Journal Education Innovation
E-ISSN: 3026-1678
Vol: 1, Nomor: 1, Oktober 2023, Hal: 87-97

Utilization of Bing Image Creator to Design Learning Media with the Theme of Natural Disasters in the Form of Artificial Intelligence-Based Animation

Yamres Pakniany[1]*, Philia Christi Latue[2], Heinrich Rakuasa[3]
Institut Agama Kristen Negeri Ambon, Indonesia[1]
Universitas Pattimura, Indonesia [2]
Tomsk State University, Rusian Federarion[3]
Email: ypakniany@gmail.com[1]*, philialatue04@gmail.com[2], heirich.rakuasa@yandex.ru[3]

Informasi Artikel

Submitted: 25-09-2023
Revised : 15- 10-2023
Published : 30-10-2023

Keywords:
Animation, Artificial Intelligence, Bing Image Creator, Learning Media

Abstract

This research describes the utilization of the Bing Image Creator platform in designing learning media with the theme of natural disasters in the form of animations supported by Artificial Intelligence (AI). Increasingly sophisticated AI technology has brought significant innovation in education, and in the context of natural disaster learning, it opens the door for educators to create more engaging, informative and adaptive learning experiences. Bing Image Creator provides access to a variety of high-quality images and illustrations that allow curriculum creators to depict in detail the phenomenon of natural disasters. This research uses a descriptive qualitative approach. This research uses the Bing Image Creator platform to design learning media with the theme of natural disasters in the form of animation. The results showed that the integration of AI Bing Image Creator really helped the teacher to design learning media with the theme of natural disasters in the form of animations which included floods, landslides, volcanic eruptions, tsunamis, putting winds, tsunamis and earthquakes to help in the teaching and learning process. Another result is a learning media that allows students to better understand the causes, impacts and coping tactics of natural disasters, as well as increase awareness and preparedness in facing disaster threats. This article discusses the concepts and implications of using Bing Image Creator and AI in the context of natural disaster education and its impact on learning effectiveness and student understanding.

Abstrak

Penelitian ini menggambarkan pemanfaatan platform Bing Image Creator dalam merancang media pembelajaran dengan tema bencana alam berbentuk animasi yang didukung oleh Artificial Intelligence (AI). Teknologi AI yang semakin canggih telah membawa inovasi yang signifikan dalam pendidikan, dan dalam konteks pembelajaran bencana alam, ini membuka pintu bagi pendidik untuk menciptakan pengalaman pembelajaran yang lebih menarik, informatif, dan adaptif. Bing Image Creator memberikan akses ke berbagai gambar dan ilustrasi berkualitas tinggi yang memungkinkan pembuat kurikulum untuk menggambarkan dengan jetail fenomena bencana alam. Penelitian ini menggunakan pendekatan kualitatif deskriptif. Penelitian ini menggunakan platfrom bing image creator untuk mendesain mendesain media pembelajaran dengan tema bencana alam berbentuk animasi. Hasil penelitian menunjukan bahwa Integrasi AI Bing Image Creator sangat membantu guru untuk mendesai media pembelajaran dengan tema bencana alam berbentuk animasi yang diantaranya yaitu banjir, longsor, gunung meletus, tsunami, angin putting beling, tsunami dan gempa bumi untuk membantu dalam proses belajar-mengajar. Hasil lainnya adalah media pembelajaran yang memungkinkan siswa untuk memahami dengan lebih baik penyebab, dampak, dan taktik penanganan bencana alam, serta meningkatkan kesadaran dan kesiapan dalam menghadapi ancaman bencana. Artikel ini membahas konsep dan implikasi penggunaan Bing Image Creator dan AI dalam konteks pendidikan bencana alam serta dampaknya pada efektivitas pembelajaran dan pemahaman siswa.

Kata Kunci : Animasi, Bing Image Creator, Media Pembelajaran, Kecerdasan Buatan.

INTRODUCTION

Natural disasters are threats that are often unexpected and can have damaging and devastating impacts (BNPB 2021). In the face of natural disasters, education and a good understanding of the various aspects of geography and disaster management are essential (Gustavo & Rakuasa 2023). Now, with the continuous advancement of technology, there is a great opportunity to enhance learning about natural disasters in innovative and effective ways (Rakuasa 2023). One technology that stands out in this endeavor is the use of the Bing Image Creator platform, which incorporates artificial intelligence (AI) to create engaging and informative animated learning media.

Education about natural disasters is one of the important aspects in disaster mitigation and management efforts (Rakuasa and Latue 2023). In this case, learning media becomes an invaluable tool in facilitating students' understanding of geography concepts related to natural disasters, as well as tactics and strategies for handling them (Manakane et al., 2023). With increasingly sophisticated AI technology, it is conceivable that animation-based learning media could be a highly effective means of supporting natural disaster education.

The Bing Image Creator platform offers a variety of features that can be used to customize learning media. This includes access to a variety of images and illustrations that can be used in the creation of animations, as well as the ability to integrate artificial intelligence in the animation design (Mehdi 2023). As such, teachers and curriculum creators can create learning content that is dynamic and suited to the needs of students, making learning media more engaging and informative (Manakane & Rakuasa 2023).

In this digital era, students tend to be more fascinated by animation and visualization compared to conventional learning methods (Lidiawati et al., 2022). Therefore, utilizing Bing Image Creator to design AI-based natural disaster learning media is the right step to attract students' attention, improve their understanding, and motivate them to be more active in understanding geography and handling natural disasters. In addition, the use of AI technology in learning media also enables personalization adaptation (Richter et al. 2019). This means that the learning media can be adapted to each student's level of understanding and interest. This ensures that each student gets a more effective and relevant learning experience (Richter et al. 2019).

However, while the potential of using Bing Image Creator and AI in natural disaster learning is promising, there needs to be further research and experimentation to measure its effectiveness. Therefore, this research will explain in detail about how this platform can be utilized to design animation-based learning media focusing on natural disasters, as well as provide insight into its positive impact on students' understanding and awareness. Based on the above background, this research aims to find out about the utilization of bing image creator platform to design learning media with the theme of natural disasters in the form of artificial intelligence-based animation.

METHODOLOGY

This research uses a descriptive qualitative approach. Qualitative research is a research procedure with descriptive data results in the form of written or spoken words (Hamilton and Finley 2019). Qualitative research aims to analyze the quality of a study. The type of research used is a literature study which is research that has been done before by collecting journal books, magazines, and scientific papers that are interrelated with the problems and research objectives. This research uses the bing image creator platform: https://www.bing.com/create to design learning media designs with the theme of natural disasters in the form of animation.

In simple terms, Bing Image Creator is an AI program that has the main ability to create or process images based on text data entered by users (Microsoft 2023). Simply put, Bing Image Creator can also be called an AI text to image program. In AI program models, with its ability to process or create images based on user-inputted text data, Bing Image Creator belongs to the AI Art Generator model (Yusuf Mehdi 2023).

According to Diaz, by using Bing Image Creator, users can create images by simply entering a command text or prompt. Bing Image Creator will process a new image that matches the command text data from the user. Users can instruct Bing Image Creator to create images with the desired model, style, color, and other criteria. Therefore, it can also be used to design learning media with the theme of natural disasters in the form of animation (Diaz 2023).

How to create learning media with the theme of natural disasters through Bing Image Creator is quite easy. However, users need to convey commands clearly, so that they can create learning media with the theme of natural disasters AI as desired. The clearer the prompt given, the easier Bing Image Creator will be to create a poster that is close to the user's wishes. The explanation of how to create a learning media poster with the theme of natural disasters in Bing Image Creator is as follows;

a) Open this Bing Image Creator website https://www.bing.com/create and login using your Microsoft account.
b) Next, type the image creation prompt in the field provided.
c) Users can create posters with commands as desired. To create a poster like the one that went viral on social media, users can write an initial command with the phrase "Disney Pixar movie poster about" or "Disney Pixar movie poster that says"
d) Next, users can write more specific commands to describe the will in making the poster. Users can describe the character shape, theme, style, or color that they want to appear in the poster.
e) In some experiments, we used one of these prompts
"Disney poster with Title "Flod", People who see their houses flooded, floods that occur in rural areas, rivers that overflow, many houses that are flooded, the atmosphere of heavy rain, there is lightning and thunder, people are crying, 3D animation."
f) After creating the command, click on the "Create" option.

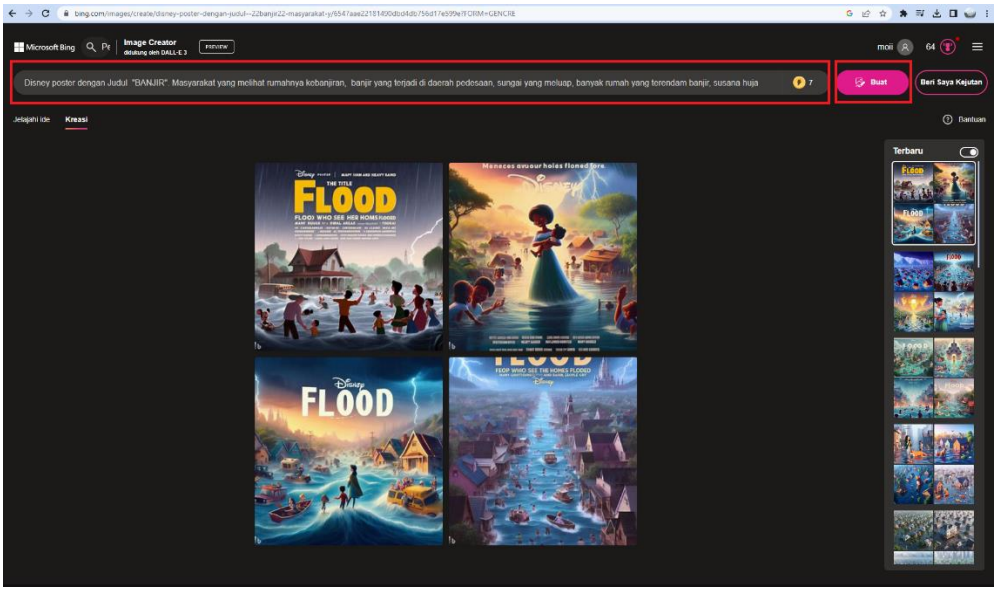

Figure 1. Bing Image Creator view

g) Then, Bing Image Creator will process the command.
h) Wait a moment for the AI poster to be presented.
i) Bing Image Creator will present four variations of images in accordance with user commands, as can be seen in Figure 1.
j) Once presented, users can download the learning media poster with the AI natural disaster theme processed by Bing Image Creator.

RESULT AND DISCUSSION

Learning media with the theme of natural disasters in the form of animations made include floods, landslides, volcanic eruptions, tsunamis, putting winds, tsunamis and earthquakes.

Flood Animation

Flood animations created with Bing Image Creator are an innovation that can enhance students' understanding of this natural phenomenon that often has destructive impacts. In the process of creating flood animations, Bing Image Creator provides access to a variety of high-quality images and illustrations that can be used to approach realism in the representation of floods (Figure 2). This allows users to depict various aspects of flooding, including its causes, scale and impact in a clear and informative manner.

One of the advantages of Bing Image Creator is its ability to utilize artificial intelligence. With AI technology embedded in this platform, flood animations can become more interactive and dynamic (Cope et al., 2021). AI can help structure content based on students' individual needs and abilities, and provide timely feedback, improving the quality of learning. In addition, animations can be used to simulate the development of floods over time, allowing students to better understand the evolution of the event.

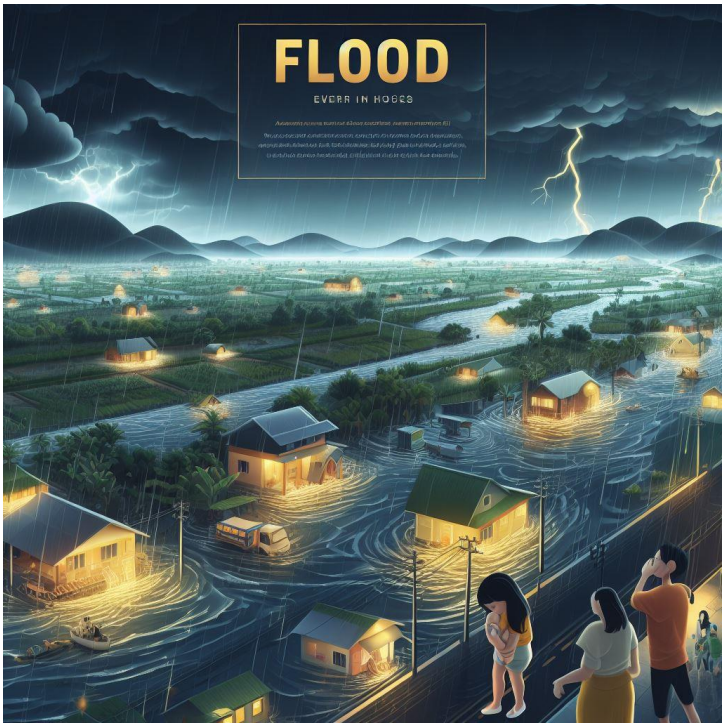

Figure 2. Flood Animation

The use of Bing Image Creator in the creation of flood animations can provide an interesting and effective means of explaining the concept and handling of flood disasters. Students will be more engaged and understand this phenomenon more deeply. Thus, Bing Image Creator-based flood animation with AI elements is a powerful tool to increase students' understanding and awareness of flood hazards and the steps that can be taken to reduce the risk.

Landslide animation

Using Bing Image Creator to create landslide animations is an effective way to convey information about this often dangerous natural phenomenon to students. With access to a wide range of high-quality images and illustrations, Bing Image Creator allows animation creators to visually depict the process of landslides with a high level of detail (Figure 3). This helps students to understand the causes, triggering factors and consequences of landslides more clearly.

One of the advantages of Bing Image Creator is the integration of artificial intelligence (AI), which can enhance interactivity and personalization in learning. AI can be used to adapt the landslide animation according to each student's level of understanding and interest (Knox 2020). This means that each student can access learning content that suits their cognitive level, improving learning effectiveness. Landslide animations with Bing Image Creator and AI can also be used to simulate various landslide scenarios, helping students understand how landslides occur and how they can identify and avoid them.

Figure 3. Landslide Animation

The utilization of Bing Image Creator technology in making landslide animation can make learning about this natural disaster more interesting, informative, and relevant for students. Students can visually see how landslides develop and damage the environment, and understand the steps that need to be taken to reduce the risk of landslides. Thus, the Bing Image Creator-based landslide animation with AI elements becomes a powerful tool to support natural disaster education and increase students' awareness of landslide hazards and how to deal with them (Ferawati et al., 2023).

Tsunami Animation

Using Bing Image Creator to create tsunami animations is an innovative approach to teaching students about this deadly natural phenomenon. Bing Image Creator provides access to a variety of images, illustrations and design tools that can be used to create an immersive visual representation of a tsunami (Figure 4). These animations can help students to understand the causes of tsunamis, such as earthquakes, volcanic eruptions or continental plate shifts, as well as how these massive waves travel and reach the shore.

An additional advantage of Bing Image Creator is the use of artificial intelligence (AI), which can bring an interactive dimension to tsunami learning. Animations can be customized for each student based on their level of understanding, allowing each individual to access content that suits their abilities. The use of AI also allows the animation to simulate a tsunami with various parameters, allowing students to see how the wave height and impact change over time, reminding them of the dangers of tsunamis and the importance of quick reactions in emergency situations.

Figure 4. Tsunami Animation

Utilizing Bing Image Creator technology to create tsunami animations allows educators to teach complex material in an engaging and informative way. Students can more deeply understand how tsunamis work, their impact on communities and the environment, and the steps that can be taken to reduce risk and increase awareness. Bing Image Creator-based tsunami animations with AI elements can be a powerful tool in natural disaster education and help students understand the importance of early warning and preparation in the face of tsunami threats.

Volcano Animation

Using Bing Image Creator to create animations about volcanoes is an effective way to visualize this complex geological phenomenon and facilitate students' understanding of how volcanoes work (Figure 5). The platform provides access to a variety of images, illustrations and design tools that can be used to create rich and informative visual representations of volcanoes. In these animations, students can take an in-depth look at the structure of volcanoes, the eruption process, as well as their impact on the environment and humans.

One of the advantages of Bing Image Creator is its ability to integrate artificial intelligence (AI), which can provide an element of interactivity in volcano learning. Animations can be customized to each student's level of understanding, so students with varying levels of knowledge can access content that suits their abilities. In addition, AI can enable the simulation of various volcanic eruption scenarios, including their severity, location and impact, so that students can learn about a range of possible conditions.

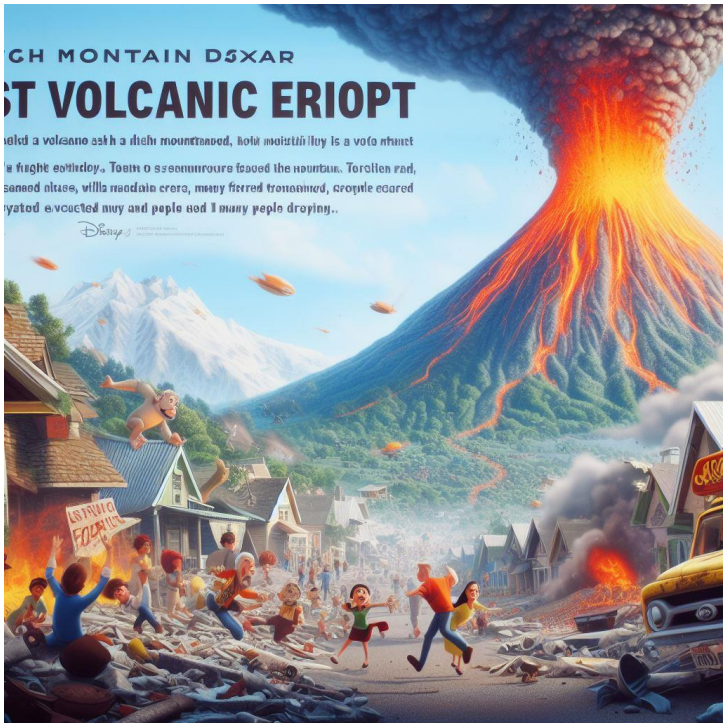

Figure 5. Volcano Animation

Utilizing Bing Image Creator technology for learning about volcanoes is an engaging and effective way to teach geology and natural science to students. The volcano animation with Bing Image Creator and AI elements can help students understand various aspects related to volcanoes, from the explanation of why and how eruptions occur, to the impact on the environment and society. With the help of these animations, students can have a deeper understanding of the geology and hazards associated with volcanoes, as well as the steps that can be taken in emergency situations.

Earthquake Animation

Using Bing Image Creator to create animations about earthquakes is a highly effective approach to illustrating and explaining this geological phenomenon to students. The platform provides access to a variety of images, illustrations and design tools that can be used to create richly detailed visual representations of earthquakes (Figure 6). In these animations, students can get a visual look at what happens beneath the earth's surface during an earthquake, as well as how these vibrations propagate and cause damage.

One of Bing Image Creator's strengths is its ability to utilize artificial intelligence (AI), which can add a dimension of interactivity to earthquake learning. Animations can be adapted for individual students based on their level of understanding, so students with varying levels of knowledge can access content that suits their cognitive level. With AI technology, the animations can also simulate various earthquake scenarios, including their severity and impact, helping students better understand the complexity of earthquakes.

Figure 6. Earthquake Animation

Using Bing Image Creator to create earthquake animations allows students to more deeply understand this phenomenon. They can learn about the causes, scale and consequences of earthquakes in a more engaging and interactive way. This earthquake animation can help students understand the importance of risk mitigation, preparation for earthquakes, and actions to take in emergency situations. Thus, this learning media makes an important contribution in increasing students' understanding and awareness of the dangers of earthquakes and efforts to reduce their risks.

CONCLUSIONS

It can be concluded that utilizing the Bing Image Creator platform to design learning media in the form of animations with the theme of natural disasters based on Artificial Intelligence has opened up great opportunities in improving the effectiveness of education on natural disasters. This technology has enabled curriculum creators and educators to create informative and engaging learning media, helping students better understand the causes, impacts and coping tactics of various natural disasters. The integration of artificial intelligence has increased interactivity and personalized adaptation in learning, making natural disaster education more effective and relevant. Thus, the utilization of Bing Image Creator and AI in natural disaster learning is an innovative step in increasing awareness and preparedness in the face of natural disaster threats.

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