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STEAM-PjBL Based Learning Activities: Strategies to Improve Environmental Awareness

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Abstract

STEAM-PjBL is a learning model that integrates approaches STEAM (Science, Technology, Engineering, Arts, and Mathematics) with project-based learning to solve real-world problems. This learning model theoretically has the potential to influence students' environmental awareness. Low student awareness of the environment is a problem that is still often found in the field. This study aims to determine the effect of the STEAM-PjBL learning model in improving students' environmental awareness in elementary schools. This research is an experimental research type with a Pre-Experimental Design. The research subjects were 16 sixth-grade students of SDN Jambe, Kapanewon Wonosari Gunungkidul in the 2024/2025 Academic Year. The research design was One Group Pretest-Posttest Design, namely experimental research carried out on one group. Which measured before treatment (pretest) and after treatment (posttest). Data collection techniques used observation and questionnaires with a total of 20 question items. Data analysis used descriptive and inferential analysis techniques. The results of the study showed that the hypothesis test of students' concern for the environment using the dependent t test obtained a two-sided significance value of p <0.001, meaning there was a difference in the average value of students' environmental concern attitudes before and after the use of the STEAM-PjBL learning model. From the results of the study, it can be concluded that learning using the STEAM-PjBL model has a positive influence in increasing environmental concern attitudes for students at the elementary school level.

INTRODUCTION

The waste problem is becoming an increasingly pressing global issue. Along with population growth and increased industrial activity, waste production continues to increase significantly. This increase in waste production, not balanced with effective management, causes various environmental problems. As a result, waste accumulates in various locations, polluting the environment and threatening human health. Improper waste management also causes ecosystem damage, climate change, and significant economic losses. Data from the Ministry of Environment's National Waste Management System website shows that waste generation in 2023 reached 38,649,897.78 tons per year. Of this waste production, 62.2% was managed, while the remaining 37.8% remained unmanaged.

One of the causes of waste problems from a social perspective is the mental attitude of the community. This can be seen from the still low level of environmental awareness. Pangsuma & Surtikanti (2024) states that environmental awareness refers to actions, behaviours and decisions that affect the environment. Environmental awareness aims to preserve the environment. An attitude of environmental awareness should be instilled as early as possible so that everyone has self-awareness of environmental sustainability. It is also hoped that this attitude of environmental awareness will be internalized into a positive character within students. According to Marasabessy et al (2023), environmental awareness is an individual's attitude to improve and manage the environment properly and beneficially, so that it can be enjoyed sustainably without damaging the environment, as well as participating in maintaining and preserving it for sustainable benefits. However, it is very unfortunate that the low level of environmental awareness is still experienced by the majority of students today.

The low level of environmental awareness can be seen from the fact that many students litter, inorganic waste is found scattered throughout the classroom during the learning process, and graffiti is found on chairs and walls. This habit arises from the low level of environmental awareness among students (Arofah, 2021). Ika & Ratnawati (2024) also conveyed a similar sentiment, stating that this lack of concern among students results in low self-awareness of environmental sustainability, evidenced by students' lack of responsibility, such as failing to fulfill their obligations to be on class duty according to the duty schedule, participating in class community service, and conducting ant operations after flag ceremonies or in class.

The low level of environmental awareness was also found in the field, the results of observations conducted on students in Cluster 7 Kapanewon Wonosari also showed that student awareness through environmental awareness, especially in waste management, was still low. Observations through questionnaires showed that data in the form of the percentage of student awareness in disposing of waste by sorting waste according to its type had only reached 46.51%. Meanwhile, the

percentage of students who already knew how to recycle waste correctly had only reached 43.02%. Many students still manage waste by burning waste, which of course will also have a negative impact, namely air pollution.

Efforts to address environmental issues can be achieved by instilling a caring attitude, which can begin as early as possible through school education. The Minister of National Education and the Minister of Environment have agreed to give schools a role in fostering a healthy environmental culture by coordinating efforts to address environmental issues through education (J. Nisa et al., 2020). Instilling a caring attitude can be achieved through environmentally conscious learning, with the goal of raising students' awareness of the importance of caring for nature and the environment around them.

Schools, as educational institutions, can be effective places to instill environmental awareness. One of the government's efforts to raise environmental awareness is the Adiwiyata school program. The implementation of Adiwiyata schools is expected to address several environmental issues early on through the school system. Through this program, schools will encourage students' habits and behaviors to always care for the surrounding environment by instilling environmental awareness from an early age through routine habits, spontaneous habituation activities, exemplary habituation activities, conditioning, school culture, and environmental health (Naziyah et al., 2020). The second effort is through character education, which can be implemented through intracurricular, co-curricular, or extracurricular activities.

One learning activity that can be carried out in schools to foster an environmentally conscious attitude is the strengthening of the Pancasila student profile project (P5). The Pancasila student profile is the character and abilities built daily and brought to life in each individual student through the culture of the educational unit, intracurricular learning, the Pancasila student profile strengthening project, and extracurricular activities (Educational Standards, Curriculum, and Assessment Agency, Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia, 2022). This learning can be carried out through project-based co-curricular activities designed to strengthen efforts to achieve competencies and character according to the Pancasila student profile. P5 involves interdisciplinary learning to pay attention to and find solutions to problems surrounding the environment. Environmental problems cannot be separated technically alone, but what is more important is the solution that can change the mentality and awareness of environmental management (Budiman, 2022)

In line with the pressing issue of waste, P5 also provides opportunities for students to be creative in solving these problems through the themes provided. One of the themes that can be taken in P5 activities is a sustainable lifestyle. Through this theme, students will be guided to understand the impact of human activities on the

continuity of life in the world and the surrounding environment, as well as build awareness to be friendly and care for the environment.

Various studies on P5 learning to increase students' awareness of the environment have been conducted, including through waste recycling (Romanza & Saputro, 2025); through tree planting programmes (Holil et al, 2023); and through ecobrick and eco enzyme projects (Sari et al, 2025). However, there are still few projects that have been developed by integrating various disciplines. Therefore, in this study, P5 will be carried out by integrating project-based learning with an interdisciplinary approach. (Gap research)Environmental awareness indicators that can be developed in schools include those mentioned by Irfianti, et al (2016), namely: 1) Environmental care, 2) Reduction in plastic use, 3) Waste management according to type, and 4) Utilisation of used items. In addition, students are also taught to study the potential for sustainability crises and develop readiness to face and mitigate them.

STEAM-PjBL is one of the learning approaches that can be used in P5 learning activities with the aim of improving students' environmental awareness. STEAM PjBL combines the STEAM method and project-based learning methodology (Anjarwati et al., 2022). This learning model integrates the STEAM (Science, Technology, Engineering, Art, and Mathematics) approach with a project-based learning model known as Project-based learning. Safriana, et al(2022) also explained that the PjBL learning model with the STEAM approach is a learning model in which there is a learning process that combines project learning using the Science, Technology, Engineering, Art, and Mathematics approach.

STEAM was formed in 1990 by the National Science Foundation, representing the combined thoughts and decisions of scientists, technologists, engineers, and mathematicians to create a more influential force (Riyanto, et al., 2021). STEAM (Science, Technology, Engineering, Art and Mathematics) is a development of STEM education by adding elements of art (Art) in its learning activities. Najamuddin, et al. (2022) explain that STEAM is a learning strategy that unites the five disciplines of science, technology, engineering, art, and mathematics. This approach brings students closer to their surroundings by connecting learning in an authentic context, which will later bridge schools to prepare students to be able to thrive in the world of work and apply knowledge in society to develop STEAM (Atmojo et al., 2020). Learning with the STEAM approach actively involves students, involves practical activities, and is directed at real situations (Nurwulan, 2020). Several previous studies have shown that both STEAM and STEM approaches have positive effects on students, including improving critical, creative, and independent thinking skills in solving problems (Albi et al., 2021; Farwati et al., 2021; Khotimah et al., 2021).

*Project-based learning*According to Ayukanti (2017), it has a theoretical basis that is in accordance with the constructivist learning theory that emphasizes the

idea of students to build knowledge based on their experiences. Constructivism gives learners independence to plan and implement their own learning or collaborate under the coordination of the teacher (Purnomo & Ilyas, 2019). This model will also direct students to work independently, both individually and in groups to produce a project that originates from contextual problems or everyday life (Vebrianto, et al., 2021). Project-based learning will improve students' thinking skills towards metacognition such as critical thinking about the project to be worked on through problems encountered by students (Purnomo & Ilyas, 2019).

Laboy Rush stated that STEAM-PjBL has 5 syntaxes, namely: 1) reflection, 2) research, 3) discovery, 4) application, 5) communication (Adriyawati et al., 2020). In the reflection stage, students are brought into the context of the problem and try to find inspiration to start investigating/conducting investigations. The research stage is carried out by facilitating students to take the form of research, researching scientific concepts, selecting readings or gathering information from relevant sources. In the discovery stage, students begin to discover the learning process and find project steps as a solution to the problem. In the application stage, students are taught to model a problem solving, test the designed model. Finally, the communication stage, gives students the opportunity to present the model and solution. This step is to develop communication and collaboration skills as well as the ability to receive and apply constructive feedback.

STEAM-PjBL learning can provide opportunities for students to think critically and logically in generating ideas and concepts when solving a problem through practical activities (Cahyani & Sulastri, 2021). The STEAM-PjBL approach begins by presenting a real-life problem so that students can be involved in providing their ideas and concepts to overcome it and provide students with opportunities to carry out activities according to the solutions they find (Fitriyah & Ramadani, 2021). According to Saban et al. (2023), the integrated PjBL learning model and STEAM approach can also develop students' critical thinking skills to solve problems based on STEAM components and can increase collaborative problem-solving in groups. Through this PjBL learning model, students are also trained in identifying and analyzing problems and searching for and sorting information according to the topic (Anindayati & Wahyudi, 2020). STEAM-PjBL can help increase students' enthusiasm in participating in learning because learning is student-centered, contextual, comprehensive, and holistic (Suryaningsih et al., 2022).

The STEAM-PjBL approach in P5 learning activities can be one solution to increase students' environmental awareness. P5 learning that adopts the STEAM-PjBL model offers innovation compared to existing learning models. In conventional learning, students' learning experiences are often not contextual to provide them with real experiences in understanding and internalising environmental values deeply. Students find it more difficult to relate learning materials to real situations in their surroundings, resulting in less than optimal awareness. The STEAM-PjBL

model presents cross-disciplinary integration with a collaborative project approach based on digital technology, providing a dynamic, creative, contextual, and meaningful learning experience, as well as improving 21st-century skills that are lacking in conventional learning models. Therefore, this model can be an alternative educational model that is appropriate and responsive to the needs of the current global and digital era. (novelty)

The P5 STEAM-PjBL-based learning activities in this study were conducted by presenting students with a problem, namely waste management, which they had to solve by creating a project as a solution to the waste problem. The project carried out is connected to mathematical concepts, namely on the topic of spatial construction. Projects as a solution to the waste problem are carried out by recycling waste. According to Defitri (2022), waste recycling is the activity of reprocessing waste or disposable products into new, useful products.

METHODS

This research is an experimental research with a pre-experimental design. The sample consisted of all 6th grade students at SDN Jambe Kapanewon Wonosari. The research design used a One Group Pretest-Posttest Design. This design includes a pretest before the treatment and a posttest after the treatment. The treatment used was a learning activity using the STEAM-PjBL model.

Table 1. One Group Pretest-Posttest Design Scheme

Pretest	Treatment	Posttest
O1	X	O2

Information:

O1 : Pretest, initial test before being given treatment

O2 : Posttest, final test after being given treatment

X : The treatment applied uses the STEAM-PjBL model

Data collection techniques used observation and questionnaires. Observations to determine the syntax of STEAM_PjBL took place during learning. Meanwhile, questionnaires were used to measure students' level of environmental awareness. Data collection instruments used were observation sheets and questionnaires.

Data analysis used descriptive analysis to calculate the average score of students' environmental awareness per indicator. Furthermore, parametric analysis used a dependent t-test to measure changes or differences in students' environmental awareness attitudes before and after treatment.

The hypotheses of the research are: Null Hypothesis (H_0), there is no influence of the STEAM-PjBL learning model on students' environmental awareness attitudes and Alternative Hypothesis (H_1), there is an influence of the STEAM-PjBL learning model on students' environmental awareness.

Determination of H_0 accepted or rejected using a significance level of 0.05 (α=5%). If the significance value is > 0.05, then the null hypothesis (H_0) is accepted and the alternative hypothesis (H_1) is rejected.

RESULTS AND DISCUSSION

1. Syntax of the STEAM-PjBL Learning Model

This study uses the STEAM-PjBL model with the aim of forming an attitude of environmental care through strengthening the Pancasila student profile project (P5). STEAM-PjBL is implemented in the classroom through the syntax proposed by Laboy Rush, namely: 1) reflection, 2) research, 3) discovery, 4) application, 5) communication.

The P5 learning that has been carried out using the STEAM-PjBL syntax can be explained as follows: first, the reflection stage, at this stage students are given a contextual problem, namely the problem of waste. Students are invited to observe the condition of waste in Indonesia through video displays. Through facts about waste problems in the field that have a negative impact on the environment, students are guided to be able to investigate waste and solutions to overcome it. This stage is in line with previous research which explains that problems used in project-based learning must be in the form of complex contextual problems (Aránguiz, et al., 2020). The second is the research stage, at this stage students are guided to collect information about waste from relevant sources such as: types of waste, negative impacts of waste, how to process or recycle waste, etc. The third stage is discovery. At this stage, students are guided to find project steps to solve problems. Students begin by designing a project utilizing inorganic waste and then share their ideas with their classmates. The project developed involved creating a Stationery Desk Organizer (SDO), a place for various stationery items that can be placed on a desk to keep them neat, tidy, and easy to find. This stage teaches students to think critically and creatively in solving problems they encounter. This is consistent with previous research that has shown that project-based learning can improve students' problem-solving, critical, and creative thinking skills (Fahrurrozi et al., 2022). The fourth stage is application. In this stage, students create a model/product as a solution to the waste problem and also test the model they designed. Students practice making SDO products from recycled inorganic waste and then test the model they created. The fifth stage, the communication stage, gives students the opportunity to present the SDO models/products they've created as solutions to waste problems. This stage will also help students develop communication and collaboration skills, as well as the ability to receive and apply constructive feedback.

Table 2. Syntax of the STEAM-PjBL in Project

Reflection	*Research*	*Discovery*	*Application*	*Communication*
Watching a show about the garbage problem	Collecting references regarding waste	Designing an inorganic waste utilization project	Making recycled products from inorganic waste	Communicating the results in the form of recycled inorganic waste products

2. Implementation of The STEAM Concept

STEAM will enable students to develop knowledge and skills in science, technology, engineering, art, and mathematics. In P5 learning, students engage in project learning using the STEAM approach, focusing on sustainable lifestyles and recycling inorganic waste. The details of the STEAM approach in learning are as follows:

a. *Science :* students know the types of inorganic waste and can utilize it through the waste recycling process.
b. *Technology:* students are able to utilize digital technology to find references regarding waste and video tutorials on making products from inorganic waste.
c. *Engineering*: students are able to develop appropriate SDO designs based on net concepts and geometric constructions. In addition, in this engineering element, students can also practice using simple technologies such as pencils, rulers, cutters, scissors, and glue in product creation.
d. *Art:* students are able to create products that are not only useful but also have artistic value. The SDO products they create are given an added artistic element, namely by adding a beautiful color combination by attaching colorful straws to the surface.
e. *Mathematics:* students are proficient in taking measurements using a ruler and can apply the concept of nets and the construction of geometric shapes to create SDO.

Table 3. STEAM Elements in Project

Science	*Technology*	*Engineering*	*Art*	*Mathematic*
Knowing the types of waste and recycling inorganic waste	Utilizing digital technology to find information about waste and how to deal with it	Developing SDO designs and using simple technologies	Creating SDO that has artistic/beautiful value	Applying the concepts of measurement, networks and construction of spatial structures in SDO

3. Research result

Learning in P5 uses the STEAM-PjBL model to improve students' environmental awareness. Project-Based Learning is an excellent contextual learning model to implement in the learning process because it helps teachers connect material with real life (Sani et al., 2022). Through this learning, students will better understand phenomena occurring close to them. Collaboration, cooperation, and communication will be evident in the learning process because this approach is carried out in groups.

STEAM-PjBL can also be applied in addressing the increasingly worrying waste problem. It is necessary to foster an attitude of environmental awareness in students so that students are aware of always acting in an environmentally friendly manner. In measuring the attitude of environmental awareness, several main indicators of environmental awareness were used as proposed by Irfianti et al. (2016), namely: 1) Environmental care, 2) Reducing plastic use, 3) Waste management according to its type, and 4) Utilization of used goods. From these indicators, an instrument in the form of a questionnaire was developed with a Likert scale of 1-4 using 20 questions.

This study used a one-group pretest-posttest. To measure students' environmental awareness, a questionnaire was completed before and after learning using the STEAM-PjBL model. The posttest attitude scores for each indicator showed a significant increase. The comparison of the average pretest-posttest scores for each environmental concern indicator can be seen in figure 1.

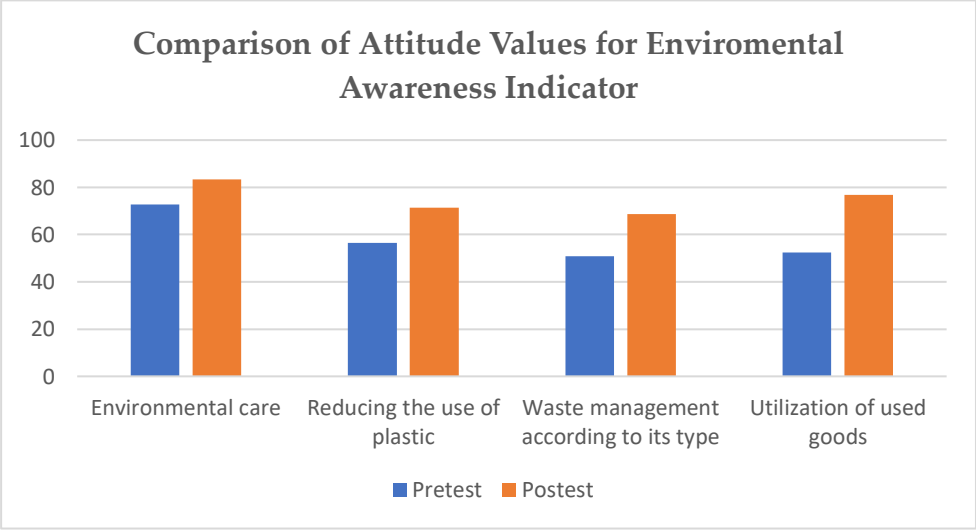

Figure 1. Comparison diagram of students' average pretest-posttest scores for each indicator

The results of the calculation of the average pretest and posttest scores of students' caring attitudes for each indicator showed an increase. In the first indicator, namely regarding environmental care behavior, the pretest score was 73

while the posttest was 83. This indicates an increase in the score of 10 points. The increase in the score on this indicator indicates an increase in students' caring attitudes in caring for the environment such as disposing of trash in its place, picking up scattered trash, maintaining the neatness and cleanliness of the environment, and being actively involved in class duty activities.

The second indicator also showed an increase in pretest and posttest scores. The pretest score was 56 and the posttest score was 71, an increase of 15 points. This increase indicates an increase in student awareness in reducing plastic use, such as reducing single-use plastics and replacing them with other, more environmentally friendly materials. Students also recognized the dangers of single-use plastics, thus increasing their awareness to avoid using plastic beverage bottles as drinking containers and using safer drinking containers such as tumblers.

The third indicator, waste management according to type, increased by 18 points, from a pretest score of 51 to a posttest score of 69. This improvement also indicates increased student awareness of waste management. Students increasingly understand the types of waste and waste sorting, the negative impacts of waste, and proper waste management.

The fourth indicator, the utilization of used goods, increased by 24 points, from a pretest score of 54 to a posttest score of 77. This indicator experienced the highest increase in points. This is certainly inseparable from the implementation of STEAM-PjBL-based learning in recycling inorganic waste into a more useful desktop organizer. The increase in this indicator also shows a significant increase in the utilization of used goods into useful items. Students are increasingly aware of waste recycling, the use of waste to make various kinds of crafts, and are trained to think creatively to utilize waste into more useful items.

In addition to calculating the average value for each indicator, an analysis was also conducted to determine the difference in the average value of students' environmental awareness attitudes before and after learning using STEAM-PjBL. The analysis was conducted using a dependent t-test. Before conducting the t-test, a normality test was first conducted on the data using the Shapiro-Wilk test. This test produced a pretest-posttest significance value of 0.561 and 0.980, both values being greater than 0.05, so it can be said that the data is normally distributed. The normality test table can be seen in Table 4.

Table 4. The Normality Test of Pretest-Posttest Values

	Class	Statistic	Df	Sig.
Result	Pretest	0.954	16	0.561
	Postest	0.985	16	0.980

The data normality test shows that the data is normally distributed and can meet the requirements for a dependent t-test. The results of the dependent t-test

indicate that the two-sided significance p shows a value <0.001. The provisions of the dependent t-test, if the significance value is >0.05, then the null hypothesis (H_0) is accepted and the alternative hypothesis (H_1) is rejected. Because the significance value is <0.05, H_0 is rejected so H_1 is accepted. This means there is a difference in the average value before and after the use of STEAM-PjBL learning. Therefore, from the results of the dependent t-test, it can be concluded that STEAM-PjBL-based learning has an impact on increasing students' caring attitudes. The table of the dependent t-test can be seen in Table 5.

Table 5. The Dependent t-Test of Pretest-Posttest Values

			Significance	
Pair 1 Pretest-Postest	t	df	One-Sided p	Two-Sided p
	-6.261	15	<.001	<.001

The results of the study indicate that the STEAM-PjBL learning model is very appropriate to help students learn to solve a problem through a project by combining various disciplines. This is in line with what was stated by Wittayakhom & Piriyasrawong (2020) who stated that the STEAM approach is the right approach for elementary school students to learn holistically by combining science, technology, engineering, art, and mathematics. These five areas represent a comprehensive pedagogical approach to problem solving through 21st-century learning experiences.

Research also shows that in STEAM-PjBL learning, the STEAM approach can hone and develop students' skills to provide ideas and ideas to become more creative (Hadinugrahaningsih et al, 2017). A similar opinion was conveyed by Albi Angito, et.al, 2021) that project-based learning involves tasks that help students think at a higher and deeper level can help students improve their critical thinking skills by focusing on the environment around them, which focuses on the classroom. Meanwhile, according to Mufida et.al (2020) STEAM learning can direct students in developing critical thinking skills, problem solving skills and collaboration.

The results of the study also showed an increase in students' self-awareness, especially in terms of environmental awareness. This is in line with research conducted by Trent Grundmeyer, et al (2022) that project-based learning has an effect on students' self-awareness, learning will provide students with experiences, namely basic leadership, problem-solving, and communication skills by designing projects to solve authentic problems.

STEAM is an activitiy that develops collaboration skills based on constructivist learning types, where students develop knowledge and understanding through projects. The projects given require students to understand the material being studied and utilize emerging technologies to help discover concepts (idam, et. Al, 2021).Students' understanding of the concept of nets and spatial construction becomes a great idea for designing a project that can be used to

overcome the problem of organic waste. Students can make desktop organizers more easily because they have previously known spatial nets and practiced making spatial structures. This basic knowledge will then develop gradually to form new knowledge. The projects chosen will then help improve students' mastery of new technologies that can help them understand the material and find concepts.

Cognitive, affective, and psychomotor aspects are three aspects that need to be improved and balanced in education (Rosyad, 2019). Limbong et al (2019) stated that 21st century learning is learning that integrates cognitive, affective, and psychomotor aspects. One of the learning that accommodates student skills in the 21st century is the STEAM-PjBL learning model. With regard to that, Ika & Rita (2022) also said that the project-based STEAM-based learning model can be a teacher's choice because the learning model can improve students' cognitive abilities and problem-solving skills. According to the opinions that have been put forward, STEAM-PjBL learning has proven effective in building student knowledge through cognitive, psychomotor, and affective aspects in overcoming waste problems.

The cognitive aspect is built through the syntax of reflection, research, and discovery. Students explore their knowledge to find a project design that is right to help solve the waste problem. At this stage, students will get a lot of additional information that can enrich their knowledge about waste.

Psychomotor aspects are developed through application and communication syntax. After students' knowledge is built comprehensively, students can use their knowledge to create a project as a problem solver. Students' ability in performance will be further trained in this stage such as in measuring and assembling materials and practicing making video tutorials on making desktop organizers. In addition, communication skills are also developed in this learning. After the desktop organizer can be made by students, students then practice presenting their work to get responses and feedback from other students. This communication syntax makes a high contribution to improving one of students' 21st century skills.

The affective aspect can be seen from the emergence of students' awareness of environmental concerns after studying the essence of the learning topic. This aspect can be measured through questionnaires that have been filled out by students during the pretest and posttest. As a result, the factual problems raised about the waste have resulted in real action through project design and helped train students in developing their caring attitudes towards the environment.

This research has proven that STEAM-PjBL can help solve the waste problem. The STEAM-PjBL model provides contextual and meaningful learning, and helps students to hone their concern for the environment. This makes students able to think creatively and take real action participate in tacking the increasingly disturbing waste problem.

CONCLUSION

Based on the analysis of research results and discussion, it is concluded that the application of STEAM-PjBL learning can be used as a strategy to increase students' awareness of the environment. Increased student environmental awareness can occur because students learn to identify, analyze, design, create, and communicate a work from a real problem around them, namely the issue of waste. Increased student environmental awareness is proven when filling out the pretest and posttest questionnaires containing each indicator of environmental awareness. Through the t-test, a significant difference can be seen between the pretest and posttest data. The results of the dependent t-test indicate that the two-sided significance p shows a value <0.001. This means there is a difference in the average value before and after the use of STEAM-PjBL learning. Therefore, it can be concluded that STEAM-PjBL learning can improvestudents' environmental awareness atittudes. Hopefully, the success of implementing STEAM-PjBL activities can positively continue to improve students' learning outcomes and self-awareness sustainably in the future.

This research is still limited in population-sampling, which is still using samples in schools only. Future research can be expanded in scope, by increasing population involvement and sample size. In addition, environmental awareness indicators can also be explored more thoroughly so that the research results are more accurate in representing students' environmental awareness attitudes.

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DISCLOSURE STATEMENT

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