Building Global Perspective with Interactive Media: A Case Study on Using Quizwhizzer and 3D Media at SDN Krejengan

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Abstract

This research uses a descriptive qualitative approach and involves interviews with teachers as well as the implementation of materials through educational games and 3D media. The results show that although student engagement increased, there were challenges in understanding the material and using technology that affected students' quiz scores. This research aims to enhance students' understanding of global issues, particularly global warming. The results are expected to positively impact education and environmental awareness among the sixth-grade students of SDN Krejengan.

Keywords: implementation, global perspective, global warming, 3D media, quizwhizzer

Introduction

A global perspective is a way of viewing and thinking about an issue, event, or activity from a global standpoint, namely from the perspective of international or world interests. Therefore, our actions and words are also directed towards global needs (Lubis, 2020). A global perspective is a conclusion drawn from the idea that we must live according to global needs. That means we must be global thinkers and local thinkers. (Aránguiz & Sannazzaro, 2024)

Therefore, teaching children that this way of life is part of the world is important. Global Perspective refers to education that focuses more on fostering and developing a sense of civic responsibility, encouraging critical thinking, and preparing students to face global issues (Masaaki, 2020). Citizenship is one of the key components of global perspective education (Amri & Sukmaningrum, 2023). Students must understand citizenship, skills, have the ability to comprehend world politics, and understand citizenship skills in communicating culture and language. Therefore, having global integration can help students develop global competencies that are important for participating on the world stage. Students develop global competencies that are important for participating on the world stage (Akçay et al., 2024). Another theory that

highlights a global perspective is the holistic education theory, which connects individuals with the global community.

In the Longman Dictionary of Contemporary English, "*concern the entire earth*" is a global term. Everything that has a connection to the world that is global or worldwide. Anything discussed here can be a problem, an event, an activity, or even an attitude. (Juliswara & Muryanto, 2022). For example, forest fires produce smoke, a global issue affecting other countries. This harms the world not only in political and governmental life but also in areas related to environmental damage, such as constructing unattractive buildings, air pollution in industrial areas, etc.

Slowly, the environment is becoming polluted, resulting in damage or exposure of the genetic resources of plants and living organisms, which might be one of the most needed things by humans (Driver & Prada, 2024). If this condition worsens, human rights and other aspects of life may also deteriorate. The impact results in a chain of processes that damage the environment and deplete natural resources. Every action must be taken with caution to ensure the environment remains intact. Wise management requires a comprehensive understanding of the currents regarding current environmental issues and the impacts of human disturbances (Zoer'aini, in Rahmayeni 2024). Therefore, the world has a broad meaning, where nations, regions, resources, or societies do not only fight against each other.

Global phenomena result in extreme environmental changes, such as rising temperatures, less predictable weather, and increased frequency of natural disasters like floods, droughts, and storms. In addition, globalization also affects the way of life of other species, including humans. The melting of polar ice, which contributes to rising sea levels, is caused by the increase in Earth's surface temperature and affects coastal areas and small islands. Global warming refers to the increase in the average atmospheric temperature caused by the increase of atmospheric gases, such as carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), in the atmosphere. These gases originate from various human activities, such as the extraction of fossil fuels for transportation and industry, deforestation, and agricultural activities that produce gas emissions from homes (Calma et al., 2024). Globalization has become a serious environmental issue that is difficult to address due to its widespread impact on people's daily lives.

Based on the research conducted by M. Andra Aditiyawarman WD, Meini Sondang, Lilik Hanifah, and Lusiana Dewi Kusumayati titled "*The Use of Quizizz Application as a Medium for Conducting Learning Evaluations*" it can be concluded that the use of the Quizizz application as a learning evaluation medium has proven effective in increasing students' enthusiasm, active participation, and understanding of the material. Quizizz also trains students' accuracy, time management, and composure in answering questions. With its engaging interactive features, Quizizz becomes a flexible, enjoyable, and supportive medium for the success of the evaluation process. Meanwhile, in the research by Husnani Aliah, Salma Idris, Muh. Damar Udin, Andi Imbara Kautsar Al Qadri, Nur Pertiwi titled "*Global Warming Socialization for Elementary School Children in Mario Village, Luwu Regency*" it was concluded that the social service aimed at socializing the issue of global warming to elementary school students has successfully increased students' awareness, interest, and motivation in

understanding and acting on environmental issues, particularly global warming. With a creative and interactive approach, this socialization successfully internalized values of sustainability and environmental responsibility among students. It is hoped that the awareness and motivation instilled in this service can last in the long term and positively impact efforts to address global warming issues in the future.

Thus, in accordance with the background and support from previous researchers, the researcher chose the title "*Building a Global Perspective with Interactive Media: A Case Study of Quizwhizzer and 3D Media Usage at SDN Krejengan*," which is related to the global warming currently occurring in the world. With direct action in the form of implementation to students to reflect the theoretical understanding of the researcher regarding the global perspective and to provide real actions to the community, in this context, the main target of education is students. The direct implementation of the product is an effective way to demonstrate the performance of each individual in the field of education in accordance with the mandate of the Constitution to "*educate the nation's children*".

Literature Review

Global Perspective

Based on the Modern Indonesian Dictionary, perspective is defined as the way of depicting objects on a flat surface as they appear, and the point of view. The word "global" comes from the word "globe" and originally referred to a planet, meaning a round Earth. A global perspective is a way of viewing and thinking about an issue, event, or activity from the standpoint of global interests, that is, from the perspective of world or international interests. Therefore, our attitudes and actions are also directed towards global interests (Lubis, 2020).

Global learning is characterized by the active participation of various stakeholders and the use of the latest technology in the learning process to create an inclusive and diverse learning environment.The concept of global education also includes openness to ideas and cross-border collaboration to create an inclusive and diverse learning environment.

The global perspective is also proposed, meaning the provision of global insights to students to face the era of globalization so that students can act in accordance with their national identity. Technologies such as e-learning, artificial intelligence, and augmented reality have revolutionized the curriculum and teaching methods, creating more adaptive and interactive education (Anton et al., 2024).

Global Warming

The accumulation of greenhouse gases such as methane (CH_4) and carbon dioxide (CO_2) in the atmosphere causing global warming has become a major concern for world leaders, scientists, and the general public. Global warming is a phenomenon that has many negative effects, such as rising global temperatures, rising sea levels, and unpredictable weather patterns. These effects are felt globally and directly threaten the sustainability of the environment in many places, including Indonesia (Tarigan et al., 2024).

Global warming poses a serious threat to the sustainability of this planet. With the rapidly changing climate, it is important to understand the root causes, impacts, and solutions that can be implemented to reduce the negative effects of global warming. Involving students in understanding the issue of global warming is important, not only for their future but also for shaping a generation that cares about the environment (Eko, 2022).

Media 3D

Learning media serves as a teaching tool that facilitates teachers in delivering material to students, hoping to improve students' learning outcomes. Three-dimensional learning media is a teaching aid that has length, width, and height. If explained, the definition of three-dimensional learning media is media whose appearance can be observed from any viewpoint and has dimensions of length, width, height, and thickness. 3D media can also be defined as a group of media without projection presented visually in three dimensions (Afifah & Zativalen, 2024).

Three-dimensional media is a non-projection medium presented visually in three dimensions. This media can take the form of original objects, both living and non-living, and replicas that represent the original (Siregar et al., 2022).

QuizWhizzer

QuizWhizzer is one of the interesting, interactive, and collaborative educational games. QuizWhizzer can enhance students' critical thinking and problem-solving skills, enabling them to better understand the concepts being taught (Faijah et al., 2022). QuizWhizzer can also enhance student engagement and learning outcomes (Hamid et al., 2022).

The use of the quiz whizzer media in a learning environment can also help students get accustomed to the use of science and technology that is developing in the world of education. In the implementation of learning in the digital media era, tools like Quiz Whizzer can significantly support the interaction between students and teachers in a classroom setting (Alfianistiawati et al., 2022).

Global Issue

Global issues are any events or discourses that can capture the global community's attention, and how society responds to these issues is partly determined by the strength of the influence exerted by the issue. Environmental issues, free markets, ideological shifts, and human rights problems remain hot topics and tend to be sensationalized to maintain global public attention. If a country is not prepared to address these issues, it will impact political stability and security (Sholeh, 2019).

Protecting the Environment

According to Law Number 32 of 2009 on Environmental Protection and Management, maintaining the environment means preserving the sustainability of environmental support and capacity. This effort is significant to ensure the survival of all living beings on Earth, including humans, animals, and plants.

The community must realize the need to protect the environment and actively participate in preventing environmental damage. From an early age, it is important to teach the value of environmental care, the management of surrounding natural resources, and a sense of responsibility towards future generations. This environmental awareness will be reflected in concrete actions to care for and maintain the environment's sustainability at school and home (Baiah, 2024).

Research Method

This research uses a descriptive qualitative method. According to (Setiyaningsih et al., 2020), qualitative research focuses on systematic planning and structure in designing and conducting research. Research qualitative descriptive explains all the events that occur during the implementation research according to its conditions. Data collection techniques using techniques interviews, product implementation, and documentation. The interview was conducted directly at the office (teacher's room), on Thursday, December 5, 2024, at SDN Krejengan with the resource persons Mrs. Yulia Rahmawati as the Class II Homeroom Teacher, and Mr. Dhani Febriyanto as the Class VI Homeroom Teacher. In the implementation of the product, the researcher delivered material and evaluation related to global warming through educational game quizzes (quizwhizzer) and involved students in 3D media (earth replica), created by the researcher. The documentation technique is carried out in the form of photographs of the researcher's interview activities with the informant as well as during the implementation of the product.

Result

Product Description

To address the issues at SDN Krejengan, three innovative learning media were introduced: Interactive PPT, 3D Media, and Quizwhizzer. With the presence of these three learning media, students can learn about the environment in an enjoyable way. This media is designed to enhance student engagement and literacy and enable them to understand the concepts being taught through engaging visualizations.

Picture 1. Initial PPT Display

First, the Interactive PowerPoint (PPT) can be seen in Picture One. The interactive Power Point is an interactive learning medium specifically designed to support students in understanding global warming. By utilizing technology, the PowerPoint presentation offers engaging and informative audio-visual representations of various environmental data. Power Point in environmental education is an important learning medium for discussing current news or issues happening in the environment.

In the field of the environment, the presence of a Power Point that aligns with the subject matter being taught can enhance students' absorption of the material and improve their literacy. Power Point, which is one of the visual learning media, plays a significant role because through this Power Point media, students will be able to more easily understand the material explained by the educator more easily, thereby more stimulated to think and thus creating a learning process within themselves. Such a situation brings consequences for teachers.

The Power Point has an attractive appearance, and by using hyperlinks, it can increase students' interest in understanding the learning process. On the second slide of the PowerPoint presentation, there is a menu with the titles "Material, Watching, and 3D Earth Replica Design." In each "Material" menu, there is an explanation of the material regarding global warming, in the "Watching" menu, there is an animated video of global warming, while in the "*3D Earth Replica Design*" menu, there are steps in assembling the 3D media. Thus, it makes the PowerPoint presentation very engaging and increases students' interest in learning.


Picture 2. 3D Media Replica

Second, the 3D Media (Earth Replica) is shown in Picture Two. The 3D Earth replica is a media shaped like a semicircle divided into two parts: healthy and unhealthy. Beneath it is a base made of cardboard, buffalo paper, and styrofoam. The rectangular base contains a miniature environment that can demonstrate the occurrence of global warming. The 3D media or Earth replica, known as a globe, is an educational tool used in elementary schools to help students understand the concept of global warming.

According to the condition, this medium consists of one semicircle with different colors. The semicircle is covered with buffalo paper and divided into two colors, green and blue, referred to as the healthy earth and the unhealthy earth. The blue half-circle, referred to as the healthy earth, contains elements that reflect human activities that do not cause global warming, such as disposing of waste properly and activities that do not produce pollution, while the green half-circle, referred to as the unhealthy earth, contains elements that reflect human activities that cause global warming, such as images of smokestacks, urban areas, and polluted

rivers. Through the use od 3D media, students can learn interactively and realistically about global warming, such as its causes and effects
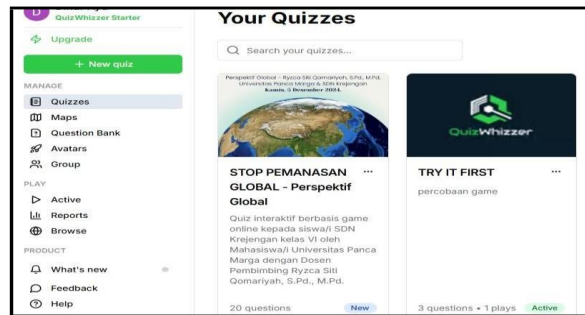
Picture 3. Display on the Quizwhizzer Web

Third, the educational game Quizwhizzer is shown in Picture Three. QuizWhizzer is an educational media platform based on educational games that are used to create interactive quizzes. In the implementation of the QuizWhizzer Game, it is used to create quizzes about global warming that will later be completed by students at SD Krejengan, using Chromebooks provided by the school in a treasure map model. The Quizwhizzer game aims to determine the improvement in students' understanding of global warming. The proper and correct use of these three interactive media can assist students in the teaching and learning process.

Product Implementation Results

The implementation of the 3D media product themed "*Global Warming*" at SDN Krejengan has been carried out smoothly and has achieved satisfactory results. This 3D media was developed with an interactive and educational approach so that students can more easily understand the impact of global warming.

Picture 4. Presentation of Material through PPT

The volunteers who played a role in introducing their product to the sixth-grade students of SDN Krejengan conducted two sessions: The first session, a material presentation session using an interactive PPT presented by the volunteers as seen in Figure 4, where they explained the material about global warming, such as the definition of global warming, an environment without global warming, the triggers of global warming, the impacts of global warming, and efforts to mitigate global warming. All the material was well-received by the students. In

addition to the material presented, the students also showed an animated video about global warming to the students.

Visible in the 3D media is a replica of the Earth that shows the difference between a healthy and unhealthy Earth, allowing students to see the differences directly, visually and physically. Students not only learn theoretically but also understand and directly observe the impacts and actions of humans on the Earth, strengthening their understanding of global warming issues.

Picture 5. Activity of Assembling by Students

In the second session, the facilitator invites the students to play a game by designing a 3D media, namely the "*Healthy Earth & Unhealthy Earth*" replica as shown in Figure 5. The students will be divided into two large groups and asked to leave the classroom first, while the facilitator will hide parts of the earth replica as shown. The purpose of designing this Earth replica is for the students to understand the condition and differences between healthy and unhealthy Earth. This game can effectively enhance students' kinesthetic learning styles due to the physical activity involved in searching for parts of the earth replica, increase emotional engagement during the competition in designing 3D media, and improve collaboration and the development of students' social skills by solving problems and assembling the parts of the healthy and unhealthy earth replica. Students were very enthusiastic about searching for and designing parts of the earth replica, and the students also implemented a reward system for the group that found the most parts.

Feedback from students shows that using this 3D media makes learning more interactive and enjoyable, thereby supporting a more effective learning process. In addition, the feedback from the school was very positive. The arrival of Panca Marga students was well-received during the product introduction, and the school also appreciated the students' involvement in product creation.

Picture 6. Classroom Situation during the Quizwhizzer Game

The third session is the evaluation stage, during which the presenters provide an assessment through an educational game on the Quizwhizzer website platform. The presenters created the Quizwhizzer game to evaluate students' understanding of global warming. This Quizwhizzer game has 20 quiz questions about global warming using a snakes and ladders game model, with each question worth 5 points.

Picture 7. Students & Group
Assembling 3D Media replicas

Picture 8. Students & Champion
Winners of the Quizwhizzer Game

At the end of the quiz, there will be a score ranking, where the student with the highest score will receive a reward in the form of a gift wrapped in gift paper prepared by the previous volunteers, as shown in Pictures 7 & 8.

Here are the overall scores of the students:

Table 1. Student Scores

| NO	NAME	SCORE	TIME
1	Ezar	65	12.32
2	Alfan	65	12.54
3	Nabil	55	12.45
4	Arifin	55	13.05
5	Tegar	55	13.56
6	Holil	50	18.12
7	Amiroh	40	18.09
8	Binar	60	18.15
9	Aurel	60	18.45
10	Nurul	45	19.55
11	David	45	21.55
12	Roy	40	22.51

It can be seen in Table 1 that the students' scores did not meet expectations. Many of them scored far below average. From these unsatisfactory results, there is certainly a gap between the material being taught and the students' ability to understand it. The factors causing this issue are:

1) The available internet (Wi-Fi) signal is not very strong, causing the quiz completion to take considerable time.
2) Students still have difficulty understanding the material, resulting in quiz scores not meeting expectations.
3) One student still struggles with literacy, so this student still needs guidance from the instructor during the quiz.
4) The students' responses during the delivery of the material appeared to be less active in paying attention to the presented material.
5) Students still have difficulty operating the Chromebook and need assistance from the volunteer.

The educators have attempted to prevent this. The educators have provided and delivered the material and repetitions in animated videos with the great hope that students can understand and achieve high scores. Students have also conducted several evaluations, such as

time management, which was far beyond expectations, from the initial process of delivering the material to the operation of the Chromebook, which took a considerable amount of time.
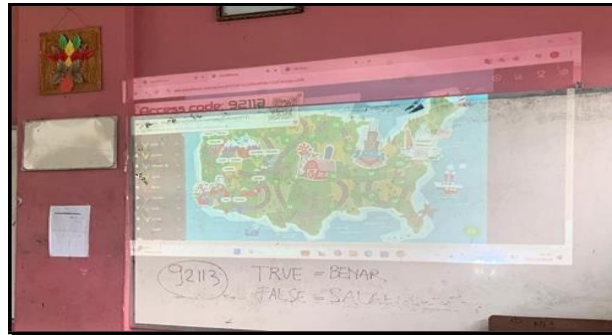
Picture 9. Display on the Projector Screen

Picture 9 shows the screen display during the Quizwhizzer question-solving process. That display will look like a treasure map with start and finish lines. To pass through the path to the finish, students must answer the questions on Quizwhizzer. If a student answers a question incorrectly, they will remain in place and cannot advance to the finish. Later, when the questions have been completed, the students' scores and rankings will be displayed on the screen.

Students appear very competitive in completing Quizwhizzer by looking at the projector screen display. This can attract attention, improve reading skills, and encourage motivation and confidence in students. The use of Quizwhizzer can also train students to think quickly and accurately. They will compete to achieve high scores and complete tasks quickly.

Quizwhizzer is also an interactive learning medium in the form of an educational game and can support ongoing learning activities. With its attractive screen display, students do not feel bored despite the lengthy learning process. Using Quizwhizzer in learning can create a more lively and enjoyable atmosphere.

Conclusion

It can be concluded that using interactive media, such as QuizWhizzer, 3D media (Earth Replica), and Interactive Power Point, at SDN Krejengan positively contributes to student engagement in understanding global issues, particularly global warming. Although the students' quiz results showed unsatisfactory scores, feedback from students and the school indicated that these learning media created a more interactive and enjoyable learning atmosphere.

Several challenges were faced during the implementation, including weak internet connectivity, students' difficulties in understanding the material, and technical issues related to using Chromebooks. However, this research still hopes that implementing this interactive media can enhance education and environmental awareness among students and help them develop global citizenship skills.

The discussion related to this research is still very limited and requires further additions. The researcher suggests that future researchers delve deeper and more comprehensively into implementing Global Perspective-Enriched Projects in Elementary Schools, including other aspects that could not be elaborated on in this study.

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