.

METHODS

The research design in this study was Classroom Action Research (CAR). There are four stages in classroom action research, namely 1) planning, 2) implementation; 3) observations made by observers; and 4) reflection. The results of the reflection are used to plan research in the next cycle. The indicator of the success of this research is seen from the increase in student learning outcomes related to the competence to analyze social phenomena.

Research Subject

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The subject studied in this study were students of PGSD UN PGRI Kediri level two class B, even semester of the 2019/2020 academic year.

Sources and Data Collection

The data taken in this study are 1) data from the results of the investigation reports of each group contained in the assessment of student performance. The rubric for assessing student performance is in table 2.

Table 2.
Rubric for Assessment of Student Performance

Aspects of the Assessment	Assessment	Scale of	Criteria for
Observation Report	Report Systematic	4	If the group reports on student performance are (1) in order, (2) in accordance with the filling steps , and (3) according to the procedure on the student performance sheet.
		3	If one of the reporting systematic assessment criteria is not met
		2	If two report systematic assessment criteria are not met
		1	If all report systematic assessment criteria are not met
	Report Contents	4	If the group reports content on student performance (1) is complete (from observations/interviews to attachments in the form of photos), (2) interesting to read, (3) using effective language using EYD rules.
		3	If one of the report content assessment criteria is not met
		2	If the two report content assessment criteria are not met
		1	If all report content assessment criteria are not met
	Problem Analysis	4	If the results of the analysis on student performance are detailed/detailed in analyzing the causes, impacts, follow-up impacts, and solutions of several social phenomena and in detail in analyzing them from the point of view of 4 subjects (sociology, anthropology, social psychology, and law).
		3	If the results of the analysis on student performance are detailed enough/detailed enough in analyzing several social phenomena (eg analyzing causes, impacts, further impacts, but not providing a solution to the problem) and detailed enough in analyzing them from the point of view of 4 subjects (sociology, anthropology) , social psychology, and law).
		2	If the results of the analysis on student performance are less detailed/less detailed in analyzing several social phenomena (e.g. analyzing causes, impacts, further impacts, but not providing a solution to the problem) and analyzing them from the point of view of 3 subjects only.
		1	If the results of the analysis on student performance are not detailed in analyzing several social phenomena (only analyzing the causes/impacts/continued impacts/solutions only) and analyzing them from the point of view of less than 3 subjects.

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Presentation	Clarity of Presentation	4	If in the presentation the students read the observation report (1) systematically, (2) use good and correct Indonesian, and (3) submit the report aloud.
		3	If one of the presentation clarity assessment criteria is not met
		2	If the two presentation clarity assessment criteria are not met
		1	If all report presentation clarity assessment criteria are not met
	Knowledge	4	If in the presentation, students can master 4 analyzes (cause, impact, follow-up impact and solutions) of several social phenomena associated with 4 subjects (Sociology, anthropology, social psychology, and law)
		3	If in the presentation, students can master 3 analyzes (cause, impact, sequelae and solutions) of several social phenomena associated with 4 subjects (Sociology, anthropology, social psychology, and law)
		2	If in the presentation, students can master 2 analyzes (cause, impact, further impact and solution) of several social phenomena that are connected with 3 subjects (Sociology, anthropology, social psychology, and law))
		1	If in a presentation, students can master 1 analysis (cause, impact, follow-up impact and so lusion) of several social phenomena associated with less than 3 subjects (Sociology, anthropology, social psychology, and law)

$$\text{ASSESSMENT SCORE} = \frac{\text{Score obtained}}{\text{Total score}} \times 100$$

Then 2) learning outcome data in the form of a test on an assessment sheet containing open-ended questions regarding material for prostitution, drug abuse (drugs), street children/punk children, and unemployment. There are 4 questions on the assessment sheet with the following criteria rubrics (1) Students are able to answer 3 questions with correct answers getting a score of 25/item questions, (2) Students are able to answer 2 questions with correct answers getting a score of 20/item questions, (3) Students are only able to answer 1 question with the correct answer getting a score of 15/item of question, and (4) Students who answer all questions but the answer is not correct get a score of 10/item of question. Just like the results of the performance assessment, the calculation of the description questions also uses the formula:

$$\text{ASSESSMENT SCORE} = \frac{\text{Score obtained}}{\text{Total score}} \times 100$$

Research Procedure

This research lasted for 2 cycles, each cycle was carried out for 2 meetings/implementation and each cycle in this study consisted of four stages namely 1. Planning, 2. Implementation, 3. Observation, 4. Reflection (Arikunto, 2010). The CAR cycle flow will be described as Figure 1.

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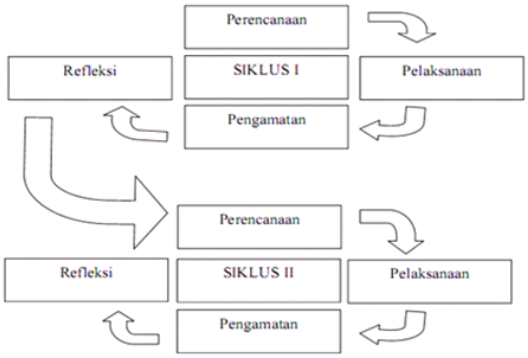

***Figure* 1. CAR**

Cycle I

Planning

The steps taken by the researcher at this stage are to create a scenario for learning social phenomena material, in the form of a lecture implementation plan (RPP) adapted to the steps of the *Group Investigation* (GI) model, then prepares a module for group investigation because each group will have different problems, and prepares assessment instruments in the form of student performance and assessment sheets (tests).

Implementation

At this stage, the lecturer carries out learning activities according to the learning scenario made with the learning of *Group Investigation* (GI) model. The learning steps of *Group Investigation* (GI) in this research can be observed as shown in table 1.

Table 1. Learning steps of *Group Investigation* (GI)

Steps	Learning Activities (Lecturer)
Group	- Informing learning objectives - Creating an active and conducive classroom environment - Organizing students into several groups
Organizing students to learn	- Dividing tasks to each group with different problems - Giving opportunities for each group to discuss - Giving opportunities for each group to investigate the given problem - Asking each group to make a report on the results of the investigation
Presentation	- Asking group representatives to convey the results of their investigations related to the problem - Asking other groups to provide responses to the results of their investigations
Reflection	- The lecturers and students together provide conclusions from each problem and the results of the investigation from each group

(Source: Aqib, 2015: 81)

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Observation

At this stage, observations are made during the learning process by observer, namely research assistant. The task of the observer is to help researchers to record all findings on the implementation of learning both in class and when conducting group investigations outside campus and the observer also helps collect student performance scores.

Reflection

At this stage the researcher and research assistant analyze the success of learning from learning and the data sources obtained from the results of student performance assessments and tests on the assessment sheet to determine the success of implementing the *Group Investigation* (GI) model in social phenomena. Furthermore, the results of the analysis will be used to determine improvements at the next meeting.

Cycle II

This cycle has the same stages as the first cycle, namely planning, implementation, observation and reflection. Findings of problems and improvements continue to be made in each cycle. After cycle II ends, this research will be stopped.

RESULT

Student Performance Results

The results of this study were obtained for two cycles. Each cycle consists of two meetings. The following is a description of the data on the results of student performance in this study.

Table 3. Student Performance Data

Cycle	Meeting	Average score of student performance	Qualitative value	Score per cycle	Description
I	Meeting 1	70.3	Good	74, 4	-
	Meeting 2	78, 5	Good		Improved
II	Meeting 1	86, 3	Good	89, 3	Increased
	Meeting 2	92, 2	Very good		Increased

Description: the information column is said to be increased if the score of the meeting is higher than the score of the previous meeting

It shows an increase in student performance results in cycle II compared to cycle I. To illustrate the increase in student performance results regarding the ability to analyze social phenomena, it can be seen in the diagram below.

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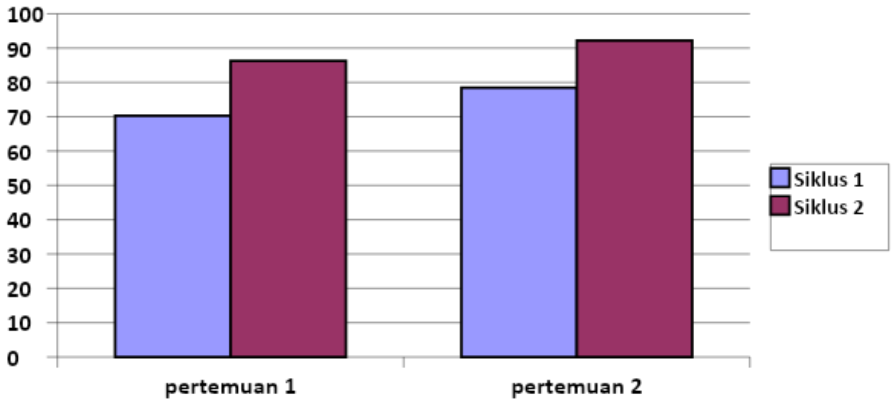

Diagram 1. Student Performance Results Data

Student Learning Outcomes

The following are student learning outcomes obtained from the assessment sheet work test.

Table 4. Learning Outcomes Data

Cycle	Meeting	Average score of student performance	Qualitative value	Score per cycle	Description
I	Meeting 1	79	Good	79.5	-
	Meeting 2	80	Good		Improved
II	Meeting 1	93	Good	94	Improved
	Meeting 2	95	Very good		Improved

Description: the information column is said to increase if the score of the meeting is higher than the score of the previous meeting.

Based on the table above, it can be seen that the score of student learning outcomes in cycle I reached a score of 79.5 and cycle II a score of 94, this shows an increase in student performance results in cycle II compared to Cycle I. To illustrate the improvement in student learning outcomes regarding the ability to analyze social phenomena, it can be seen in the diagram below.

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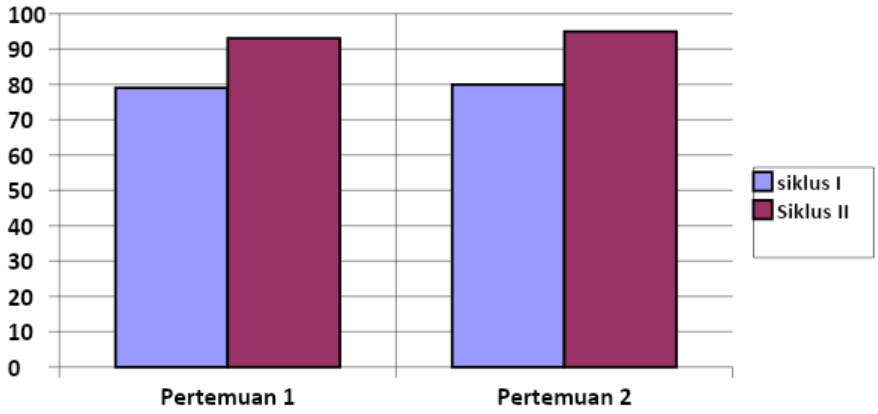

Diagram 2. Student Learning Outcomes Data

DISCUSSION

In Cycle 1

Planning

The steps taken by researcher at this stage are making a scenario for learning social phenomena material, in the form of a lecture implementation plan (RPP) adapted to the steps of the Group Investigation (GI) model, then prepare modules for group investigations because each group will have different problems, and prepare assessment instruments in the form of student performance and assessment sheets (tests).

Implementation

At this stage, the lecturer carries out learning activities according to the learning scenario made with the Group Investigation (GI) learning model. The Group Investigation steps based on Astuti, B. (2017, vol 4: no.3) on the material of social phenomena are as follows. (a) The learner divides the class into several groups, after the learner (lecturer) shows a video about social problems in Indonesia, the learner divides the students into several groups to complete the task from the student performance sheet given by the learner; (b) Learner explain the purpose of learning and give group assignments that must be done, namely the task for each group to make observations/observations or it can be done by interviewing several sources in certain areas that are the object of study of social phenomena material in order to dig up detailed information, which later results the observations or interviews are used as material for making reports on the results of observations as a result of carrying out tasks from the performance sheet; (c) Learner

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invite group leaders to choose the material on the task cooperatively in their groups. So in this activity, each group must choose a topic for studying social phenomena and then cooperatively each group carries out tasks according to the instructions of the Learner (Lecturer); (d) Each group discusses the task material cooperatively in their group, in this activity each group carries out observations and interviews. Then the results of the observations and interviews are written in the form of a report that is adapted to the format determined by the learner; (e) After completion, each group represented by the group leader or one of its members conveys the results of the discussion, namely after carrying out their duties, each group leader submits the results of observations in the area chosen as the object of the study topic; (f) Other groups can provide responses to the results of the discussion; (g) The learner provides a brief explanation (clarification) when a conceptual error occurs and provides a conclusion; and (h) conduct an evaluation in the form of giving a test.

Observation

At this stage, observations are made during the learning process by the observer, namely the research assistant. The task of the observer is to help researcher to record all findings on the implementation of learning both in class and when conducting group investigations outside campus and the observer also helps collect student performance scores. Wibawa, B. (2003: 2722) said that observation is the most important element in CAR research because the process is able to analyze and identify obstacles that cannot be explained in the test constraints.

Reflection

At this stage the researcher and research assistant analyze the success of learning from learning and the data sources obtained from the results of student performance assessments and tests on the assessment sheet to determine the success of implementing the Group Investigation (GI) model in social phenomena. Furthermore, the results of the analysis will be used to determine improvements at the next meeting. According to Widayati, A. (2008 vol.8, no.1) explained that reflection is a conclusion from several previous stages in order to know the extent of the implementation of the CAR. If there are still obstacles, then proceed to cycle 2.

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Cycle 2

In cycle 2 the activities are the same as in cycle 1, namely planning by improving learning tools that are not satisfactory, then carrying out implementation, observation and reflection. Overall, in cycle 1, obstacles were found at the stages of "Creating an active and conducive classroom environment" and "Organizing Learner to learn". The drawback at the stage of "Creating an active and conducive classroom environment" is that in learning students are still complacent with previous learning, namely students only listen to the lecturer while looking at the lecturer's powerpoint. So that students still look passive and less enthusiastic about learning. The shortcomings at the stage of "Organizing Learner to Learn" namely when the lecturer divides tasks to each group with different problems, students are busy and often ask the lecturer, then when the lecturer gives each group the opportunity to discuss, many students do not understand the instructions from the lecturer. , then when the lecturer gave each group the opportunity to investigate the given problem, many students were undisciplined because most of the groups took time to conduct investigations in the field so that some groups were not timely in collecting reports on the results of the investigation.

Then after reflecting on cycle 1, cycle 2 was carried out with the same material and treatment, but taking into account the obstacles in cycle 1 so that in cycle 2 social phenomenon learning material for social phenomena ran smoothly. Several solutions were made to overcome these obstacles, namely the researcher provided a stimulus for better learning so that in cycle 2, students were able to analyze social phenomena associated with several social science disciplines (interdisciplinary approach). The benefits obtained from this research are that students are able to think holistically about the problems that occur in society starting from the causes, impacts, further impacts, and the solutions offered from these problems which are seen from several perspectives from the social sciences Sudikan, SY (2015, vol. 2, no. 1).

The advantage of the *group investigation* (GI) model is that it increases student activity in the learning process. Observation of social phenomena in several disciplines requires students to be skilled in actually observing behavior in society, skilled in making reports, and skilled in presenting (Prasetyani, SD, Sajidan, S., & Maridi, M, vol.4, no.2 , 2015). Learning will be more motivating if learning is active and "Hands on" which involves a lot of physical activity (Nicolls, 2004). Along with (De Jong & Van Joolingen,

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1998) on discovery learning to be successful, learners must have a number of discovery skills. This learning model trains students to make observations in groups, thereby improving student skills and strengthening communication.

CONCLUSION

Based on the results of the study, it can be seen that during the two cycles of this classroom action research, the application of the model *Group Investigation* (GI) was successful in the Social Sciences course on social phenomena. It is evident in the results of student performance that there has been an increase from the first cycle, namely the average score is 74.4 and the second cycle the average score is 89.3. Then the student learning outcomes also experienced an increase in scores, namely from the first cycle with an average score of 79.5 and an average score of 94 in the second cycle.

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IMPLEMENTATION OF LEARNING DURING THE COVID-19 IN COLLEGE

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Abstract: The purpose of this study was to obtain information regarding the implementation of learning during the Covid-19 pandemic period in college. This research activity uses a type of library research which means that in obtaining data in the form of information on relevant matters from various sources such as documents, books, magazines, news, and others. The criteria for selected articles and news are those that discuss the implementation of learning during the Covid-19 pandemic in college. From the 10 sources obtained, then the most relevant were selected so that 7 articles were obtained. The results obtained in this study indicate that the implementation of learning during the Covid-19 pandemic in college can be carried out properly and effectively using online learning. Another finding is that the Covid-19 pandemic is a momentum for lecturers and students to start and familiarize online learning with various learning applications. And there are many online learning applications, but the applications that are widely used are the Google Classroom and Whatsapp applications.

Keywords: learning, covid-19 pandemic, college

INTRODUCTION

Currently, the world has been shocked by the outbreak of the Corona Virus or known as the Coronavirus. Coronavirus itself is a virus that can cause illnesses ranging from mild symptoms to severe symptoms. One type of coronavirus that is known to cause illness that can cause severe symptoms. Coronavirus Diseases 2019 (COVID-19) is a new type of disease that has never been identified in humans. General signs if a person is infected with Covid-19 are acute respiratory disorders such as fever, cough, and shortness of breath with an average incubation period of 5-6 days and a maximum incubation period of 14 days. WHO has declared Covid-19 as a public health emergency that has been troubling the world community since January 30, 2020. According to kompas.com, accessed on May 29, 2021, at 13.00 WIB, there were 99.690 active cases of Covid-19 in Indonesia as of May 29, 2021.

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Coronavirus is a large family of viruses that cause mild to severe symptoms to appear. There are at least two types of Coronavirus that are known and cause severe symptoms, *they are Middle East Respiratory* Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Whereas *Coronavirus Diseases* 2019 or COVID-19 is a new type of virus that has not been previously identified in humans. Common signs of being infected with the Covid-19 virus are symptoms of acute respiratory distress, namely fever, cough, shortness of breath, with an average incubation period of 5-6 days and a maximum incubation period of 14 days. (Yurianto& Ahmad, 2020).

The outbreak of the Covid-19 virus in Indonesia has had a significant impact on the entire community and various groups. According to Kompas, 28/03/2020 the impact of the virus was felt in various fields including the economic field, social sector, tourism sector, and even education. The first circular letter issued by the government due to the outbreak of the Corona-19 virus on March 18, 2020, that all indoor and outdoor activities in all sectors be temporarily postponed to reduce the spread of the Corona-19 virus, especially in the education sector. On March 24, 2020, the Minister of Education and Culture of the Republic of Indonesia issued Circular Letter Number 4 of 2020 regarding the Implementation of Education in the Emergency Period for the Spread of Covid-19, in the Circular, it is clarified that learning activities are carried out at home with an online or networked learning system or known as distance learning which is carried out to provide a meaningful distance learning experience for students. Studying at home can be focused on life skills education, one of which is regarding the Covid-19 pandemic.

The implementation of learning in college must also be carried out remotely through good cooperation between lecturers and students as well as supporting facilities and infrastructure. Distance learning is learning that is carried out not face to face or face to face but through cyberspace. With a distance learning system in the online form, students have the opportunity to learn without being limited by space and time. Online learning is according to (Moore, Dickson-Deane & Galyen, 2011) Online learning is learning that uses the internet network with accessibility, connectivity, flexibility, and the ability to bring up various types of learning interactions. In carrying out online learning, students can interact with lecturers using digital technology of online learning applications such as google classroom, LMS, video conferences such

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as zoom and google meet, telephone, live chat such as Whatsapp group, and many more.

The purpose of this research is to obtain information regarding the implementation of learning during the Covid-19 pandemic in college. How can the implementation of learning during the Covid-19 pandemic in college be carried out properly and effectively?

METHOD

This study uses library research methods. Library research is research that is done by collecting information and data from various library sources such as documents, books, magazines, historical stories, news, and so on. According to experts, library research is a theoretical study, other scientific references that are closely related to the culture, values, and norms that develop in the social situation being tested (Sugiyono, 2012). This research collects information and data obtained from articles and news in online journals.

Based on the research conducted by the researcher, the researcher got various articles and news. The selected news and articles are related to discussions about the impact of the Covid-19 virus and online learning. From the 10 sources obtained, the most suitable were selected, namely 6 articles. The research technique used is documentation, by looking for data related to things or variables in the form of notes, books, papers or articles, journals, and news. (Arikunto, 2010)

Validity test using triangulation of data sources obtained. The analysis uses 4 stages including 1. Collecting data; 2. Reduce data obtained; 3. Appropriate data display; and 4. Summing up.

RESULTS

The outbreak of the Covid-19 pandemic, which was previously carried out face-to-face at school, now wants it or not, whether we like it or not, or whether we are ready or not ready to do remote learning at home. Online distance learning can use a wide selection of online learning application facilities that use digital technology such as google classroom, LMS, video conferences such as zoom and google meet, telephone, live chat such as Whatsapp group, and many more. Learning activities are carried out by delivering material through video conferences so that lecturers can monitor participation in online distance learning and assign assignments to

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determine the extent to which students understand distance learning or lectures through the online system.

The implementation of distance learning in college during the Covid-19 pandemic showed various results including according to (Sadikin & Hamidah, 2020) the results of their research stated that online learning was effective in overcoming learning that allowed lecturers and students to communicate or interact in the virtual classroom so that lecture activities can be accessed anywhere and anytime. Online learning makes students learn more independently and can increase student motivation in learning. However, there are advantages and disadvantages of online learning where student lecture activities are not monitored optimally by lecturers during the process of online learning activities. On the other hand, the weakness of online learning is related to internet signals and the high cost of internet quota is a separate obstacle in carrying out online learning activities. Another advantage of online learning during the Covid-19 pandemic is that it can suppress the spread of Covid-19 in college.

On the other hand (Dewantara & Nurgiansah, 2021) stated that if online learning was continuously carried out for PGRI Yogyakarta University students, it would be ineffective, due to the emergence of boredom because activities seemed to be carried out repeatedly so that they reached a saturation point. Less than half of the material that students can absorb, another problem is the ability to use internet facilities for lecturers and students are still relatively low. So that online learning will be effective when it is done at any time but not continuously for a full semester. In this study, it was emphasized that in the future online learning should only be carried out during certain conditions that make it impossible to carry out face-to-face learning activities, for example when a natural disaster occurs and along with the increasing professionalism of the teaching staff in the use of various online applications so that learning is not so boring.

Meanwhile, according to (Fitriyani, Fauzi & Sari, 2020) from the results of data analysis carried out in their research, it can be concluded that from 8 indicators of learning motivation, namely concentration, curiosity, spiritedness, independence, readiness, enthusiasm, or encouragement, never give up, and confident the result is that the average percentage score is 80.27% with very good criteria, from these results it can be said that during the Covid-19 pandemic that hit almost all of part in the earth, this is not a reason for students to stay motivated to learn even the motivation is still high, although in practice there are still deficiencies found, there is no other choice except to maximize online lecture activities because this is an emergency like now, only technology connected in transferring knowledge from lecturers to students.

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According to (Yudiawan, 2020) in his research online learning in Islamic Universities since the outbreak has been implemented and is going well. The policies that have been taken to manage college during the Covid-19 period in implementing online learning are considered appropriate, according to the needs in the current situation and conditions. Meanwhile, in terms of input, in terms of the quality of lecturers and students, they are quite competent when preparing and conducting online learning. The substance of the material delivered is the same when compared to face-to-face classes at school. However, problems arise from the non-technical side. Where the problem is related to the network and the cost of data packets is something that students and lecturers need to pay attention to. Especially for those who live in areas that still lack signals, such as the West Papua region with diverse demographics and people whose economy is affected by the Covid-19 pandemic. Technical steps should be taken to overcome problems related to the network and academic costs of each student. Online learning products during Covid-19 to improve understanding of technology for students. This is a momentum with the Covid-19 pandemic for students in the 3T region, it has become and has implemented information technology as a matter of course.

According to (Ningsih, 2020) in her research based on questionnaires that were distributed to students of the Educational Technology Study Program at Baturaja University, 100% of the students of the Educational Technology Study Program conducted online learning activities in the even semesters of 2019/2020 academic year. However, 93.5% prefer face-to-face learning to online learning. Due to the limitations of students to provide internet quota for a long period, the understanding of the material is minimal and direct interaction is very limited. Although students prefer face-to-face learning, several online media are very popular with students when online learning activities are carried out, namely data 1). Google Classroom (46.8%), 2). Whatsapp (27.4%), 3). Edmodo (19, 4%) and 4). Zoom (6.4%). The results of this study can be used as a basis for the use of online media, especially in the Education Technology Study Program.

According to (Fuadi, Musriandi & Suryani, 2020) in their research, the impact of Covid-19 cannot be avoided, especially in the use of several online learning applications by teaching staff in this case are lecturers in carrying out lecture activities. Not only students, but lecturers also strive to provide the best, interesting, and effective learning activities for students to fulfill their obligations as educators. There are many types of applications that are often used by lecturers at college to conduct online lecture

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activities including; 1). zoom, 2). Google classroom, 3). Whatapp groups, 4). google meet, 5). Skype, 6). Webex, 7). e-mail, 8). Edmodo and 9). CamStudio.

While according to (Rosali, 2020) based on the results of his research, it can be concluded that the learning or lectures carried out during the Covid-19 pandemic were in the Geography education department as a whole has used an online learning model by using several applications such as 1). V-class, 2). meet Unsil, 3). zoom, 4). Whatsapp, 5). telegrams, 6). Google classroom, 7). youtube, 8). Facebook, and 9). messenger. Every lecturer on average uses two applications in one lecture activity, such as Google Classroom and WhatsApp because they are more practical and require less quota than other applications. Online lecture activities run well and smoothly, but most of the lecturers and students feel that the implementation of lectures is not as ideal as face-to-face learning as before. Communication activities that are intertwined are not smooth so that the material is difficult to understand, especially for subjects that need to do the practicum. The results of student lecture activities using online learning are varied, from unsatisfactory, moderate to good. Obstacles faced by students and lecturers for online lectures include the availability of internet quotas, unstable networks, and other supporting tools (devices and laptops). Online lectures were considered by some informants to be effective when carried out during the Covid-19 pandemic, this was due to restrictions on health protocols. However, a varied online lecture model is needed for alternatives to be used in the future so that lecture activities remain interesting and in the end, the learning objectives can generally be achieved.

DISCUSSION

From the 10 articles obtained with the keyword Learning during the Covid-19 in university, obtained 7 articles relevant to the title of this article. From 7 articles that are relevant to the title of the article, there are 3 articles that state that online learning is very effective as a solution to keep learning during the restrictions to minimize the spread of Covid-19. An article explains that online learning in the Covid-19 era is a momentum for lecturers and students to get to know and even get used to using technology in distance learning. And 3 articles describe the use of online learning applications that are often used, including 1). Google Classroom, 2). Whatsapp, 3). Edmodo

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and 4). Zoom. And the most effective is *Google Classroom* and Whatsapp application because it is the simplest and does not require a lot of internet quota.

The outbreak of the Covid-19 pandemic, which was previously carried out face-to-face at school, now wants it or not, whether we like it or not, or whether we are ready or not ready to do remote learning at home. Online distance learning can use a wide selection of online learning application facilities that use digital technology such as google classroom, LMS, video conferences such as zoom and google meet, telephone, live chat such as Whatsapp group, and many more. Learning activities are carried out by delivering material through video conferences so that lecturers can monitor participation in online distance learning and assign assignments to determine the extent to which students understand online distance learning or lectures. Online learning here is of course based on information and communication technology (ICT) with the main media being an internet connection. Siahaan (2003) explains that electronic learning (online instruction, e-learning, or web-based learning) has three main functions: (1) optional supplements, (2) complements, and (3) substitutions on learning in the classroom (classroom instruction).

Comerchero (2006) states that e-learning is an educational tool that includes communication, efficiency, technology, and self-motivation and further explains that E-learning is efficient because it eliminates distance and round-trip flow. However, E-learning cannot be fully used to replace classroom learning, so many colleges are competing to present the best quality online learning that integrates conventional learning processes and distance learning which results in a combination of various learning models known as the blended learning method. Singh (2003) also stated, "The blended learning mixing or combining web-bases technology to accomplish an educational goal, combining pedagogical approaches (eg behaviorism, cognitivism, constructivism), combining any form of instructional technology with face-to-face instructor-led training". Therefore, the developed e-learning must be comprehensive, capable of accommodating learning that regulates lecturers' roles, students' roles, learning management, utilization of learning resources, to an integrated learning evaluation and monitoring system, namely the Learning Management System (LMS).

Learning Management System (LMS) according to Amiroh (2013) is "A software application used by educators, both schools and colleges as an online learning medium based on the internet (e-learning). In line with this, Riad and EL-Ghareeb (2008) stated "Learning Management System (LMS) is a real software unit integrated with various features for course delivery and management". Related to this Directorate General of Higher Education, Ministry of Education, Culture, Research, and Technology (dikti.Kemendikbud.go.id, July 2021) has even issued an announcement to higher education leaders regarding the

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clustering of college to report activities in the field of online learning by integrating the Learning Management System (LMS) PT with SPADA Indonesia in its assessment.

CONCLUSION

The results obtained in this study indicate that the implementation of learning during the Covid-19 pandemic in college can still be carried out properly and effectively using online learning. Another finding is that the Covid-19 pandemic is a momentum for lecturers and students to start developing creativity and innovation in familiarizing online learning with various learning applications so that the needs of students and lecturers in learning can be accommodated properly and responsibly. Furthermore, it is also indicated by the Ministry of Education and Culture, Research and Technology are using a learning activity reporting system can be monitored using the Learning Management System (LMS) of PT.

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IMPLEMENTATION OF BEHAVIORISTIC THEORY IN ONLINE LEARNING OF INDONESIAN LESSONS IN CLASS IV OF ELEMENTARY SCHOOL

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Abstract: The purpose of this research is to find out changes in behavior (behavioristic) in learning Indonesian in reading, writing, and listening skills in grade IV at SDN Karang Entang Bangkalan. This study used qualitative research methods conducted online. The types of data in this study are quantitative and descriptive qualitative data obtained from the sample group, then divided by the number of samples. Based on the results of the research conducted, the percentage of listening skills material obtained is 72% in very good criteria. On the material of reading skills, it is 95% in very good criteria. On the material of writing skills, that is 81% on very good criteria. From these results, it is stated that learning Indonesian on the material of listening, reading, and writing skills by using behavioristic theory, teachers can change and shape student behavior, including increasing knowledge, improving attitudes, and increasing skills and making learning more effective and meaningful.

Keywords: Behavioristic, online, behavior change, listening skills, reading skills, writing skills, Indonesian.

IMPLEMENTASI TEORI BEHAVIORISTIK DALAM PEMBELAJARAN DARING MATA PELAJARAN BAHASA INDONESIA PADA KELAS IV SD

Abstrak: Tujuan penelitian ini yaitu untuk mengetahui perubahan tingkah laku (behavioristik) dalam pembelajaran Bahasa Indonesia pada materi keterampilan membaca, menulis, dan menyimak pada kelas IV di SDN Karang Entang Bangkalan. Penelitian ini menggunakan metode penelitian kualitatif yang dilakukan secara daring. Jenis data pada penelitian ini yaitu kuantitatif dan kualitatif deskriptif yang diperoleh dari data kelompok sampel, kemudian dibagi dengan jumlah sampel tersebut. Berdasarkan hasil penelitian yang dilakukan, diperoleh hasil persentase pada materi keterampilan menyimak yaitu 72% dalam kriteria sangat baik. Pada materi keterampilan membaca yaitu 95% dalam kriteria sangat baik. Pada materi keterampilan menulis yaitu 81% pada kriteria sangat baik. Dari hasil tersebut menyatakan bahwa pembelajaran Bahasa Indonesia pada materi keterampilan menyimak, membaca dan menulis dengan menggunakan teori behavioristik guru mampu

mengubah dan membentuk tingkah laku siswa diantaranya pengetahuannya bertambah dan semakin bertambah, sikapnya semakin membaik, dan keterampilan yang dimiliki semakin banyak dan membuat pembelajaran lebih efektif serta bermakna.

Kata Kunci : Behavioristik, daring, perubahan tingkah laku, keterampilan menyimak, keterampilan membaca, keterampilan menulis, bahasa Indonesia.

INTRODUCTION

Learning is a process of interaction between students and educators and learning resources in a learning environment. There are five concepts in this sense, they are (1) interaction, (2) students, (3) educators, (4) learning resources, and (5) learning environment (Hayati, 2017:3). Based on this explanation, it can be concluded that learning is a process of teaching and learning activities that collaborate in an integrated manner into interaction or communication between teachers and students, as well as between students and students during the learning process. Philosophically, learning, in essence, is more down to earth or humanist, not only because it emphasizes the importance of implementing the educational process by paying more attention to the development and growth of children, but also because it emphasizes the importance of completing children's needs and helping the development of children's talents, interests, and abilities.

Behavioristic learning is an effort to form appropriate behavior or desired behavior. Behavioristic learning is often referred to as stimulus-response learning. Human behavior is controlled by rewards or reinforcement from the environment which is one of the components in this theory. The student's behavior is a reaction to the environment and that all behavior is the result of learning. Behavioristic learning can improve the quality of learning if its application is reintroduced in learning. Based on its components, this theory is relevant if used in current learning.

The implementation of behavioristic theory is easy to find in schools now. This is because it is easy to apply this theory to improve the quality of students. One example of its implementation is the existence of a point system when students violate school rules. The intended target of this learning is to change the behavior of students for the better. In addition to giving points for violating school rules, behaviorism is also applied in learning.

Based on the results of initial observations made by researchers at SDN Karang Entang Kwanyar Bangkalan for fourth-grade students online through the Whatsapp Group platform, the reality encountered by researchers was that during the theme learning activities,

which included Indonesian subjects, did not run effectively and optimally because the Indonesian subjects, especially on the topic of listening, reading and writing students are only limited to listening to lectures from the teacher and there does not appear to be a change that occurs after the learning is completed. This means that teachers and students lack the stimulus and response. This causes learning to be less meaningful. It is also not able to provide a realistic description of the concept that the teacher explains to make students understand the material abstractly. Meanwhile, based on the results of interviews with Mr. Rifa'i as a fourth-grade teacher, he received information that in online learning activities the teacher only used the zoom platform and sometimes only distributes assignments in text form (word) in WhatsApp groups. As a result, students cannot obtain real information and result in unsatisfactory student learning outcomes.

From the results of the analysis, it can be seen that even though online learning is certainly needed, a learning atmosphere is needed with a pleasant and interesting stimulus and response so that students do not easily feel bored, lazy, and sleepy. Researchers provide solutions through the Implementation of Behavioristic Theory in Online Learning Indonesian Subjects in Class IV Elementary School. This is expected to make teachers provide attractive stimuli to students and students are interested, more active, and more enthusiastic during the learning process and get satisfactory learning outcomes through behavioral changes that adhere to behavioristic theory.

Based on the description above, the objectives of this study are 1) to describe the behavioral (behavioristic) learning methods identified in learning listening, reading, and writing skills in class IV at SDN Karang Entang Bangkalan. 2) describe changes in behavior (behavioristic) in learning listening, reading, and writing skills in class IV at SDN Karang Entang Bangkalan.

METHOD

The type of research used is a descriptive qualitative approach with the research subject of teachers and fourth-grade students at SDN Karang Entang Kwanyar Bangkalan. The qualitative research method is a research method based on the philosophy of postpositivism, used to examine the condition of natural objects, where the researcher is the key instrument and the data analysis is inductive or qualitative. Sugiyono (2009:9).

To collect data then used the method of observation and interviews. Data is the result of recording from research either in the form of facts or in the form of numbers as material for composing information (Arikunto 2006:118). According to Lofland in Moleong (2007:157) the data used in qualitative research are words and actions as the main data source, while documents and others are additional data. A research instrument is a tool used to measure the observed natural or social phenomena (Sugiyono 2009:102). The research instruments used in this study were observation and interviews.

The data obtained are presented in the form of tables, charts, and descriptions. The description of the data is obtained in the form of a percent.

$$\% \frac{number\ of\ parts}{total\ number\ x} 100\%$$

The average value is calculated by adding up all the data values for the sample group, then dividing by the number of samples. So if a group random sample with the number of samples n, then the sample value can be calculated as follows.

$$x = \sum_{n=1}^{n} x\ ^{1} \quad \text{(Sugiyono, 2011)}$$

RESULTS AND DISCUSSION

RESULTS

The research results that have been obtained are formulated following the objectives of this study, they are:

1) Describe the behavioral learning methods (behavioristics) identified in learning listening, reading, and writing skills in class IV at SDN Karang Entang Bangkalan.

Table 1. (Behavioral learning methods (behavioristic) in class IV at SDN Karang Entang Bangkalan)

No	Skill type	Behavioral learning method (behavioristic) in class IV at SDN Karang Entang Bangkalan
1.	Listening skills	• Listen and write method • Identify keywords
2.	Reading skills	• The syllabic method (Syllabic Method) • Sentence/global method (Syntaxis Method)
3.	Writing skills	• communicative method • Constructivist method

Source: Researcher Data

2) Describe changes in behavior (behavioristic) in learning listening, reading, and writing skills in class IV at SDN Karang Entang Bangkalan.

To find out the results of the analysis of each response item with predetermined effectiveness criteria:

Table 2. (Percentage of response item analysis results)

No	Percentage	Criteria
1.	71% - 100%	Very good
2.	61% - 80%	Good
3.	41% - 60%	Enough
4.	0% - 40%	Not enough

Source: Arifin (2016)

Listening Skills

Listen and write method

Table 3. (Indicators of Assessment of Listening Skills for Listening and Writing Method)

No	Rating indicators	Achievement rate			
		1	2	3	4
1.	Understanding the content of the discourse				5 students
2.	Discourse content disclosure skills				4 students
3.	Smooth disclosure			4 students	
4.	Correct sentence structure			5 students	
5.	Courage of speech			4 students	

Source: Nurgiyantoro (2013)

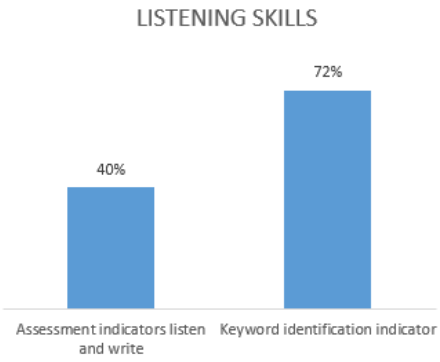
Keyword Identification Method

Table 4 (Indicators of the Assessment of Listening Skills for Keyword Identification Methods)

No	Rating indicators	Achievement rate			
		1	2	3	4
1.	Understanding the content of the discourse				3 students
2.	Discourse content disclosure skills				6 students
3.	Smooth disclosure			4 students	
4.	Correct sentence structure			2 students	
5.	Courage of speech				7 students

Source: Nurgiyantoro (2013)

Based on the results of calculations in the form of percent of the two methods of listening skills, it can be seen in a chart like the following:



Source: Research data

Reading Skills

Syllable Method Assessment Indicators

Table 5 (Indicators of Reading Skills Assessment of the Syllable Method)

No	Rating indicators	Achievement rate			
		1	2	3	4
1.	Diction accuracy and language style				11 students
2.	Smooth disclosure			1 student	
3.	Courage of speech			1 student	
4.	Correct sentence structure				9 students

Source: Nurgiyantoro (2013)

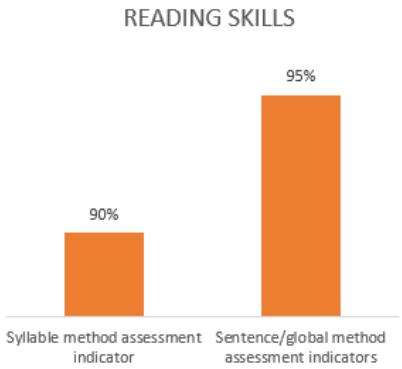
Sentence/Global Method

Table 6 (Indicators of Reading Skills Assessment Sentence/Global Method)

No	Rating indicators	Achievement rate			
		1	2	3	4
1.	Diction accuracy and language style				7 students
2.	Smooth disclosure				4 students
3.	Courage of speech			1 student	
4.	Correct sentence structure				9 students

Source: Nurgiyantoro (2013)

Based on the results of calculations in the form of percent of the two methods of reading skills, it can be seen in the following chart:



Source: Research data

Writing skills

Communicative Method Assessment Indicators

Table 7 (Indicators of Communicative Method Writing Skills Assessment)

No	Rating indicators	Achievement rate			
		1	2	3	4
1.	Diction Accuracy				3 students
2.	The suitability of the writing topic				7 students
3.	Correct sentence structure				3 students
4.	The breadth of the writing material			4 students	

Source: Nurgiyantoro (2013)

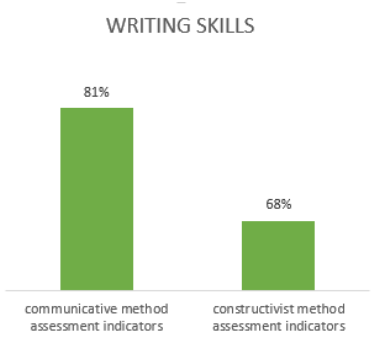
Constructivist Method

Table 8 (Indicators of Constructivist Writing Skills Assessment)

No	Rating indicators	Achievement rate			
		1	2	3	4
1.	Diction Accuracy				3 students
2.	The suitability of the writing topic				7 students
3.	Correct sentence structure				3 students
4.	The breadth of the writing material			4 students	

Source: Nurgiyantoro (2013)

Based on the results of calculations in the form of percent of the two methods of writing skills, it can be seen in a chart like the following:



Source: Research data

DISCUSSION

The discussion of the research that has been obtained is formulated following the objectives of this study and the results obtained during the research, they are:

1) **Describe the behavioral learning methods (behavioristics) identified in learning listening, reading, and writing skills in class IV at SDN Karang Entang Bangkalan.**

Based on the results of interviews with the homeroom teacher for class IV, Mr. Rifa'I, S.Pd., it was found that the following is a behavioral learning method (behavioristic) identified in learning reading, writing, and listening skills in class IV at SDN Karang Entang Bangkalan. The thing that becomes a pressing point in the process of learning in students is the emergence of a relationship between stimulus and response. This relates to what behavior is shown by students, so it is important to pay attention to other things so that teachers can detect or conclude that the learning process has been successful. What is meant is as follows:

1. Teachers should understand what kind of stimulus is right to be given to students.
2. The teacher also understands what kind of response will appear in students.
3. To find out whether the response shown by this student is following what is expected, the teacher must be able to: a. Determine that the response can be observed (observable) b. The responses shown by students can also be measured (measurable) c. The response shown by students should be stated explicitly or clarify the meaning (explicit) d. So that the response can always continue to occur or be faithful in the memory/behavior of students, it is necessary to have some kind of reward.

Behavioristic theory views that knowledge has been structured neatly and orderly, so students or people who learn must be faced with clear and strictly defined rules beforehand. Habituation and discipline are very essential in learning, so learning is more associated with discipline enforcement. Failure or inability to gain knowledge is categorized as an error that needs to be punished and learning success or ability is categorized as a form of behavior that deserves to be rewarded. Likewise, adherence to rules is seen as a determinant of learning success. Learners or students are objects that behave following the rules, so learning control must be held by a system that is outside of the learner.

The behavior observed by the researcher was in the form of behavior that emerged from most of the students in the class being studied. Based on the results of the study, two responses or student behavior emerged, namely verbal responses and nonverbal responses. Based on the research that has been done, the desired student behavior appears in the learning objectives.

Listening skills

Listening is one aspect of language skills. Listening is closely related to speaking, reading, and writing. However, the relationship between listening and speaking is closer than the relationship between listening and reading or listening and writing. Oral communication will not work if listening is not accompanied by speaking or vice versa speaking must be accompanied by listening activities. Indonesian teachers in elementary schools should strive to make listening teaching enjoyable for students. This can be done if the teacher mastered the material and ways or methods of teaching listening. Especially in the listening teaching method, the teacher must recognize, understand, appreciate, and be able to practice various ways of teaching listening.

The listening learning methods include:

a. Listen and write

   In this technique, the teacher reads or plays to a short discourse (heard only once). Students listen well.

b. Identify keywords

In listening to a sentence, paragraph, or long discourse, we do not need to catch all the words but just remember the keywords. Keywords are the core of a long sentence, paragraph, or discourse.

Reading Skills

Reading skills need to be mastered by every student. First, when students are in the process of completing their studies, reading skills are needed in learning each subject. Every subject must have a textbook that must be digested by students. Second, if students later engage in social life outside of school, reading skills are still very necessary.

a. Syllabic Method (Syllabic Method)
   This method begins with the introduction of syllables such as ba, bi, bu, be, bo, ca, ci, cu, ce, co, da, di, du, de, do, and so on. Then the syllables are assembled into meaningful words.
b. Sentence Method/ Global (Syntaxis Method)
   The Global Method is a way of learning to read complete sentences. The Global Method is based on a sentence approach. The trick is that the teacher teaches reading by displaying sentences under the picture.

Writing Skills

Writing means expressing writing notions, ideas, opinions, or thoughts and feelings. The tool of making this happen is language. The contents of the expression through that language will be understood by other people or readers if it is poured in an orderly, systematic, simple, and easy to understand language. The skill of expressing thoughts through language that is regular, systematic, simple, and easy to understand is what Indonesian teachers must train their students. This can be achieved through targeted and planned writing exercises. For example, writing exercises in the simplest, usual, and difficult forms.

In learning to write, several methods are used, they are:

a. Communicative Method

Designs that contain communicative methods must cover all language skills. Each goal is organized into learning. Each learning is specified into a concrete goal which is the final product. For example, the communicative method can be done by writing dialogue

techniques. Students write dialogue about what they did in an activity. This activity can be carried out individually or in groups.

b. Constructivist Method

The central assumption of the constructivist method is learning is discovering. This means that even though the teacher conveys something to students, they carry out mental processes or brain work on the information so that the information enters their understanding. Constructivism starts from problems that often arise from students themselves and then helps students solve and find steps to solve these problems.

2) Describe changes in behavior (behavioristic) in learning listening, reading, and writing skills in class IV at SDN Karang Entang Bangkalan.

Based on observations during the learning process, it was found that behavioral changes (behavioristic) in learning reading, writing, and listening skills in class IV at SDN Karang Entang Bangkalan are as follows:

Listening Skills

Indicator Assessment Method Listen to write

At this stage, the teacher reads or plays a short discourse related to the beginning of the spread of the covid virus in Indonesia. The teacher only plays to the students once enough. After that, students were asked to repeat the discourse that the teacher had said.

From the assessment indicators, it was found that 9 students understood the discourse content, the accuracy of sentence structure, the courage of narrative with the level of achievement of 4. While skills of disclosing discourse content, and the fluency of disclosure were with the level of achievement of 3. There were 13 students with the skills of disclosing discourse content and fluency disclosure with the level of achievement of 4. While the understanding of discourse content, the accuracy of sentence structure, the courage of narrative, namely the level of achievement of 3.

Keyword Identification Method Indicator

In this case, students listen to a sentence, paragraph, or long discourse, students do not need to catch all the words but just remember the keywords. Keywords are the core of a long sentence, paragraph, or discourse.

From the assessment indicators, it was found that 16 students understood the content of discourse, the accuracy of sentence structure, the courage of narrative, the accuracy of sentence structure, the fluency of disclosure with the level of achievement of 4. While the skill of disclosing the discourse content was with the level of achievement of 3. There were 6 students with the skill of disclosure content of discourse and fluency of disclosure, Courage of speech with the level of achievement of 4. While understanding of discourse content, the accuracy of sentence structure, fluency of disclosure that is with the level of achievement of 3.

According to the chart results, it can be concluded that the method of listening skills in the written listening assessment is getting a score of 40% which is included in the sufficient category. Meanwhile, in the assessment of keyword identification, a score of 72% was included in the very good category. Students tend to be more active in the key identification method than in the written assessment.

Reading Skills

Syllable Method Assessment Indicators

This method begins with the introduction of syllables such as ba, bi, bu, be, bo, ca, ci, cu, ce, co, da, di, du, de, do, and so on. Then the syllables are assembled into meaningful words.

From the assessment indicators, it was found that there were 20 students with accuracy in diction and language style, fluency in disclosure, courage in speech, and accuracy in sentence structure with an achievement level of 4. There were 2 students with speaking courage and speaking fluency with an achievement level of 3.

Sentence/Global Method Assessment Indicators

Students learn how to learn to read complete sentences. The Global Method is based on a sentence approach. The trick is that the teacher teaches reading by displaying sentences under the picture. In addition, the Global Method can also be applied in sentences, without the help of pictures.

From the assessment indicators, it was found that there were 21 students with accuracy in diction and language style, fluency in expression, courage in speech, and

accuracy in sentence structure with an achievement level of 4. There was 1 student of speaking courage with an achievement level of 3.

According to the chart results above, it can be concluded that the method of reading skills in the assessment of the Syllable Method, which is 90%, is included in the very good category. Meanwhile, the Sentence/Global Method assessment is included in the very good category, which is 95%. Students are actively involved and happy in the learning process using two methods on the reading skills material.

Writing skills

Communicative Method Assessment Indicators

The communicative method can be done by writing the dialogue technique. Students write dialogue about what they did in an activity. This activity can be carried out individually or in groups.

From the assessment indicators, it was found that there were 18 who wrote with the accuracy of diction, the suitability of writing topic, the accuracy of sentence structure, the breadth of writing material with the level of achievement of 4. 4 students wrote with the breadth of the writing material at the level of achievement of 3.

Constructivist Method Assessment Indicators

The teacher conveys something to students, they carry out mental processes or brain work on the information so that the information enters their understanding. Constructivism starts from problems that often arise from students themselves and then helps students solve and find steps to solve these problems.

From the assessment indicators, it was found that there were 15 who wrote with the accuracy of diction, the suitability of writing topic, the accuracy of sentence structure, the breadth of writing material with the level of achievement of 4. 7 students wrote with the breadth of the writing material at the level of achievement of 3.

According to the chart results above, it can be concluded that the method of writing skills in the Communicative Method assessment, which is 81%, is included in the very good category. Meanwhile, in the Constructivist Method, 68% was included in the very good

category. Students are actively involved and happy in the learning process using two methods in the writing skill material.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the study it can be concluded that:

1) Behavioral learning methods (behavioristic) identified in learning listening skills in class IV at SDN Karang Entang Bangkalan consist of listening and writing methods, identifying keywords. The behavioral learning method (behavioristic) identified in learning reading skills in class IV at SDN Karang Entang Bangkalan consists of the syllabic method (Syllabic Method), the sentence/global method (Syntaxis Method). While the behavioral learning methods (behavioristic) identified in learning writing skills in class IV at SDN Karang Entang Bangkalan consist of communicative methods, constructivist methods.
2) Changes in behavior (behavioristic) in learning listening, reading, and writing skills in class IV at SDN Karang Entang Bangkalan, which is learning Indonesian in listening, reading, and writing skills using behavioristic learning theory carried out by teachers and students during the learning process good to very good results. Class teachers can change and shape student behavior in the Indonesian learning process on listening, reading, and writing skills using behavioristic learning theory with the help of special methods that the teacher has prepared. As well as being able to change students towards goodness, including increasing and increasing knowledge, improving attitudes, and increasing skills. This is following the results of the percentage of response item analysis results obtained. In the listening skill, the reading and writing assessment indicator scored 40%, while the keyword identification indicator scored 72%. The reading skill in the syllable method assessment indicator gets a score of 90% while the sentence/global method assessment indicator gets a 95% score. The writing skill in the communicative method assessment indicator scored 81% while the constructivist method assessment indicator scored 68%. The reading skill in the syllable method assessment indicator gets a score of 90% while the sentence/global method assessment indicator gets a 95% score. The writing skill in the communicative method assessment indicator scored 81% while the constructivist method assessment indicator scored 68%. The reading skill in the syllable method assessment indicator gets a score of 90% while the sentence/global method assessment indicator gets a 95% score. The writing skill in the communicative method

assessment indicator scored 81% while the constructivist method assessment indicator scored 68%.

Suggestions in this study are that it can be used as an experience that learning Indonesian in listening, reading, and writing skills using behavioristic learning theory assisted by special learning methods can make students more enthusiastic about learning and can make students understand the material more concretely. It is hoped that all Indonesian teachers can convey material in a fun way and that the teacher always involves students in the learning process so that the learning process runs smoothly, meaningfully, effectively, creatively and students get satisfactory learning outcomes. From changes in behavior to the good of the students, if the behavior is carried out continuously it will become the child's character.

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ELEMENTARY SCHOOL LEARNING SYSTEM IN TRENGGALEK DURING THE COVID 19 PANDEMIC

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Abstract: This article is based on finding out systematic learning in elementary school during the COVID-19 pandemic in the Trenggalek area. The main target points are teachers, guardians, and elementary students regarding the process of teaching and learning activities during the covid-19 pandemic. The method used in this study is a qualitative method, namely the method used by asking for some information from several parties concerned directly in accordance with the facts. Giving various questions and statements to the person concerned to receive the answer (Sugiyono, 2014: 142). And the data collection method used is a questionnaire. The data analysis method uses the Miles & Hubberman (2014) model which includes data reduction, presentation, verification, and conclusions. This study uses interview techniques, so that valid data sources can be obtained. Checking the validity of the data using triangulation of sources, namely teachers, students, and guardians of students. This information was obtained not only from 1 or 2 sources, but from several elementary schools in rural and urban areas such as SDN 2 Margomulyo, SDN 1 Tasikmadu, SDN 2 Sawahan, SDN 1 Ngadisoko, and SDN 1 Trenggalek. The selection of resource persons must also be appropriate, who are good at conveying information which can be proven to be true, which is an important reference in the preparation of this article. The quality of the learning media used to complete important points in order to improve the quality of the article.

Keywords: elementary school learning media during the Covid Pandemic 19

INTRODUCTION

One of the important points in life is learning. Learning can be done in theory or practice and also formally or informally. There are several quotes from scientists about learning.

Another opinion about learning was put forward by Hamalik, namely "Learning is a real change in the elements of words and sentences that undergo changes. Learning outcomes are not from mastery of exercises but changes in behavior." (Hamalik, 2016: 30).

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"Quality learning at least places students as quality learning facilitated by quality teachers and a quality learning ecosystem." (Sukakhamad 2009: 354).

So, learning is a process that is used to achieve the desired goals in thssse learning process. And to be able to achieve these learning objectives, an effective learning process is needed in it, such as using quality learning media.

The purpose of learning is to organize, educate, and understand in order to build a character in students who are diligent, smart, disciplined and obedient. Especially during this pandemic. where the government recommends that each learning process must implement good and correct health protocols. And without us realizing that environmental conditions can affect the learning process.

During the pandemic, the recommendation for online learning activities (non-face to face) must be applied in the learning process with students. It can be seen that the online learning process is not as effective as the direct learning process (face to face). In order for the learning process to continue to achieve the desired goals or objectives, one must be able to choose and sort out effective methods or media to improve the quality of a learning process.

One of them is able to collaborate with various methods, including teachers acting as remote tutors, students as media who can learn online with the guidance of teachers and parents (Lase, 2019). Parents function as substitute tutors for teachers in schools who monitor children's learning progress at home (Kurniawan, 2018).

The most important thing that is needed in this learning is communication between teachers, students, and parents. Because that way it will be easier to achieve the desired learning goals for students during the current pandemic. In this study, an observation of learning in Trenggalek during the Pandemic.

Based on the results of observations that have been made at the elementary school in Trenggalek in the learning process, implementing teaching and learning activities from home during the covid-19 pandemic. Describes the learning system and methods adopted by elementary school in Trenggalek during the covid-19 pandemic. It also summarizes several aspects related to the learning process in the area.

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METHOD

The research method uses a phenomenological type of qualitative research approach, namely research conducted in natural conditions or directly to data sources and researchers (Sugiyono, 2016). Instrument validation needs to be done with the aim of obtaining valid data in research (Arikunto, 2014). This study used a data collection instrument, namely a questionnaire. Questionnaire is a collection of written questions that are used to obtain information from respondents about the questions given by the researcher. The questionnaire process was carried out by personally meeting the resource persons, namely elementary school teachers, parents, and students in Trenggalek. The selection of resource persons in this study was carried out evenly. This means that the sources are divided from villages and cities in Trenggalek so that the data sources obtained can be valid. Because basically learning in the village and in the city is quite different. Sources of data from the village included 5 elementary school teachers, 6 guardians, and 3 students from different schools. Meanwhile, from the city there are 4 elementary school teachers, 5 guardians, and 3 students from different elementary schools.

The questioning was conducted by means of question and answer related to learning during the Covid 19 pandemic. The data analysis technique used the Miles & Huberman (2014) model, which included data reduction, data presentation, verification and conclusions. Checking the validity of the data using triangulation of sources, namely teachers, students, and guardians of students who come from villages and cities. Triangulation is checking data from various sources by checking the validity of the data using something other than the data for checking purposes or as data comparisons (Moleong, 2011).

Results

The following will be presented the data from the questionnaire to the three sources, namely teachers, students, and parents of elementary students in Psychology:

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Table 1. Results of Teaching and Learning Activities Questionnaire on Pandemic period Covid 19

No.	Indicator	Aspects Investigated	response			
			Teacher	Student	Guardian pupil	Description
1.	System learning	• Provide a statement regarding the learning system of the Trenggalek education office. • Providing RPP / book pandemic curriculum module covid 19	√√√√		 √	Credible Credible
2.	Implementation of teaching	• The use of educational applications (Wa Group, google classroom, and video calls) • Establish a study group in the works of art.	√√√√		 √	Credible Credible
3.	Evaluation of learning	• Filming on the results of students' learning • Tasks to quiz / test of both groups or independent • Monitoring of progress every week on student learning			 √√√√√	Credible Credible Credible

Source: Interview against informants

Based on Table 1, the results of questionnaires learning activities during the pandemic covid 19 as follows:

1. From the aspect of the learning system the Trenggalek Educational Institution stated that: as an educational institution in Trenggalek, it has the responsibility to regulate and monitor the learning process of Elementary School in Trenggalek. The institution provides directions to elementary school educators to conduct independent learning at home/online during the COVID-19 pandemic. Not only providing direction, but the service also pays more attention to how the online learning process runs. In a way, every month the institution visits each elementary school in Trenggalek in turn. This visit aims to review the work of educators in the online learning process. The

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agency asked for several reports related to online learning from each grade 1-6 elementary school teacher. The report is in the form of online learning data.

2. Aspects seen from the curriculum module book and lesson plans for learning during the covid-19 pandemic: RPP is an important part of a learning process in elementary school. RPP is made by teacher educators with reference to the syllabus from the government, so they can prepare RPP. The learning process will run smoothly if the teacher applies learning in accordance with the lesson plans made. RPP includes a series of learning procedures by covering a series of behaviors that teachers need to do to students and several activities that can be carried out in order to achieve the goals and benefits of all potential in learning.
3. Aspects seen from the implementation of learning through the use of educational applications: In this aspect, the use of educational applications plays an important role in the online learning process during the covid-19 pandemic. The use of the WhatsApp group application is more dominant in the learning process. This happens because WhatsApp users are already evenly distributed in the community, and it makes online learning easier. Google Classroom is used by several elementary schools in the city from grades 5-6. This application occurs because according to the teacher educators, grade 5-6 students are already able to access the application. During certain lessons, such as questions and answers, the teacher usually makes video calls to students to carry out the questions and answers. Not only for questions and answers, but also to find out students' understanding of the material presented. Of the three applications according to teachers, parents and students are more likely to choose WhatsApp Groups as an educational application to support online learning during the Covid-19 period.
4. Aspects seen from group formation in art learning: In forming groups, students are expected to be easier and able to work on making works of art. And students are able to express opinions rationally about the works of art. Based on the description in the field notes, it is explained that the teacher forms groups to help students in terms of discussing to achieve a learning process. However, teachers cannot directly monitor the group discussion process conducted by students, and teachers cannot observe how active students are in making works of art.

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5. Aspects seen from taking pictures on the results of student learning activities: In this aspect, it is recommended that the guardians of students help the process of student learning activities. By taking pictures of students' work, in the form of answer sheets for the questions given. Taking this picture is also to support the report to the teacher. According to the results of field notes, it was explained that the pictures sent by students as learning reports were very helpful for teachers in terms of making reports on learning outcomes during the covid-19 pandemic. And by taking pictures the teacher is also able to know the results of the work given.
6. Aspects seen from giving quizzes/exam assignments either in groups or independently: In this aspect, giving assignments either in groups or independently runs in a credible manner. This means that teachers, students and parents can contribute properly and effectively. In delivering assignments, the teacher does not only give questions, but also in the form of an illustration so that students are able to understand and be able to carry out the exam well given by the teacher.
7. Aspects seen from monitoring the progress of learning every week for students: In this aspect, monitoring is a component of a teaching and learning strategy that functions and plays an important role. Monitoring is carried out as one of the teaching and learning processes that is carried out once a week by the teacher in order to find out how far the understanding received by students is. The teacher monitors by going directly to the field, by making visits to each student's home. Of course with the implementation of health protocols.

DISCUSSION

This research has produced several aspects that have been applied by teachers, students and elementary school guardians during learning in the COVID-19 pandemic in Trenggalek. In aspect 1 the results are credible with a statement of the elementary school learning system from the educational institution. This statement is an online learning as a substitute for face-to-face in order to avoid the spread of the covid-19 virus. "Learning activities are still carried out online and cannot do face-to-face learning until conditions allow" (Zainab 2021). The educational institution recommends that teachers must be able to properly control the learning process during the pandemic and that the parents of students also participate in this online learning. With the participation of parents in online

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learning, it is hoped that it will help students to better understand the learning material. The educational institution also monitors elementary schools in Trenggalek, this aims to review how active teachers are in the online teaching and learning process. The teacher provides several reports related to evidence of student learning at home in the form of photos/videos of student assignments.

In the second aspect, the results are credible by providing RPP/books for the COVID-19 pandemic curriculum module. RPP is one of the learning activities owned by the teacher as a learning guide in the classroom. RPP is made for the purpose of regulating the implementation of more directed learning in accordance with the predetermined KD (Mulyasa, 2015). In preparing the RPP, the teacher must be able to master the theory and elements in the RPP. RPP is useful for predicting learning success, utilizing learning resources optimally, organizing learning activities systematically, and as a teacher guide. During the COVID-19 pandemic, it was different from before the Covid-19 pandemic. During the pandemic the RPP also underwent a change, namely from the K13 curriculum RPP to the 2021 curriculum.

In the third aspect the results were credible with the implementation of learning through the use of educational applications. The learning process during this pandemic is very dependent on educational applications. Like WhatsApp Grub and Google Classroom, the use of this application itself has advantages and disadvantages in each application. Like Google Classroom, which is only used by elementary school grades 5 and 6. Because this application is quite complicated for children or elementary school students, its use is only recommended for grades 5 and 6 of elementary school. This Google Classroom is also only known among elementary school students in the city. In rural areas, they have not used the Google Classroom application, only using WhatsApp. Why is that? According to data sources obtained from interviews, elementary school teachers in villages only use WhatsApp for the learning process on the grounds that it is easier, more efficient and can be used in all circles, both adults and small children. "Yes, so that learning does not burden students in providing material or collecting assignments, then only use WhatsApp grub. If you use an application like Google Classroom for a village area that is quite remote, in my opinion, it is quite inconvenient. Moreover, if students or their guardians cannot access it, it will add to the problems in the learning process," said Mrs. Ismawati as an elementary school teacher. To better anticipate the

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understanding of the material and the approach between teachers and students. Teachers have many ways, one of which is by making video calls with several students in turn. This method is used by teachers to carry out a deeper understanding of learning materials and also to increase the closeness of teachers and students during this covid-19 pandemic.

In the fourth aspect, the results are credible with the formation of groups in art learning. The formation of groups in art lessons has become a very common thing. Both in elementary schools in villages and in cities, art lessons are indeed carried out by forming discussion groups. "The formation of this group is only when there is material that involves many people. Such as making handicrafts, dancing, and dramas that involve at least 3 people in making assignments, therefore a discussion group is formed," said Bu Endang as an elementary school teacher. This discussion group was formed only in grades 4-6 SD because the art material in that class was already familiar with dance, drama, and handicrafts. While in grades 1-3 only singing and drawing material, which means there is no need to make groups and can be done individually.

In the fifth aspect, the results are credible by taking pictures of the results of student learning activities. Taking this picture is one of the important things in the learning process during the COVID-19 pandemic. This image includes photos of the results of assignments, photos of the learning process at home, and photos of practical learning activities such as sports. In this aspect, student guardians play an important role in helping to take photos of student activities at home, and controlling the progress of learning at home. Because during the pandemic, parents or guardians of students play an important role in the learning process as a substitute for teachers at home by helping students understand the subject matter. The results of this photo shoot also aim to produce reports on learning outcomes during the COVID-19 pandemic. This report is usually made by the teacher to fulfill the learning requirements given by the education office to the supervising teacher. This report is in the form of an analysis of learning which contains photo evidence of learning outcomes at home.

In the sixth aspect, the results are credible by giving quizzes/exam assignments either in groups or independently. According to Refindasari (2015) giving quizzes or exam assignments in online learning is very important to measure how well students are able to understand the material presented by the supervising teacher. This task/exam is

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part of how to measure the achievement of a learning process that has been carried out. This task / quiz has individual and group systems depending on the learning carried out.

In the seventh aspect, the results are credible by monitoring the learning progress of the students every week. Monitoring is one of the mandatory activities that teachers do once a week. With this monitoring, teachers can evaluate their students directly while still complying with health protocols. According to Kusuma (2020) evaluating is an examination of the strategy implementation process, the learning outcomes that have been achieved, as well as an examination of the suitability of the strategy with the type of learning task at hand.

CONCLUSION

Based on the results and discussion, it can be concluded that the role of the educational institution for teachers and students is very important in the implementation of the primary school education system during the COVID-19 pandemic. Covering several aspects resulting from the research questionnaire data, the results of the questionnaire on teaching and learning activities include directives from the education office to elementary school educators to carry out independent online learning. The RPP is made with a reference to the syllabus from the government which includes a series of learning procedures. Use of educational applications such as WhatsApp groups and Google classroom. Because according to teacher educators, students in grades 5-6 are able to access the application. The formation of groups with the hope that students will find it easier and able to make fine arts. Monitoring by means of teachers going directly to the field by making visits to each student's home by implementing health protocols.

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THE INFLUENCE OF VIDEO-BASED MEDIA MULTIPLICATION BOARDS IN IMPROVING MATHEMATICS LEARNING OUTCOMES FOR MI PLUS GRADE II STUDENTS AL-ISTIGHOTSAH TULUNGAGUNG

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Abstract: Based on the results of interviews conducted by researchers at MI Plus Al-Istighotsah Tulungagung, it was known that the online learning process has not used learning media, only asking students to read, observe and do assignments. So that they do not understand the multiplication material being studied. This study aims to explain the effect of video-based multiplication board media in improving mathematics learning outcomes for class II students MI Plus Al-Istighotsah Tulungagung. This research is a quasi-experimental research with a quantitative approach. Data collection techniques using tests. Based on data analysis, it can be seen that there is a significant difference between learning that received special treatment (using video-based multiplication board media) and learning that did not receive special treatment. This can be seen from the results of the analysis on the t-test that the t-count value is 2,087, while the t-table value is 1,697 at the 5% significance level with db = N-2 = 56-2 = 54. Based on the results of tcount with ttable it can be concluded that tcount > t table is 2,087>1,697 with sig. (2-tiled) is 0.042 < 0.05. Based on the results of the study, it can be concluded that there is an effect of video-based multiplication board media in improving mathematics learning outcomes for class II students of MI Plus Al - Istighotsah Tulungagung.

Keywords: Media Multiplication Board, Video-Based, Mathematics Learning Outcomes

INTRODUCTION

In China, in the city of Wuhan, in early 2020, a virus that can disrupt the respiratory tract and can lead to death, namely the corona virus. Corona virus has entered many countries. One of them is Indonesia. The COVID-19 outbreak entered Indonesia on March 12, 2020. The impact of the COVID-19 pandemic has changed various aspects of life. One of them is education. To prevent the transmission of the corona virus, education is carried out remotely or online. This online learning challenges all elements, from teachers, students to parents. Education which was

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initially carried out face-to-face, due to the COVID-19 pandemic, education had to be done online. According to Luh Devi Herlindry (2020), online education is considered effective for carrying out learning even though it is in a different place. Online learning urges an educator to innovate and adapt to the use of technology. The utilization of technology in learning can be used in all subjects.

The learning process carried out at MI Plus Al-Istighotsah Tulungagung was carried out online without using learning media, only asking students to read, observe and do assignments. So that they do not understand the multiplication material being studied. This can be seen from the results of the multiplication material math test with an average value of students is 67. Many of the results of these tests have not been completed.

Researchers are interested in researching the development of video-based multiplication board media at MI Plus Al-Istighosah Tulungagung with the reason that the school has not used video-based Multiplication Board media and from the principals and teachers are very enthusiastic about the video-based Multiplication Board media which later can help improve students' mathematics learning outcomes in online learning. The multiplication board media is proven to be able to help students improve learning outcomes following the article Inarotul Humaero et al, with the titled efforts to improve the Mathematics Learning Outcomes of Multiplication Materials through the Class III Napier Board Media at SDN Kalisabuk 03 2019. In this journal, the Napier board is used as a multiplication medium. The Napier board is made of styrofoam modified with number cards, where there is a series of additions and a series of multipliers. The results of the study were obtained from the first cycle with an average value of 67.59 with a completeness percentage of 45.45%, while in the second cycle the score increased by an average of 80.04 with a completeness percentage of 77.27%. Thus it can be concluded that there is an increase in the value of the use of Napier board media.

Based on the problems above, the researcher formulates the problem formulation, how does the influence of multiplication board media video-based in improving mathematics learning outcomes for class II students MI Plus Al-IstighotsahTulungagung. The purpose of this study is to explain the effect of

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multiplication board media video-based in improving grade II mathematics learning outcomes MI Plus Al-Istighotsah Tulungagung.

METHOD

This research used a quantitative research approach with a quasi-experimental type of research. According to Kerlinger, (2006:215) in all experimental research is a study with the control class group and the experimental class having the same ability. The experimental class was given special treatment, while the control class was not given special treatment. Then the results of the two are compared to determine whether there is an effect of special treatment from the experimental class.

This study used a population of all class II, which amounted to 79 students. The researcher used a research sample of class II C as the experimental class, which consisted of 28 students, and class II B as the control class with 28 students. To obtain the research sample, the researcher used a cluster sampling technique. As for data collection using a test with two types of questions, which are five multiple-choice questions and five fill-in questions. Researchers used data analysis techniques using t-test with SPSS 16.0.

RESULTS

This research was conducted at MI Plus Al – Istighotsah Tulungagung with class II as the research object. Researchers used tests as data collection. Post-test questions before being given to class II students of MI Plus Al - Istighotsah Tulungagung, first were corrected by a question expert and then tested on 10 class II students from other schools to test the validation and reliability of the questions. After the post-test questions are valid and reliable, they can be used on the research sample. Based on research on the effect of multiplication board media video-based in improving mathematics learning outcomes for class II students MI Plus Al-Istighotsah Tulungagung obtained the following data:

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Table. 1. Homogeneity Test Results
Students' Daily Test Values

Test of Homogeneity of Variances

Daily test score

Levene Statistic	df1	df2	Sig.
.199	2	75	.820

Based on the results of the table above, it can be seen that the significance is 0.820 so that it is obtained 0.820 > 0.05, then the three have no difference in ability, so they can be used as research samples.

Table 2. Output Validation Test of Multiple Choice Questions

Correlations

		Question 1	question 2	question 3	question 4	question 5	total
question1	Pearson Correlation	1	1,000**	.667*	.667*	.667*	.902**
	Sig. (2-tailed)		.000	.035	.035	.035	.000
	N	10	10	10	10	10	10
questions	Pearson Correlation	1,000**	1	.667*	.667*	.667*	.902**
	Sig. (2-tailed)	.000		.035	.035	.035	.000
	N	10	10	10	10	10	10
question3	Pearson Correlation	.667*	.667*	1	1,000**	1,000**	.923**
	Sig. (2-tailed)	.035	.035		.000	.000	.000
	N	10	10	10	10	10	10
question4	Pearson Correlation	.667*	.667*	1,000**	1	1,000**	.923**
	Sig. (2-tailed)	.035	.035	.000		.000	.000
	N	10	10	10	10	10	10
question 5	Pearson Correlation	.667*	.667*	1,000**	1,000**	1	.923**
	Sig. (2-tailed)	.035	.035	.000	.000		.000
	N	10	10	10	10	10	10
Total	Pearson Correlation	.902**	.902**	.923**	.923**	.923**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	10	10	10	10	10	10

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Based on the table above, it can be concluded that from 10 respondents the rtable value is 0.632. From questions number 1 to number 5, the values of rcount rtable are (0.902 0.632), (0.902 0.632), (0.923 0.632), (0.923 0.632), (0.902 0.632) are declared valid.

Table 3. Results of the Validation Test Using SPSS 16.0

Correlations

		question 6	question7	question 8	question 9	question 10	total
question 6	Pearson Correlation	1	.716*	.764*	.600	.764*	.856**
	Sig. (2-tailed)		.020	.010	.067	.010	.002
	N	10	10	10	10	10	10
question7	Pearson Correlation	.716*	1	.937**	.820**	.937**	.938**
	Sig. (2-tailed)	.020		.000	.004	.000	.000
	N	10	10	10	10	10	10
question 8	Pearson Correlation	.764*	.937**	1	.875**	1,000**	.972**
	Sig. (2-tailed)	.010	.000		.001	.000	.000
	N	10	10	10	10	10	10
question9	Pearson Correlation	.600	.820**	.875**	1	.875**	.894**
	Sig. (2-tailed)	.067	.004	.001		.001	.000
	N	10	10	10	10	10	10
question 10	Pearson Correlation	.764*	.937**	1,000**	.875**	1	.972**
	Sig. (2-tailed)	.010	.000	.000	.001		.000
	N	10	10	10	10	10	10
Total	Pearson Correlation	.856**	.938**	.972**	.894**	.972**	1
	Sig. (2-tailed)	.002	.000	.000	.000	.000	
	N	10	10	10	10	10	10

Based on the results of the table above, it can be concluded that from 10 respondents with an rtable value of 0.632 questions numbers 6 to 10 have values, namely (0.856 0.632), (0.938 0.632), (0.972 0.632), (0.894 0.632), (0.972 0.632) are declared valid.

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Table 4. Reality Test Results of Multiple Choice Questions Using SPSS 16.0

Reliability Statistics

Cronbach's Alpha	N of Items
.820	6

Based on the results of the table above, it can be seen that rcount is 0.827. The number of respondents is 10 students, so rtable = 0.632 at a significant level of 5%. From the results of the table, it shows 0.827 > 0.632, this indicated that the multiple-choice test questions are stated to be reliable, so they can be used in research.

Table 5. Reliability Test Results of Stuffed Questions Using SPSS 16.0

Reliability Statistics

Cronbach's Alpha	N of Items
.827	6

Based on the results of the table above, it can be concluded that rcount is 0.820. The number of respondents is 10 students, then r table = 0.632 at a significant level of 5%. From the results of the table, it shows 0.820 > 0.632, this indicated that the test items are stated as reliable, so they can be used in research.

Table 6. Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		experiment	control
N		28	28
Normal Parameters	mean	80.3571	72.8571
	Std. Deviation	11.62123	1.50572E1
Most Extreme Differences	Absolute	.144	.164
	Positive	.084	.096
	negative	-.144	-.164
Kolmogorov-Smirnov Z		.761	.866
asymp. Sig. (2-tailed)		.609	.441

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Based on the results of the table above, it can be seen from Asymp. Sig. (2-tailed) the experimental class was 0.609 and the control class was 0.441. The table shows that the value of Asymp. Sig. (2-tailed) experimental class 0.609 0.05 then the experimental class data is normally distributed and for the control class the Asymp value. Sig. (2-tailed) 0.441 0.05 then the control class data is normally distributed.

Table 7. Homogeneity Test Results

Test of Homogeneity of Variances

Mark

Levene Statistics	df1	df2	Sig.
2.161	1	54	.147

Based on the results of the table above, it can be seen that the value of Levene Statistic is 2,161 with sig. 0.147, this means that sig. 0.147 0.05. It can be concluded that the homogeneity test of the data is homogeneous.

Table 8. Results of t-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Mark	Equal variances assumed	2.161	.147	2,087	54	.042	7.50000	3.59450	.29346	14.70654
	Equal variances not assumed			2,087	50,742	.042	7.50000	3.59450	.28285	14,71715

Based on the results of the table above, it can be concluded that there is an effect of multiplication board media video-based in improving mathematics learning outcomes for class II MI Plus Al - Istighotsah Tulungagung students. This can be seen from the results of the analysis on the t-test that the t-count value is 2.087, while the t-table value is 1.697 at the 5% significance level with db = N-2 = 56-2 = 54. Based on

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the results of tcount with ttable it can be concluded that tcount > t table is 2.087>1.697 with sig. (2-tiled) that is 0.042 < 0.05

DISCUSSION

Researchers conducted this research intending to explain the influence of the Multiplication Board media video-based in improving mathematics learning outcomes for class II students MI Plus Al-IstighotsahTulungagung. The researcher before determining the research sample carried out a homogeneity test of the three classes using the daily math test scores. Obtained significance is 0.820 which is greater than the level of 0.05 or 0.820 > 0.05, then the three classes are declared homogeneous.

Next, the researcher conducted a validation and reliability test on the post-test questions before the questions were given to the research sample. From the results of the validation test on multiple-choice questions, it shows that of 10 respondents with an rtable value of 0.632 from question number 1 to question number 5 has a value that is (0.902 0.632), (0.902 0.632), (0.923 0.632), (0.923 0.632), (0.902 0.632) are declared valid . And the questions filled in from 10 respondents with an rtable value of 0.632, questions numbered 6 to 10 have values, namely (0.856 0.632), (0.938 0.632), (0.972 0.632), (0.894 0.632), (0.972 0.632) are declared valid. While the results of the reliability test on multiple-choice questions it is known that rcount is 0.827. The number of respondents is 10 students, then r table = 0.632 at a significant level of 5%. From the results of the table, it shows 0.827 > 0.632, this indicates that the multiple-choice test questions are stated to be reliable.

Researchers conducted a t-test to determine the effect of multiplication board media video-based in improving the mathematics learning outcomes of class students MI Plus Al-Istighotsah Tulungagung during the covid-19 pandemic. Before conducting the t-test, first, the researcher conducted a homogeneous test and a normal distribution.

Based on the results of the research data shows that there is a significant difference that can be seen from the results of the t-test, the t-count value obtained is 2.087 and the value in ttable is at a significance level of 5% with db = N-2 = 56-2 = 54 at ttable is 1.697 , so we get 2.087 > 1.697 with sig. (2-tiled) 0.042 < 0.05.

The results of this study are strengthened by previous research from Rismayani Armin and Waode Hensi Purwati in their journal entitled the effect of using the

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multiplication smart board media on the mathematics learning outcomes of the second grade of multiplication material at SDN 75 Buton in their journal concluded that the experimental group student learning outcomes were higher, that is 77.5, while the learning outcomes of control students were 73.5. From the results of hypothesis testing using the t-test, it can be obtained the value of tcount = 0.187 with df = 14*sig*. (2-tiled)at 0.001 < (0.05).

Reinforced by Lalita Nurfi Kurniawati who stated that the multiplication board media used in the learning process was more fun, students were more active and directly involved in the use of the multiplication board media. Students are easier to learn multiplication and easy to remember.

Reinforced by Arif Yudianto who stated that Video is one of the learning media that can be seen and heard very effectively to support the learning process. Both face-to-face learning and online learning (distance learning). The selection of video media as a tool to convey material to students in addition to innovation can also combine audio and visual which can make it easier for students to receive messages and understand the content of the material. Video becomes effective to use because it can be viewed repeatedly, can be reproduced.

Based on the explanation above, it is concluded that the use of multiplication board media video-based can improve the Mathematic learning outcomes of class II students MI Plus Al-Istighotsah Tulungagung.

CONCLUSION

Based on the results of the study, there is a significant effect Multiplication Board media video-based in improving grade II mathematics learning outcomes MI Plus Al-Istighotsah Tulungagung. This is based on the results of the t-test analysis can be 2,087 > 1,697 with sig. (2-tiled) 0.042 < 0.05. Based on the explanation above, it is concluded that the use of multiplication board media video-based can improve mathematics learning outcomes for class II students of MI Plus Al-Istighotsah Tulungagung.

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DESIGN AND VALIDATION OF THEMATIC E-MODULES: OPTIMIZATION OF PROBLEM-BASED LEARNING

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Abstract: Preparing for learning well is the teacher's obligation, especially in this COVID-19 pandemic. One thing that needs to be considered is compiling appropriate teaching materials. The purpose of this research is to design and validate the thematic e-module design and material based on problem-solving for 3rd-grade elementary school students. This research design used the Borg & Gall development model. The stages are: (1) initial study and collecting data, (2) creating an activity framework, (3) developing product drafts, (4) validation tests, (5) revising validation results. The research instrument is a content and design validation questionnaire. The results of this research are problem-solving-based thematic e-modules. The module presentation was systematic consists of Mapping Basic Competencies, Mapping Indicators, Learning Objectives, Let's Read, Let's Tell a Story, Let's Observe, Let's Discuss, Let's Write, Let's Practice, Conclusion. The results of material validation are 93% in the very valid category and 91% of media validation results are very valid categories so that they can be used in learning.

Keywords: e-module, thematic, problem-solving.

INTRODUCTION

Thematic learning is learning formed from themes and is related to the student's real-life/contextual (Akbar & Sutama, 2010; Utari, Degeng, & Akbar, 2016). Regarding contextual learning, the professional task of a teacher is to make learning more interesting, easier, and meaningful. So that teachers need to prepare to learn well, such as: determining teaching objectives, subjects to be taught, teaching models, teaching methods, the subject matter in student modules, teaching aids, and evaluation techniques used(Chrisyarani & Akbar, 2017).

Preparing for learning well is the teacher's obligation, especially during this Covid-19 era. The impact of Covid-19 in education has led to the widespread closure of schools. UNESCO recommends using online learning as well as using platforms to aid learning(Caskurlu, Richardson, Maeda, & Kozan, 2021; UNESCO,

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2020). Based on this policy, the Ministry of Education and Culture participates in making policies in solving learning problems during the COVID-19 pandemic at the education unit level. (Hong, Lee, & Ye, 2021; Ministry of Education and Culture, 2020).

This is also felt by teachers at elementary schools in Malang City. Based on the interview results that have been conducted, there are obstacles in implementing learning during this covid-19 pandemic. Changes in learning from face-to-face to online, inadequate preparation in compiling online teaching materials. Thus, teaching materials still use printed teaching materials, difficulties in monitoring student learning as a whole. The application of methods, models, and media is also limited. Based on interview results conducted, problems obtained were related to the teaching materials used were still printed, difficulties in applying models, and learning methods in online learning.

Similar research that has been carried out is about the views of teachers regarding learning during the COVID-19 pandemic (Vu et al., 2020). E-module Development(Erick Suryadi, Agustini, & Sugihartini, 2019; Sugihartini & Jayanta, 2017). Module development is based on problem-solving and the use of technology(Kurniawan, 2019; Troseth & Strouse, 2017).

The purpose of this research is to design and validate problem-solving-based thematic e-modules in thematic learning. Through e-modules students will be trained to learn independently(Mudiono, Akbar, Dwi Yasa, & Delawanti Chrisyarani, 2017). The advantages of e-modules lie in solving problems in learning, problem orientation, organizing students in learning, assisting in collecting data individually or in groups, developing and presenting data, and leading to the problem-solving process.(Montag-Smit & Maertz, 2017; Munir, Baroutian, Young, & Carter, 2018). Problem-solving models help students observe relationships, problems solving and infer the concepts learned(de Hei, Strijbos, Sjoer, & Admiraal, 2016; Goyena & Fallis, 2019; Kurniawan, 2019). Through the design and validation process of this problem-solving-based e-module, it is hoped that it can help students in thematic learning to make it more meaningful so that it can be applied in real life.

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METHOD

Development of thematic e-modules based on Problem Solving using the Borg & Gall model. The development steps carried out only reached the 5th stage (product revision). Its flow is as follows: (1) initial study and collecting data, (2) creating an activity framework, (3) developing product drafts, (4) validation tests, (5) revising validation results. The subjects in this study were content/material experts, media experts. The instrument of this research is a questionnaire. The analysis technique is qualitative and quantitative. Qualitative data were obtained from comments from content experts and media experts. Quantitative data was obtained through the value of the questionnaire.

The results of validation questionnaires then were analyzed. The formula for validation gain was adapted with the following modifications(Akbar & Sutama, 2010):

$$Vm = \frac{TSe}{TSh} x\ 100\% \qquad Vd = \frac{TSe}{TSh} x\ 100\% \qquad Vt = \frac{Vm + Vd}{2} = \cdots \%$$

Information:

Vm = Validity content/material
Vd = Validity design
Vt = Total Score achieved
TSh = Total score
Vt = Total validation
100%

Table 1. Criteria for the validity of the Thematic e-Module Based on Problem Solving

No.	Attractiveness Score	Practicality level	Validity level
1.	86% - 100%	Practicality is very good, no revision is needed	Very Valid (no revision)
2.	70% - 85%	Practicality is good, no revision is needed	quite Valid (with revision)
3.	60% - 69%	Practicality is enough, need minor revision	Invalid (unusable)
4.	0% - 59%	Less practicality, total revision	very invalid

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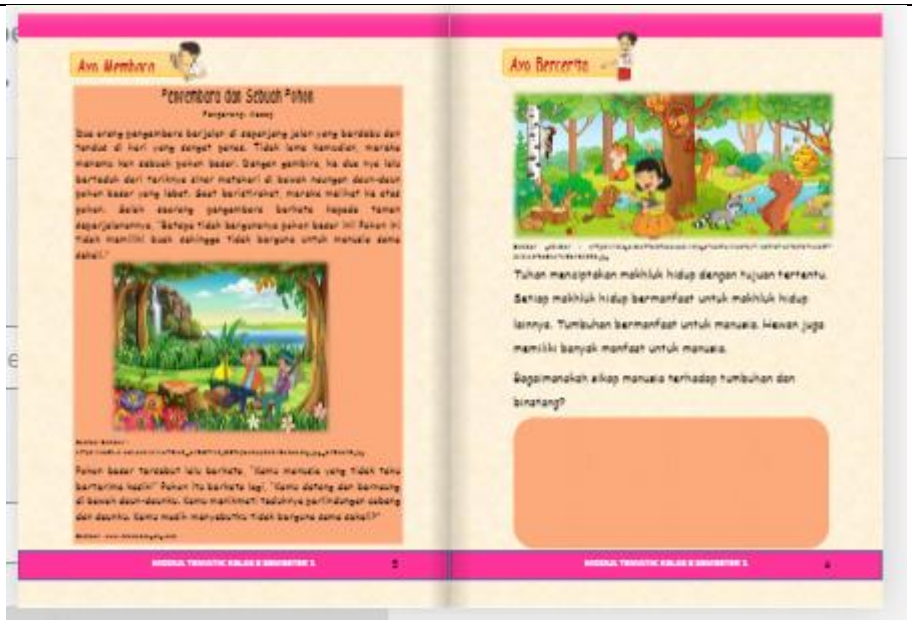
RESULTS

The results of this development research are in form of problem-solving-based thematic e-modules. Systematic module presentation was consisted of Mapping Basic Competencies, Mapping Indicators, Learning Objectives, Let's Read, Let's Tell a Story, Let's Observe, Let's Discuss, Let's Write, Let's Practice, Conclusions, test questions. The following presents components in the module.

Table 2. Components of problem solving-based thematic e-modules

No	Picture	Information
1		Instructions for use of e-Modul
2		Problem-solving based materials

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3		Problem solving-based thematic exercises and assignments

Product validity analysis is carried out by experts who are considered by predetermined criteria to test the theoretical suitability of the product. Validation data of the e-module product was obtained through a validation questionnaire. Validation results from the material experts got a percentage of 93% and received qualitative input as contained in table 3 below.

Table 3. Suggestions from Material Experts and Revisions made

No	Part	Before Revision	After revision
1	Student Module	1. Need to add a conclusion	Conclusion activities have been added

The validation results from the design experts got a percentage of 91% and received qualitative input which is contained in table 4 below.

Table 4. Qualitative Data Validation Aspects of Module Design

No	Part	Before Revision	After revision
1	Student Module	1. Pay attention to the choice of font color used	Use easy-to-read font colors

The total validation of problem-solving-based thematic e-modules can be seen in Table 5 below.

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Table 5. Total Validation Data
Problem solving-based thematic e-modules

Aspect	Validator
contents	93%
design	91%
total	184
mean	92

The total results of experts in assessing student e-modules are 92% with very valid criteria.

DISCUSSION

Based on the results of expert data, it was stated that problem-solving-based thematic e-modules were developed according to the needs in the module and could be used in learning. The components and content in the module have been adapted to thematic and problem solving-based learning. Total validation of e-modules obtained 92% with very valid criteria.

The components in the developed module include Mapping Basic Competencies, Mapping Indicators, Learning Objectives, Let's Read, Let's Tell a Story, Let's Observe, Let's Discuss, Let's Write, Let's Practice, Conclusions, test questions. The components in the module at least contain an introduction, learning activities, and bibliography(Muslich, 2010; Parmin & Peniati, 2012). Problem-solving-based thematic e-modules also present material, questions that provide problems so that students can think critically(Erol & Kurt, 2017; Moore-Russo & Demler, 2018; Silvia, Risnita, & Syaiful, 2015). Problems are presented contextually so that students can analyze, collect data from various sources or observations(Chang et al., 2020; Llera & Newman, 2020)

The results of total validation of e-modules are 94% with very valid criteria. In terms of design, the module is packaged and designed according to student development. Because, 3rd-grade students still like colorful designs(Mufliharsi & Sulhan, 2020; Roskos, Brueck, & Lenhart, 2017).

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CONCLUSION

The results of this study are in form of problem-solving-based thematic e-modules. Systematic module presentation was consisted of Mapping Basic Competencies, Mapping Indicators, Learning Objectives, Let's Read, Let's Tell a Story, Let's Observe, Let's Discuss, Let's Write, Let's Practice, Conclusion. The results of material validation are 93% in the very valid category and 91% of media validation results are in the very valid category so that they can be used in learning.

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RELATIONSHIP BETWEEN CRITICAL THINKING AND CREATIVE THINKING THROUGH ZOOM MEETING ON SCIENCE LEARNING IN ELEMENTARY SCHOOL

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Abstract: Humans are social creatures who need to develop themselves in facing life in society. To understand something, a person's way of thinking is influenced by knowledge, the ability to see, and the ability to create a strategy in thinking. One of them is in the education. Based on observations, it is shown that the learning carried out by the teacher when teaching is less varied so that it seems monotonous and the questions asked by the teacher are not in-depth only in the cognitive domains of C1 and C2. Lack of direct application (practice) when learning and the work made by students is less innovative. Through the zoom application, students can also do online learning. This study aims to determine the relationship between students' critical and creative thinking through the Zoom application and science learning outcomes. The type of research used in this research is quantitative correlational type. The subjects of this study were fifth grade students of SD Muhammadiyah 8 Surabaya. From the research that has been carried out, the results obtained are: (1) There is a relationship between critical thinking through the Zoom application and science learning outcomes, because the value of Sig. < 0.05 (0.008 < 0.05); (2) There is a relationship between creative thinking through the Zoom application and science learning outcomes, because the value of Sig. < 0.05 (0.006 < 0.05); (3) There is a relationship between critical and creative thinking through the Zoom application with science learning outcomes because of the value of Sig. < 0.05 (0.009 < 0.05).

Keywords: Critical Thinking; Creative Thinking; Zoom Meetings; IPA

INTRODUCTION

Humans are social creatures who need to develop themselves in dealing with life in society. Along with the development of time and era, humans are required to take an understanding of something that has been experienced in life(Kuntarto, Sofwan, & Mulyani, 2021). To understand something, a person's way of thinking is influenced by knowledge,

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ability to see, and ability to create a strategy in thinking. One of them is through education. Education directs humans to develop basic potentials so that they become real.

Education according to the National Education System Law No. 20 of 2003 (Afiani & Faradita, 2021) is a learning atmosphere that has been consciously planned in the learning process to develop students' potential to have religious-spiritual strength, personality, intelligence, and skills. According to Ki Hajar Dewantara (Neolaka, 2017) Education is an effort to cultivate children's ethics, reason, and body, to increase perfection to bring children to live in harmony with nature and society. Education is an important role for the community as a learning process to gain knowledge as a provision for the future. According to R. Gagne (Susanto & Retnawati, 2017), learning is a process of behavior change in which learning and teaching are two concepts that cannot be separated into one unified interaction activity when conducting direct learning.

According to Bigge (Nuruddin, 2018) in fact, there are two poles of learning in education, namely tabula rasa and constructivism. According to the tabula rasa reference, students are likened to a white paper that the teacher can write anything on or like an empty container that the teacher can fill in anything. This opinion is as if students are passive and have limitations in learning. According to constructivism, each person learns to build his knowledge. So students are active and can continue to improve themselves under certain conditions.

According to Piaget (Son, 2018) argued that every individual can build his knowledge since childhood. Building knowledge is done through the process of mixing and facilitating existing designs. The implication of the constructivism view in schools is that knowledge cannot be transferred completely from the teacher's mind to students, but students can build their knowledge through their experiences.

According to Piaget (Samatowa, 2016) revealed that learning science is a process that requires active support from students so that the position of the teacher becomes a supporter and provider of student learning. Science is a way to observe natural phenomena that is investigative/analytical, thorough, careful, and linking one phenomenon to another, therefore all of which form a new point of view regarding the object that has been observed. Science learning provides opportunities for children to develop their thinking skills in explaining a problem (critical thinking).

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According to Fisher (Sulistiani & Masrukan, 2017) argued that learning to think critically means students who can reason until they can test their knowledge, assess skills, ideas, and consider arguments before reaching a balanced justification. Not only critical thinking but in science learning students are also required to have creative thinking. According to Cropley, creative thinking is thinking to get a special idea or concept that is discovery and new.

Based on the results of the researcher's observations, it shows that in science learning for the fifth grade of SD Muhammadiyah 8 Surabaya the score that must be taken is 75. From 50 students only 20 students can reach the KKM, while the rest still have not reached the KKM. From this assessment, it can be seen that students' learning experience is still lacking and students have not been able to find alternative problem-solving. Learning is carried out by the teacher in teaching is less varied so that it seems monotonous and the questions asked by the teacher are deep less and limited to the cognitive domains of C1 and C2. Lack of direct application (practice) in learning and the work made by students is less innovative.

The description above explains that students' critical and creative thinking skills play an important role in achieving learning outcomes. For this reason, the relationship between critical and creative thinking skills makes students able to solve a problem, find alternative solutions and play an active role in producing innovative work.

Based on previous research, which has been done (Faradita, 2018) with the title "Application of CLIS Learning by Using Simple Teaching Aids to Improve Problem Solving Thinking Skills" explained that student responses in learning science by applying CLIS learning using simple teaching aids can improve problem-solving thinking skills and improve student learning outcomes completeness both process and product. There are also previous studies that have been done(Neka, Marhaeni, & Suastra, 2015) entitled "The Influence of Environmental-Based Guided Inquiry Learning Model on Creative Thinking Skills and Mastery of Science Concepts Class V SD Gugus VIII Abang Subdistrict" explained that the guided inquiry learning model in the science learning process can provide opportunities for students to actively participate in the learning process. The guided inquiry learning model based on the environment gives better results than the direct learning model.

The purpose of this study was to determine how much the relation between students' critical and creative thinking skills. Carrying out further research, the researcher wrote the

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title of this research on "Relation between Critical and Creative Thinking through the Zoom application and Science Learning Outcomes in the fifth-grade Students of SD Muhammadiyah 8 Surabaya".

METHODS

This research used correlational quantitative research, with the research subjects being the fifth-grade students of SD Muhammadiyah 8 Surabaya, totaling 50 students. According to (Sugiyono, 2019) research variables are objects or activities that have various kinds that have been determined by the researcher to be understood and then draw conclusions. The variables in this study can be divided into two, namely independent variable (X_1 and X_2) is critical and creative thinking and the dependent variable (Y) is science learning outcomes.

The data collection instruments used in this study were test sheets and *Likert* scale questionnaire sheets containing positive statements.

Table 1. Critical Thinking Instrument Grid

Variables	Indicator	Number Item	Number of
Critical Thinking	1. Give a simple explanation.	1,2,3	3
	2. Build basic skills.	4,5,6	3
	3. Conclusion	7,8,9,10	4
	4. Provide further explanation.	11,12,13	3
	5. Measure strategy and tactics.	14.15	2
	Total		15

Source: Adoption of positive statements (Ennis, 2017)

Table 2. Grid of Creative Thinking Instruments

Variables	Indicator	Number Item	Number of
Creative Thinking	1. A great curiosity.	1,2	2
	2. Gives lots of ideas and suggestions.	3,4	2
	3. Able to propose thoughts and ideas that are different from others.	5,6,7	3
	4. Strong imagination	8,9	2
	5. Can work alone	10,11	2
	6. Give explanation	12,13	2
	7. Try new things	14,15	2
	Total		15

Source: Adopt positive statement (Wulandari, 2014)

For collecting technique data using several statistical tests. Validity test is used to show the level of validity of an instrument (Arikunto, 2010).

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An instrument can be said to be valid if the calculated r value is greater than r table. The formula that will be used to process, test or analyze data using SPSS 24 and Excel tools is as follows.

$$r_{xy} = \frac{n(\Sigma XY) - (\Sigma X).(\Sigma Y)}{\sqrt{\{n.\Sigma X^2 - (\Sigma X)^2\}.\{n\Sigma Y^2 - (\Sigma Y)^2\}}}$$

Description:

r_{xy} = Correlation coefficient
N = Number of samples
X = Score of independent variables
Y = Score of dependent variable
Source: (Sugiyono, 2016)

The calculation of the reliability test shows the level of reliability of something. The questionnaire is declared reliable if it has a *Cronbach Alpha* greater than r table. The study was analyzed using the formula *Cronbach Alpha* using the SPSS 24 program.

$$r_{11} = \left[\frac{k}{k-1}\right]\left[1\right.$$

Description:
r_{11} : instrument reliability
k : number of questions
σ^2 : sum of variance squared for each question item
$\sigma_1^{2:}$ quadratic variance in total
Source: (Sugiyono, 2019)

To test the research hypothesis, simple and multiple regression analysis tests were carried out with the help of SPSS 24.0 for *Windows*.

RESULTS

The results of the questionnaire instrument test were tested with validity and reliability tests. According to (Susanto & Retnawati, 2017) The validity test is said to be valid if $r_{count} > r_{table}$, while the reliability test is said to be reliable if *Cronbach's alpha* > r_{table}. There are 2 questionnaires that have been tested, namely the critical and creative thinking questionnaire with a total of 15 questions.

According to (Antari, Wiarta, & Putra, 2017) The normality test conducted in the classroom is the *Kolmogrov Smirnov normality* test to test critical and creative thinking questions to get a significance value of *Asymp.Sig* (2-tailed) of 0.200 greater than

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0.05. So it can be said that the data that has been tested is normally distributed because the significance value or Sig. > 0.05.

According to (Kusuma & Khoirunnisa, 2018) the homogeneity test was carried out to find out if the test instrument given to the class was the same or homogeneous. The output results are known that the significance value (Sig.) of the test variable given is 0.356. Because of the value of Sig. 0.356 > 0.005, so it can be concluded that the tests conducted in class are the same or homogeneous, because the significance value or Sig. > 0.05.

According to (Komalasari, 2012) the linearity test was carried out to determine whether the relationship between the independent variable and the dependent variable was linear. The linearity test is done by looking at the *Deviation from linearity value*. The output results are known that the significance (Sig.) of the test variable given is 0.702. Because of the value of Sig. 0.702 > 0.005, so it can be concluded that the tests conducted in class are linear. Hypothesis test using simple and multiple regression analysis test. According to (Komalasari, 2012) Simple regression analysis test is an analysis that involves one independent variable and one dependent variable. This test is used to measure the magnitude of the relationship between the independent variable and the dependent variable.

Table 3. Simple Linear Regression Critical Thinking Ability Through Zoom Meeting Application on Science Learning Outcomes

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	53,592	17,493		3,064	0,004
	Critical thinking	0,705	0,396	0,249	1,780	0,008
a. Dependent Variable: learning outcomes						

Source: SPSS Calculation Version 24

Based on the *output* above, it is known that the significance value (Sig.) of 0.008 is smaller than < probability of 0.05. It can be concluded that $H_{0\ is}$ rejected and H_a

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accepted, which means that "There is a relationship between critical thinking through the Zoom application and science learning outcomes".

Table 4. Simple Linear Regression Creative Thinking Through the Zoom Application on Science Learning Outcomes

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	53,696	17,556		3,058	0,004
	Creative thinking	0,540	0,393	0,194	1,372	0,006
a. Dependent Variable: learning outcomes						

Source: SPSS Calculation Version 24

Based on the *output* above, it is known that the significance value (Sig.) of 0.006 is smaller than < probability of 0.05. It can be concluded that $H_{0\ is}$ rejected and H_a accepted, which means that "There is a relationship between creative thinking through the Zoom application and science learning outcomes".

Table 5. Double Regression Table for Critical and Creative Thinking Through the Zoom Application with Learning Outcomes

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	49,247	17,504		2,814	0,007
	Critical thinking (X1)	0,888	0,249	0,760	3,567	0,006
	Creative thinking(X2)	0,482	0,151	0,460	3190,000	0,003
a. Dependent Variable: Hasil Belajar (Y)						

Source: SPSS Calculation Version 24

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Based on the *output* above, it is known that the significance value (Sig.) of 0.009 is smaller than < 0.05 probability. It can be concluded that $H_{0\ is}$ rejected and H_a accepted, which means that "There is a relationship between critical and creative thinking through the Zoom application and science learning outcomes".

DISCUSSION

The researcher will explain the discussion of research that has been carried out. In this discussion, we will answer the results of problem formulation based on the research results that have been presented in the results of previous data analysis and are supported by theoretical explanations and relevant previous research.

Based on the results of data analysis of students in critical thinking through zoom meeting application on science learning outcomes, it showed very good results. Students can think critically during the learning process. It can be seen from results obtained through calculations. To find out the relationship between critical thinking (X) and learning outcomes (Y) in simple regression analysis. From the table, it is known that the significance score (Sig.) of 0.008 is smaller than the probability of 0.05. So it can be concluded that it is rejected and accepted, which means that "There is a relationship between critical thinking and science learning outcomes". It can happen because it cannot be separated from many supporting factors during the learning process so that it can improve science learning outcomes for students.

This is in line with research from (Rahayuni, 2016) who argued that there is a relationship between critical thinking skills and scientific literacy. The relationship formed between critical thinking skills and scientific literacy is a fairly strong positive relationship. This opinion is strengthened by research (Huda & Rahman, 2020) which said that there is a significant relationship between students' critical thinking skills so that it is necessary to empower critical thinking skills in all subjects in elementary school.

Based on the data analysis results of students in creative thinking through zoom meeting application on science learning outcomes, it showed very good results. Students can think creatively during the learning process. It can be seen from the results obtained through calculations regarding knowing the relationship between creative thinking (X) and learning outcomes (Y) in a simple regression analysis, it can be seen that the significance score (Sig.) of 0.006 is smaller than the probability of 0.05 so it can be

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concluded that rejected and accepted, which means that "There is a relationship between creative thinking and science learning outcomes".

It can happen because it cannot be separated from the many supporting factors during the learning process so that it can improve science learning outcomes for students. To find out the relationship between critical thinking (X□) and creative thinking (X□) with learning outcomes (Y) in multiple regression analysis. From the table that has been presented, it can be seen that the significance score (Sig.) of 0.009 is smaller than the probability of 0.05. So it can be concluded that it is rejected and accepted, which means that "There is a relationship between critical and creative thinking through zoom meeting application on science learning outcomes". It can happen because it cannot be separated from the many supporting factors during the learning process so that it can improve science learning outcomes for students.

The research results above are following the researcher (Alatas, 2014) explained that in the learning process a teacher must be able to develop thinking skills and self-concept in students so that it can lead to meaningful learning and have an impact on student learning outcomes. This research is also strengthened by previous research conducted by (Saputri, 2014) concluded that the application of the guided inquiry method can improve students' critical thinking skills and research shows that there is a relationship between critical thinking skills and student creativity and shows that if the value of students' critical thinking skills increases, student creativity also increases.

CONCLUSION

Based on the results data analysis in this study, it can be concluded that: (1) There is a relationship between critical thinking through Zoom application and science learning outcomes for the fifth grade in SD Muhammadiyah 8 Surabaya is categorized as good because the significance score (Sig.) is 0.008 < probability 0.05 ; (2) There is a relationship between creative thinking through Zoom application and science learning outcomes for the fifth grade in SD Muhammadiyah 8 Surabaya categorized as good because the significance score (Sig.) of 0.006 is smaller than the probability of 0.05; (3) There is a relationship between critical and creative thinking through Zoom application and science learning outcomes of the fifth grade in SD Muhammadiyah 8 Surabaya categorized as good because the significance value (Sig.) is 0.009 < probability 0.05.

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Based on the results study, suggestions can be made that educators must be able to convey learning in a fun and meaningful way for students, besides that students, are required to be able to understand the material. In the learning process, students are asked to be active and can work together in understanding the material so that shy students do not need to ask the teacher directly unless there is an urgent problem. Therefore, critical and creative thinking is very helpful to improve student learning outcomes.

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THE USE INFLUENCE OF INFORMATION AND OMMUNICATION TECHNOLOGY (ICT) LEARNING MEDIA ON STUDENTS LEARNING ACTIVENESS IN CLASS V SDN PANNARA MAKASSAR CITY

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Abstract: This study used a quantitative approach with the type of research True-Experimental Design with Pretest-Posttest Control Group Design. The purpose of this study was to determine the effect and description on students learning activeness before and after the use of information and communication technology (ICT) learning media in SDN Pannara Makassar. Data collection techniques used observation sheets (observations), questionnaires, and documentation. The population is all fifth-grade students of SDN Pannara Makassar. The sampling technique used is the total sampling technique. The data analysis technique used is descriptive analysis and inferential analysis. The results showed that the use of Information and Communication Technology (ICT) learning media was implemented well. Based on the results and implementation of students learning activeness before using Information and Communication Technology (ICT) learning media (pretest) in the experimental group in low category 24.00%, medium category 20.00%, high category 56.00%, and in very high category 24.00% and control group in the low category was 32.00%, the medium category was 40.00%, the high category was 28.00%, and the very high category was 24.00%. After being treated with the use of Information and Communication Technology (ICT) learning media, there was an increase in students learning activeness in the experimental group with low 0.00%, medium 12.00%, high 32.00%, and very high 56.00% categories. While the control group is in the low category of 0.00%, medium 20.00%, high 56.00%, and very high 24.00%. From these acquisitions, the use of Information and Communication Technology (ICT) learning media affects students learning activeness of SDN Pannara Makassar.

Keywords: learning media, ICT, student learning activeness.

INTRODUCTION

Education is an important part of a country, the future of the nation and state depends on education that gives birth to quality successors. The act No. 20 of 2003 article 3 concerning the National Education System (Sanjaya, 2007: 63), namely the development of the potential of students to become human beings who believe and are

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devoted to God Almighty, have a noble character, are healthy, knowledgeable, capable, creative, independent and become a democratic and responsible citizens.

To achieve this goal, various innovations and teacher creativity are needed in designing learning processes that attract students. Interesting learning is expected to increase student activeness in participating in learning to achieve the desired results. Losanov (A'la, 2010:48) "learning or teaching process is a complex phenomenon. Everything means, every word, thought, action, and the extent to which you change the environment and the design of the teaching to the extent that the design of the learning process goes.

(Dimyati & Mujiono, 2006:46) stated that "in the learning process, there are four important components that influence the success of student learning, namely: a) learning materials; b) learning atmosphere; c) media and learning resources; and the teacher as the subject of learning". These components are very important in influencing the learning process. If one of the components can not support the success of learning can not be optimal. The learning atmosphere must be designed so that children can enjoy a comfortable and fun learning atmosphere.

The increasingly advanced Information and Communication Technology (ICT) is expected to help teachers to facilitate their duties in delivering lessons. Information and Communication Technology (ICT) as part of Science and Technology (IPTEK) in general are all technologies related to the retrieval, collection, processing, storage, dissemination, and presentation of information (Budiana et al: 2015). Information and Communication Technology (ICT) can be used by teachers to design interesting learning media so that students can be more active in learning. However, for this to be implemented, teachers must improve their ability to adopt the technology. The use of technology-based learning media is not easy. In using the media, you must pay attention to several techniques so that the media used can be utilized to the maximum and does not deviate from the learning objectives(Zabir, 2018). Media in the teaching and learning process is a tool to achieve goals. Learning media(Arief Sadiman, 2008: 7) is anything that can be used to distribute messages from the sender to the recipient of the message. Furthermore, DePorter's opinion regarding learning media (2005:70) says that aids are objects that can be used to represent an idea and aids can help visually and kinesthetically the process of student understanding of the subject matter.

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Lantip and Rianto (2011:4) information technology is defined as science in the field of computer-based information and its development is very rapid. Information technology is a means and infrastructure (hardware, software, user) systems and methods for obtaining, transmitting, processing, interpreting, storing, organizing, and using data meaningfully. (Bambang Warsita 2008:135). (Hamzah B. Uno and Nina Lamatenggo, 2011: 57) also stated that information technology is a technology used to process data. Then, (Huda, 2020) Information and Communication Technology (ICT) is a medium that can be used to distribute messages from the sender to the recipient so that it can stimulate the thoughts, feelings, and interests, and attention of students so that the learning process in the classroom occurs. Furthermore, (Zakiah & Hilman, 2018) Information and Communication Technology (ICT) includes two aspects, namely Information Technology (IT) which includes everything related to processes, use as a tool, manipulation, and information management. Communication Technology (TK) is everything related to the use of tools to process and transfer data from one device to another. Whereas,(Alfatru, 2010: 5), activeness is "an activity or everything that is done or activities that occur both physical and non-physical".

The learning activeness can be seen in student activities during the learning process. If students are already involved in the learning process, then students will feel a pleasant learning atmosphere so that learning outcomes can be maximized. (Djamarah, 2006: 27) "activity can be said as an activity or a person's busyness or using energy, thoughts, to achieve certain goals, all of which is to achieve optimal abilities".

One of the learning problems found in the school that is the object of the author's research is the provision of conventional material in this case the learning tools that are given are less stimulating the active role of students in learning. This is what causes students to be less active in learning which results in the low interest of students in learning.

Based on results of previous studies that are relevant to the research that the researcher will carry out. The research related to this research is (Yusri, 2016) ”The Use Influence of Information and Communication Technology (ICT) Media with the Achievement of Learning English for Class X Students at SMAN I Dekai, Yahukim Regency" indicated that the use of Information and Communication Technology (ICT) media have a good impact on students' English learning achievement. The level of

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achievement in learning English for class X students at SMAN I Dekai, Yahukimo Regency is in the high category. Another relevant research is, (Arfiyunanda, 2017) "The Influence of ICT Advice on Students' Learning Motivation in ICT Learning" The results obtained indicate that the results of the study state that using ICT facilities in learning can encourage student learning motivation in ICT subjects at SMK Yasemi Karangrayung.

Therefore, the authors are interested in taking the research title "The Use Influence of Information and Communication Technology (ICT) Learning Media on Students Learning Activeness in Class V SDN Pannara Makassar City". The purpose of this research is This study aims to determine the effect and description of student learning activeness before and after the use of information and communication technology (ICT) learning media in Pannara Makassar Elementary School. By raising this title, the author hopes to help teachers present Information and Communication Technology learning media to increase student learning activeness.

METHOD

This type of research is experimental research, using True-Experimental Design which aims to determine the use of Information and Communication Technology (ICT) learning media on the activity of fifth-grade students at Pannara State Elementary School, Makassar City. The population in this study were fifth-grade students of SDN Pannara Makassar City in the odd semester of the 2020/2021 academic year. The population of this study was 50 students, with the number of samples for each group being 25 students. The sample in this study was taken using the total sampling technique (total sampling).

Data collection techniques and research instruments used in this study were students learning activeness questionnaires and observation. The questionnaire was filled out twice, namely pretest and posttest. Data analysis techniques include descriptive statistical analysis and inferential analysis. This analysis begins with a test of analytical requirements, namely the normality test of the data, the homogeneity of the data, and the hypothesis test (t-test).

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RESULTS

Overview of Student Learning Activeness at Pannara State Elementary School, Makassar City

Student learning activity was measured using an instrument in the form of a questionnaire totaling 20 items. Student learning activeness questionnaire sheets are arranged in the form of a choice test that is checked (√) by students, which consists of a list of 12 positive questions and a list of 8 negative questions which were developed from indicators of student learning activeness which include: visual activities, oral activities, listening activities, writing activities, mental activities, and emotional activities.

The following table describes student learning activity before and after treatment:

Table 1 Overview of Student Learning Activeness Before and After Treatment

Control Group				interval	Category	Experimental Group			
Pretest		*Posttest*				*Pretest*		*Posttest*	
f	%	*f*	%			*F*	%	*f*	%
0	0	6	24.00	85 – 100	Very high	0	0	14	56.00
7	28.00	14	56.00	69 – 84	High	6	24.00	8	32.00
10	40.00	5	20.00	53 – 68	Medium	13	52.00	3	12.00
8	32.00	0	0	37 – 52	Low	6	24.00	0	0
0	0	0	0	20 - 36	Very low	0	0	0	0
25	**100**	**25**	**100**	**Amount**		**25**	**100**	**25**	**100**

Source:

a. Description of Student Learning Activeness Questionnaire Before being given ICT Learning Media Treatment

Table 1 above shows that in the control group before being given conventional (traditional) learning treatment by the researcher, the activeness learning of students at SDN Pannara Makassar City was 8 students in the low category with a percentage of 32.00%, in the medium category as many as 10 students with a percentage 40.00%, and the high category as many as 7 students with a percentage of 28.00%.

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The results of the questionnaire (pretest) in the experimental group before being given treatment with the use of ICT learning media by researchers, the activeness learning of students at SDN Pannara Makassar City was 6 students in the low category with a percentage of 24.00%, in the medium category as many as 13 students with a percentage of 52.00 %, and the high category as many as 6 students with a percentage of 24,00%.

Pretest was carried out in the experimental group and in the control group to determine the students' initial learning activeness towards learning. Based on the analysis results of the pretest value data, it was shown that the experimental group and the control group had early learning activeness that was not significantly different. The pretest results of both classes are in the medium category. This shows that the initial learning activeness of students in the experimental group and the control group before taking part in learning is still low.

b. Description of Student Learning Activeness Questionnaire After being given ICT Learning Media Treatment

Questionnaire or student learning activeness questionnaire for the posttest is the same as the pretest. This is so that there is no bias between the posttest and pretest.

Based on table 1, shows that in the control group after being given conventional (traditional) learning treatment by the researcher, the learning activeness of students at SDN Pannara Makassar City was 5 students in the medium category with a percentage of 20.00%, in the high category as many as 14 students with a percentage of 56, 00%, and in the very high category as many as 6 students with a percentage of 24,00%. Then students who are in the low category, with an interval of 37–52 are no longer there.

After being treated by the researcher, student learning activeness had a greater increase in the experimental group than the control group where as many as 3 students were in the medium category with a percentage of 12.00%, in the high category as many as 8 students with a percentage of 32.00%, and the very category

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as many as 14 students with a percentage of 56.00%. Then students who are in the low category, namely with an interval of 37–52 are no longer there.

This shows that the level of students learning activeness in the experimental group experienced a large increase when compared to the pretest. The low students learning activeness in the control group was due to the lack of precise selection of the learning model used to increase student learning activeness.

The posttest results of students in the experimental group had a greater increase, from the moderate category and then increased to the very high category. The high posttest score of students occurs due to the learning model used, that is the use of ICT learning media which can increase student learning activeness in learning. This is because there is fun learning where there is an interaction between the teacher and students that is established well. When the teacher applies ICT learning media, students follow it well.

Based on the average (mean value) of the experimental group and the control group, a difference of 5.64 (83.12 - 77.48 = 5.64) was obtained, with the experimental group having a higher mean value than the control group. The mean difference indicates that learning using ICT learning media affects increasing student learning activeness.

Based on the description above, it can be concluded that student learning activeness in the experimental group is higher than in the control group. When viewed from the average pretest the control group and the experimental group have almost the same value, but the average posttest results show that the use of ICT learning media in the experimental group is better than the implementation of conventional (traditional) learning in the control group. This indicates that the use of ICT learning media has a better effect on increasing student learning activeness in class V compared to the application of conventional learning in the control group.

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DISCUSSION

The Influence of ICT Learning Media on Student Learning Activeness at Pannara State Elementary School Makassar City

Based on the results of calculations using the t-test (independent samples test) with the help of SPSS version 20 with a significant level of 5% or 0.05, two outputs are obtained that the value of the results of hypothesis testing on posttest data is t_{count} = 2,298 and *p-value (sig. 2-tailed)*=0.026.

Summary of test calculation results-*t* by comparing the values of t_{count} with the following:t_{table}

Table 2 Summary of Results T-Test Calculation by Comparing Between Values t_{count} with t_{table}

No.	Compared group	Mark t_{count}	Value (0.05)t_{table}	Description
1.	*Posttest* experimental group with the control group	2,298	1,708	Significant

Based on table 2 above, shows that the t-test calculation shows the results of calculations about the difference in learning activeness between the two learnings as a whole that t_{count} = 2.298 > t_{table}= 1.708 at a significant level of 0.05, thus H0 is rejected and H1 is accepted, meaning that there is an effect of using ICT media on student learning activeness.

The summary of the results of t-test calculation by comparing the p-value/ (Sig.2-tailed) with a significance of 0.05 is as follows:

Table 3 Summary of results t-test calculation by comparing the p-value/(Sig.2-tailed) with a significant 0.05

No.	Compared group	*p-value/ (Sig.2-tailed)*	Significant	Description
1.	Posttest experimental group with the control group	0.026	0.05	Significant

Based on table 3 above, shows that the t-test calculation shows the calculation results that $p - value/(Sig.2 - tailed)$ = 0.026 <0.05, thus H0 is rejected and H1 is

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accepted, meaning that there is an influence of ICT learning media on student learning activeness.

The results of the t-test calculation above can be concluded that there is a significant difference in the effect between the experimental group that is given the treatment of ICT learning media and the control group that is not given the treatment of ICT learning media but used conventional learning on student learning activeness. Therefore, student learning activeness who were given the treatment of ICT learning media was significantly better than those given conventional learning. This means that the overall research hypothesis is that student learning activeness who are given ICT learning media is higher than the group of students who are given conventional learning. Learning media is one of the things that makes it easier for a teacher to deliver learning material. The word media comes from the Latin medius which means 'middle', 'intermediary', or 'introduction'. In Arabic, the media is an intermediary or introductory message from the sender to the recipient of the message (Arsyad, 2016). Media is an aspect that greatly influences the achievement of the learning process that can stimulate students and teachers when delivering learning materials (Syafei, 2013).

Level of Student Learning Activeness in Elementary School

The results of the questionnaire (pretest) in the experimental group before being given treatment by researchers, students learning activeness at SDN Pannara Makassar City as many as 6 students were in the low category with a percentage of 24.00%, in the medium category as many as 13 students with a percentage of 52.00%, and high category as many as 6 students with a percentage of 24,00%. While the results of the questionnaire (pretest) in the control group before being given conventional (traditional) learning treatment by the researcher, students learning activeness at SDN Pannara Makassar City as many as 8 students were in the low category with a percentage of 32.00%, in the medium category as many as 10 students with a percentage of 40 0.00%, and the high category as many as 7 students with a percentage of 28.00%.

Pretest was carried out in the experimental group and in the control group to determine the students' initial learning activeness towards learning. Based on the analysis result of the pretest value data, it was shown that the experimental group and the control group had early learning activeness that was not significantly different. The

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pretest results of both classes are in the medium category. This shows that the initial students' learning activeness in the experimental group and the control group before taking part in learning is still low.

The questionnaire results (posttest) in the control group after being given conventional (traditional) learning treatment by the researcher, students learning activeness at SDN Pannara Makassar City as many as 5 students were in the medium category with a percentage of 20.00%, in the high category as many as 14 students with a percentage of 56, 00%, and in the very high category as many as 6 students with a percentage of 24,00%. Then students who are in the low category, with an interval of 37–52 are no longer there.

After being treated by the researcher, students learning activeness had a greater increase in the experimental group than the control group whereas many as 3 students were in the medium category with a percentage of 12.00%, in the high category as many as 8 students with a percentage of 32.00%, and the very category as many as 14 students with a percentage of 56.00%. Then students who are in the low category, namely with an interval of 37–52 are no longer there.

The cause of the high increase in students learning activeness in the experimental group is because students always ask the teacher if there is the material that has not been understood, students discuss the material studied with their friends, students can express their opinions, and students seek information about the material provided by the teacher so that there is a significant increase of students learning activeness in the experimental group.

This is in line with the opinion (Sudjana, 2009: 72) which suggested students activeness in the learning process can be seen in:

a) Participate in carrying out their learning tasks.
b) Engage in problem-solving.
c) Ask other students or the teacher if they do not understand the problem they are facing.
d) Trying to find the various information needed to solve the problem.
e) Train themselves in solving problems.
f) Assess their abilities and the results obtained.

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Based on the description above, it can be concluded that students learning activeness in the experimental group is higher than the control group. This indicates that the use of ICT learning media has a better effect on increasing students learning activeness in class V compared to the application of conventional learning in the control group.

Based on the results of calculations using the t-test (independent samples test) with the help of SPSS version 20 with a significant level of 5% or 0.05, two outputs are obtained that the value of the results of hypothesis testing on posttest data is t_count= 2,298 and p-value (sig. 2-tailed)= 0.026, it can be concluded that there is a significant difference in the effect between the experimental group given the treatment of ICT learning media and the control group which was not given the treatment of ICT learning media but using conventional learning on students learning activeness. Therefore, students learning activeness who are given treatment using ICT learning media are significantly better than those given conventional learning.

Based on the description above, the use of ICT learning media can be applied to increase the learning activeness of fifth-grade students at Pannara State Elementary School, Makassar City.

CONCLUSION

Student learning activeness in learning in class V SDN Pannara Makassar City before the use of ICT learning media was in the medium category, both in the experimental group and in the control group. There was an increase in students learning activeness in the experimental group which was in the very high category after the use of ICT learning media while the control group was in the high category. The use of ICT learning media has a positive effect on students learning activeness in class V SDN Pannara Makassar City.

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ANALYSIS OF LEARNING FACILITIES UTILIZATION IN ONLINE LEARNING IN CLASS IV STUDENTS IN SDN 021 NORTH SAMARINDA

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Abstract: This study aims to determine the use of learning facilities in online learning at SD Negeri 021 North Samarinda. The subjects of this study were school principals, fourth grade teachers and students. The method applied in this research is descriptive qualitative. The results of the study show that the utilization of learning facilities is still quite good, as can be seen from the interview rubric related to learning and online learning facilities. This is evidenced by interviews with the principal, teachers, and five interviewed students, showing that the differences in learning at this time still make it a little difficult for students to understand the lessons given so that the results in terms of student practice learning are still not optimal but learning in the form of student material still gets results which is maximum. Based on the description above, it can be concluded that the use of learning facilities in online learning for fourth grade students at SD Negeri 021 North Samarinda is going quite well.

Keywords: Utilization, learning facilities and learning *online.*

INTRODUCTION

Education is a teaching and learning process between teachers and students to gain knowledge and knowledge, experience and useful knowledge which is expected to be a provision for their future and the provision of their life journey. Education is a science that is required in schools through teaching and learning between teachers and students to provide intelligence, knowledge and good morals to students who will become the successors of this family, community, country and nation. Education is a conscious activity through formal education, non-formal and informal to derive one generation to the next through learning to increase the knowledge to someone who does not understand education.

Online Lerning still cannot be carried out properly due to various obstacles such as inadequate facilities, low economic conditions so that they cannot afford to buy quotas, geographical conditions that result in less stable internet networks, lack of

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community digital literacy which results in online learning not running optimally. (Sulastri, 2020).

The Big Indonesian Dictionary explains that facilities "means that it makes it easier to carry out tasks". Facilities associated with activities learning are facilities and infrastructure. Infrastructure is an indirect tool for examples such as the location, sports field, money, school buildings and others, facilities are direct tools, examples such as books, media lessons that teachers use, rooms and others that facilitate the learning process if a facility can maximize it good, then the learning outcomes to be achieved can be carried out well (Sunadi, 2010).

A good facilitator or able to understand a common goal will support activities to learning run successfully so that learning objectives can be achieved properly and optimally. Learning facilities are all facilities needed in learning activities, both moveable in order to support the success of educational goals that can run successfully.

Learning facilities are facilities and infrastructure that are needed in the teaching and learning process, without learning facilities the teaching and learning process will be an obstacle and cannot achieve maximum learning outcomes. Facilities, namely facilities and infrastructure that are very much needed for teaching and learning activities, especially during a pandemic like this, the facilities used and to support are not complete and what are most often needed are cell phones, quotas and internet networks where the three facilities are very helpful in the learning process during this pandemic. Whether or not a teaching and learning process runs smoothly is strongly influenced by whether or not the existing facilities are complete (Kartika, 2021).

Learning facilities are all the needs needed by students in launching the teaching and learning process, and supporting learning activities at school. In order to be more effective and efficient, students will be able to learn optimally and have satisfactory learning outcomes for students, teachers, schools and parents. If the learning facilities in a school are complete, the learning process will also run well and the presence of complete facilities will increase online learning supported by the learning facilities needed when online learning (Asih, 2017).

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Based on some of the definitions above, researchers can conclude that learning facilities are a necessity that schools need or infrastructure facilities that are needed by schools to support and expedite the online learning process and can improve so that the results are effective and efficient and students can learn optimally and can provide satisfactory improvement in learning.

Learning facilities are divided into two, namely facilities and infrastructure. Regarding the teaching and learning process, school infrastructure is moving indirectly, for example, sports equipment. While school facilities are moving directly to the teaching and learning process, examples as needed in learning during a pandemic like this are learning media used by teachers such as cell phones, quotas and internet networks (Nur, 2015). Learning facilities directly have a positive and significant effect on student achievement. Learning the online system or online directly has a positive and significant effect on student achievement. Amenities learn direct and significant positive effects on learning online systems or online (the Goddess,*2021).*

One of the challenges in carrying out online learning is that it requires adequate facilities and infrastucture, for example laptops, smartphones, computers, and internet networks (Handarini, 2020). Online learning is basically a distance learning process or online communication, which is known as online communication, network communication is communication system cush as computers, mobile phones and a device connected to the internet (Belawati, 2020).

The Teaching and learning process distance is a system that has existed since the mid 18th century. Since its inception, the teaching and learning process distance tenses applications in carrying out learning, ranging from the easiest and simplest applications to the slightly complicated ones.

Online learning, which is carried out remotely, is currently the goal of implementing online learning as a result of COVID-19. Online learning occurs when there is delivery of online information. The delivery of online information is known as the delivery of information in a network or online, delivery of information in a network or online or online learning request communication technology devices or systems such as mobile phones, laptops, computers or devices that can be connected or connected to the internet (Sutriyanti, 2020).

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Online learning was first recognized because of the influence of the development of electronic-based learning (*e-learning*) which was introduced by the University of Illinois through a computer-based learning system (Hardiiyanto). Online learning is a system that can facilitate students to learn more broadly, more, and varied. Through the facilities provided by the system, students can learn anytime and anywhere without being limited by distance, space and time. The learning materials that are studied are more varied, not only in verbal form, but also more varied such as visual, audio, and motion (Riyana, 2020).

Based on some of the definitions above, the researcher can conclude that online learning is a teaching and learning activity that is carried out remotely without being limited by time.

The benefits of learning online are that it can build communication, very efficient interactive discussions between teachers, students and parents. Both are the right means to make exams, questions and quizzes for students without time limits. The three teachers can easily provide material to students in the form of picture media and videos in learning besides that students can download these teaching materials and can be studied by students repeatedly (Pohan, 2020). The benefit of online learning is that it increases the level of one type of action or more that occurs by more than one person which has a learning effect between students and teachers with the learning process from anywhere and anytime that is not tied to time and place and makes it easier for students to learn the subject matter provided by the teacher, which is where online learning opens an easier space for students and teachers with such ease it can be expected to increase students in participating in online learning (Mustuti, 2020). Then the benefits of online learning are that it provides convenience for education in providing information transfer of subject matter in various situations and conditions (Herliandry, 2020).

Then the purpose of online learning is to launch student learning activities and to keep it going even during this pandemic by providing many interesting and easily accessible learning resources and a flexible and easy-to-understand learning process so as to avoid confusion among students, both in place and time. The implementation can be completely online, otherwise it can be combined with online learning and offline lessons or face to face directly but with an agreed agreement so that online learning

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can improve (Fahrina, 2020). Furthermore, the purpose of online learning is to continue to carry out the learning process during this pandemic which is not possible for the direct learning process which will result in the spread of the COVID-19 virus so that the learning process continues, the government takes a way, namely online learning and also so that teachers can make design or design learning that is unique and as good as possible so that it can improve online learning by utilizing the use of technology as creatively as possible (Hairun, 2020). The purpose of learning online is something that the teacher cannot determine whether the learning objectives online to be achieved from the learning outcomes are achieved or not because online learning is based on the understanding of each student in responding to the lessons given by the teacher and many obstacles that cause learning to take place between other limitations quotas owned by students, children's readiness when learning time has started, and the disruption of the internet network is good or not and so on (Kusumah, 2020).

In this study, researchers used two variables: learning and online learning facilities. Given the first variable, researchers found that study in the facilities studied many types of learning facilities, so researchers are focusing on whatsapp and the internet. Researchers found several uses of facilities that are still functioning in online learning today, for example, textbooks on the theme of tics and school buildings. The researcher also found some problems in the learning process chiefly in the fourth grade in the learning process using only one application, namely whatsapp application and an inadequate internet network so that students who follow the learning process or when sending assignments must find an adequate internet network so that they can send assignments or follow in the learning process, there are even students who have to join friends or even don't follow the learning process because they only have one cellphone and their parents often use it for work.

Based on the explanation above, researchers are interested in researching and knowing about the analysis of learning facilities utilization in online learning in class IV students in SDN 021 Nort Samarinda. The purpose of this study was to explain and determine the use of learning facilities utilization in online learning in class IV students in SDN 021 North Samarinda.

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METHOD

Types of Research

This research used a descriptive qualitative approach, qualitative research method is a study that intends to understand the phenomena experienced by the subject, research for example behavior, perception, motivation, action, etc., holistically and by means of description in the form of words and language in a special natural context and by applying various natural methods. In educational studies, qualitative research can seal their right to understand various phenomena attitudes of educators, students, teachers and in the process pembelajaran (Sugiyono 2016).

Place and Time of

Research This study aims to obtain an overview, clear, complete, and easy information for researchers to carry out research. So, the researcher determined that the research location was at SDN 021 North Samarinda. This research has been carried out for two months.

Research Subject The

The subject of this research is the principal of SDN 021 North Samarinda as well as teachers who act as the use of learning facilities during online learning and students who take part in online learning.

Data Collection Techniques Data

Data collection techniques used in this study were interviews and documentation. The researcher conducted a data validity test by means of triangulation of sources. The results of checking the validity of the data in this study, is to re-check the source of the data obtained as comparison material (Sugiyono 2016).

Data Analysis Techniques

Data analysis techniques in the therapy, right there are three stages of data reduction that sharpens the form of analysis, directing, classifying, discarding unnecessary and organizing data in a manner such that until the final conclusion can be drawn and verified. This process continues as long as the research is running because it

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becomes an inseparable part of data analysis. Furthermore, the presentation of data, data analysis activities cannot be avoided, making it possible for researchers to develop themes or categories, so that researchers can know for sure what steps to take next. Then drawing conclusions, from this stage the findings from the research are reinforced with proven meanings.

RESULTS

The results of this study are data or information obtained from research results that are in accordance with events that are in the field or according to what is in the field. The results of this study are to find out the data that has been obtained in the form of interviews and documentation based on the focus of research in this study, the researchers describe the results of the data obtained relating to the use of learning facilities in online learning.

1. Learning Facilities
   a. Learning Facility Process
      1) Principal Interview

         Based on the results of an interview with Mr. ZAI as the principal at SD Negeri 021 North Samarinda on Monday, April 26, 2021, at 10.00 WITA until the end of the process in the online learning facility the teacher provides subject matter in the form of text messages and photos through class groups via the whatsapp application and the internet with a schedule that has been determined by the teacher and when collecting assignments in the form of videos, students usually send their video assignments to their class groups, while assignments in the form of material are collected at school with a schedule for collecting assignments that have been arranged by the teacher, informing them in the form of text messages via the whatsapp application and the are obstacles when using the whatsapp application and internet application, namely in the form of an internet network which is a little difficult to access the internet network and the cellphones owned by students are also limited so it requires students to alternate with each other and his parents as well as his brother and sister

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when using it. Where the school is located a bit far from the city so that accessing the internet network is a bit constrained by sthis situation, students must first find a good internet network or rent wifi to be able to use the whatsapp application.

Sometimes with such circumstances, the school implements learning as offline well by the way the teacher informs via text messages using the whatsapp application and students come to school at the time determined by the teacher to take material in the form of a theme book and a sheet of guide paper for students to learn which In a sheet of guide paper, a period of time is usually given for one week and when taking the material the teacher explains a little of the material given so that students understand the material given and the task given is in the form of student material collecting it at school and lending each package book. theme for each student with a loan period determined by the teacher.

2) Teacher Interview

Based on the results of an interview with Ms. YS as a homeroom teacher for grade IV at SD Negeri 021 North Samarinda on Monday, April 26, 2021 at 09.40 WITA until it was finished that the learning facility process in the form of whatsapp application and internet in the learning process the teacher provided materials or assignments that given via whatsapp and the internet in class groups and sometimes there are obstacles such as the students long time to respond when learning begins because the cell phones taking owned by students are the cellphones of their parents so they have to take turns with their parents to work and not all students have a place to access a good internet network so this makes students hampered when participating in learning and when collecting assignments the teacher must first collect then the students collect their assignments.

3) Student Interviews

Based on the results of interviews with MI class IV at SD Negeri 021 North Samarinda on Monday, April 26, 2021, at 09.13 WITA until finished, the process of learning facilities online in the form of whatsapp application in the process students prepare equipment such as cell phones, books, pens

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and networks internet is good but there are obstacles when the teacher gives material and assignments, sometimes these students do not understand.

Based on an interview with SR on Monday 26 April 2021, at 09.27 WITA, that during this pandemic, parents are required to be able to adapt to the current situation. It is also related to the results of the FN interview on Monday 26 April 2021, at 08.52 WITA, Ardelia Putri on Monday. April 26, 2021, at 09.05 WITA, SL on Monday April 26, at 09.19 WITA until it is finished that in the process of learning facilities in the online form of whatsapp application and internet in the process when the teacher has given material in class groups via whatsapp students must first prepare their cell phones, good internet network, books and pens. However, there are perceived obstacles, namely in the form of a difficult internet network and having to find an internet network first when participating in the learning process and cell phones limited that must take turns with parents, brothers and sisters when using and sometimes delivering material in the form of text messages makes students less comfortable. understand so that it hinders the learning process a little online.

Based on the results of the interviews with principals, teachers and students above, it can be concluded that principals, teachers and students can overcome the learning facility in online learning process that is running during the COVID-19 pandemic in the form of whatsapp application and internet at this time, although it is a bit constrained cell phones by the limited number of that students have and internet network that is difficult to access but students still try to understand the material given.

b. Preparation in the Use of Study Facilities

1) Principal Interview

Based on the results of an interview with Mr. ZA as the principal at SD Negeri 021 North Samarinda on Monday, April 26, 2021, at 10.00 WITA until it is finished that preparations are being made for now to overcome the internet network which slightly constrained, therefore the school installed wifi to make it easier for students and local teachers to access the internet

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network, but there are obstacles for now only one application is still being used, namely the whatsapp application because to use other applications that can be more adequate it cannot be implemented because some cell phones students are still inadequate.

2) Teacher Interview

Based on the results of an interview with Ms. YS as a homeroom teacher for grade IV at SD Negeri 021 North Samarinda on Monday, April 26, 2021 at 09.40 WITA until it was finished that the main preparations prepared were in the form of whatsapp application, quotas, subject matter, good internet, why use the whatsapp application because the only application that can be used at SD Negeri 021 North Samarinda for online learning is currently being implemented due to inadequate conditions such as internet which is a little difficult to access so the whatsapp application that can be used for now is internet quota which is very much needed for the learning system during the covid-19 pandemic without learning quote online, it is complicated to run, besides that the sales place is a little far away and must anticipate beforehand so that learning can run smoothly and the third is the internet which is currently to access the internet in SD Negeri 021 North Samarinda is a bit constrained, only certain places have easy access to the internet, so it is necessary to find a good internet so that online learning can run well, then prepare materials and assignments when starting online learning.

3) Student Interview

Based on the results of the interview with MI class IV on Monday, April 26 2021, at 09.13 WITA until it was finished that the preparations were only cell phones, notebooks, and pens because everything else was available such as the internet because this student had wifi at his home. alone.

Based on the results of interviews with SR class IV on Monday April 26 2021, at 09.27 WITA until finished, it is also related to the results of interviews with FN class IV on Monday April 26 2021, at 08:52 WITA, AP class IV on Monday April 26 2021, at 09.05 WITA and SL class IV at SD Negeri 021 North Samarinda on Monday, April 26, at 09.19 WITA that the

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preparations made are to provide notebooks, pens, cell phones, good internet networks, quotas and money to rent wifi because accessing the internet at SD Negeri 021 North Samarinda is a bit constrained.

Based on the results of the interviews with principals, teachers and students above, it can be concluded that principals, teachers and students can cope with preparations for using learning facilities that are ongoing during the COVID-19 pandemic in the form of whatsapp application and internet at this time, although it is a little constrained cell phones by the limited number of that students have and the internet network is a little difficult to access.

c. Obstacles in Learning Facilities

1) Principal Interview

Based on the results of an interview with Mr. ZA as the principal at SD Negeri 021 North Samarinda on Monday, April 26, 2021, at 10.00 WITA until it was finished, the obstacles that have occurred since the implementation of online learning in the Covid-19 era are in SD Negeri 021 North Samarinda, namely cell phones the lack of that make some students have to take turns with their parents, brother or sister when using them and the internet network which is slightly constrained when accessing the internet and the provision of material in the form of text messages from the teacher sometimes makes students not understand. The constraint of the internet network makes the school as soon as possible to install wifi in the school in order for students to take part in online learning.

2) Teacher Interview

Based on the results of an interview with Mrs. YS as a homeroom teacher for grade IV at SD Negeri 021 North Samarinda on Monday, April 26, 2021 at 09.40 WITA until it was finished, the obstacles that occurred since the implementation of online learning during the COVID-19 pandemic at SD Negeri 021 North Samarinda, which is still using one type of application, namely the whatsapp application only because the internet network is a little difficult to access which is used in the online learning process.

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Sometimes students and parents who accompany their children to study do not understand or do not understand directly with the material given by the teacher in the form of text messages given by the teacher, unlike face-to-face which can be given a broad explanation of the material and it is possible for students to ask questions directly. if something is not understood, so to overcome the problem the teacher there usually gives an explanation in the form of a video or students and their parents can meet directly with the teacher to explain what is not understood.

3) Student Interviews

Based on the results of interviews with MI class IV on Monday, April 26, 2021, at 09.13 WITA until completion, the obstacles experienced since online learning was implemented were that sometimes they did not understand or did not understand the material in the form of text messages given via whatsapp or assignments. given by the teacher.

Based on the results of interviews with SR class IV on Monday April 26 2021, at 09.27 WITA, it is also related to the results of interviews with FN class IV on Monday April 26 2021, at 08:52 WITA, AP class IV on Monday April 26 2021, at 09.05 WITA and fourth grade SL at SDN 021 North Samarinda on Monday, April 26, at 09.19 WITA that the obstacles experienced since learning was online implemented, namely when starting online learning these students must first find a good internet network and their own mobile phone less so that they have to take turns with their brother or sister or their parents when using cell phones and internet networks which are slightly constrained when accessing the internet and sometimes students do not understand the material or assignments given by the teacher via whatsapp during online learning .

Based on the results of interviews with principals, teachers and students above, it can be concluded that principals, teachers and students can overcome the obstacles that occur by providing wifi in schools in order to make it easier for students to access the network for online learning. Today's is certainly different from learning before online laerning applied so that it still makes students and parents who accompany their children to learn not

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understand the material or assignments given but students still try to understand the material and assignments given.

d. Results From UtilizingLearning Facilities

1) School Principal Interview

Based on the results of an interview with Mr. ZA as the principal at SD Negeri 021 North Samarinda on Monday, April 26, 2021, at 10.00 WITA until the end, the results that can be seen since the implementation of online learning are still quite good from the results of online learning there are good results and some are not good, for example in SD Negeri 021 North Samarinda from the online learning process in terms of student practice there achieve poor results while in terms of material the results achieved are very satisfying and the school continues to try help and facilitate students so that in online learning they can achieve the online learning outcomes maximum possible.

2) Teacher Interview

Based on the results of an interview with Ms. YS as a homeroom teacher for grade IV at SD Negeri 021 North Samarinda on Monday, April 26, 2021 at 09.40 WITA until the end, the results that can be seen since the implementation of online learning are still quite good due to differences in the process current learning with learning before the covid-19 pandemic is very different so it needs even more maximum adaptation for students because what the teacher conveys in the form of learning material is still not necessarily for students to understand what is being conveyed so that the results achieved are a bit constrained but there are other aspects of learning. The results that are still achieved are mastery of the material where students can still provide satisfactory results.

3) Student Interviews

Based on the results of interviews with SR class IV on Monday, April 26, 2021, at 09.27 WITA, it is also related to the results of interviews with FN class IV on Monday, April 26, 2021, at 08.52 WITA, Muhammad Ismail class IV on Monday, December April 26, 2021, at 09.13 WITA, AP class IV

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on Monday April 26 2021, at 09.05 WITA and SL class IV at SD Negeri 021 North Samarinda on Monday April 26, at 09.19 WITA.

That the results achieved are still quite good because of the difference in the different learning processes before face-to-face learning is replaced with online learning at this time which makes student learning outcomes decrease in practical learning where practical learning must be explained face-to-face so that students can be clear when given an explanation because currently online learning requires an explanation of assignments or materials in the form of online so it makes students a little difficult to understand lessons in the form of practice but on the other hand lessons in the form of student materials can still provide maximum results.

Based on the results of the interviews with principals, teachers and students above, it can be concluded that the principal, teachers and students that the results obtained from the use of learning facilities are still quite good because the differences in learning at this time still make it a little difficult for students to understand the lessons given. In terms of practical learning, students there are still not optimal, but learning in the form of student material there still gets maximum results.

2. Online Learning

a. Media and Methods used in Online Learning

1) Principal Interview

Based on the results of an interview with Mr. ZA as the principal at SD Negeri 021 North Samarinda on Monday, April 26, 2021, at 10.00 WITA until it was finished that the media and methods used in SD Negeri 021 North Samarinda since online learning is implemented is the first of the media. The media used in the form of mobile phones is assisted by using the whatsapp application, for now whatsapp application only the can be used because it is constrained by the internet network which is a little difficult to access, so the method used for now is online learning and sometimes offline learning such as students coming to school with a time and schedule determined by the teacher and take the material and material guide with a working time limit that has been determined by the teacher and the blend of

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material that has been prepared by the teacher so that students just see the guide and work on the material provided by the teacher.

2) Teacher Interview

Based on the results of an interview with Ms. YS as a homeroom teacher for grade IV at SD Negeri 021 North Samarinda on Monday, April 26, 2021 at 09.40 WITA until it was finished that the media and methods used since online learning was implemented are currently there are two types of media the first one uses online media, namely mobile phones assisted by the whatsapp application and the second media, offline namely theme books which are distributed one by one to students and material guides so that students can be directed in the learning process and the methods used for online learning and sometimes offline learning such as students coming to school with the time and schedule determined by the teacher and taking material and material guides with a time limit for working on the material that has been determined by the teacher and material guides that have been prepared by the teacher so that students just see the guide and work on the material provided by the teacher and provide material that is not too difficult so that it is easy for students to work because the learning process is not directly or face to face in class, sometimes the teacher gives material in the form of interesting videos so that students can understand the material given by the teacher and do not give a lot of assignments to students so that students do not experience boredom and to keep the spirit in learning when online learning. However, there are several obstacles, namely the internet network which is a bit difficult to access, the cell phones owned by students are inadequate, and some students still need more adaptation to the current learning process.

3) Student Interviews

Based on the results of interviews with SR class IV on Monday, April 26, 2021, at 09.27 WITA, it is also related to the results of interviews with FN class IV on Monday April 26 2021, at 08:52 WITA, MI class IV on Monday, the 26th April 2021, at 09.13 WITA, Ardelia Putri for fourth grade

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on Monday, 26 April 2021, at 09.05 WITA, and fourth grade SL at SD Negeri 021 North Samarinda on Monday, 26 April, at 09.19 WITA.

The media and methods used today are in the form of mobile phones assisted by the whatsapp application, while learning media are offline in the form of open lesson themes, notebooks and pens, while the methods used are online learning and sometimes offline learning.

Based on the results of the interviews with principals, teachers and students above, it can be concluded that principals, teachers and students use mobile phones assisted by the whatsapp application for online learning media while learning theme books, notebooks and pens are offline media while the method used is online learning and sometimes offline learning.

DISCUSSION

Online learning which is carried out at SD Negeri 021 North Samarinda remotely which is currently the goal of implementing online learning as a result of COVID-19. Submission of information in online learning requires devices or communication technology systems to support the learning process such as mobile phones, laptops, computers or devices that can be connected or connected to the internet. This is in accordance with the theory expressed by (Sutriyanti, 2020).

The process of online learning facilities that are running during the covid-19 pandemic at SDN 021 North Samarinda in the form of whatsapp application and internet at this time although slightly constrained cell phones by the limited owned by students and internet networks that are difficult to access, students still try to understand the material provided in online learning. Learning facilities which are facilities and infrastructure that are needed for the teaching and learning process, there are no learning facilities for the learning and teaching process will be an obstacle and cannot achieve maximum learning outcomes. pandemic times like this. This is in accordance with the theory expressed by (Zulkifil, 2020).

Schools can overcome the problems of learning facilities that usually occur by providing wifi in schools so that it can make it easier for students to access the network. Online lerning today is certainly different from before online learning applied

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so that it still makes students and parents who accompany their children learn not understand the material or assignments given but students still learning try to understand the material and assignments given. This is in accordance with the theory expressed by (Asih, 2017).

Research conducted by researchers proves that the use of learning facilities is still quite good. This is evidenced by interviews with principals, teachers, and students that the differences in learning at this time still make it a little difficult for students to understand the lessons given so the results in terms of student practice learning are still not optimal but learning in the form of student materials still gets maximum results with facilities learning for online learning using mobile phones assisted by the whatsapp application for media in offline using learning theme books, notebooks and pens.

This is in accordance with research conducted by (Yuliani, 2019) with the title "Utilization of Media in Based Learning Processes Online- in the Pandemic Period of SD Negeri 5 Bengkulu City ". That the results of the study indicate that teachers and students in utilizing online media use whatsapp grub to carry out learning discussions, whatsapp photos and whatsapp videos to carry out school assignments, whatsapp documents to carry out exams. Online learning by applying whatsapp is considered effective because the teaching and learning process continues well, the learning materials that the teacher wants to provide can be absorbed by students, and the results received in the online teaching and learning process are also good, seen from the increasing student report cards.

This is in accordance with research conducted by (Hariyadi & Hariyanti, 2020) with the title “The Importance of Information Technology-Based Learning Facilities on Student Learning Outcomes”. The results of the study show tha the existing IT-based learnng facilities in schools affect student learning outcomes. To further improve the quality of learning,teachers and students must use school facilities optimally so that the desired taget is achieved and student learning outcomes show good changes.

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CONCLUSION

Based on the results of the discussion on the use of learning facilities in online learning for fourth grade students at SD Negeri 021 North Samarinda that: 1) The process of learning facilities, that the principal, teachers and students can overcome the learning facility process although a little constrained by cell phones owned by some students are limited , inadequate and the internet network is a little difficult to access; 2) Preparation in the use of learning facilities, that principals, teachers and students can overcome preparations in the use of learning facilities even though it is a bit constrained cell phones by the limited number of owned by some students, inadequate and the internet network is a little difficult to access; 3) Obstacles in learning facilities, that principals, teachers and students can overcome the obstacles that occur even though the cell phones owned by some students are limited, inadequate and the internet network is a little difficult to access; 4) The results from the use of learning facilities, that the principal, teachers and students achieved quite good results, although they were a bit constrained by the differences in current learning and the cell phones owned by some students were limited, inadequate and the internet network was a little difficult to access; 5) The media and methods applied in online learning, that the media and methods used by school principals, teachers and students are quite good although it is a little constrained cell phones that they owned by some students are limited, inadequate and the internet network is a little difficult to access. Based on the description above, it can be concluded that the results of using learning facilities in online learnng for fourth grade students at SD Negeri 021 North Samarinda are going quite well.

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DEVELOPMENT OF CONTEXTUAL TEACHING-BASED E-MODULES IN GRADE V ELEMENTARY SCHOOL LEARNING

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Abstract: The purpose of this study was to determine the development of e-modules based on Contextual Teaching in the fifth grade of elementary school learning. This research method uses research and development methods with the ADDIE approach. This research method uses research and development methods with the limits of expert judgment and practicality. Expert assessment is carried out on media, language, and material experts, while practicality with teachers and students. Data collection techniques use documentation and questionnaires, while data analysis techniques use percentages. Based on the results of the study showed that the E-Module Based on Contextual Teaching with an average of 3.70. Thus, it can be concluded that the development of Contextual Teaching-based E-modules in fifth grade elementary school learning is included in the valid or feasible category. From the results of the small group test and large group test, an average of 3.645 was obtained. Thus, it can be concluded that the feasibility of Contextual Teaching-based E-modules in class V elementary school learning is included in the practical or feasible category.

Keywords: E-Module, Contextual Teaching.

PENDAHULUAN

Saat ini dunia dihadapkan dengan wabah penyakit yang disebabkan oleh virus yang bernama *Coronavirus Disease* atau dikenal dengan istilah *Covid-19*. Pada tanggal 30 Januari 2020 WHO menetapkan sebagai kedaruratan kesehatan masyarakat yang meresahkan dunia. Dampak *Covid-19* di Indonesia saat ini cukup besar bagi seluruh masyarakat. Dengan terus melonjaknya kasus positif *Covid-19* di Indonesia mendesak pemerintah untuk segara menangani pandemi *Covid-19* dengan membuat berbagai kebijakan seperti menerapkan *phsycal distancing*, PSBB (Pembatasan Sosial Berskala Besar), dan *lockdown*. Dengan adanya kebijakan tersebut dampak yang besar diberbagai

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aspek kehidupan, tidak terkecuali pada pendidikan sehingga mengharuskan melakukan pembelajaran secara daring.

Kuntarto (2017:99-110) menyatakan bahwa pembelajaran daring adalah pembelajaran yang dalam proses pembelajarannya menggunakan teknologi multimedia, kelas *virtual*, video, teks *online* animasi, email, pesan suara, telepon konferensi, dan *video streaming online*. Menurut Enriques (2018) dalam pembelajaran daring guru dan peserta didik melakukan pembelajaran bersama, waktu yang sama, dengan menggunakan berbagai aplikasi, seperti *Whatsapp,* Edmodo, Telegram, *Zoom Meeting*, maupun aplikasi lainnya.

Lefudin (2014: 45) pembelajaran merupakan proses interaksi antara peserta didik dengan pendidik dan sumber belajar pada lingkungan belajar. Pembelajaran sebagai proses belajar yang dibangun oleh guru untuk mengembangkan kreatifitas berpikir yang dapat meningkatkan kemampuan berpikir siswa serta dapat meningkatkan kemampuan mengkontruksi pengetahuan baru sebagai upaya peningkatan penguasaan yang baik terhadap materi pembelajaran.

Bahan ajar yang cocok digunakan dalam pembelajaran daring salah satunya yaitu E-modul. Modul elektronik (E-modul) merupakan pengembangan modul cetak dalam bentuk digital yang banyak mengadaptasi dari modul cetak. Menurut Herawati (2018) merupakan media inovatif yang dapat meningkatkan minat siswa dalam belajar dan mengajar. Modul maupun E-modul memiliki komponen yang sama. Jannah (2020) menyatakan bahwa komponen E-modul meliputi: petunjuk/pedoman, lembar kegiatan, latihan soal, kunci jawaban, lembar tes dan kunci jawaban. E-modul juga memiliki elemen-elemen yang harus dipenuhi. Elemen penyusunan E-modul yang harus dipenuhi yaitu: konsistensi, *layout*, organisasi, daya tarik, bentuk dan ukuran huruf, dan penggunaan ruang/spasi kosong. Dari beberapa pendapat tersebut dapat ditarik kesimpulan bahwa E-modul adalah seperangkat media pengajaran digital atau non cetak yang disusun secara sistematis yang digunakan untuk keperluan belajar secara mandiri. Sehingga menuntut peserta didik untuk belajar memecahkan masalah dengan caranya sendiri.

E-modul yang dirancang perlu disesuaikan dengan pengalaman dalam kehidupan sehari-hari sehingga tujuan pembelajaran dapat tercapai. Pendekatan yang dalam pembelajarannya mengupayakan agar siswa dapat menggali kemampuan yang

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dimilikinya dengan memahami konsep- konsep yang berada dilingkungan sekitar mereka dalam dunia nyata disebut *Contextual Teaching*. E- modul yang mengakomodasi kebutuhan siswa dan layak digunakan dengan memperhatikan kemenarikan, kemudahan, dan kebermanfaatannya adalah E-modul berbasis *Contextual Teaching*, karena mampu beradaptasi dengan kurikulum apa saja termasuk dalam implementasi kurikulum 2013. Komalasari (2013: 7) berpendapat bahwa *Contextual Teaching* adalah pembelajaran yang mengaitkan materi yang dipelajari dengan kehidupan nyata siswa sehari-hari, baik dalam lingkungan keluarga, sekolah, masyarakat maupun warga negara dengan tujuan untuk menemukan makna materi tersebut.

Berdasarkan hasil wawancara peneliti dengan wali kelas V di SD 91 Palembang, pembelajaran selama covid-19 ini cenderung monoton karena siswa hanya dikirim tugas melalui *Whatsapp* dan kurangnya sumber belajar. Siswa terkadang merasa jenuh dan kesulitan memahami pembelajaran. Sehingga semangat belajar siswa pun rendah. Menurut wali kelas V di SD Negeri 91 Palembang, mayoritas siswanya sudah memiliki *handphone* untuk menunjang proses pembelajaran. Lebih lanjut berdasarkan analisis kebutuhan, tampak bahwa guru kelas V belum sepenuhnya memanfaatkan media dan bahan ajar berbasis teknologi. Guru juga belum memproduksi media dan bahan ajar berbasis teknologi seperti E-modul. Berdasarkan permasalahan tersebut salah satu solusinya adalah memaksimalkan sarana teknologi yaitu melalui pengembangan bahan ajar berupa E-modul sebagai sumber belajar siswa agar dapat memotivasi siswa sehingga meningkatkan semangat belajar siswa. Selain itu sudah banyak penelitian yang membahas tentang pengembangan E-modul salah satunya seperti penelitian terdahulu yang dilakukan oleh Heni Widya Ayu Isnia, dkk. (2020) menunjukkan bahwa E-modul cocok diterapkan dalam proses pembelajaran.

Alasan peneliti memilih pengembangan E-modul dan bukan media lain karena E-modul dapat memfasilitasi siswa karena dilengkapi dengan petunjuk untuk belajar secara mandiri, siswa dapat belajar sesuai dengan kemampuannya dan dapat memenuhi seluruh kompetensi yang harus dikuasai oleh siswa. Didalam E-modul ini berisi teks materi, gambar serta video. Manfaat penggunaan media E-modul sebagai sumber belajar dalam proses pembelajaran antara lain, siswa dapat menambah dan memperluas pengetahuannya. Siswa dapat memperluas pengetahuan dengan mempelajari materi-

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materi tambahan yang disajikan didalam E-modul. Dengan demikian, media pembelajaran E-modul dapat memotivasi kemandirian belajar siswa. Berdasarkan uraian di atas maka penelitiakan melakukan penelitian mengenai **"Pengembangan E-Modul Berbasis *Contextual Teaching* Pada Pembelajaran Kelas V SekolahDasar".**

Modul ini merupakan salah satu bahan ajar yang mampu meningkatkan efektivitas dan efisiensi pembelajaran disekolah. Menurut Purwanto, dkk. (2007: 9) modul merupakan bahan/ sumber belajar yang dirancang secara sistematis berdasarkan kurikulum tertentu dan dikemas dalam bentuk satuan pembelajaran terkecil dan memungkinkan dipelajari secara mandiri dalam satuan waktu tertentu.Tujuan disusunnya modul ialah agar peserta dapat menguasai kompetensi yang diajarkan kegiatan pembelajaran dengan sebaik-baiknya. Bagi guru, modul juga menjadi acuan dalam menyajikan dan memberikan materi selama diklat atau kegiatan pembelajaran berlangsung.Fungsi modul adalah sebagai bahan belajar yang digunakan dalam kegiatan pembelajaran pesertadidik.

Selanjutnya, Majid (2013: 176) menyatakan bahwa modul merupakan bagian dari jenis-jenis bahan ajar yang digunakan dalam membantu proses pembelajaran bagi peserta didik. Modul dapat diartikan sebuah buku yang dirancang dengan tujuan agar peserta didik dapat belajar secara mandiri tanpa atau dengan bimbingan pendidik.Dengan modul peserta didik dapat belajar lebih terarah dan sistematis secara mandiri.

Menurut Prastowo (2011: 105) modul merupakan program belajar mengajar yang dapat dipelajari oleh peserta didik dengan bantuan yang minimal dari guru atau dosen pembimbing, meliputi perencanaan tujuan yang akan dicapai secara jelas penyediaan materi pembelajaran alat yang dibutuhkan dan alat untuk penilai, serta pengukuran keberhasilan peserta didik dalam penyelesaian pembelajaran.

Menurut Hamdani (2010: 219) modul adalah sarana pembelajaran dalam bentuk tertulis yang disusun secara sistematis, memuat materi pembelajaran, metode, tujuan pembelajaran berdasarkan kompetensi dasar atau indikator pencapaian kompetensi, petunjuk kegiatan belajar mandiri, dan memberikan kesempatan kepada siswa untuk menguji diri sendiri melalui latihan yang disajikan dalam modultersebut.

Daryanto (2013: 9) menyatakan modul adalah sebuah buku yang ditulis dengan tujuan agar siswa dapat belajar secara mandiri tanpa atau dengan bimbingan guru,

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sehingga modul berisi paling tidak tentang segala komponen dasar bahan ajar. Berdasarkan pendapat para ahli tersebut dapat disimpulkan bahwa modul merupakan salah satu program pengajaran mengenai suatu satuan bahasan yang sengaja disusun secara sistematis, operasional dan terarah untuk digunakan oleh peserta didik. Dengan tujuan agar peserta didik dapat menguasai kompetensi yang diajarkan dalam kegiatan pembelajaran dengan sebaik-baiknya.

Mustaji (2008: 30-32) mengemukakan unsur-unsur modul secara rinci sebagai berikut:

1. Rumusan Tujuan Instruksional

   Tujuan tersebut dirumuskan dalam bentuk tingkah laku yang diharapkan dari siswa setelah mereka mempelajari modul.

2. Petunjuk Guru

   Memuat penjelasan bagi guru tentang pengajaran agar dapat terlaksana dengan efisien, serta memberikan penjelasan tentang macam-macam kegiatan yang dilaksanakan dalam proses belajar, waktu untuk menyelesaikan modul, alat-alat dan sumber pelajaran, serta petunjuk evaluasi.

3. Lembar Kegiatan Siswa

   Lembaran ini berisi materi-materi pelajaran yang harus dikuasai oleh siswa serta dicantumkan buku sumber yang harus dipelajari siswa untuk melengkapi materi.

4. Lembar Kerja Siswa

   Lembar kerja ini merupakan pertanyaan-pertanyaan yang ada padalembar kegiatan yang harus dikerjakan siswa setelah mereka selesai menguasai materi.

5. Kunci Lembar Kerja

   Siswa dapat mengoreksi sendiri jawabannya dengan menggunakan kunci lembar kerja setelah mereka berhasil mengerjakan lembar kerja

E-modul merupakan sarana pembelajaran yang berisi materi, metode, batasan-batasan dan cara mengevaluasi yang dirancang secara sistematis dan menarik untuk mencapai kompetensi yang diharapkan sesuai dengan tingkat kompleksitasnya secara elektronik bagian *e-learning* (Depdiknas, 2008). E-modul yang dirancang dalam bentuk digital dan sistematis dapat mendukung siswa agar dapat belajar mandiri. Hal tersebut membuat siswa dituntut untuk belajar memecahkan masalah dengan caranya sendiri. E-modul dapat diakses baik melalui laptop atau *smartphone*. Di Indonesia telepon seluler

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telah mengubah peta industri telekomunikasi. Dimana telepon yang dulunya merupakan barang mewah, sehingga hanya kelompok-kelompok yang bisa menikmatinya, sekarang dengan mudah mendapatkannya.

Menurut Solikin (2019: 190) E-modul merupakan bahan ajar yang bersifat *self instructional* yang memuat materi pembelajaran dengan tujuan agar peserta didik dapat mempelajari secara mandiri dan meningkatkan hasil belajar. Adapun beberapa kriteria yang harus dimuat dalam E-modul yaitu: petunjuk belajar, isi materi pembelajaran, kompetensi yang akan dicapai, latihan-latihan, petunjuk kerja (lembar kerja), evaluasi, informasi pendukung. Selanjutnya menurut Munadi (2013: 99) E-modul merupakan bahan ajar siswa untuk belajar mandiri dengan bantuan seminimal mungkin dari orang lain. Modul maupun E-modul memiliki komponen yang sama.

Nurul Latifah (2020) menyatakan bahwa modul elektronik atau E-modul merupakan sebuah bentuk penyajian bahan belajar mandiri yang disusun secara sistematis kedalam unit pembelajaran terkecil untuk mencapai tujuan pembelajaran tertentu yang disajikan ke dalam format elektronik yang di dalamnya terdapat animasi, audio, navigasi yang membuat pengguna lebih interaktif dengan program.E-modul dapat diimplementasikan sebagai sumber belajar mandiri yang dapat membantu siswa dalam meningkatkan kompetensi atau pemahaman secara kognitif yang dimilikinya serta tidak bergantung lagi pada satu-satunya sumber informasi. E-modul juga dapat digunakan di mana saja, sehingga lebih praktis untuk dibawa. Karena E-modul merupakan penggabungan dari media cetak dan komputer, maka E-modul dapat menyajikan informasi secara terstruktur, menarik serta memiliki tingkat interaktifitas yang tinggi. Selain itu, proses pembelajaran tidak lagi bergantung pada instruktur sebagai satu-satunya sumber informasi.

Berdasarkan pendapat para ahli tersebut dapat disimpulkan bahwa E-modul merupakan modifikasi dari modul konvensional dengan pemanfaatan teknologi informasi, sehingga modul dapat menarik dan interaktif. E-modul ialah bahan ajar yang dapat dirancang oleh guru dengan mempertimbangkan siswa dan metode mengajar pilihan guru yang berisi kumpulan materi pelajaran yang digunakan oleh peserta didik untuk belajar secara mandiri.

Menurut Murtono (2017: 116) mengemukakan bahwa pembelajaran kontekstual dapat terjadi siswa mampu menerapkan dari hasil mengalami apa yang sedang

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diacarkan dengan mengacu yang terjadi pada dunia nyata yang berhubungan dengan peran dan tanggung jawab mereka sebagai anggota keluarga, masyarakat, siswa, warga negara, dll. Oleh sebab itu pembelajaran kontekstual dapat berlangsung dalam berbagai konteks kehidupan, baik disekolah, rumah, maupun lingkungan masyarakat.

Selanjutnya, Soimin (2014: 41) menyatakan bahwa *Contextual Teaching* atau biasa disebut pembelajaran kontekstual adalah merupakan suatu konsep pembelajaran yang holistik, dimana materi pelajaran dikaitkan dengan lingkungan sekitar atau konteks kehidupan sehari-hari baik sosial, budaya, kulltur, maupun kehidupan pribadi peserta didik sehingga akan menghasilkan pembelajaran yangbermakna dan peserta didik dapat memiliki pengetahuan maupun keterampilan yang dapat diterapkan pada berbagai permasalahan.

Menurut Sanjaya (2006: 255) *Contextual Teaching* adalah suatu pendekatan pembelajaran yang menekankan proses keterlibatan siswa secara penuh untuk dapat menemukan materi yang dipelajari dan menghubungkannya dengan situasi kehidupan nyata sehingga mendorong siswa untuk dapat menerapkannya dalam kehidupan mereka.Berdasarkan pendapat para ahli diatas, dapat disimpulkan bahwa *Contextual Teaching* adalah pendekatan pembelajaran yang dapat membantu guru mengaitkan antara materi yang diajarkan dengan kehidupan sehari-hari siswa, dan mendorong siswa menghubungkan antara pengetahuan atau materi yang telah diterima dengan menerapkannya dalam kehidupan sehari-hari siswa.

Menurut Komalasari (2013: 7) karakteristik pembelajaran kontekstual meliputi pembelajaran yang menerapkan beberapa konsep, yaitu:

1.) Keterkaitan (*relating*), pembelajaran yang menerapkan konsep keterkaitan, yaitu pembelajaran yang memiliki keterkaitan (relevansi) dengan bekal pengetahuan yang telah ada pada diri siswa dan dengan konteks pengalaman dalam kehidupan nyata siswa.
2.) Pengalaman langsung (*experiencing*), pembelajaran yang menerapkan konsep pengalaman langsung, yaitu proses yang memberikan kesempatan pada siswa untuk mengonstruksi pengetahuan dengan cara menemukan dan mengalami sendiri secara langsung.
3.) Aplikasi (*applaying*), pembelajaran yang menerapkan konsep aplikasi, yaitu proses pembelajaran yang menekankan pada penerapan fakta, konsep, prinsipdan

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prosedur yang dipelajari dalam situasi dan kontekslain yang berbeda, sehingga bermanfaat bagi kehidupan siswa.

4.) Kerja sama (*cooperating*), pembelajaran yang menggunakan konsep kerja sama, yaitu pembelajaran yang mendorong kerja sama di antara siswa, antara siswa dan guru, dan sumber belajar.

5.) Pengaturan diri (*self-regulating*), pembelajaran yang menggunakan konsep pengaturan diri, yaitu pembelajaran yang mendorong siswa untuk mengatur diri dan pembelajarannya secara mandiri.

6.) Asesmen autentik (*authentic assessment*), pembelajaran yang menerapkan konsep asesmen autentik adalah pembelajaran yang mengukur, memonitor dan menilai semua aspek hasil belajar, baik yang tampak sebagai hasil akhir dari suatu proses pembelajaran maupun berupa perubahan dan perkembangan aktivitas dan perolehan belajar selama proses pembelajaran didalam kelas ataupun diluar kelas.

Menurut Rusman (2013: 192) langkah-langkah pembelajaran *Contextual Teaching* antara lain:

1. Mengembangkan pemikiran bahwa anak akan belajar lebih bermakna dengan cara bekerja sendiri, menemukan sendiri dan mengkonstruksi sendiri pengetahuan dan keterampilan barunya
2. Melaksanakan sejauh mungkin kegiatan *inquiry* untuk semua topik
3. Mengembangkan sifat ingin tahu siswa dengan melalui memunculkan pertanyaan-pertanyaan
4. Menciptakan masyarakat belajar
5. Menghadirkan model sebagai contoh belajar
6. Melakukan refleksi diakhir pertemuan
7. Melakukan penilaian secrara objektif, yaitu menilai kemampuan yang sebenarnya pada setiap siswa.

Menurut Rusman (2013: 193) terdapat tujuh prinsip dalam pembelajaran kontekstual antara lain, yaitu:

1. Konstruktivisme (*constructivism*), konstruktivisme merupakan landasan berpikir (filosofi) dalam *Contextual Teaching*, yaitu bahwa pengetahuan dibangun oleh manusia sedikit demi sedikit yang hasilnya diperluas melalui konteks yang

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terbatas. Pengetahuan bukanlah seperangkat fakta, konsep, atau kaidah yang siap untuk diambil dan diingat. Menusia harus membangun pengetahuan dan memberi makna melalui pengalaman yang nyata. manusia sedikit demi sedikit yang hasilnya diperluas melalui konteks yang terbatas. Pengetahuan bukanlah seperangkat fakta, konsep, atau kaidah yang siap untuk diambil dan diingat. Manusia harus membangun pengetahuan dan memberi makna melalui pengalaman yang nyata. Siswa harus mengkonstruksikan pengetahuan dibenak mereka sendiri. Esensi dari teori konstruktivis, yaitu ide bahwa siswa harus menemukan dan mentransformasikan suatu informasi kompleks ke situasi lain, dan apabila dikehendaki informasi itu menjadi milik mereka sendiri.

2. Menemukan (*inquiry*), inkuiri merupakan bagian inti dari kegiatan pembelajaran berbasis kontekstual. Pengetahuan dan keterampilan yang diperoleh siswa diharapkan bukan hasil mengingat seperangkat fakta-fakta, akan tetapi hasil dari menemukan sendiri.
3. Bertanya (*questioning*), pengetahuan yang dimiliki seseorang selalu bermula dari bertanya. Penerapan bertanya dalam *Contextual Teaching* harus difasilitasi oleh guru, kebiasaan siswa untuk bertanya atau kemampuan guru dalam menggunakan pertanyaan akan mendorong pada peningkatan kualitas dan produktivitas pembelajaran.
4. Masyarakat belajar (*learning community*), maksud dari masyarakat belajar, yaitu membiasakan siswa untuk melakukan kerja sama dan memanfaatkan sumber belajar dari teman-teman belajarnya. Hasil belajar yang diperoleh dari sharingantar teman, antar kelompok, dan antar yang tahu ke yang belum tahu. Diruang ini, dikelas ini, disekitar sini, juga orang-orang yang ada diluar sana, semua adalah anggota masyarakat-belajar.
5. Pemodelan (*modelling*), *modelling* adalah proses pembelajaran dengan memperagakan sesuatu sebagai contoh yang dapat ditiru oleh setiap siswa. Guru dapat menjadi model, misalnya memberi contoh cara mengerjakan sesuatu. Proses *modelling* tidak terbatas dari guru saja, akan tetapi dapat juga memanfaatkan siswa yang dianggap memiliki kemampuan.
6. Refleksi (*reflaction*), refleksi adalah cara berpikir tentang apa yang baru terjadi atau baru saja dipelajari. Pada saat refleksi, siswa diberi kesempatan untuk

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mencerna, menimbang, membandingkan, menghayati, dan melakukan diskusi dengan dirinya sendiri.

7. Penilaian sebenarnya (*authentic assessment*), penilaian autentik menilai pengetahuan dan keterampilan yang diperoleh siswa. Penilai tidak hanya guru, tetapi bisa juga teman atau orang lain.

Masalah pada penelitian ini adalah sebagai berikut: Bagaimanakah pengembangan E-modul berbasis Contextual Teaching pada pembelajaran kelas V Sekolah Dasar yang valid? Bagaimanakah kelayakan E-modul berbasis Contextual Teaching pada pembelajaran kelas V Sekolah Dasar?

Berdasarkan masalah di atas, tujuan dari penelitian ini adalah: Untuk mengetahui cara mengembangakan E-modul berbasis Contextual Teaching pada pembelajaran kelas V Sekolah Dasar yang valid. Untuk mengetahui kelayakan E-modul berbasis Contextual Teaching pada pembelajaran kelas V Sekolah Dasar.

METODE

Metode penelitian dan pengembangan (Research and Development). Sugiyono (2016: 297) menyatakan bahwa Research and Development adalah metode penelitian yang digunakan untuk menghasilkan produk tertentu dan menguji keefektifan produk. Research and Development bisa didefinisikan sebagai media penelitian yang secara sengaja, sistematis, bertujuan, atau diarahkan merumuskan, memperbaiki, mengembangkan, menghasilkan, menguji keefektifan produk, model, metode, strategi atau cara, jasa, prosedur tertentu yang lebih unggul, baru, efektif, efisien, produktif dan bermakna. Menurut Sugiyono (2019: 765-766) mengembangkan Instructional Design (Desain Pembelajaran) dengan pendekatan ADDIE, yang merupakan perpanjangan dari Analysis, Design, Development, Implementation dan Evalution. Analysis, berkaitan dengan kegiatan analisis terhadap situasi kerja dan lingkungan sehingga dapat ditemukan produk apa yang perlu dikembangkan. Design merupakan kegiatan perancangan produk sesuai dengan yang dibutuhkan. Development adalah kegiatan pembuatan dan pengujian produk. Evaluation adalah kegiatan menilai apakah setiap langkah kegiatan dan produk yang telah dibuat sesuai dengan spesifikasi atau belum. Pada pengembangan ini akan dilakukan sesuai dengan prosedur yang terdiri dari lima

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langkah. Kelima langkah tersebut adalah: Analysis (analisis), design (desain), development (pengembangan), implementation (implementasi), evaluation (evaluasi).

Jenis dan Sumber Data Penelitian:

1. Wawancara

   Menurut Sugiyono (2016: 137) wawancara digunakan sebagai teknik pengumpulan data apabila peneliti ingin melakukan studi pendahuluan untuk menemukan permasalahan yang diteliti. Wawancara yang dilakukan adalah wawancara tidak terstruktur dimana peneliti tidak menggunakan pedoman wawancara dan wawancara dilakukan untuk memperoleh informasi mengenai permasalahan dalam pembelajaran tematik.

2. Angket (Kuesioner)

   Sugiyono (2016:142) menyatakan bahwa angket (kuesioner) adalah teknik pengumpulan data yang dilakukan dengan cara memberi seperangkat pertanyaan atau pernyataan tertulis kepada responden untuk dijawabnya. Kuesioner merupakan teknik pengumpulan yang efisien bila peneliti tahu dengan pasti variabel yang akan diukur dan tahu apa yang diharapkan dari responden. Selain itu, kuesioner juga cocok digunakan bila jumlah responden cukup besar dan tersebar diwilayah yang luas. Kuesioner dapat berupa pertanyaan atau pernyataan tertutup atau terbuka, dapat diberikan kepada responden secara langsung atau dikirim melalui pos atau internet. Bila penelitian dilakukan pada lingkup yang tidak terlalu luas, sehingga kuesioner dapat diantarkan langsung dalam waktu tidak terlalu lama, maka pengiriman angket kepada responden tidak perlu melalui pos. Dengan adanya kontak langsung antara peneliti dengan responden dengan sukarela akan memberikan data objektif data dan cepat.

3. Dokumentasi

   Dokumentasi berfungsi sebagai data dalam bentuk fisik berupa dokumen-dokumen yang terkait dengan penelitian yang dilakukan diantaranya adalah prototipe, komentar atau saran dari validator, komentar atau saran dari pendidik, komentar atau saran dari siswa dan jawaban siswa.

4. ObjekPenelitian

   Objek dalam penelitian ini adalah kualitas E-modul berbasis Contextual Teaching pada pembelajaran tematik.

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Teknik analisis data dilakukan untuk mendapatkan media pembelajaran berupa E-modul berkualitas yang memenuhi kriteria kevalidan, dan kepraktisan. Langkah-langkah dalam menganalisis kriteria E-modul yang dikembangkan adalah sebagai berikut:

1. Analisis Kevalidan

   Berdasarkan data validasi penilaian media oleh ahli media, ahli bahasa, dan ahli materi dapat diketahui kevalidan media dengan langkah-langkah sebagai berikut: data kuantitatif didapatkan dari ahli media, ahli materi, ahli bahasa dan pendidik yang disusun dengan skala *Likert*, akan dihitung skor rata-rata lembar validasi ahli media, ahli materi, ahli bahasa dan pendidik, kriteria kevalidan E-modul. Langkah pertama adalah memberikan skor pada tiap kriteria ketentuan pada tabel sebagai berikut:

Tabel 1. Pedoman Skor Penilaian

Kriteria	Skor
Sangat Setuju	4
Setuju	3
Tidak Setuju	2
Sangat Tidak Setuju	1

(Sumber: Riduwan, 2015: 228)

Selanjutnya dilakukan perhitungan dengan rumus:

$$\bar{x} = \frac{\sum_i^n = 1xi}{n}$$

Dengan:

$$\bar{x} = \frac{jumlah\ semua\ skor}{4\ skor\ maksimum}\ x\ 100$$

Keterangan:

x	Rata-rata akhir
xi	Nilai uji operasional angke tiap mahasiswa
N	Banyaknya mahasiswa yang mengisi angket

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Tabel 2. Kriteria Kevalidan E-Modul

Interval Skor	Kriteria	Keterangan
3,26 ≤ x ≤ 4,00	Valid	Tidak Revisi
2,51 x < 3,26	Cukup Valid	Revisi Sebagian
1,76 ≤ x <2,51	Kurang Valid	Revisi Sebagian dan Pengkajian Ulang Materi
1,00 ≤ x < 1,76	Tidak Valid	Revisi Total

(Sumber: Riduwan, 2015:228)

E-modul yang dikembangkan memiliki nilai kevalidan yang baik, jika minimal kriteria kevalidan yang dicapai adalah valid.

2. Analisis Kelayakan

Langkah-langkah untuk menganalisis kepraktisan E-modul yang diperoleh dari angket respon siswa dan guru. Berdasarkan skor rata-rata yang diperoleh dari angket respon siswa dikategorikan sesuai kriteria yang dilihat pada tabel. Data yang terkumpul diproses dengan cara dijumlahkan, dibandingkan dengan jumlah yang diharapkan dan diperoleh persentase, atau dapat ditulis dengan rumus berikut:

$$\bar{x} = \frac{jumlah\ semua\ skor}{4\ skor\ maksimum}\ x\ 100$$

Tabel 3. Kriteria Kelayakan E-Modul

Interval Skor	Kriteria	Keterangan
3,26 ≤ x ≤ 4,00	Layak	Tidak Revisi
2,51 x < 3,26	Cukup Layak	Revisi Sebagian
1,76 ≤ x <2,51	Kurang Layak	Revisi Sebagian dan Pengkajian Ulang Materi
1,00 ≤ x < 1,76	Tidak Layak	Revisi Total

(Sumber: Riduwan, 2015:228)

E-modul yang dikembangkan memiliki nilai kepraktisan yang baik, jika minimal kriteria kepraktisan yang dicapai adalah layak.

PEMBAHASAN

Hasil merupakan bagian utama artikel ilmiah, berisi: hasil bersih tanpa proses analisis data, hasil pengujian hipotesis. Hasil dapat disajikan dengan table atau grafik, untuk memperjelas hasil secara verbal.

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Penelitian dan pengembangan yang dilakukan menghasilkan produk berupa E-Modul (Elektronik Modul) Berbasis *Contextual Teaching* Pada Pembelajaran Kelas V Sekolah Dasar. Pada prosedur penelitian dan pengembangan, bahan ajar berupa E-Modul (Elektronik Modul) Berbasis *Contextual Teaching* Pada Pembelajaran Kelas V Sekolah Dasar ini dikembangkan menggunakan metode *research and depelopment* (R&D) dengan model pengembangan ADDIE. Adapun hasil penilaian validasi ahli kebahasan dapat dilihat pada tabel di bawah ini.

Tabel 3. Hasil Validasi Bahan Ajar E-Modul Berbasis *Contextual Teaching*

Validator	**Tahap 1**	**Tahap 2**	**Keterangan**
Ahli Materi	2,72	3,70	Valid
Ahli Bahasa	2,82	3,64	Valid
Ahli Media	2,72	3,76	Valid
Jumlah	8,26	11,1	-
Rata-Rata	**2,75**	**3,70**	**Valid**

Berdasarkan tabel 4.10 hasil dari validasi media, validasi materi dan validasi bahasa, maka bahan ajar E-Modul Berbasis *Contextual Teaching* didapatkan rata-rata 3,74 dengan kategori valid.

Penelitian ini bertujuan untuk mengetahui pengembangan E-Modul Berbasis *Contextual Teaching* Pada pembelajaran Kelas V SD. Hasil penelitian ini terdiri dari 9 ahli validasi yaitu ahli media, ahli materi, dan ahli bahasa. Berdasarkan hasil validasi yang dilakukan oleh 9 dosen Universitas PGRI Palembang didapatkan hasil bahan E-Modul Berbasis *Contextual Teaching* materi dinyatakan dengan kategori cukup valid tetapi perlu direvisi terlebih dahulu, setelah dilakukan revisi maka didapatkan hasil valid dan tidak perlu direvisi lagi. Validasi bahan ajar ini meliputi validasi materi, validasi bahasa, dan validasi media atau tampilan.

Berdasarkan hasil penilaian validasi tahap 1 oleh ahli materi diperoleh skor pada ahli pertamasebesar 44 dengan rata-rata sebesar 2,58, sedangkan skor pada ahli kedua sebesar 51 dengan rata- rata sebesar 3. Pada ahli ketiga diperoleh skor sebesar 44 dengan rata-rata sebesar 2,58. Pada tahap pertama perlu dilakukan revisi, sehingga dilakukan validasi pada tahap kedua. Berdasarkan hasil penilaian validasi tahap 2 oleh ahli materi diperoleh skor pada ahli pertama sebesar 64 dengan rata- rata sebesar 3,76, sedangkan skor pada ahli kedua sebesar 65 dengan rata-rata sebesar 3,82. Pada ahli

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ketiga diperoleh skor sebesar 60 dengan rata-rata sebesar 3,52. Dengan demikian, hasil penilaian validasi oleh ahli materi termasuk dalam kategori valid.

Selanjutnya, pada ahli bahasa aspek yang dinilai yaitu kebahasaan, lugas, komunikatif, dan penggunaan. Berdasarkan hasil penilaian validasi tahap 1 oleh ahli bahasa diperoleh skor pada ahli pertama sebesar 36 dengan rata-rata sebesar 2,4, sedangkan skor pada ahli kedua sebesar 52 dengan rata-rata sebesar 3,46. Pada ahli ketiga diperoleh skor sebesar 39 dengan rata-rata sebesar 2,26. Pada tahap pertama perlu dilakukan revisi, sehingga dilakukan validasi pada tahap kedua. Berdasarkan hasil penilaian validasi tahap 2 oleh ahli bahasa diperoleh skor pada ahli pertama sebesar 56 dengan rata-rata sebesar 3,73, sedangkan skor pada ahli kedua sebesar 52 dengan rata-rata sebesar 3,46. Pada ahli ketiga diperoleh skor sebesar 56 dengan rata-rata sebesar 3,73. Dengan demikian, hasil penilaian validasi oleh ahli bahasa termasuk dalam kategorivalid.

Selanjutnya, pada ahli bahasa aspek yang dinilai yaitu tampilan desain layar, kemudahan penggunaan, konsisten, kemanfaatan, dan kegrafikan. Berdasarkan hasil penilaian validasi tahap 1 oleh ahli media diperoleh skor pada ahli pertama sebesar 61 dengan rata-rata sebesar 2,44, sedangkan skor pada ahli kedua sebesar 76 dengan rata-rata sebesar 3,06. Pada ahli ketiga diperoleh skor sebesar 67 dengan rata-rata sebesar 2,68. Pada tahap pertama perlu dilakukan revisi, sehingga dilakukan validasi pada tahap kedua. Berdasarkan hasil penilaian validasi tahap 2 oleh ahli media diperoleh skor pada ahli pertama sebesar 100 dengan rata-rata sebesar 4, sedangkan skor pada ahli kedua sebesar 100 dengan rata-rata sebesar 4. Pada ahli ketiga diperoleh skor sebesar 82 dengan rata-rata sebesar 3,28. Dengan demikian, hasil penilaian validasi oleh ahli media termasuk dalam kategorivalid.

Dari hasil penilaian validator materi, bahasa, dan media diperoleh jumlah skor pada tahap kedua sebesar 11,1, dengan rata-rata sebesar 3,70. Dengan demikian, dapat disimpulkan bahwapengembangan E-modul berbasis *Contextual Teaching* pada pembelajaran kelas V Sekolah Dasar termasuk dalam kategori valid.

Selanjutnya dilakukan uji praktikalitas bahan ajar E-Modul berbasis *Contextual Teaching* kepada kelompok kecil atau *small grup*. Dari penilaian kelompok kecil didapatkan rata-rata nilai sebesar 3,69 yang termasuk dalam kategori layak. Selanjutnya, dilanjutkan pada tahap kelompok besar dan diperoleh rata-rata nilai

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sebesar 3,60 yang termasuk dalam kategori praktis. Dari hasil uji kelompok kecil dan uji kelompok besar, diperoleh rata-rata sebesar 3,645. Dengan demikian, dapat disimpulkan bahwa kelayakan E-modul berbasis *Contextual Teaching* pada pembelajaran kelas V Sekolah Dasar termasuk dalam kategorilayak.

Hasil penelitian ini membuktikan bahwa pengembangan E-Modul Berbasis *Contextual Teaching* Pada pembelajaran Kelas V SD termasuk dalam kategori valid. Hasil penelitian ini didukung oleh penelitian Fadilah (2021) yang menyatakan bahwa E-Modul berbasis *Contextual teaching* valid dan layak digunakan sebagai salah satu sumber belajar. Selanjutnya, hasil penelitian Aprianti (2015) juga menyatakan bahwa modul berbasis *contextual teaching* dapat digunakan untuk meningkatkan hasil belajar.

Selanjutnya, Sanjaya (2017:225) menjelaskan bahwa model pembelajaran *Contekstual Teaching and Learning* (CTL) adalah suatu model pembelajaran yang menekankan pada proses keterlibatan peserta didik untuk dapat menerapkan kehidupan sehari-hari untuk meningkatkan proses pembelajaran peserta didik sekolah dasar kelas II. Andriyanti (2016) menyatakan bahwa dengan menggunakan model pembelajaran CTL dapat meningkatkan proses pembelajaran, aktivitas, dan hasil belajar siswa tingkat sekolah dasar. Selain itu, penelitian Ledy Ahrisya (2019) juga menyatakan bahwa model pembelajaran *Contextual teaching and learning* (*CTL*) mempengaruhi hasil belajar peserta didik kelas V Sekolah Dasar.

SIMPULAN

Berdasarkan hasil penelitian Pengembangan E-Modul Berbasis *Contextual Teaching* Pada Pembelajaran Kelas V Sekolah Dasar yang telah dilakukan, dapat disimpulkan bahwa. Hasil penilaian para ahli menunjukkan bahwa E-Modul Berbasis *Contextual Teaching* dengan rata-rata sebesar 3,70. Dengan demikian, dapat disimpulkan bahwa pengembangan E-modul berbasis *Contextual Teaching* pada pembelajaran kelas V Sekolah Dasar termasuk dalam kategori valid atau layak. Dari hasil uji kelompok kecil dan uji kelompok besar, diperoleh rata-rata sebesar 3,645. Dengan demikian, dapat disimpulkan bahwa kelayakan E-modul berbasis *Contextual Teaching* pada pembelajaran kelas V Sekolah Dasar termasuk dalam kategori praktis atau layak.

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Berdasarkan hasil penelitian pengembangan bahan ajar yang telah dijelaskan, bahan ajar ini masih memiliki banyak kelemahan. Oleh karena itu, beberapa hal dapat dijadikan saran sebagai berikut. Untuk guru, sebaiknya lebih sering menggunakan bahan ajar dan metode pembelajaran yang lebih menarik dan tidak membosankan dalam proses pembelajaran. Untuk sekolah, Melatih guru membuat bahan ajar sendiri. Untuk penelitian selanjutnya dapat dilakukan tahapan field test untuk mengetahui efektifitas bahan ajar yang telah dikembangkan.

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CREATIVE THINKING WITH STEM-BASED PROJECT-BASED LEARNING MODEL IN ELEMENTARY MATHEMATICS LEARNING

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Abstract: Entering the era of Industrial Revolution 5.0, changes occurred in all aspects, including education. One of the important competencies in this era is the ability to think creatively. In addition, students are also required to be able to integrate their knowledge with science, technology, engineering, and mathematics (STEM). This research is a quasi-experimental research with a non-equivalent post-test only control group design which aims to determine whether is there an effect of using the Project-Based Learning model with STEM-based
approach on the creative thinking skills of elementary school students in class V mathematics. The population in This research is the fifth-grade students of SDN 225 Palembang. As for the research sample for the experimental class, students of class V-A and the control class, students in class V-B. The experimental class was treated with Project-Based Learning based on STEM, while the control class used the Project-Based Learning model only. Data collection techniques using tests and data analysis with t-test. Based on the analysis of research data with a significant value of 0.006 < 0.05, it can be concluded that there is an effect of students' creative thinking skills using the STEM-based Project-Based Learning learning model in Mathematics Learning for fifth-grade elementary school.

Keywords: Project-Based Learning, STEM, Creative Thinking, Elementary Mathematics

INTRODUCTION

In the Industrial Revolution 5.0 era, changes occurred in various aspects quickly and continuously. This dynamic change requires students to have creative thinking skills, non-routine thinking skills and have new ideas in dealing with every problem. One of the competencies that students must have to adapt to dynamic changes is the ability to think creatively (Widana, 2020). Mathematics learning that is integrated with science and technology can train students' creative thinking skills. Because learning mathematics,

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which is characterized by reasoning and logical thinking, can underlie students' creative thinking abilities.

Contextual-based mathematics learning can connect abstract mathematical concepts with concrete concepts that exist in everyday life so that learning becomes more meaningful (Sudiarta and Widana, 2019). The beginning of contextual learning to solve contextual problems is by mathematical modeling, which is changing the context of the problem into a mathematical model. This mathematical modeling can be completed quickly and efficiently by using information technology (Nafiah and Suyanto, 2014). The integration between learning mathematics, science, technology, and engineering is known as the STEM (Science, Technology, Engineering, Mathematics) approach.

Based on the results of PISA, the creative thinking ability of Indonesian students is very low. Judging from the ability of students to solve contextual problems in learning mathematics is low (Nilasari & Anggreini, 2019). The research results of Mawardhiah and Manoy (2018) concluded that the creative thinking ability of students was very low. In the analysis, the selection of the right learning model can develop students' creative thinking skills. So that student are not emphasized in mastering theoretical mathematics but creative mathematics.

The foresight and creativity of educators in choosing and combining learning models that are following the characteristics of learning, the characteristics of students, and the competencies demanded by the industrial revolution 5.0 absolutely must be mastered. Currently, the learning model must be combined with technology which is also growing rapidly. According to Hidayat, et al (2019), the learning model must involve the intellectual and emotional aspects of students simultaneously. The learning model must also be able to analyze, shape attitudes, and make students actively involved in learning.

One of the learning models that combines the intellectual and emotional involvement of students is the Project-Based Learning (PBL) model. The PBL learning model focuses on the intellectual mentality of students to think creatively in solving problems (Redkar, 2012). In the learning process with the PBL model, the teacher acts as a facilitator. Learners fully get the opportunity to use their ideas and thoughts in solving contextual problems so that they can form new concepts in learning (Zhou, 2012).

In elementary school mathematics learning, the PBL learning model can be combined with the STEM approach. According to Carlisle and Weaver, 2018; Association

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of American Universities, 2013) Mathematics learning using the STEM approach has advantages, including: (1) in education, the boundaries of science, technology, engineering, and mathematics lessons can be eliminated; (2) scientific literacy skills and abilities can be improved; (3) 21st-century competencies which include communication skills, creative thinking collaboration and developing creativity can be developed; (4) problem solutions can be simplified through technology and engineering; (5) can develop contextual problem-solving skills.

Learning research using the PBL model has attracted the attention of educators and education observers. Wahyu, R, 2016; Kristanti, et al, 2016) have applied the PBL model in learning and concluded that the application of the PBL model can improve student learning outcomes. Aldabbus, S (2018) researched the implementation and challenges of implementing PBL by elementary school teachers. Chiang and Lee (2016) also conducted a similar study to find out whether there was an effect of implementing the PBL model on problem-solving abilities and students' learning motivation. Melda Arianti (2017) researched the effectiveness of PBL in learning. In the research conducted, the researcher also used the PBL model but combined it with the STEM approach.

Based on the background and literature review above, the formulation of the problem in this research is whether is there an effect of using the STEM-based PBL learning model on students' creative thinking skills in mathematics learning in fifth-grade elementary school. The hypothesis in this study is that there is a significant effect of using the STEM-based PBL learning model on the creative thinking ability of students in mathematics learning in fifth-grade elementary school.

METHOD

This research is an experimental study with a non-equivalent post-test only control group design. The research population is the fifth-grade students of SDN 225 Palembang for the 2020/2021 academic year. The research sample was determined by using a random sampling technique. Class V-A is the experimental class and V-C is the control class. There were 33 students in the experimental class consisting of 20 girls and 13 boys. While the students in the control class were 32 people consisting of 19 girls and 13 boys. Between the experimental class and control class got different treatments. STEM-based PBL learning by utilizing information technology in the form of internet

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use and educational game applications. The control class was given the usual PBL learning treatment.

PBL learning has specific steps in its implementation, they are (1) learning starts from essential questions. Questions must be answered by doing activities; (2) designing project activity steps; (3) making a schedule in completing the project; (4) Monitoring project developments and student activities; (5) assessing and conducting discussions on project achievements and student activities; (6) evaluation and reflection. At the end of the project, students will present the project results and discuss to obtain new findings (new inquiry) as answers to questions and problems posed at the beginning of learning.

The technique of collecting data on creative thinking skills is by using a written test and then analyzing creative thinking skills based on indicators of creative thinking abilities. Of the 20 questions tested, 17 questions were declared valid with reliability of 0.706. Of the 17 questions that were declared valid, 10 questions were chosen that represent each indicator of the fractional material. The validity of the research instrument was tested with Pearson's product-moment correlation test and the reliability test with Croncbach's Alpha. After testing the research instrument, then the instrument that is declared valid and reliable is used for research. After the control and experimental classes were given treatment, a creative thinking ability test was conducted. The research data were analyzed by an independent sample t-test. The test was carried out after the prerequisites for the research data were carried out, namely normality and homogeneity tests.

RESULTS

The experimental class was treated with STEM-based PBL learning while the control class was given PBL learning treatment. After being treated, descriptive statistical data from the two classes were obtained as follows:

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Table 1. Research Result Data

	Class	N	mean	Std. Deviation	Std. Error Mean
Math score	Experiment	33	80.24	8.617	1,500
	Control	32	72.94	11.862	2,097

The number of samples of the experimental class is 33 and the control class is 32. The average of the experimental class is 80.24 and the average of the control class is 72.94. To test the similarity of the two averages between the experimental and control groups, a t-test was performed with the condition that both groups of data were normally distributed and homogeneous. The following are the results of normality testing of the experimental and control classes using the Kolmogorov-Smirnov IBM SPSS 25 test.

Table 2. Normality Test One-Sample Kolmogorov-Smirnov Test

		Math score
N		65
Normal Parameters, b	mean	76.65
	Std. Deviation	10,901
Most Extreme Differences	Absolute	.098
	Positive	.098
	negative	-.071
Test Statistics		.098
Asymp. Sig. (2-tailed)		.197c

Based on the results of calculations with SPSS, the significance value for the normality test for the two groups of experimental and control data groups was 0.197 > 0.05. So it can be concluded that data from the test results of students' creative thinking skills in the experimental class and control class are normally distributed. After being declared normal, it is continued with the homogeneity test as a prerequisite test before carrying out the t-test. The results of the homogeneity test are shown in table 3 below:

Table 3. Homogeneity Test Results

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		Levene Statistics	df1	df2	Sig.
Math score	Based on Mean	1,702	1	63	.197
	Based on Median	1.007	1	63	.319
	Based on Median and with adjusted df	1.007	1	50,444	.320
	Based on trimmed mean	1,800	1	63	.185

Based on table 3, it can be seen that the significance value for the homogeneity test of the two groups of experimental and control data is 0.197 > 0.05 so it can be concluded that the two groups of data come from the same variance or they are homogeneous. After the prerequisite test was carried out, and the data was declared normal and homogeneous, it was continued with the independent sample t-test to answer the research hypothesis. The t-test was carried out with the help of IBM SPSS 25 with the following output:

Table 4. Results of Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Math score	Equal variances assumed	1,702	.197	2.847	63	.006	7.305	2,566	2.178	12,432
	Equal variances not assumed			2,833	56.509	.006	7.305	2,578	2,141	12,469

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Based on the independent sample t-test output above, it can be seen that the significance value is 0.006 <0.05. This means that Ho is rejected and Ha is accepted. So it can be concluded that there is an effect of the STEM-based PBL learning model on creative thinking skills in fifth-grade elementary school learning.

DISCUSSION

STEM-based project-based learning research needs to be done as a learning innovation in welcoming the 5.0 industrial revolution. Research related to STEM is not the first time research has been conducted. Previously, education observers had done a lot of this research. The results of Carlisle and Weaver's research (2018) conclude that the implementation of the STEM approach can increase students' learning motivation. By applying the STEM approach in learning, students can complete the given project on their own accord. This has an impact on increasing the learning independence of students (Capraro, et al, 2016). In addition, implementing STEM-based learning can indirectly train students in integrating science, technology, engineering, and mathematics in problem solving and theoretical concepts with the real world. Creative thinking skills can be developed with the mathematical aspects of the STEM approach. In mathematical concepts that include logic and reasoning can train students to think logically and creatively. Based on these facts, the researcher believes that the STEM-based PBL learning model implemented in mathematics learning can improve students' creative thinking skills.

In this study, the STEM-based PBL learning model used mathematics educational games as the implementation of technology in learning. The game is given at the beginning of learning and students are asked to solve puzzles in the games. Students collaborate with their group members to complete challenges as projects in learning. This is very motivating for students in learning. Based on the results of observations during the learning process, students looked enthusiastic in participating in learning and completing projects. This indirectly proves that by applying the STEM-based PBL model, students are motivated to participate in learning. The research results by Nurfaadhilah & Zubaidah (2018) conclude that there was an increase in mathematics

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learning outcomes by applying similar learning. In line with this research, Margot, KC & Kettler, T (2019) stated that the application of STEM in mathematics learning can increase students' interest in learning.

Nadelson, L. S, et al (2013) also conducted STEM research in elementary schools. In their research, STEM is implemented with an inquiry learning model. STEM-based learning can train students to find learning concepts independently. This research was also conducted in elementary schools which differentiated the learning model used. In this study, STEM-based PBL affects students' creative thinking.

Mathematics learning can optimize students' creative thinking skills (Swanewi, 2019). Creative thinking skills train students to be able to find various solutions to the contextual problems they encounter. Students can find new ideas as solutions and can find solutions from other points of view. This kind of ability is very important to be developed as a 21st-century competency. Model The results of this study have supported the research hypothesis that STEM-based PBL learning has a significant effect on improving students' creative thinking skills. In addition, implementing STEM-based PBL can motivate students in learning mathematics. Chesky & Wolfmeyer (2015) stated that by implementing STEM learning, mathematics learning outcomes can be increased. Internal and external factors that affect mathematics learning outcomes can be maximized by implementing STEM-based CTL learning.

CONCLUSION

Based on the analysis of research data, it can be concluded that there is an effect of the STEM-based PBL (Project-based Learning) learning model on students' creative thinking skills in elementary school fifth-grade mathematics learning. The STEM-based PBL learning model can be implemented in elementary mathematics learning. The STEM-based PBL learning model is recommended for elementary school teachers to apply the learning model to mathematics learning.

Suggestions for further researchers are expected to be able to conduct similar research for other elementary and secondary learning. In addition, based on observations during the learning process, students looked very enthusiastic in participating in learning. It is hoped that further researchers can examine the effect of the STEM-based PBL learning model on students' learning motivation.

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THE LEARNING INNOVATION OF ART PERFORMANCE DEVELOPMENT COURSES OF PGSD STUDENTS' IN UNP KEDIRI IN CALON ARANG STORY

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Abstract: This study primarily conducted to find out the learning innovation of art performance development of PGSD students of UNP Kediri in Calon Arang story. This article is the result of qualitative study by art performance approach, by using ethnography method, by focusing on art performance creator which is the students. The data collected were gained by doing an observation, interview, a literature research, and document study. The learning goal of art performance at campus is not only interpreted as creating the students to be the actors, but also focused on developing skill potential and knowledge, and processing students creativity in creating art performance.

Keywords: learning innovation, art performance development, creativity.

INTRODUCTION

Students are not only who are sitting on the college bench and not only following the administrative requirements of students. But a student also has a role and contribution in improving human resources. PGSD UNP Kediri students are printed to be excellent educator candidates. The hallmark of students who graduate from the PGSD UNP Kediri study program is that they have excellent inclusive education, integrated thematic learning, arts, Javanese language, and scouting. One of the main subjects for the PGSD UNP Kediri study program is the art course. Art education has a role in the personal formation of students who are harmonious between logic, ethics, aesthetic and artistic sense in developing creativity, and in growing awareness and ability to appreciate cultural diversity (Masunah, 2004:123)

The development of art education, through Indonesian culture, requires the realization of the ideals of Indonesian education to become a society that is intellectually, emotionally, ethically, and aesthetically intelligent to become the nation's successor who is educated and has a civilized attitude. By being oriented to

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the art value in the development of learning based on Indonesian culture, it can become a commitment to maintain and preserve art in contributing to national culture.

The purpose of art education for elementary school children is to develop cognitive, affective, and psychomotor aspects. Like Trianingsih's opinion, the main principle of elementary school children's education is referring to the development of their characteristics which are starting to become clear and have uniqueness from various aspects. including developments in cognitive, psychosocial, moral, physical, and motor aspects (Trianingsih, 2018)

One of the problems in the field is that not all children can go through the development process well. Children's behavioral problems can arise in physical, cognitive, and language development. Especially in the realm of emotional social development, and the development of children's character (Hayati, 2016: 85).

To realize a creative personality cannot be separated from the development factor of the child's self-concept. The determining factor in the successful development of each child is seen from the aspect of self-concept. The distinctive nature of the individual that distinguishes one from another is called the self-concept (Sari, 2020:45).

Some of the concepts of art education that ever existed include: The Reform Movement is an effort to reform in the field of art education concepts that prioritizes freedom of expression as a way to provide opportunities for students to develop their abilities. This movement aims to mature students not only in intellectual terms but also wants children to learn from active actions through artistic activities, meaning that children can learn well and get "lessons" from what they have experienced themselves, not only through stories. , theory or lecture only, this learning concept moves from constructivism learning theory which encourages students to find and solve problems independently (Irawan, 2020)

The tasks of PGSD students who are elementary school teachers candidates are required to master five main subjects (science, social studies, Indonesian, mathematics, and civic education), besides that they are also required to have standard competencies in the arts and culture that will be given to students. In art learning, students can explore their creativity, with the provision or direction of the teacher according to the Semester Learning Plan (RPS) which is given theoretically first as a

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basis for students to be applied in practice. So in the course entitled Performing Arts Development taken at level 3 as for compulsory subjects, students are required to develop their potential skills, knowledge, and creativity in several branches of arts, they are Dance, Music, Theater/Drama, and Visual Arts.

Art learning is a study that provides opportunities to develop a sense of beauty, experience, and appreciation so that the beauty experienced can provide awareness to students by experiencing and living it. Following the opinion expressed by Sujamto that something that attracts students' attention, will greatly affect the formation of students' mindsets after becoming human adults. Likewise, the inculcation of values or character through various ways is most effective if it starts from an early age, from teenager to adult. (Sujamto 1992: 98).

Arts and culture education and skills have a role in the formation of a harmonious personality of students by paying attention to the needs of children in achieving multi-intelligence consisting of intrapersonal, interpersonal, visual-spatial, musical, linguistic, logical-mathematical, naturalist intelligence as well as adversity intelligence, creativity, spiritual and moral as well as emotional (Mansyur, 2008:61).

Problems encountered related to art education include, among other things, that it is rare to find alternative literacy in art forms for elementary school students based on their local culture (a problem in former Karisedinan Kediri schools), whereas if the art products are nuanced with local cultures (Wahyudi, 2021:2).

PGSD students who are prospective teachers are required to hone themselves to become excellent teachers, following Suhaya's statement that teachers who are one of the components in the learning system are required to be creative in carrying out their duties as a teacher, so that the learning process will be more effective and directed which will later be easy to achieve the goals of learning in this case student achievement will be further increased by the creativity of a teacher both in managing learning and in dealing with students (Suhaya, 2016:14).

Students in art learning need to be provided with provisions to be able to practice expression in their creativity in the field of art which does not only focus on theory alone, but students can experience directly the creative process in creating a performance. Following Sunarto's opinion that creativity in art education is characterized by the ability to master materials, concepts, and work techniques so that

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they find works that are different from others. Creative itself is the basis for a person to cultivate himself always in a dynamic position. Therefore, touches to grow new ideas are always used as the first step by motivating and stimulating(Sunarto, 2018: 108)

Likewise, according to Setiawan, creativity is "the ability to create or produce new works of art armed with the skills and imagination possessed". Thus, the notion of "performing arts creativity" in the context of this paper is creating a new type of performing arts, which is a collaboration of elements of traditional performing arts and new creations of performing arts, a collaboration of two or more different types of performing arts, and making changes to the appearance to suit contemporary needs (Setiawan, 2016:4). This opinion is the same as what we have done in the lecture process by combining or collaborating three different types of performing arts (Drama, Music, and Theatre) into one performance.

The creative process carried out is an innovation in the learning process to attract students' interest in the Performing Arts Development course. The definition of innovation is "doing new things, ideas, or ways to better introduce, attract interest, and develop an art" (Setiawan, 2016: 4). A special strategy in growing student interest is an innovation in learning because art courses are subjects that are closely related to talents and interests.

Another opinion expressed by Hasanah (2020:163) reveals that creativity is "an idea or new thought, strategy, understanding or new model that is actualized through a work, and then used in life." Creative individuals or groups will always be needed by the environment wherever they are because they can create and contribute to the environment so that they can create continuous change.

The final task of the performing arts development course is for students to be able to organize the results of their creativity in a performance presentation that includes several branches of art in one complete performance presentation. Meanwhile, the purpose of this research is to provide students with an understanding of the innovative forms of learning for performing arts development for PGSD UNP KEDIRI students in the story of Calon Arang. The results of this study are expected to be able to contribute to the learning of the Performing Arts Development course.

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METHOD

This research is qualitative research with a performing arts approach, using ethnographic methods and focusing on the creation of performing arts. Qualitative methods take advantage of the way of interpretation by presenting it in the form of a description (Ratna, 2009: 46). The researcher aims to describe the form of performing arts presented in a description through the interpretation of the creative process of artworks phenomenon that occurred in the field during the creation of the PGSD Unp Kediri Student Show in the Story of Calon Arang. Interview results were collected, interpreted, and analyzed according to research needs using interpretation theory (Poespoprodjo, 1987) as a surgical analytical tool. The interpretation process includes three stages, they are (1) saying (discussing or describing in a scientific language that is straightforward and clear); (2) Explain based on the reality of the findings in the above discussion; and (3) translating from the correlations that are built from the description of the object, its meaning, function and the meaning it gets.

RESULTS

1. Performing Arts Learning Development

Students determined the chosen source of footing, it is the Calon Arang folklore to be reinterpreted or packaged into an interesting simple show. The performing arts drama entitled Calon Arang can certainly develop the potential of PGSD students in the arts. In this context, students are brought into the aesthetic dimension, so that there is a strengthening of art learning development. They experienced firsthand how the process until the performance of the Calon Arang drama show, in which the object of study related to the concept of knowledge, was then transformed into action. In the sense that students can develop and do it according to the plot that has been made and play it to the fullest.

a. Script Making

The initial step taken by students as a basis is to interpret or develop a script related to the source of the story of Calon Arang obtained. In a show in which there is also an element of drama according to Astriyana Drama always follows the plot structure listed. Every scriptwriting will imagine there is a story journey, there are themes, values that are instilled, and so on (Astriyana, 2019: 2). It is very important to write the script at the

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beginning because it will greatly affect the structure of the show that is created. From the script that has been made, it is continued by making dialogues and dividing the scene according to a predetermined duration of no more than 60 minutes.

The story of Calon Arang is a folk tale written in lontar and maintained in oral tradition, openly condemning Calon Arang as an evil widow who was a tease. In a remote village named Girah lived a widow named Calon Arang. She had a very beautiful daughter named Ratna Manggali. Thanks to her beauty, Ratna Manggali managed to attract the village youth, but unfortunately, they did not dare to ask for a proposal because Calon Arang was known as an evil widow who liked to spread eggs. From the opinion of the residents, a label emerged that Ratna Manggali was a woman who did not sell well. Hearing the rumors, Calon Arang was angry and complained to all the residents of Girah Village. King Airlangga then intervened and ordered Mpu Baradah to kill Calon Arang who was considered the ringleader of the chaos that occurred in Girah Village. Candidate Charcoal also died at the hands of Mpu Baradah after being reincarnated. The emergence of various genres that retell the story of Calon Arang then gave birth to various new interpretations of the figure of Calon Arang itself (https://indonesiakaya.com/library-indonesia/calon-arang- Simbol-perlawanan-kaum-perempuan/). For example, the PGSD UNP Kediri study program students reinterpreted Calon Arang's story into a performance presentation.

The second step is that students are given the freedom by the teacher to choose their respective responsibilities according to their potential, this exemption is adjusted to the needs of the performance because in the presentation of the show it is not only the actor who is the main focus. In addition to actors, the supporting role of the show in this case is managerial in the show also needs to be formed. In the division of tasks related to the needs of a show, there are several options:

- Performance Section: This section is in charge of performing on stage (Director, Actor, Dancer, Musician)
- Equipment Section: Makeup, Artistic, Lighting and Sound system
- Performance Management: Stage Manager, Production Lead, Secretary, Treasurer, Publication, and Documentation

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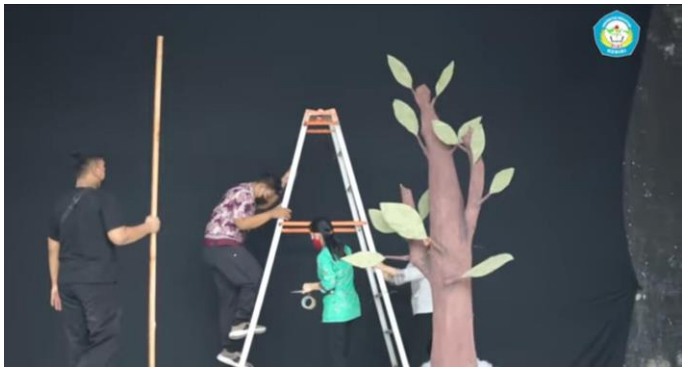

Figure 1. Artistic Section

Figure 2. Makeup and Clothing Section

2. Creativity in Drama Show

After students choose a section that suits their respective abilities, students continue the creative process by using a script that is made according to the responsibilities of each student. LTSIN (Herdian, 2010 [online]) stated that a person's idea of creative thinking has at least one of the characteristics of: the idea that did not exist before; already somewhere else he just doesn't know; it finds a new process for doing something; it applies existing processes to different areas. From these things, we can categorize them into two things, new ideas can also be called innovations, both pure innovations (which have not existed before) and new ideas in the form of improvements to existing ones. (Wiarsih, 2017:14). The purpose of the creative process in this course is to find ideas for creative thinking and find new processes to do something.

Another opinion said that the creative learning process is basically to develop various alternative thoughts or ways to overcome various problems according to what is in their minds. Munandar (1999: 21) suggested that the creative process includes

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four stages, they are (1) preparation; (2) incubation; (3) illumination; (4) verification. Munandar (Muhammad, 2010: 182) also mentions the characteristics of creativity, namely fluency, flexibility, originality, elaboration, or detail.

Before studying drama, students must have the ability to analyze material about drama, both about scripts, characterizations, and so on. In the end, students can act out dramas through performances. Without staging, drama is considered imperfect. (Mahendra, 2017:3). Therefore, the lecturer provides provisions or directions to students following the division of tasks, because it is still during the COVID-19 pandemic, the practical learning process system is combined online using google meet, which is an application that can be used remotely without meeting or face-to-face, while directly carried out in turns not simultaneously to reduce crowding activities.

The exercises are carried out separately, each group led by a coordinator, so that everything runs smoothly together. Lecturers involve students who are members of the Dance and Karawitan Student Activity Unit to assist in the practice process and if there are students experiencing difficulties or confusion in the process. In each group, a coordinator is formed who is responsible for making exercise schedules, student attendance, and recording the activities carried out by each student from their activities (giving ideas, opinions/suggestions, doing assignments well).

After the independent training process was carried out by each group, then a joint exercise was carried out between actors, dancers, musicians commanded by the director. Combined exercises are performed for each scene. The director is in charge of combining and adjusting the performance of each scene between actors, dancers, and musicians. After all the scenes are finished, then an evaluation is carried out.

After the show has been worked on from the beginning to the end, it is continued with the performance of the show which is directly commanded by the production leader starting from the implementation and needs of the elements of the show which are carried out virtually. The performances are carried out in addition to being used as material in the Final Semester Examination of the Performing Arts Development Course, it is also used as a place to show students' creativity as a result of the creative process that has been carried out.

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Figure 3. Drama Staging of Calon Arang

DISCUSSION

Based on the research results that have been done art education from time to time always develops. The experience gained by students in the creative process can make them superior quality educators because learning art for elementary school children is also the responsibility of the classroom teacher. It's the same as what Soetopo said that as classroom teachers, elementary school teachers must be able to teach all subjects in elementary school, according to the curriculum, except religious education and physical education, sports, and health (PJOK). Even if forced, the subjects of religious education and PJOK must be able to be handled by classroom teachers when these two fields are not available. It is very ironic and concerning when there are teachers who teach in elementary schools who do not master all subjects outside of religious education and PJOK. It is not wrong if some PGSD and PAUD students when asked to tell their art experiences revealed that they were not rich in artistic experiences while in elementary school. (Soetopo, 2015:29)

Innovations in art education continue to be developed according to the era, therefore the lecture process for the Performing Arts Development for PGSD UNP Kediri students, the lecturers provide an experience in the creative process for students to create a performance consisting of several branches of art (Dance, Music, Theater and Fine Arts) packaged become one show by choosing the source of the story from folklore, fairy tales, legends, and history related to local wisdom or Indonesian culture. The selected stories are used as a stepping stone in making student performances.

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Calon Arang's script which was used as a basis for cultivation was presented from the many thoughts of students in one class which were then put together, followed by the presentation of having hopes that the future could guide the nation's children to become a golden generation who loves culture. The performance of the work of PGSD UNP Kediri students in the story "Calon Arang" can be appreciated on the youtube linkhttps://m.youtube.com/watch?v=41_cnw-qFcQ&t=5s

The conclusion that we can draw as elementary school teachers candidates who are of superior quality, then we as educators need to provide the right provisions for students. When students go into the field later, they are ready with the provisions that have been given while sitting on the lecture bench, because a teacher who is one of the components in the learning system is required to be creative in carrying out his duties as a teacher, so that the learning process will be more effective and efficient directed learning which will be easy to achieve the goals learning, in this case, student achievement will be further increased by the creativity of a teacher both in managing learning and in dealing with students

CONCLUSION

From the research conducted, it can be concluded that Elementary School Teacher Education (PGSD) students need to develop creativity, skills, knowledge from performing activities on stage through art learning activities. For students, performance is learning while displaying potential, guided by instructors following their field of expertise. PGSD students learn dance, drama, music, and everything related to Calon Arang's story to cultivate their creativity in preparing performances at the end of the lesson for final semester grades. The purpose of learning the performing arts on campus is not merely defined as forming students into actors but rather focuses on developing knowledge, creativity, personality, and skills, combined with physical development, mental and emotional students. The learning of performing arts for students has been carefully prepared and requires a relatively short period. Even though it was limited during the Covid-19 pandemic, it still ran and was carried out smoothly. Through the drama performance of Calon Arang, the players can express their impressions and experiences from the world around them.

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