

Analysis of Independent Learning Ability and Environmental Literacy of Fifth Grade Elementary School Students on the Development of Learning Outcomes through the Google Form Application

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Abstract

This study aims to analyze the ability of independent learning and environmental literacy of elementary school students in grade 5 (five) on the development of learning outcomes through the google form application. The research method used in this research is descriptive research method, and data collection techniques through interviews and observations, and the google form application. The instruments used are in the form of questionnaires, observation sheets and evaluation questions containing environmental literacy and learning independence which are presented in google forms. The results of the study show that independent learning abilities can be assessed in several ways, namely students are able to answer questions without being appointed when the teacher asks questions about the material contained in the Google Form application, environmental literacy skills can be assessed from several things including students being able to instill a caring attitude. environment by saving electricity.

Keywords

independent learning ability;
environmental literacy; learning
outcomes



I. Introduction

The Covid-19 pandemic has had an impact on the implementation of learning and learning assessments. Teachers cannot carry out face-to-face meetings in class as well as carry out assessments. Learning during the Covid-19 pandemic did not dampen the enthusiasm of teachers to provide quality educational services for the nation's next generation. Teachers are still trying to innovate in the midst of this pandemic both in conducting learning and assessing students. Along with the development of information and communication technology in this industrial era, it has had a great influence on the teaching and learning process. Responding to the current era of technology, education must be able to adapt to the development of increasingly sophisticated technology with one of its goals, namely to facilitate the implementation of education,

Google Forms or Google Forms is a useful tool to help plan events, send surveys, give students or others quizzes, or easily gather information in an efficient way. Forms can be linked to spreadsheets. If the spread sheet is related to the form, the responses will automatically be sent to the spreadsheet. Otherwise, users can see them on the "Response Summary" page accessible from the Feedback menu. Google Forms is a component of the Google Docs service. The Google Form application is very suitable for students, teachers, lecturers, office employees and professionals who often make online quizzes, forms and surveys. The Google Form feature can be shared with other people openly or specifically to Google account owners with accessibility options, such as: read only (can only read) or editable (can edit documents). Some of the functions of Google Form in the world of education include: 1) Providing online practice/test assignments through website pages, 2)

Collecting other people's opinions through website pages, 3) Collecting various student/teacher data through website pages, 4) Creating online registration forms for schools, 5) Distributing questionnaires to people online (Hamdan Husein Batubara, 2016).

Ease of access to technology can be used by teachers to improve the quality of education. Google Forms is a component of the Google Docs service. This application is perfect for students, teachers, lecturers, office employees and professionals who like to make quizzes, forms and online surveys. Features of Google Forms can be shared publicly or specifically with Google account owners with accessibility options, such as: read only or editable (can edit documents). In addition, Google docs can also be an alternative for people who do not have the funds to buy paid applications to use free programs compared to pirated paid programs such as Microsoft Office (Sesana, 2020).

The issue of environmental damage such as climate change which is increasingly considered a threat by countries has become a hot topic in the study of International Relations in the contemporary era (Prayandana, 2020). Environmental damage arises as a result of climate change, the extinction of natural resources, to environmental damage caused by human activities (Nugroho, 2018). Aspects of the natural environment and political-economic aspects must be considered for sustainable development. However, development that destroys nature without being able to renew will face problems. Destructive nature can no longer provide a proper place and resource support (Abdoellah, 2016).

Literacy has an important role in increasing human resources to have broad insights. Environmental literacy is the ability to understand environmental conditions so that they can maintain and increase environmental conditions (Patrisiana et al., 2020). Environmental literacy can be said as the ability to recognize environmental impacts, identify solutions that occur in the environment and act in an environmentally friendly way (Aini et al., 2020). Literacy skills have an important role to grow in Indonesia. Instilling environmental literacy is very important to do from an early age to shape the character of students (Leksono et al., 2020). Increasing environmental literacy can be done by instilling a caring attitude towards the environment.

The attitude of caring for the environment also contributes significantly to the learning achievement of students. The higher the attitude of caring for the environment applied by students, the better for learning achievement that will be obtained (Widyaningrum & Wicaksono, 2018). Inculcating an attitude of caring for the environment from an early age, will be carried by children into adulthood and children will contribute to preserving the environment, and ideally schools as educational institutions should instill in shaping the character of students with an attitude of caring for the environment. (Rochimah, 2018).

The importance of an environmental care attitude that is instilled from an early age starting at the elementary school level in accordance with government regulations and environmental protection and management laws which is realized through environmental education (PLH) or by implementing the Adi wiyata program in schools with the aim of raising student awareness. to care about the environment and to be wiser towards the environment and always strive to preserve the environment (Gunawan & Guslinda, 2019). The attitude of caring for the environment is an attitude that is manifested in everyday life to preserve, repair and prevent damage and pollution to the environment (Narut & Nardi, 2019).

The attitude of caring for the environment of students is a change in student behavior which is shown by understanding, feeling and a tendency to apply environmental knowledge possessed through actions that have a positive impact on the environment. Such

as keeping the environment clean and trying to prevent bad influences that have the potential to damage the environment. The use of pop-up media will involve students directly so that it will help construct knowledge independently.

Planting environmental literacy in schools must have the support of all school members. The party who plays an important role in inculcating environmental literacy in schools is the principal which is then realized by the teacher through the learning process using appropriate and effective media. So that the material presented can be understood by students well and can be implemented. Therefore, it is necessary to increase literacy and environmental awareness in the community by applying values in treating the environment known as environmental ethics so that there is no prolonged natural damage.

In addition to the importance of increasing literacy in students, growing independent learning in students is also necessary. Students with high learning independence by carrying out high learning responsibilities to improve the quality of learning which will affect the achievement of learning objectives. Independent learning in students demands great responsibility for students so that it influences students to carry out activities that will achieve learning goals (Sahade, 2020). Independent learning is influenced by several factors, such as the environment and family. This is because students who are in a less conducive environment will have an influence on the learning process (Asmar, 2018).

The success of educational goals depends a lot on how the learning process in schools. Meanwhile, the success of the learning process in schools can be illustrated by the achievement of student learning outcomes. Learning outcomes are abilities achieved by students after receiving learning experiences in the learning process (Sudjana, 2010) so that the improvement of learning outcomes needs to be pursued in order to achieve learning objectives. Learning outcomes or learning achievements can be influenced by several factors, including from oneself and from the student's environment. Learning outcomes are influenced by factors that arise from students, namely learning motivation and learning styles, while environmental factors are the school academic environment, teacher leadership during the learning process, and learning intensity. (Sulistiyarini & Sukardi, 2016). Learning can be said as a process of gaining knowledge, student interest is very important in learning and interest also plays an important role in developing students' thinking skills (Kusmaryati & Amertaningrum, 2017).

Students can be said to be successful in learning if students can achieve learning objectives, another very important factor in achieving learning objectives is to use learning media by teachers, media are used as teaching aids, help communicate learning material through tools or media (Pingge, 2018). To foster students' enthusiasm for learning, teachers are required to create more interesting and innovative learning, so as to encourage optimal learning and be able to develop thinking capacity. (Ratnaningsih, 2016).

Based on the results of initial observations that have been carried out by researchers at SD Negeri Sumber Karang Trenggalek and MIM Tumpok Trenggalek, especially class V students. From the results which it was found that students' independent learning was still relatively low where students only relied on the learning provided by the teacher when in class. Then students do not use their free time to study independently and do not use learning media when gaining knowledge. Data were obtained from 34 respondents using a google form questionnaire with an average level of student learning in SD Negeri Sumber Karang Trenggalek with an average of 55% and in MIM Tumpok Trenggalek with an average of 48%. Thus, the independent learning of fifth grade students at the school is still relatively low.

Apart from independent learning variables, the researchers got the results of initial observations on the environmental literacy variable. From the results found, students' environmental literacy is still relatively low with a percentage of 45% at MIM Tumpok Trenggalek and a percentage of 48% at SD Negeri Sumber Karang Trenggalek. With independent learning and low environmental literacy, this affects student learning outcomes.

Based on the problems found regarding learning independence and the environment, it is necessary to develop independent learning and environmental education for students to improve environmental literacy through the google form application as an evaluation tool. Febriasari (2017) states that students who have environmental literacy will behave responsibly towards the environment through knowledge, skills, and awareness of environmental problems, so that environmental literacy plays a role in shaping one's character to care about the environment. In this regard, information is needed regarding environmental literacy of students at MIM Tumpuk Tugu Trenggalek. So, through this research, it can be used as a consideration for the government or concerned to improve students' environmental literacy.

II. Review of Literature

The research method used in this study is a descriptive research method, namely a method that does not provide treatment, manipulation, or change to the sample used so that it does not require a control class or an experimental class (Frankel et al, 2012). several steps are carried out. The research flow is used as a reference or guideline in the research agenda to be carried out so that the author can conduct research in a structured manner and can complete research on time, also so that research can run as expected. The first stage is problem identification, which is the first step in this research. At the stage of identifying the problem, it is intended to be able to understand the problem to be studied,

The second stage is literature study, at this stage the author studies and understands the theories that serve as guidelines and references obtained from various books, journals and also the internet to complete the vocabulary of concepts and theories. The third stage is data collection which is an important stage in the process, because only by getting the right data. Some of the methods used are interviews which are used to find out responses to matters relating to factors that affect the level of knowledge about the environment and its application in working on environmental literacy aimed at several students who are representatives of research subjects and teachers.

Observation is an initial observation in the form of a general exploration of all that is seen, heard, and felt. Researchers observe the environment around the school so that they know the state or condition of the school. The test method is a way of collecting data by giving a number of questions related to environmental literacy to research subjects. The fourth stage is making reports based on research results.

Data collection techniques are a way to obtain data in achieving research objectives. This is in accordance with the opinion(Sugiyono, 2013)Data collection techniques are the most strategic step in research, because the main purpose of research is to obtain data. Another opinion is a process carried out by researchers to uncover or capture phenomena, locations or conditions of researchers in accordance with research.(Ningtiyas et al., 2019). Data collection techniques through interviews and observations, and the google form application.This research data collection was carried out using several instruments consisting of environmental literacy questions in the form of

multiple choice and essays and main questions, questionnaires and class observation sheets.

Success can be measured by a data collection, so it is necessary to make an instrument. (Purwanto, 2016) instrument is "a measuring instrument used to measure in the context of data collection". The instruments used are in the form of questionnaires, observation sheets and evaluation questions containing environmental literacy and learning independence which are presented in google forms.

III. Result and Discussion

3.1 Independent Learning Results

The value of independent learning ability is obtained based on a questionnaire filled out by students. The results of the calculation of the independent learning questionnaire of students are presented in Table 1.

Table 1. Independent Learning Results Table

Ability	Total value	Average	Percentage	Criteria
Independent Learning	1458	38,722	86%	Tall

Based on the table above, the results of independent learning calculations are obtained with a percentage of 84% with high criteria. This shows that independent learning in students after using interactive pop-up multimedia based on science learning gets good results. In addition to the self-assessment questionnaire, learning is based on observations made during the learning process. The results of the calculation of observations on students' independent learning abilities are presented in the table above.

Table 2. Independent Learning Observation Results

Criteria	Total value	Average	Percentage	Criteria
Accuracy and thoroughness	516	17.27	73%	Tall
Neatness and cleanliness	599	18.58	85%	Very high
Delivery systematic	484	15.38	69%	Tall
Courage	616	19.05	87%	Very high
Content clarity	516	16.27	73%	Tall

The results of research on independent learning abilities can be assessed in several ways, namely students are able to answer questions without being appointed when the teacher asks questions about the material contained in the text.google forms. The initiative is to ask the teacher when there is material that they do not understand and students are able to provide a review of the water cycle material that has been taught by the teacher. Through the application of independent learning, students are given autonomy in managing their learning which will lead to independent learning. The learning process that has been carried out by students is learning withgoogle forms appcan provide opportunities for students to be able to practice independent learning because this media can be accessed by each student via a smartphone or computer. These learning activities have actually stimulated and trained the abilities possessed by students. The process of learning to

usegoogle forms app,students are taught to apply environmental literacy skills so that students are able to maintain the environment well in the learning process and in everyday life.

The results of observations made by the teacher during the learning processon accuracy and accuracy get the percentage result of 73% with high criteria. Neatness and cleanliness get a percentage of 85% with very high criteria. Systematics of delivery get a percentage of 69% with high criteria. Courage to get a percentage result of 87% with very high criteria. Clarity of content gets a percentage result of 73% with high criteria. Based on this data, it shows that the results of observations support the results of the questionnaire that has been filled out by students, that learning independence in students gets results with high criteria.Learning independence (self-direction in learning) can be interpreted as the nature and attitudes and abilities of students to carry out learning activities alone or with the help of others based on their own motivation to master a certain competency so that they can be used to solve problems they encounter in the real world.(Handayani et al., 2013).

Students with high learning independence by carrying out high learning responsibilities to improve the quality of learning which will affect the achievement of learning objectives(Sugianto et al., 2020). Independent learning is an ability that must be possessed by students. Doing independent learning that is with the initiative without any invitation or help from others. The principle of independent learning is that students can know when students need help from others or by themselves(Tampubolon, 2020).

3.2 Environmental Literacy Results

The value of environmental literacy ability is obtained based on a questionnaire filled out by students. The results of the calculation of students' environmental literacy questionnaires are presented in the table below:

Table 3. Environmental Literacy Questionnaire Results

Ability	Average	Percentage	Criteria
Environmental Literacy	63.583	84%	Tall

Based on the table above, the results of the calculation of environmental literacy are obtained with a percentage of 84% with high criteria. This shows that environmental literacy in students after using the Google Forms application in learning the material provided gets good results.

The results of research on environmental literacy skills can be judged from several things, namely students are able to instill an attitude of caring for the environment by saving electricity. The attitude of saving electricity is marked by being responsible for all school infrastructure, so that in the future students are able to protect the environment and sustainable development. In addition, the use of water is also an attitude of caring for the environment. The attitude of using water is seen by students not letting water flow when not in use. The behavior of not littering is one of the attitudes in environmental literacy that has been applied by students. Maintain cleanliness and environmental sustainability by taking care of existing plants and not destroying them, and also doing pickets or being responsible for the cleanliness of the classroom. Some of these attitudes show that environmental literacy increases after using the Google Forms application so that students become more concerned about the surrounding environment. This is in line with the statementNasution, (2016:353)By knowing the environmental literacy skills and attitudes

of students towards the environment, they can build a sense of love for the environment and maintain the existence of abundant natural resources in Indonesia.

The teacher response questionnaire was given to the classroom teacher at the school where the research was conducted. The results of the teacher's response as a whole obtained a percentage of 100% with very good criteria, meaning that the teacher gave a very positive response to the google form application developed for the learning process in the classroom. The existence of the Google Form application makes the learning atmosphere in the classroom more independent and improves environmental literacy skills in students. The teacher thinks that by using the Google Form application on the given learning material, it can provide a new learning experience for students. Students tend to actively participate in the learning process carried out using the application.

Responses from students by learning the google form application can provide a new learning experience with media using technology-based learning. This is because students are rarely involved in learning that is more active for students. The google form application received positive responses from students, so this application can be used in the learning process. This is in line with the opinionFebrianti et al., (2015:56)that teaching materials are said to be good, if they get a positive response from students regarding aspects of attractiveness (interesting), the extent to which they can help students (helpful), and how easy it is to be understood by students (understable).

Assessment of learning outcomes is considered complete if it includes cognitive, affective, and psychomotor aspects(Chusniyah et al, 2016). Assessment should be used as a process to measure and determine the level of competency achievement and at the same time to measure the effectiveness of the learning process. Improving learning outcomes can be done through conscious effort systematically and leads to positive change(Astari et al, 2018).

IV. Conclusion

The results of research on independent learning abilities can be assessed in several ways, namely students are able to answer questions without being appointed when the teacher asks questions about the material contained in the google form application. Make lesson notes when the teacher explains the water cycle material. The initiative is to ask the teacher when there is material that they do not understand and students are able to provide a review of the water cycle material that has been taught by the teacher. Through the application of independent learning, students are given autonomy in managing their learning which will lead to independent learning.

The results of research on environmental literacy skills can be assessed from several things, including students are able to instill an attitude of caring for the environment by saving electricity. The attitude of saving electricity is marked by being responsible for all school infrastructure, so that in the future students are able to protect the environment and sustainable development. In addition, the use of water is also an attitude of caring for the environment. The attitude of using water is seen by students not letting water flow when not in use. The behavior of not littering is one of the attitudes in environmental literacy that has been applied by students. Maintain cleanliness and environmental sustainability by taking care of existing plants and not destroying them, and also doing pickets or being responsible for class cleanliness.

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