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Implementation and Utilization of AI in Conceptualizing Educational Video Content on the Importance of Using Sunscreen in Daily Activities

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ABSTRACT

This research explores the application of Artificial Intelligence (AI) in developing educational video concepts, specifically focusing on the daily importance of sunscreen use. Recognising AI's capacity to enhance human activities, this study leverages it as a tool for crafting engaging and informative video content. Sunscreen is vital for protecting skin from harmful ultraviolet radiation, necessitating effective public education—video being a key medium. Employing a qualitative, descriptive methodology, this study gathered data through observing and analysing educational videos on social media. The video concept creation primarily utilised ChatGPT, an AI platform, with final video production handled by InShot and CapCut. The findings reveal that AI significantly simplifies and accelerates the video concept generation process, drastically reducing production time. This also allows for the creation of a wide variety of video styles and themes, extending beyond just sunscreen education. The core benefits of integrating AI into this workflow include enhanced time efficiency, streamlined content creation, and remarkable flexibility in generating concepts tailored to specific educational goals. Ultimately, implementing AI in video production promises to empower both the public and content creators to disseminate information with greater effectiveness and creativity.

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1. INTRODUCTION

The rapid evolution of digital technologies in the 21st century has given rise to new paradigms in the way information is produced, shared, and consumed. One such technological advancement is Artificial Intelligence (AI), which has progressively become an integral part of various sectors including health, finance, communication, and education. AI is defined as the ability of machines or software to emulate intelligent human behavior, enabling them to perform tasks such as understanding language, recognizing patterns, solving problems, and even generating creative content [1], [2].

Although AI still lacks the full adaptive capacity of human intelligence, its ability to process large datasets, generate responses based on learned patterns, and execute tasks with high speed and consistency makes it a powerful tool in human-centered applications [3]. Rather than replacing human roles, AI is better positioned as an augmentation technology, helping humans accomplish complex or repetitive tasks more efficiently [4].

In the field of education, the use of multimedia content—especially educational videos—has proven to be an effective medium for enhancing learning experiences. Videos combine visual, textual, and auditory stimuli to improve memory retention, clarify complex concepts, and motivate learners [5]. According to Mayer's Cognitive Theory of Multimedia Learning, combining words and pictures helps learners build more meaningful mental representations [6]. Moreover, educational videos distributed via social media platforms can reach a broader audience and encourage self-directed learning outside traditional classrooms [7].

One important topic often overlooked in everyday health education is the proper use of sunscreen. Ultraviolet (UV) radiation, particularly from prolonged sun exposure, can lead to various adverse health effects such as sunburn, hyperpigmentation, premature aging, and even skin cancer [8], [9]. Sunscreen functions as a topical chemical or physical barrier that absorbs or reflects UV rays, helping prevent cellular damage [10]. Despite its proven efficacy, studies have shown that awareness of daily sunscreen use remains low, especially among adolescents and young adults [11].

This lack of awareness is particularly concerning in tropical regions where sun exposure is intense and prolonged. Research conducted in Indonesia indicates that many young individuals underestimate the long-term risks of UV exposure, often perceiving sunscreen as a cosmetic rather than a preventive health measure [12], [13]. Furthermore, marketing trends, peer influence, and the proliferation of misinformation on social media contribute to inadequate understanding of sunscreen's role and usage guidelines [14].

Given these challenges, innovative educational interventions are needed—ones that are visually appealing, concise, and easy to disseminate across digital platforms. The integration of AI tools such as ChatGPT in content creation enables users to generate structured video scripts, storyboards, and narration tailored to specific topics, including health awareness campaigns [15]. Combined with intuitive video-editing applications like InShot and CapCut, AI can significantly streamline the process of educational video production, allowing creators to generate diverse, high-quality content with minimal technical skills [16].

This study investigates the implementation of AI in conceptualizing and producing an educational video about the importance of daily sunscreen use. By employing a qualitative descriptive method, this research explores how generative AI tools can enhance efficiency, creativity, and accessibility in the development of health-oriented digital media. The aim is to demonstrate the potential of AI-assisted content creation in promoting public health education through digital storytelling.

2. METHOD

This study adopts a qualitative descriptive method to explore the implementation of artificial intelligence (AI) in the creation of educational video content on the importance of sunscreen use. The qualitative approach was selected to enable a detailed examination of the processes, tools, and outcomes involved in AI-assisted video conceptualization and production.

2.1. Research Design

The research was conducted through field observation and content analysis, focusing on the use of AI tools in content generation and video editing applications. Observations were centered on examples of AI-integrated educational videos available on social media platforms such as Instagram and TikTok, particularly those targeting public health awareness.

Data collection also involved the practical application of generative AI specifically ChatGPT as a tool for creating video scripts and content concepts. The study was carried out in several stages, starting from prompt development, script generation, editing, to the final video output. This design allowed the researcher to analyze both the functionality of the tools and their effectiveness in facilitating content development.

2.2. Data Collection Procedures

The following stages were conducted:

Prompt Engineering & Content Generation: ChatGPT, developed by OpenAI, was used to generate short video scripts on sunscreen education based on custom prompts. The generated content was then evaluated for thematic relevance, narrative flow, and clarity.

Video Production & Editing: The final scripts were converted into short video content using two mobile-based applications: InShot and CapCut. These tools enabled the addition of visual assets, text overlays, background music, and transitions to enhance viewer engagement.

Observational Analysis: The researcher documented the ease of use, time required, and output quality at each stage. Social media videos with similar health education goals were also analyzed for comparison.

2.3. Research Instruments

AI Platform: ChatGPT (OpenAI) – used for generating video scripts and narration. Video Editors: InShot and CapCut – for assembling video clips, adding effects, and finalizing the product. Observation Sheets: Used to record the effectiveness of AI tools and editing platforms throughout the process.

2.4. Analytical Approach

Data analysis was conducted using descriptive interpretation, where observations and video outputs were compared against the research objectives. The researcher evaluated the effectiveness, efficiency, and flexibility of AI use in video concept development, referencing multimedia design theory and prior studies in educational media.

The qualitative data from observations were then synthesized into themes reflecting: The efficacy of AI in script creation, The usability of editing applications, and The overall feasibility of AI-based content creation workflows.

3. RESULTS AND DISCUSSION

This study focused on implementing Artificial Intelligence (AI) to support the creation of educational video content, specifically regarding the importance of sunscreen use in daily life. The process involved two key stages: (1) the use of ChatGPT to generate video concepts and scripts, and (2) the use of mobile editing tools (InShot and CapCut) to produce the final video. The results are discussed below according to the research objectives.

3.1. AI-Assisted Script Generation

By utilizing ChatGPT, the researcher successfully produced a structured short video script with proper narrative flow, educational messaging, and language suited to youth audiences. The script emphasized several key educational points, including the dangers of UV radiation, correct sunscreen usage, and the selection of appropriate SPF values. The use of AI significantly shortened the content planning phase. What would typically take hours of brainstorming and drafting was reduced to mere minutes with prompt-based input.

Moreover, the AI was able to generate multiple script variations, allowing the researcher to compare tones, styles, and formats. This flexibility and responsiveness illustrates the potential of large language models in content ideation processes, especially in educational contexts.

3.2. Video Production Using Mobile Applications

The second phase involved converting the script into a short video using InShot and CapCut, two widely used mobile video editing tools. The editing process included: Inserting voice-over narration based on AI-generated text, Adding royalty-free background music, Overlaying informative text and call-to-action prompts, Integrating transitions and visual cues to support engagement.

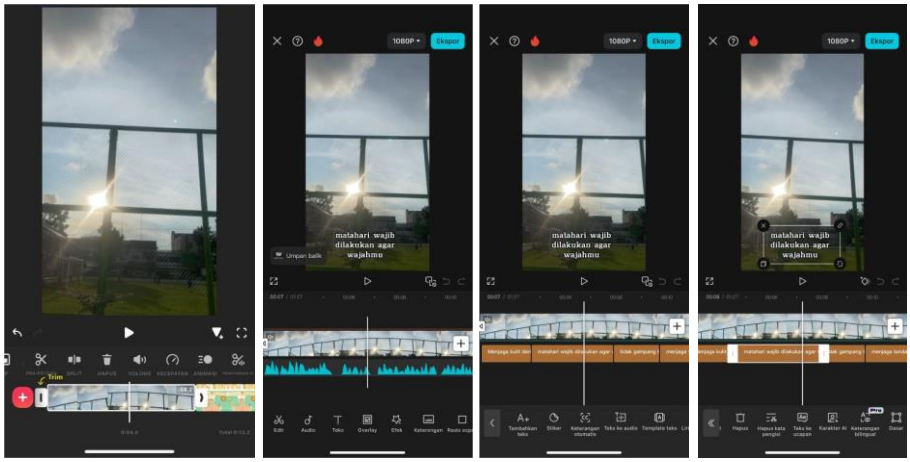


Figure 1. Video Merging Process, Adding Text and Audio Elements

The final video had a duration of approximately 2.5 minutes, consistent with the initial design scope. Both applications proved effective for beginner-level editors. CapCut was especially helpful due to its built-in templates and advanced layering features.

The overall production time was significantly reduced due to the combination of pre-generated content and intuitive editing tools. No professional studio or equipment was required, highlighting the accessibility of this method for content creators with limited resources.

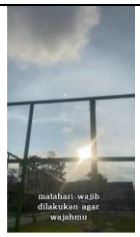
3.3. Qualitative Evaluation and Observations

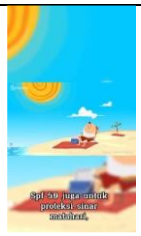
The video was reviewed informally by a group of peers and educators. Feedback indicated that: The message was clearly understood and memorable, The AI-written script sounded natural and informative, The visual elements added appeal and engagement, The format was suitable for social media dissemination.

Furthermore, it was observed that the AI system could easily adapt to other health-related themes by changing the prompt, showing its cross-topic applicability.

These findings align with Mayer's multimedia learning principles, suggesting that well-integrated text, visuals, and narration can effectively enhance comprehension. The approach also supports digital education models promoted in the Society 5.0 era, where AI serves not only as a tool but as a partner in knowledge dissemination.

Table 1. Video Result

No.	Image	Fill Text
1.		*Why is sunscreen important?*
2.		*"Protecting your skin from the sun is a must so that you don't burn easily, prevent signs of aging, and also skin cancer"*
3.		*"Sunlight radiation is divided into UVC, UVB, and UVA. UVC can be absorbed by the ozone layer and does not reach the earth. UVB partially penetrates the ozone layer and can damage the skin, cause sunburn, and skin cancer. UVA can penetrate the deepest layers of the skin and damage the skin's DNA, causing signs of premature aging such as wrinkles, dark spots and skin cancer.*
4.		*Even though the sky is cloudy, do not assume that you are free from sun radiation, because it turns out that 90% of UV radiation can penetrate the clouds, and the higher the sun the greater the radiation, UV radiation is highest from 10 to 2 o'clock, so avoid outdoor activities at that hour.*
5.		*To protect it, you can use sunscreen on your face.*

No.	Image	Fill Text
6.		*The choice of sunscreen must also be adjusted to your skin type so that the ingredients contained can work perfectly.*
7.	 	*The first is chemical sunscreen, this type of sunscreen is suitable for oily skin and acne.*
8.	 	*The second is physical sunscreen, this type of sunscreen is suitable for dry and sensitive skin.*
9.		*Physical sunscreen tones up with spf 15+, while chemical sunscreen has spf 50, but does not tone up.*
10.		*Apply evenly on all areas exposed to the sun, use an amount approximately as much as a knuckle for the face and neck, use 15-20 minutes before exposure to the sun so that the sunscreen absorbs and provides maximum protection.*
11.		*Choose a sunscreen with at least 30 spf to protect your skin from UV rays, retain moisture, and prevent invisible damage.*
12.		*Take care of your skin every day, use sunscreen and feel the difference.*

No.	Image	Fill Text
13.		*Have you applied sunscreen today?*

4. CONCLUSION

This study demonstrates that the integration of Artificial Intelligence (AI) significantly enhances the process of conceptualizing and producing educational video content. By using generative AI tools like ChatGPT, content creators can efficiently generate structured, engaging, and informative video scripts tailored to public health themes such as the importance of sunscreen use in daily life. The application of accessible mobile editing tools like InShot and CapCut further simplifies the technical process, allowing high-quality videos to be produced without advanced expertise or costly resources.

The findings show that AI can reduce production time, diversify content variations, and improve message delivery in educational contexts. Moreover, this approach is not only effective for health education but is also scalable to other thematic areas, making it a flexible solution for modern digital content creators. The use of AI in educational media supports the broader goals of digital literacy, health promotion, and innovative pedagogy in the Society 5.0 era.

Future research could explore audience reception in more depth and measure the long-term impact of AI-assisted educational content on knowledge retention and behavior change.

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