

AI-Based Teaching Using Bing Image Creator (AI Art Generator): Teaching English Writing a Descriptive Text Illustrated by 3D Animation Design Style

Tira Nur Fitria

Institut Teknologi Bisnis AAS Indonesia

tiranurfitria@gmail.com

Abstract—Recently, posters or images with designs similar to Disney Pixar have been circulating on various social media platforms, such as Instagram and TikTok. With a design that is quite adorable, it is no wonder that the image design created using artificial intelligence (AI) has attracted the attention of people. Seeing the popularity of posters via Bing Image Creator, people can try to create character descriptions according to their favourite cartoons/ animations, such as Disney, via Bing Image Creator. This research simulated the use of Bing Image Creator to teach writing an English descriptive text to be illustrated into an animation or a cartoon. The analysis shows that the Bing Image Creator AI application is currently entertaining to create/produce the images they want without having design or drawing skills. This research is descriptive qualitative research. Teachers/lecturers can ask students to visit or access Bing Image Creator at <https://www.bing.com/create>. Students need to have a Microsoft account, but if they do not have one, they can create an account first. They sign in using a Microsoft account. After logging in, type the character description into the column provided. They can enter character descriptions as desired. To create a Disney AI cartoon, students can add the words "Disney Pixar style" to the beginning of the character description. They can create more specific commands to turn photos into Disney cartoons. The order may include descriptions such as 1) gender, male or female. 2) character shape, such as face shape, eyes, jaw, nose, cheeks, hair, clothes, position of body parts, and others. 3) certain poses/styles and accessories used. 4) objects worn on body parts, for example, types of clothing, colors, motifs/patterns. 5) objects used or around 6) expression, facial expression, or feeling. 7) activities carried out. 8) shooting angle. 9) surrounding background. To get accurate animated image results, students can write detailed and specific descriptions. Finally, wait for the image to finish and download it. Further research still needs to be carried out to determine students' perceptions of the use of Bing Image Creator in illustrating their written character descriptions of a desired cartoon.

Keywords: AI-based teaching, Bing Image Creator, teaching writing, descriptive text, Disney Pixar's design style

I. INTRODUCTION

Artificial Intelligence (AI) is one type of technological advancement that can provide many changes and conveniences in human life (Fitria, 2021, 2023). The term "artificial intelligence" (AI) refers to one of the technologies that is frequently utilized in automated computer systems. The purpose of developing artificial intelligence was to find solutions to existing cognitive challenges (Rahayu & Santoso, 2023). Using AI enables content creators to generate inspiring images from text and foster users' creativity (Adru et al., 2023). Users are now able to swiftly produce text, photos, audio, or video using a simple web-based application by using generative artificial intelligence (AI) systems (Attard-Frost, 2023). These systems need the user to enter a string of text or a group of images, audio, or video clips.

Text-to-image-based GAI (Generative Artificial Intelligence) or AI Image Generators Have recently become increasingly common due to the complexity with which they can produce images in a short amount of time based on human natural language communications. This has contributed to the topic's rise in popularity (Enjellina et al., 2023). Mori & Asahi (2023) explain that the discipline of Text-to-Image Generator

within the domain of AI integrates multiple AI disciplines to generate images from text. With the advent of Machine Learning (ML), computers are now capable of acquiring knowledge from data and iteratively optimizing and improving themselves following previous experiences. Deep Learning (DL) is a subfield of machine learning (ML) whose name derives from the fact that its model comprises a substantial quantity of intricate and complex artificial neural networks; the data is transmitted from layer to layer to the region responsible for performing various computations.

In the increasingly developing digital era, mastery of artificial intelligence (AI) technology has become a very important competency, especially in the creative and design fields (Darmawan et al., 2024). Bing Image Creator, Microsoft's free tool that is widely used among the population (Sandoval-Martin & Martínez-Sanzo, 2024). The presence of an AI Image Generator is an innovative tool that can convert text into images, which are almost accurate and realistic objects according to the user's imagination (Anna et al., 2023).

The AI Image Generator is an amazing tool that can turn words into images, which are virtually exact and realistic according to the user's imagination. It does this by utilizing neural networks, which are essentially computer simulations. The process of converting a textual description

into an image is referred to as "text-to-image synthesis (Bankar & Ket, 2021). The visualization and conceptualization of images described by natural language explanations are capabilities of humans. Text-to-image generation is an innovative procedure that has been introduced within the domain of artificial intelligence. This process enables individuals to conceptualize concepts in new ways. (Hanafy, 2023) Text-to-image creation is a groundbreaking method that was brought into the field of artificial intelligence. It enables people to picture concepts in new ways and was a major step forward in the field.

AI has the potential to revolutionize the way that marketers and others create visual content by providing fast, easy, and cost-effective tools for generating realistic images (Suryadevara, 2020). Text-to-image art (so-called "AI art") with a specific focus on the practice of prompts (Oppenlaender, 2022). Art is widely considered to be a uniquely human phenomenon (Bellaiche et al., 2023). Text-to-image synthesis is a term used to describe computer algorithms that may convert human-written textual descriptions, such as keywords or phrases, into visuals that have a comparable semantic meaning to the text (Agnese et al., 2020). Text-to-image synthesis task aims to generate images consistent with the input text (Zhang et al., 2021).

The development of text-to-image generative models has simplified the process of producing artwork by simply inputting text into the models (Qiao et al., 2022). The development of text-to-image generative models has made it simpler for anyone to produce works of art by only inputting text as input to the models. From time to time, the art of painting and drawing continues to evolve. Supporting tools are always emerging that bridge human creativity with works of art, including in the digital realm. The latest digital evolution that is worth paying attention to in this case is an artificial intelligence-based text-to-image conversion application called an AI image generator. Simply put, this application can convert a set of text or keywords into an image. Until now, AI image generators have been applied in graphic design, comic books, films, and video games.

In recent years, numerous disciplines have implemented AI text-to-image generators, such as product design, interior design, and architectural design (Lee & Chiu, 2023). Creative ideas are effectively implemented by the text-to-image generator despite the limitations imposed by text descriptions. Midway through 2022, AI systems that translated text into evocative original images went viral on the internet (Chesher & Albarrán-Torres, 2023). Technological advancements have facilitated the creation of techniques capable of generating visual multimedia as desired (Kim et al., 2020). The utilization of deep learning for image generation has been the subject of extensive research in numerous disciplines.

Microsoft introduced Bing Image Creator—now simply called Image Creator—which allows users to generate AI images (Narayanaswamy, 2024). It was launched soon after Bing Chat debuted in early 2023. Following the rebranding of Bing Chat to Copilot, Microsoft also renamed Bing Image Creator to Image Creator. The tool is powered by OpenAI's DALL·E technology, which converts text prompts into striking visual content.

The AI image generator is an artificial intelligence-based software that can create digital images through text (prompts) given by humans (users). It should be remembered that AI is a simulation of human intelligence applied to machines so that machines can behave and think like humans. Like humans, an AI image generator has 'creative' power through learning or interpreting the text provided, which is then converted into images. From an art perspective, the AI image generator has the function of digitizing art that is more lively, realistic, expressive, and personal. Digital artists understand the AI image generator as a computer algorithm that can learn aesthetics through text analysis.

In an era of technology that continues to develop, the presence of AI image generators increasingly dominates various aspects of our lives. One of the newest developments in the world of AI that is on the rise is the Bing Image Creator AI platform. Bing Image Creator is a tool based on AI technology, which was directly developed by Microsoft (Drianto et al., 2023). Bing Image Creator (Image Creator from Microsoft Bing) helps users generate AI images with DALL·E directly from the sidebar in Microsoft Edge. Given a text prompt, the AI will generate a set of images that match the pre-written prompt. In short, the Image Creator application can convert text into images (text to image), so that just by writing, users can create an image without needing to use design tools.

Using the AI text-to-image program, Bing Image Creator can create creative illustrations based on text provided by users. Meanwhile, when compared with other AI program models, Bing Image Creator is included in the AI Art Generator model. Bing Image Creator is the result of Microsoft's collaboration with OpenAI. The reason is, Bing Image Creator is based on Dall-E 3, one of OpenAI's image processing programs. Bing Image Creator is presented together with Bing Chat, you could say Microsoft's ChatGPT, in the Bing search engine. Unfortunately, this program can only accept English texts. Meanwhile, only PCs with Windows 10 and 11 can be used to access this program.

In Bing Image Creator, to get a poster image that is detailed and close to what they want, users must enter a concise and clear description of the sentence. Otherwise, AI will create a general image. Entering specific words such as place, time, and names of famous figures will help AI quickly detect the images created. Bing Image Creator generates 4 AI Images in Seconds. It allows the image creation process to take just 15 seconds. The resulting images are immediately processed into four images. Users can select some or all and save them easily. Of course, this makes things easier for work or just for entertainment.

Recently, images of Disney Pixar-style posters featuring characters similar to users have gone viral on various social media platforms such as TikTok and Twitter. However, what should be noted is that these posters are not the work of human hands, but are the result of processing using an AI program known as Art Generator. One of the AI Art Generator programs that is often used to create Disney cartoons with characters based on user photos is Bing Image Creator, which was developed by Microsoft based on Dall-E 3 technology made by OpenAI. Bing

Image Creator allows users to create or edit images based on the text commands they enter. With this feature, users can create images according to their preferences, including the desired style, color, character, and background. This technology is currently widely used to create Disney AI posters based on personal photos.

As an AI Art Generator, Bing Image Creator has the main ability to create images based on text commands or prompts entered by the user (text to image). With this capability, we can create images with prompts as we wish. We as users can use Bing Image Creator to create images or look for image inspiration with the help of AI, enter a prompt, and then the results will immediately appear. Not long ago, we might have come across an image on social media that was thought to be created by AI. The image seems to be stylized like a Disney Pixar film poster with a distinctive visual style.

Conversion of text to images AI is capable of creating innovative visuals that may serve as a source of inspiration; nevertheless, the uses of AI for 3D design processes and how designers might develop 3D models utilizing ideas offered by AI have not yet been investigated further (Liu et al., 2023). According to Pakniany et al. (2023), a large amount of innovation has been brought to education as a result of more sophisticated AI technology. In the context of natural disaster learning, this innovation offers the potential for educators to develop more engaging, informative, and adaptable learning experiences for their students. The Bing Image Creator gives users access to a wide selection of graphics and photographs of excellent quality, which educators may use to create detailed depictions of the phenomena of natural catastrophes. A descriptive qualitative technique has been taken for this research. The study presented here makes use of the Bing Image Creator platform in order to develop animated forms of educational media centered on the topic of natural catastrophes. According to the findings, the incorporation of AI into Bing Image Creator was of great assistance to the educator in developing educational materials with the topic of natural disasters as the central focus. These materials were in the form of animations, and they covered topics such as earthquakes, floods, landslides, volcanic eruptions, tsunamis, and putting winds. These animations were designed to support the teaching and learning process. An additional effect is the production of a teaching medium that helps students get a deeper comprehension of the factors that contribute to the occurrence of natural disasters, as well as the strategies that can be utilized to mitigate their effects and deal with the aftermath. The principles and consequences of utilizing Bing Image Creator and AI in the context of natural disaster teaching are discussed in this article, along with the article's influence on the efficiency of learning and the comprehension of students.

Lately, the social media world has been filled with Disney Pixar-style poster posts originating from Bing Image Creator AI. These unique Disney Pixar-style posters were created using the help of AI. Many netizens have uploaded Disney Pixar-style film posters made using various Bing Image Creator AI tools. Bing Image Creator AI is a tool that can produce interesting images based on text entered by the user. As for how to make a Disney AI poster, we can use a

technology called Bing Image Creator. However, users must also be able to describe their imagination in a prompt sentence on the page. The aim of doing this is so that Bing Image Creator can create images according to the user's wishes or orders. The following are the steps we can take to make a Disney Pixar poster.

Recently, posters or images with designs similar to Disney Pixar have been circulating on various social media platforms, such as Instagram and TikTok. With a design that is quite adorable, it is no wonder that the image design created using artificial intelligence (AI) has attracted the attention of various groups, including researchers. Seeing the popularity of posters via Bing Image Creator, how do we create character descriptions according to our favorite cartoons or animations, such as Disney via Bing Image Creator? In this research, researchers are interested in discussing the use of Bing Image Creator in teaching writing descriptive text then it as illustrated on an interesting image/poster object.

II. LITERATURE REVIEW

What is Bing Image Creator AI?

Bing Image Creator AI is a free online tool for creating images from text descriptions. It uses machine learning to produce realistic images. Microsoft uses the DALL-E 2 model from OpenAI. We can use it via Bing Chat to request modifications in English. On September 29, 2023, Microsoft will switch to the DALL-E 3 model for higher art quality. Using Bing is much more profitable than using DALL-E 2 directly. Because DALL-E is now paid, while Bing Image Creator is free. However, we can redeem our Microsoft Rewards points to get more improvements in using the Bing Image Creator. Microsoft allows users to use Bing for free to build their search engine's user base.

In short, the Image Creator application can convert text into images (text to image), so that just by writing, users can create an image without needing to use design tools. Unlike ChatGPT, Bing Image Creator AI allows us to create images just by using our own words for certain images. Supported and trained by millions of images and DALL-E, Bing Image Creator AI is an art generator that can produce images according to our expectations. Whether we want to create hyper-realistic images, cartoon style, anime, watercolor, cyberpunk worlds, or even AI characters, Bing image generator has us covered. In short, language is no longer a barrier between our creative ideas and their visual realization. What makes Bing AI maker so special is its advanced machine learning algorithm. By using this technology, the Bing image generator can turn our dream images into reality.

The capabilities of the Bing image generator are not just limited to professional artists and designers. This is a useful tool for anyone who wants to create images quickly and easily. Whether we are a beginner looking to try our hand at visual arts or a professional looking for a tool that can speed up our creative process. No more searching for images that match our vision on the internet. With Bing Image Creator AI, we can create images according to our specifications. It is the ideal solution for all our visual needs, be it for design projects, illustrations, presentations, or even just for personal satisfaction.

Bing Image Creator consists of a set of prompts that are designed and tested to create images (Lakomy, 2023). Some key features that make Bing Image Creator are: 1) Simple Image Editing: This tool allows users to edit images quickly and easily. We can crop, rotate, zoom in, zoom out, and add text to images. 2) Image Collection: Bing Image Creator provides access to a vast collection of images, which can be used as backgrounds or other elements in our design work. 3) Project File: We can save our project as a project file, allowing us to continue editing at a later time. 4) Image Format: The tool supports a variety of image formats, including JPG, PNG, and GIF, allowing us to customize the file type according to our needs. 5) Font Choices: Bing Image Creator provides several fonts and text styles that we can choose from to add text to images. 6) Share Directly: Once we have finished editing our image, we can directly share it on various social platforms or download it to our device.

Bing Image Creator can be used in a variety of contexts, including: 1) Social Content: Create engaging images to share on social media platforms like Facebook, Instagram, Twitter, or LinkedIn. 2) Blog and Website Content: Creating illustrative images for blog posts, web pages, or articles. 3) School and Business Projects: College students and professionals often use Bing Image Creator for school assignments, presentations, and marketing materials. 4) Graphic Design: Create posters, greeting cards, brochures, and other promotional materials.

There are several ways of using Bing Image Creator AI: 1) Open Bing Image Creator. 2) Describe the image we want to create. Bing's FAQ section suggests making instructions "highly descriptive." So, explain in detail what images we want to display, the background, and other visual elements in each frame. Example prompt: "Provide a realistic photo of a blue trailer truck in the desert, wide-angle view." After that, click the Create button. Bing Image Creator will display four images. Click on the image we like to enlarge it and select the option to share. The available options are: 1) Share image: By clicking the Share button, a link for image creation will be generated. 2) Save images: Images can be saved in our Bing account in the My Saves section. Collections can be created to group images that will be used for certain projects. 3) Download image: The resulting image can be downloaded to a computer. Please note that the image has a Bing watermark. If we want to add details to the image, simply update the prompt by adding the desired keywords to it. Provide feedback on images when necessary to improve the system. Microsoft encourages "responsible use of Image Creator" by implementing safeguards to block the use of harmful or unsafe images and blocking some dangerous prompts.

Example of a Bing Image Creator description for making a Disney Pixar poster (Kompas, 2023). Please note that in Bing Image Creator, users can only give commands in English. Then, in a complete description or prompt in the image creation command in Bing Image Creator, the user needs to include a phrase like this: "Disney Pixar style", "Disney Pixar", or "Disney Pixar Art". This phrase needs to be included so that the image requested by the user can be processed by Bing Image Creator using a Disney Pixar-style

design. Some examples of Disney Pixar poster descriptions on Bing Image Creator are as follows:

Table 1. Example of Prompts to Create Images in Bing Image Creators

1. "Disney Pixar-style," 1A male is adorned in a turquoise green blouse featuring an elaborate floral design. The fringe of his short, black hair extends over his forehead. His visage is oval in shape. Brown-lens, retro-style spectacles are on his person. He possesses an optimum physique. Smiling is the expression on his face. The background consists of an arboreal field. The point of view is at the half-body. Animation in 3D.
2. "A portrait of a dancer exemplifying elegant motions and articulate facial expressions." The performance can be brought to life through the use of animation that emphasizes fluidity and elegance, complemented by a background that enhances the atmosphere. "Art by Disney Pixar."
3. "Art by Disney Pixar. The culinary process is meticulously documented in this portrait of a chef preparing a signature dish, from ingredient selection to plating. Employ animated cookery implements and ingredients to emphasize the culinary arts' artistic and technical nature.
4. "Art by Disney Pixar. Animate a touching scene depicting two couples spending a picnic in a picturesque park illuminated by the sun. Illustrate a heterosexual couple partaking in a vibrant dialogue and mutual hilarity, while the other couple partakes in a sentimental exchange, such as a passionate embrace or a shared gaze.
5. "Disney Pixar". A moving animation of a nuptial ceremony taking place in an idyllic landscape. Illustrate the union of the bride and groom as they exchange vows beneath an ornate arch adorned with billowing drapes and fleurs. Incorporate elements of enchantment into the scene by animating the soft beams of sunlight cascading through the trees, the fluttering of butterflies, and the delicate rustling of foliage.
6. A Disney Pixar poster that reads "(Name)" depicts a woman in a museum holding a book in her palms while donning a hijab and a degree in literature, while also exploring the realm of 3D animation.
7. A Disney Pixar poster featuring a girl seated while adorned in a black pashmina hijab and a robe; a newborn boy perched on her lap, attired in a blue shirt and cap. The foreground consists of flowers, vegetation, and lawns. Adorable 3D animation.
8. Poster for the Disney Pixar film "Boy and Girl at the University." A lady with long ebony tresses is a student of culinary arts. A girl donning a chief's uniform. A male student of computer engineering has short, dark hair. Animation in 3D.
9. Disney Pixar poster, depicting a girl in a hijab and glasses conversing with a male in his twenties seated on the seashore while donning a black shirt; the poster features 3D animation.
10. Disney Pixar features 3D animation. Persian cats

have a lively, active disposition and are silky. A Disney Pixar poster reads "(Our name)" and depicts a jovial, white-skinned teacher with pudgy cheeks, a black hijab, and a gamis who is also laughing while instructing in class. Animation in 3D.

11. A Disney Pixar poster states, "(TIRA)" depicts an enthusiastic, white-skinned educator with pudgy cheeks, a hijab, and games donning herself while instructing in the class. Animation in 3D.
12. A poster by Disney Pixar depicting a couple embracing while holding hands and gazing at a green tea plantation; a young boy wearing a gray hoodie and black jeans; a girl with short, unstyled hair wearing an undershirt and an open blue jacket; a pair of gray cargo jeans and black shoes; and a girl carrying a small black handbag. Animation in 3D.
13. A Disney Pixar film poster. A girl with her hair pulled back, clad in eyeglasses, and donning a blue denim jacket takes a selfie alongside her beau, who is dressed in a black hoodie and also wears sunglasses, while they gaze upon a verdant mountain. Animation in 3D.
14. On a Disney Pixar movie poster, a man with Javanese fashion. He has short curly hair, an attractive and kind face, and a black windbreaker is depicted painting at an art table with a woman wearing a hijab, who has a beautiful and kind face. A small black cat is also present. Animation in 3D.
15. A Disney Pixar poster depicts an elementary school teacher adorned in a hijab and a pink flourish uniform, surrounded by Indonesian students. Animation in 3D.

Those are some examples of Bing Image Creator descriptions for creating examples of Disney AI posters. Users, for example, students, can be as creative as they wish in compiling image creation prompts in Bing Image Creator. To produce a Disney Pixar AI poster, users (students) need to create a detailed and specific description of their wishes. The more detailed the description, the Bing Image Creator will present results that are closer to the user's wishes. By having prepared the right prompt, the user (student) can now start creating other images in Bing Image Creator.

III. METHOD

This research uses descriptive qualitative research. Qualitative research predominantly employs empirical methods, which include interviews, observation, and the analysis of documents and artifacts, to gather data. Qualitative research utilizes data in the form of visual representations, artifacts, words, or images, as opposed to numerical and statistical data (Ary et al., 2018). In this study, a qualitative method was utilized, and it was based on the qualities of having a natural environment, making use of the person that is the researcher as the primary instrument, working with data that are in the form of words rather than figures and statistics, and evaluating the data inductively.

The method of collecting data is documentation. Documents are comprised of existing records (Biddix, 2018). Documents can be formed in written, printed, or

electronic form to collect our data. Documents are written, printed, or electronic materials that contain verbal, numeric, or non-verbal data. In this research, the researcher uses an electronic data form website (application), namely Bing Image Creator, which can be accessed at <https://www.bing.com/create>. Documentation is a technique for collecting data using collecting and analyzing documents, both written, graphic, or electronic. Documents that have been obtained and then analyzed (decomposed), compared, and combined (synthesized) form a systematic, unified, and complete study result.

The method of analyzing data in this research is based on three steps of qualitative analysis, such as data reduction, data display, and conclusion, as proposed by Miles et al. (2018). In this research, the researcher reduces data. Data reduction refers to the systematic approach taken in research to simplify imprecise data obtained from written records in the field. The purpose of data reduction is to provide researchers with a more comprehensive understanding of the findings they have obtained in the field. The researcher displays data. Data presentation involves the interpretation of the data, specifically the researcher's interpretation concerning the issue being investigated in a table, chart, or figure. After that, the researcher makes the conclusions related to the findings and analysis.

IV. FINDINGS AND DISCUSSION

Findings

To use Bing Image Creator in Microsoft Edge, first enable Image Creator in the Edge sidebar by selecting the "+" icon and selecting the toggle button for Image Creator. This adds an Image Builder to the sidebar. To use it, simply select the Image Creator icon in the sidebar or right-click on any input area that supports image insertion, and a panel on the right side of the page will open with the Image Creator experience. From there, we can create images and copy and paste them into social media posts, blog posts, and more, all within Microsoft Edge. Image Creator is available in Microsoft Edge, making it the first and only browser with an integrated AI-powered image generator. To use Image Creator in Microsoft Edge, first enable Image Creator in the Edge sidebar by selecting the "+" icon and selecting the toggle for Image Creator. Then simply select the Image Creator icon in the sidebar or right-click on an input area that supports image insertion, and a panel on the right side of the page will open with the Image Creator experience. From there, we can create images and copy and paste them into social media posts and blog posts. Once the image is created, select it to see our options. Click "share" to get a link to the image, click the "+" sign to save it to our Saved photos collection, or click "..." for options to download and send feedback.

Considering the importance of the text commands we enter, make sure to provide very detailed descriptions so that the results meet our expectations. We also keep in mind that Bing Image Creator can only understand commands in English, and some results may not be perfect. If we are not satisfied with the results, we can try processing the image again with the same commands or add additional commands to clarify the image we want.

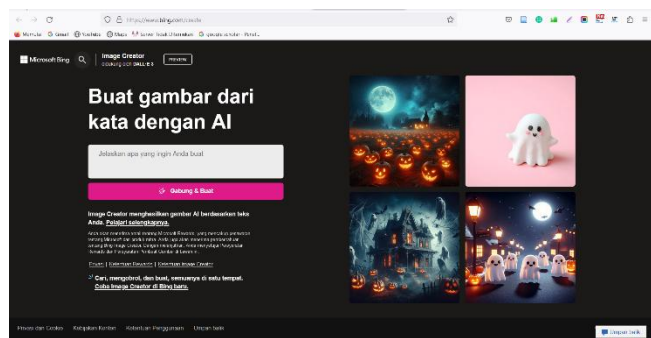


Figure 1. The View of Bing Image Creator

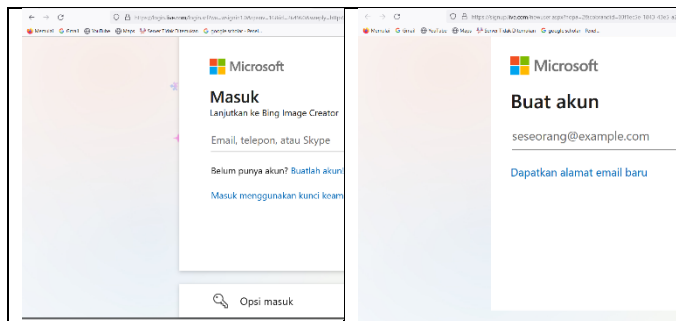


Figure 2. Menu of Sign in and Sign up for Bing Image Creator Account

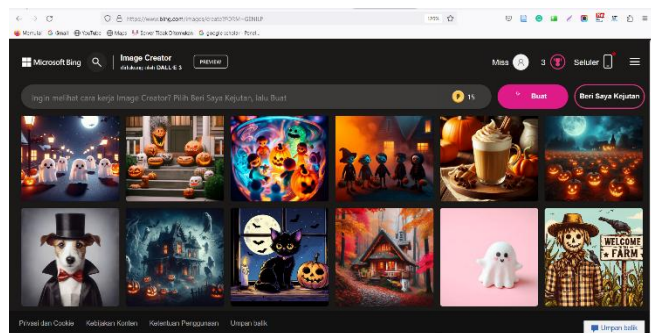
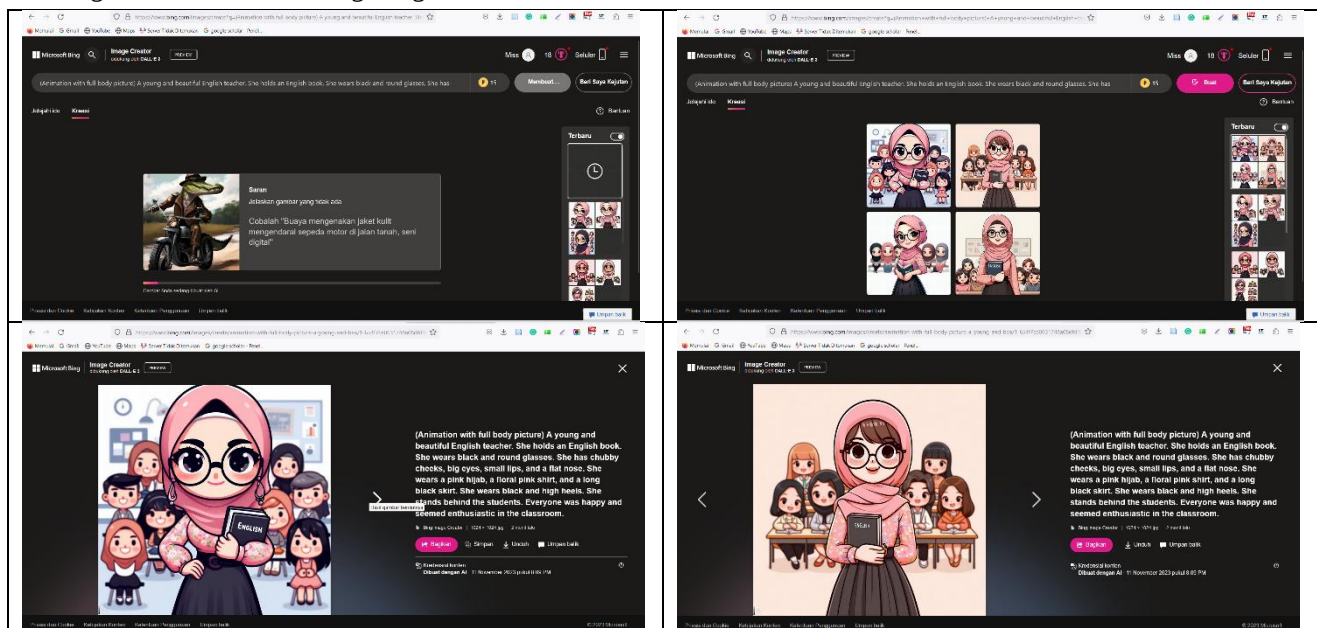


Figure 3. The View of Bing Image Creator Account



Teachers and lecturers can teach and explain to students how to write a descriptive text and then illustrate it into AI cartoons using Bing Image Creator:

1. Visit the Bing Image Creator website at <https://www.bing.com/create> and sign in using our Microsoft account.
2. Enter the text command that suits our wishes in the column provided. To make our photo a Disney cartoon, we can start the command with the words “Disney Pixar style” and
3. then explain the characteristics of the character we want to create based on the photo. This can include faces, poses, clothing, and other elements.
4. Once we have finished setting the command, click the “Create” option to process it. Bing Image Creator will generate several image variations according to our commands.
5. Once the results are displayed, we can download a Disney AI poster featuring characters similar to the photo we processed using Bing Image Creator.

Bing Image Creator AI itself is a website developed by Microsoft Bing. In providing this service, Microsoft Bing collaborates with DALL-E, a text-to-image model developed by OpenAI. DALL-E itself comes by relying on AI with deep learning methods to produce digital images from natural language descriptions called 'prompts'.

The teacher can make the first trial as an example to the students, for example, writing a prompt “(Animation with full body picture) A young and beautiful English teacher. She holds an English book. She wears black and round glasses. She has chubby cheeks, big eyes, small lips, and a flat nose. She wears a pink hijab, a floral pink shirt, and a long black skirt. She wears black and high heels. She stands behind the students. Everyone was happy and seemed enthusiastic in the classroom”. The results can be seen below:

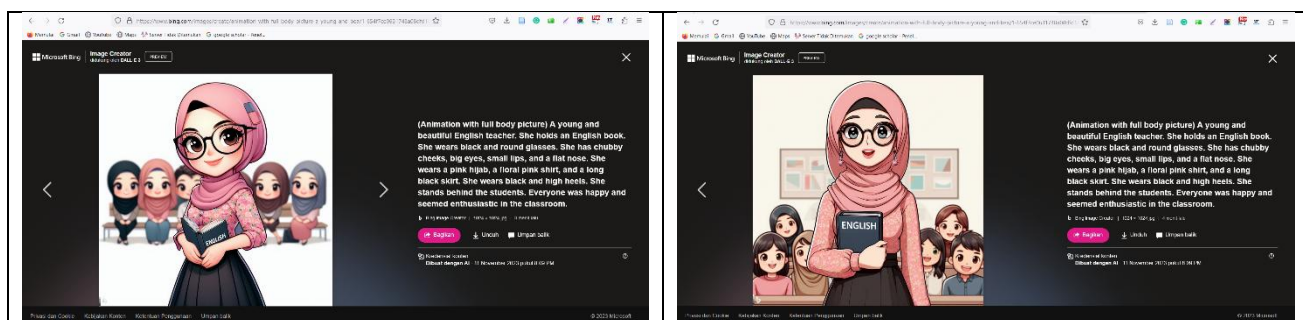


Figure 4. Creating a Cartoon/Animation Using Bing Image Creator

Physical appearance is one of the things we can tell when we describe ourselves or other people. To make our description sound more complex, we can tell what clothes or accessories we can use the verb "wear". We can also tell about other features on our bodies, such as mustaches, freckles, moles, birthmarks, scars, and so on. Not only that, we can describe our physical appearance as a whole using adjectives, such as handsome, attractive, cute, attractive, etc. Finally, add other brief details to our physical description to make it more interesting. Description in the field of composing is an essay that the writer uses to transfer his impressions, the results of observations, and feelings to the reader. This text can describe impressions or the five senses solely from the author's perspective. An example of describing a person is a form of writing that aims to expand the reader's experience and knowledge by describing the real person.

To get accurate animated image results, students can write detailed and specific descriptions. The description or prompt used must be in English. 2) Use this formula: adjective + noun + verb + style. 3) Instead of writing "create a photo of," we can write sentences like "a cartoon", "a painting" or "3D animation" to give a clear image style. 3. Image details match the sentence description. Click Generate and it can immediately start the process. Finally, just wait for the image to finish and download it. Further research still needs to be carried out to determine students' perceptions of the use of Bing Image Creator in illustrating their written descriptions of characters of a desired cartoon.

Discussion

In an increasingly connected and digital world, the use of images has become essential in a variety of contexts, whether for personal or professional content. Bing Image Creator is one of the fast-growing creative tools offered by Microsoft, and focuses on enabling users to easily create images that are attractive and suit their needs. In this article, we will explore what Bing Image Creator is and how this tool can be useful in various aspects of digital life. Bing Image Creator is an online tool developed by Microsoft that aims to make it easy for users to create images with various creative features and options. This tool has a user-friendly interface and can be accessed for free via a web browser. Although the name may suggest an association with the Bing search engine, Bing Image Creator is an independent tool that focuses on creating unique and diverse images.

Bing Image Creator is an image production tool equipped with AI (Artificial Intelligence). The existence of

AI allows users to change text into images or text-into-images. In the world of AI programs, Bing Image Creator is included in the AI Art Generator model. The development of Bing Image Creator was carried out by Microsoft in collaboration with OpenAI, based on Dall-E 3. The AI program used to process images belongs to the ChatGPT development company, namely OpenAI.

As an AI Art Generator, Bing Image Creator can process commands or prompt text into images (text to image). With this capability, users can enter a prompt to order Bing Image Creator to create the image they want. Users can request images to be created in various design styles, including Disney Pixar styles. Bing Image Creator's capabilities are now being widely used to create images or posters in a Disney-Pixar style. Creating a cartoon/animation in Bing Image Creator is quite easy. However, users must be able to describe their imagination in a prompt sentence in Bing Image Creator. The goal is that Bing Image Creator can create images that match the user's commands or wishes.

Bing Image Creator is provided by Microsoft in the Bing search engine alongside the AI chatbot program, Bing Chat. Simply put, Bing Image Creator is Microsoft's ChatGPT available on Bing. How to use Bing Image Creator is similar to using ChatGPT, namely, the user must enter command text, aka a prompt. However, currently, the command text that must be entered must be in English. To access this program, users must also use a PC with Windows 10 or 11 OS. Image Creator is currently only available to users with a Microsoft account on the device Windows 10 and Windows 11 devices. We're working to expand access to other platforms soon. Please note that the availability of this feature is subject to change without notice. Currently, Image Creator only supports image requests in English. We will add more language support over time. The way to enter command text in Bing Image Creator is to enter command text data according to the style, model, color, or other criteria that the user wants. The more detailed the command is entered, the more the results obtained will follow the user's wishes.

One of the capabilities of Bing Image Creator that has attracted the attention of netizens is its ability to create images or posters in the style of Disney-Pixar posters. For those of us who want to try it, here's how to create a poster image in Bing Image Creator. Open our browser, then visit Bing Image Creator at bing.com/create. Users are required to log in with their Microsoft account. After that, users can start typing command text or image creation prompts in the existing column. An example of the first command text for

Bing Image Creator is, for example, “Disney Pixar movie poster about ...”. After that, the user must write a more specific command as desired, for example, “a girl with red hair with glasses”. Apart from that, we are advised to type in other details related to the setting or other atmosphere that we want to appear on the poster. Once the description is sufficient, the user can click “Create”. Several illustration options will appear. Users can choose one of several options available by downloading.

However, currently, Bing Image Creator is still not perfect. The resulting images are sometimes considered strange or imperfect, such as when the writing on the poster is unclear or the image is incomplete. Apart from that, images processed in Bing Image Creator by imitating Disney Pixar's design style have the potential to violate copyright, so it is not recommended to use Bing Image Creator images for commercial purposes. Users can use these results as entertainment, education, or reference.

Through Bing Image Creator AI, it will be easy for users to create images, photos, posters, and illustrations according to their wishes. How to create an image using Bing Image Creator AI: First of all, open the Microsoft Edge browser application on your laptop or computer. The next step, open Bing Image Creator, which is located in the sidebar or bar on the right, and then click the image and brush icon. We can also access Bing Image Creator AI via the following link: <https://www.bing.com/create>. Then, click Join & Create to log in using our Microsoft account. Now type the prompt we want with certain words (in English) to describe the image we want will be created. Wait a few moments, then several images that have been created by Bing Image Creator AI will appear. Select one of the images we want, press Share to share the Bing Image Creator link, or press the Download button to save the image that has been created.

Bing Image Creator provides the ability to generate digital images based on text descriptions (Primasari et al., 2025). Image Creator is different from searching for images on Bing. This works best when we are very descriptive. So, get creative and add details: adjectives, locations, and even artistic styles like “digital art” and “photorealistic.” The example: instead of the text prompt “creature” - try sending a prompt for “fuzzy creature wearing glasses, digital art”. Through Bing Image Creator AI, users can easily fulfill their needs for images or illustrations according to their wishes. Currently, all the features on this website can be enjoyed for free, making it easier for users to use images for various purposes.

To get results that are close to expectations, we must enter a detailed command description. The more detailed the description provided, the easier it will be for Bing Image Creator to present the image we want. However, in processing these commands into images, Bing Image Creator still has several shortcomings. If the results are not satisfactory, students can ask Bing Image Creator to process it again with the same command. Then, they can add commands to clarify the desired image. To get accurate animated image results, users must write detailed and specific descriptions. The following are tips & tricks so that the animated images are created according to what we want.

1) The description or prompt used must be in English. 2)

Use this formula: adjective + noun + verb + style. 3) Instead of writing “create a photo of” we can write sentences like “a cartoon” “a painting” or “3D render” to give a clear image style. Example: “A short-haired and a long-haired woman wearing different glasses are sitting and reading books in the library. 3D animation”.

There are some of the capabilities of Bing Image Creator AI: 1) Produce realistic or abstract images. Bing Image Creator AI can produce images that look like real photos or images that are more artistic and imaginative. Users can select the desired mode by adding words such as “realistic”, “abstract”, “cartoon”, “sketch”, etc., at the end of their text. 2) Produce images with various themes and genres. Bing Image Creator AI can produce images related to various topics, such as nature, animals, humans, technology, history, fantasy, horror, etc. Users can determine the desired theme or genre by using relevant keywords. 3) Produce images with various moods and emotions. Bing Image Creator AI can produce images that express various moods and emotions, such as happiness, sadness, anger, fear, awe, etc. Users can determine the desired atmosphere or emotion by using appropriate adjectives or adverbs. 4) Produce images of various sizes and resolutions. Bing Image Creator AI can produce images of varying sizes and resolutions, depending on user needs and preferences. Users can determine the desired size or resolution using common units of measurement, such as pixels, inches, centimeters, etc.

The Bing Image Creator platform offers a variety of features that can be used to customize learning media. Bing Image Creator is a creative tool that can help users, for example, students with various skill levels, to easily create interesting images by entering descriptions of people, objects, or places. It is hoped that this will attract students' attention and motivation to write descriptive text because what they describe will be depicted or illustrated in image form via Bing Image Creator. With access to a wide collection of images, simple editing capabilities, and a variety of other features, this tool is suitable for a variety of user needs in an ever-evolving digital world. To use or create images using Bing Image Creator AI, we must use a Windows 10 or Windows 11-based laptop or computer with a connected Microsoft account. Currently, this feature is only available on the platforms mentioned above, but Microsoft is working to expand it to other platforms. Bing Image Creator AI currently only supports requests or prompt requests in English. Of course, teachers can use this in teaching writing text descriptions in English.

There are several ways to create cartoons/animations with Bing Image Creator. 1) Open the Bing Image Creator website <https://www.bing.com/create> and log in using a Microsoft account. 2) Type the prompt to create an image in the column provided. Bing Image Creator can only understand commands in English, so we need to write the prompt in English. 3) We can make posters with orders as we wish. To make a photo into a Disney cartoon, we can write the initial command with the words “Disney Pixar style”. 4) Write more specific commands that describe the characters in the photo to be made into Disney cartoons. We can provide an explanation of the character's shape in the photo, such as face shape, pose, clothes worn, and others. 5)

After creating the command, click the “Create” option. Then, Bing Image Creator will process the command. 6) Wait a while until the AI Disney poster appears. Bing Image Creator will present four image variations according to our command. 7) Once it appears, we can choose the AI photo we like. 8) After that, we can start downloading and saving the photo.

There are several advantages of Bing Image Creator, as follows: 1) Ease of Use. Bing Image Creator AI begins its journey by offering users a very easy-to-use solution. We don't need to be graphic design experts to take advantage of this tool. The process of creating images becomes simpler, even for beginners. In a few short steps, we can produce quality images without having to understand the complexities of graphic design. This is what makes Bing Image Creator AI very friendly for users who have no background in this field. 2) Speed in Production. The sophistication of Bing Image Creator AI lies not only in its simplicity but also in the production speed it provides. This tool changes the dynamics of image creation, allowing us to create images in a fraction of the time. This is very useful in today's fast-paced world, where content has to be delivered in a very short time. With Bing Image Creator AI's ability to produce images quickly, we can focus on other important tasks. 3) Various Templates and Design Styles. One of the main advantages of Bing Image Creator AI is the variety of templates and design styles it offers. We no longer need to start from scratch, because this tool provides templates that we can adapt to our needs. These templates cover a wide range of image types, from illustrations to posters, infographics, and more. We can choose the template that best suits the type of content we want to produce. This saves us the time and effort we would have to spend if we had to design an image from scratch. 4) Easy Customization. Even though Bing Image Creator AI provides ready-to-use templates, we still have the flexibility to customize the resulting images. We can change text, colors, fonts, and other design elements according to our preferences. This allows us to create images that are unique and fit our brand or style. With these capabilities, Bing Image Creator AI is not only a practical tool but also a tool that can meet our specific needs. 5) Saves Time. One of the main values of Bing Image Creator AI is its ability to save time. With this tool, we can produce images quickly, without having to involve manual design processes, which tend to take a lot of time. This is especially meaningful for those who have busy schedules or need to produce large amounts of content. In a world that continues to spin rapidly, Bing Image Creator AI is an efficient solution.

However, there are also several disadvantages of Bing Image Creator, as follows: 1) limitations of creativity. While Bing Image Creator AI is impressive in many aspects, it also has its limitations, especially when it comes to creativity. The images produced by this tool have characteristics that tend to be generic. Although we can customize certain elements, Bing Image Creator AI cannot replace the creativity of an experienced graphic designer. Therefore, this tool may be less suitable for projects that require unique images or require a strong personal touch. 2) not suitable for complex design projects. Bing Image Creator AI's advantages in terms of ease of use and

production speed also come with limitations. This tool is more suitable for simple design projects. For design projects that require complex elements or a high level of creativity, such as logo design or artistic illustrations, Bing Image Creator AI may not be suitable. 3) not suitable for story content or creative text. Even though Bing Image Creator AI is very powerful in producing visual images, this tool cannot help in creating story content or creative text. If we are looking for a tool for writing or creating story content, Bing Image Creator AI will not be enough. These are limitations to consider when choosing a tool that suits our project. 4) limitations in understanding creative concepts. Bing Image Creator AI tends to focus more on the visual aspect. These tools may not always understand the creative concept or message we want to convey. As a user, we need to provide clear guidelines to ensure the resulting images meet our goals. This can be a challenge if we have a very creative idea that is difficult to translate into visual elements. 5) dependence on image databases. The quality of the images produced by Bing Image Creator AI is highly dependent on the image database used by this tool. If the image database is limited, the resulting images may also be limited in variety. This can be an obstacle if we are looking for images with very specific characteristics or images that have not been found in many databases.

Bing Image Creator AI is a revolutionary tool in the world of graphic design. Advantages include ease of use, speed of production, a wide variety of templates and design styles, and easy customization. However, these tools also have limitations that need to be considered, such as limitations in terms of creativity and their unsuitability for complex design projects. Understanding the advantages and disadvantages of Bing Image Creator AI is key to optimally utilizing it in our graphic design efforts. As an evolving innovation, Bing Image Creator AI will likely continue to evolve to overcome some of its limitations.

There are steps to create a Disney AI cartoon from a photo in Bing Image Creator: Visit the Bing Image Creator website at <https://www.Bing.com/create> and sign in using a Microsoft account. After logging in, type the character description into the column provided. Users can enter character descriptions as desired. To create a Disney AI cartoon, users can add the words "Disney Pixar style" to the beginning of the character description. Users can create more specific commands to turn photos into Disney cartoons. The order may include descriptions such as 1) gender, male or female. 2) character shape, such as face shape, eyes, jaw, nose, cheeks, hair, clothes, position of body parts, and others. 2) certain poses/styles and accessories used (necklaces, earrings, rings), etc., 3) objects worn on body parts, for example, types of clothing (shirts, t-shirts, dresses, trousers, etc.), colors, motifs/patterns. 4) objects used or around 5) expression, facial expression, or feeling (happy, sad, disappointed). 6) activities carried out (sitting, reading, standing, singing, etc.). 7) shooting angle. 7) surrounding background. Of course, there are many more.

Bing Image Creator (AI) is a feature offered by the Bing search engine that utilizes artificial intelligence (AI) technology to generate images based on verbal descriptions. Users can use words or phrases to describe the desired

object or situation, and the AI will attempt to create a visual representation of the description. This feature aims to make it easier to find images relevant to the description provided by the user. Users do not need to manually search through the image database or use specific keywords, but simply provide a verbal description. Although Bing Image Creator (AI) attempts to provide a visual representation of the description provided, the results may not always be perfect or accurate according to the description expressed. This is because the AI algorithm used is still in the development stage, and the AI's ability to interpret descriptions and generate appropriate images still needs improvement (Saroh & Nurhamidah, 2024).

V. CONCLUSION

Recently, posters or images with designs similar to Disney Pixar have been circulating on various social media platforms, such as Instagram and TikTok. With a design that is quite adorable, it is no wonder that the image design created using artificial intelligence (AI) has attracted the attention of people. Seeing the popularity of posters via Bing Image Creator, people can try to create character descriptions according to their favorite cartoons/animations, such as Disney via Bing Image Creator. Teachers/lecturers can ask students to visit or access Bing Image Creator at <https://www.bing.com/create>. Students need to have a Microsoft account, but if they do not have one, we can create an account first. They sign in using a Microsoft account. After logging in, type the character description into the column provided. They can enter character descriptions as desired. To create a Disney AI cartoon, students can add the words "Disney Pixar style" to the beginning of the character description. They can create more specific commands to turn photos into Disney cartoons. The order may include descriptions such as 1) gender, male or female. 2) character shape, such as face shape, eyes, jaw, nose, cheeks, hair, clothes, position of body parts, and others. 2) certain poses/styles and accessories used. 3) objects worn on body parts, for example, types of clothing, colors, motifs/patterns. 4) objects used or around 5) expression, facial expression, or feeling. 6) activities carried out. 7) shooting angle. 8) surrounding background. To get accurate animated image results, students can write detailed and specific descriptions. Click the Create option and wait a moment. To save the image, click the Download option, and the image will automatically be saved.

References

- [1] Adru, S. L., Johnson, S., & Hemalatha, M. (2023). AI and Blockchain-Based Platform for Empowering Content Creators: Enabling NFT – Driven Content Sharing, Inspiration Generation, and Collaborative Interaction. *2023 4th International Conference on Smart Electronics and Communication (ICOSEC)*, 666–673. <https://doi.org/10.1109/ICOSEC58147.2023.10276305>
- [2] Agnese, J., Herrera, J., Tao, H., & Zhu, X. (2020). A survey and taxonomy of adversarial neural networks for text-to-image synthesis. *WIREs Data Mining and Knowledge Discovery*, 10(4), e1345. <https://doi.org/10.1002/widm.1345>
- [3] Anna, N. E. V., Novian, R. M., & Ismail, N. (2023). Enhancing virtual instruction: Leveraging AI applications for success. *Library Hi Tech News, ahead-of-print(ahead-of-print)*. <https://doi.org/10.1108/LHTN-09-2023-0175>
- [4] Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). *Introduction to Research in Education*. Cengage Learning.
- [5] Attard-Frost, B. (2023). *Generative AI Systems: Impacts on Artists & Creators and Related Gaps in the Artificial Intelligence and Data Act* (SSRN Scholarly Paper No. 4468637). <https://doi.org/10.2139/ssrn.4468637>
- [6] Bankar, S. A., & Ket, S. (2021, May 25). An Analysis of Text-to-Image Synthesis. *Proceedings of the International Conference on Smart Data Intelligence (ICSMDI 2021)*. <https://doi.org/10.2139/ssrn.3852950>
- [7] Bellaiche, L., Shahi, R., Turpin, M. H., Ragnhildstveit, A., Sprockett, S., Barr, N., Christensen, A., & Seli, P. (2023). Humans versus AI: Whether and why we prefer human-created compared to AI-created artwork. *Cognitive Research: Principles and Implications*, 8(1), 42. <https://doi.org/10.1186/s41235-023-00499-6>
- [8] Biddix, J. P. (2018). *Research Methods and Applications for Student Affairs*. John Wiley & Sons.
- [9] Cheshier, C., & Albarrán-Torres, C. (2023). The emergence of autolography: The 'magical' invocation of images from text through AI. *Media International Australia*, 189(1), 57–73. <https://doi.org/10.1177/1329878X231193252>
- [10] Darmawan, A. J., Yoo, P. M. H., & Hartawan, R. A. (2024). Teknik Prompt ANVS Progresif untuk Bing Image Creator dan Interpretasi Kesenjangan Gambar AI. *Visualita: Jurnal Online Desain Komunikasi Visual*, 13(1), 112–130. <https://doi.org/10.34010/visualita.v13i1.13967>
- [11] Drianto, L. A., Valentino, M. N., Wibowo, S. I., & Setiawan, S. B. (2023). *Inovasi Teknologi Kecerdasan Komputer*. SIEGA Publisher.
- [12] Enjellina, Beyan, E. V. P., & Rossy, A. G. C. (2023). A Review of AI Image Generator: Influences, Challenges, and Future Prospects for Architectural Field. *Journal of Artificial Intelligence in Architecture*, 2(1), 53–65. <https://doi.org/10.24002/jarina.v2i1.6662>
- [13] Fitria, T. N. (2021). The Use Technology Based on Artificial Intelligence in English Teaching and Learning. *ELT Echo: The Journal of English Language Teaching in Foreign Language Context*, 6(2), 213–223. <https://doi.org/10.24235/eltecho.v6i2.9299>
- [14] Fitria, T. N. (2023). Artificial intelligence (AI) technology in OpenAI ChatGPT application: A review of ChatGPT in writing English essay. *ELT Forum: Journal of English Language Teaching*, 12(1), 44–58. <https://doi.org/10.15294/elt.v12i1.64069>

- [15] Hanafy, N. O. (2023). Artificial intelligence's effects on design process creativity: "A study on used A.I. Text-to-Image in architecture." *Journal of Building Engineering*, 80, 107999. <https://doi.org/10.1016/j.jobe.2023.107999>
- [16] Kim, D., Joo, D., & Kim, J. (2020). TiVGAN: Text to Image to Video Generation With Step-by-Step Evolutionary Generator. *IEEE Access*, 8, 153113–153122. <https://doi.org/10.1109/ACCESS.2020.3017881>
- [17] Kompas, C. M. (2023, November 2). 10 Contoh Deskripsi Bing Image Creator untuk Membuat Poster Disney AI yang Viral Halaman all. KOMPAS.com. <https://tekno.kompas.com/read/2023/11/01/16150087/10-contoh-deskripsi-bing-image-creator-untuk-membuat-poster-disney-ai-yang>
- [18] Lakomy, M. (2023). Artificial Intelligence as a Terrorism Enabler? Understanding the Potential Impact of Chatbots and Image Generators on Online Terrorist Activities. *Studies in Conflict & Terrorism*, 0(0), 1–21. <https://doi.org/10.1080/1057610X.2023.2259195>
- [19] Lee, Y.-H., & Chiu, C.-Y. (2023). The Impact of AI Text-to-Image Generator on Product Styling Design. In H. Mori & Y. Asahi (Eds.), *Human Interface and the Management of Information* (pp. 502–515). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-35132-7_38
- [20] Liu, V., Vermeulen, J., Fitzmaurice, G., & Matejka, J. (2023). 3DALL-E: Integrating Text-to-Image AI in 3D Design Workflows. *Proceedings of the 2023 ACM Designing Interactive Systems Conference*, 1955–1977. <https://doi.org/10.1145/3563657.3596098>
- [21] Miles, M. B., Huberman, A. M., & Saldana, J. (2018). *Qualitative Data Analysis: A Methods Sourcebook*. SAGE Publications.
- [22] Mori, H., & Asahi, Y. (2023, July 8). *Human Interface and the Management of Information*. HCI International Conference, Copenhagen, Denmark.
- [23] Narayanaswamy, A. (2024). Working with Image Creator. In A. Narayanaswamy (Ed.), *Microsoft Copilot for Windows 11: Understanding the AI-Powered Features in Windows 11* (pp. 149–161). Apress. https://doi.org/10.1007/979-8-8688-0583-7_8
- [24] Oppenlaender, J. (2022). The Creativity of Text-to-Image Generation. *Proceedings of the 25th International Academic Mindtrek Conference*, 192–202. <https://doi.org/10.1145/3569219.3569352>
- [25] Pakniany, Y., Latue, P. C., & Rakusa, H. (2023). Utilization of Bing Image Creator to Design Learning Media with the Theme of Natural Disasters in the Form of Artificial Intelligence-Based Animation. *Journal Education Innovation (JEI)*, 1(1), 87–97. <https://jurnal.ypkpasid.org/index.php/jei/article/view/28>
- [26] Primasari, D., Kamilah, N., Hermawan, E., Riana, F., Laxmi, G. F., Yanuarsyah, I., Hadjimartsu, S. A., & Eosina, P. (2025). Artificial Intelligence Application Usage Training: ChatGPT, Gamma, and Bing Image Creator In SMK Taman Siswa Bogor Students. *Jurnal Pengabdian Masyarakat Inovatif*, 3(1), 30–38.
- [27] Qiao, H., Liu, V., & Chilton, L. (2022). Initial Images: Using Image Prompts to Improve Subject Representation in Multimodal AI Generated Art. *Proceedings of the 14th Conference on Creativity and Cognition*, 15–28. <https://doi.org/10.1145/3527927.3532792>
- [28] Rahayu, R. A. S., & Santoso, H. (2023). Analisis Gambar Wajah Palsu: Mendeteksi Keaslian Gambar Yang Dimanipulasi Menggunakan Metode Variational Autoencoder Dan Forensics Deep Neural Network. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 2(9), 2701–2726. <https://doi.org/10.54443/sibatik.v2i9.1312>
- [29] Sandoval-Martin, T., & Martínez-Sanzo, E. (2024). Perpetuation of Gender Bias in Visual Representation of Professions in the Generative AI Tools DALL·E and Bing Image Creator. *Social Sciences*, 13(5), 250. <https://doi.org/10.3390/socsci13050250>
- [30] Saroh, S., & Nurhamidah, D. (2024). Kolaborasi Classcraft dan Bing Image Creator (AI) Sebagai Media Pembelajaran Bahasa Indonesia. *Jurnal Metamorfosa*, 12(2), 126–139. <https://doi.org/10.46244/metamorfosa.v12i2.2437>
- [31] Suryadevara, C. K. (2020). Generating Free Images with Openai's Generative Models. *International Journal of Innovations in Engineering Research and Technology*, 7(3), 49–56. <https://repo.ijert.org/index.php/ijert/article/view/3653>
- [32] Zhang, H., Zhu, H., Yang, S., & Li, W. (2021). DGattGAN: Cooperative Up-Sampling Based Dual Generator Attentional GAN on Text-to-Image Synthesis. *IEEE Access*, 9, 29584–29598. <https://doi.org/10.1109/ACCESS.2021.3058674>