DEVELOPMENT OF AN ISLAMIC EDUCATIONAL INFOGRAPHIC ANIMATION VIDEO ON INTERNET DANGERS FOR CHILDREN UNDER TEN

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Abstract

This study developed an Islamic educational infographic animation video aimed at raising awareness among parents and educators about the dangers of internet use for children under ten years old. Utilizing the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation), the research involved needs analysis, storyboard creation, animation production, and effectiveness testing. The video, which integrates Islamic moral values with engaging visual storytelling, addresses key risks such as digital addiction, exposure to inappropriate content, and lack of supervision. The effectiveness of the video was evaluated through pre-test and post-test questionnaires administered to 40 selected respondents, supported by qualitative interviews. The results showed a statistically significant improvement in participants' understanding ($p < 0.05$), with over 80% reporting increased readiness to guide children in safe and responsible digital behavior. Respondents also appreciated the video's simple language, appealing visuals, and clear message delivery. This study contributes to the field of digital parenting and Islamic education by offering a culturally relevant, faith-integrated educational tool. Future research is encouraged to enhance interactivity and widen dissemination across digital platforms to reach broader audiences.

Keyword: *Infographic Animation, Islamic Education, Internet Safety, Digital Literacy, Children Under Ten*

Abstrak

Penelitian ini mengembangkan video animasi infografis edukatif berbasis nilai-nilai Islam yang bertujuan untuk meningkatkan kesadaran orang tua dan pendidik mengenai bahaya penggunaan internet pada anak-anak di bawah usia sepuluh tahun. Dengan menggunakan model ADDIE (Analisis, Desain, Pengembangan, Implementasi, dan Evaluasi), penelitian ini mencakup analisis kebutuhan, pembuatan storyboard, produksi animasi, serta pengujian efektivitas. Video ini mengintegrasikan nilai-nilai moral Islam dengan narasi visual yang menarik, dan membahas risiko utama seperti kecanduan digital, paparan konten tidak pantas,

serta kurangnya pengawasan. Efektivitas video dievaluasi melalui kuesioner pre-test dan post-test yang diberikan kepada 40 responden terpilih, serta didukung oleh wawancara kualitatif. Hasilnya menunjukkan peningkatan pemahaman yang signifikan secara statistik (p < 0.05), dengan lebih dari 80% responden menyatakan peningkatan kesiapan dalam membimbing anak menggunakan internet secara aman dan bertanggung jawab. Responden juga mengapresiasi penggunaan bahasa yang sederhana, visual yang menarik, serta penyampaian pesan yang jelas. Penelitian ini memberikan kontribusi dalam bidang parenting digital dan pendidikan Islam dengan menawarkan alat edukasi yang relevan secara budaya dan terintegrasi dengan nilai keimanan. Penelitian selanjutnya disarankan untuk meningkatkan interaktivitas serta memperluas distribusi melalui berbagai platform digital agar menjangkau audiens yang lebih luas.

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Introduction

The development of information technology has significantly impacted human life, particularly in the lives of young children. The internet has become a prominent medium for learning, entertainment, and communication, easily accessible through various digital devices such as smartphones, tablets, and computers. When used appropriately, internet access can support children's independent and creative learning processes, broaden their horizons, and enhance cognitive development through exposure to visual and auditory information (Livingstone & Blum-Ross, 2020).

However, alongside its benefits, unsupervised internet use poses serious risks. Several studies have shown that children are highly vulnerable to the negative effects of internet exposure, including digital addiction, reduced social interaction, exposure to age-inappropriate content, cyberbullying, and online predators (Green et al., 2021; Wu et al., 2022). A study by Smahel et al. (2020) found that children who frequently use the internet experience difficulty concentrating, impulsive behavior, and a decline in academic performance.

Moreover, the risk of harmful content exposure is closely linked to the lack of digital literacy among parents and educators. Many parents lack sufficient knowledge and skills to filter and guide children in navigating the internet wisely (Çoklar et al., 2021). This issue is further compounded by the limited availability of educational media that effectively communicate these risks in an accessible and easy-to-understand manner for the general public.

Although several educational initiatives have been introduced to raise digital literacy awareness, such as workshops, printed guides, and instructional modules, most of these approaches remain text-based and informational in nature. As a result, they often fail to attract the attention of parents and caregivers, especially those with limited time or educational background (Nugroho & Arifianto, 2021). In this context, interactive visual media such as infographic animation videos are seen as more effective tools, as they can convey complex information in a simplified, appealing, and communicative way (Alkhawaldeh et al., 2022). Animated videos not only offer strong narrative visualizations but also facilitate understanding across different age groups and literacy levels.

Despite this, a significant research gap remains. To date, very few studies have focused on developing educational media in the form of infographic animations specifically designed to enhance children's digital literacy while integrating Islamic educational values. In Islam, the protection and proper upbringing of children is a fundamental responsibility of parents. The Qur'an explicitly commands believers to "protect themselves and their families from a fire" (Qur'an, At-Tahrim: 6), and the Prophet Muhammad (peace be upon him) emphasized that every child is a trust, and parents are accountable for their education (morally and spiritually). Therefore, it is crucial to provide educational media that are not only informative and visually engaging but also embedded with Islamic principles as part of nurturing the *insan kamil*, a holistic human being developed intellectually, spiritually, and socially.

However, existing educational efforts often rely on textual or non-engaging media. In addition, little emphasis has been placed on Islamic educational values in developing digital awareness tools for Muslim parents and educators. This constitutes a clear and urgent research gap.

This study aims to develop an infographic animation video as an educational medium to raise awareness among Muslim parents and educators about the negative impacts of the internet on children under ten years old. The media is designed using a visual, narrative-driven approach that is accessible and engaging, while also conveying Islamic moral values, such as parental responsibility, ethical guidance, and the importance of supervision in the use of technology. It is hoped that this media can serve as a significant contribution to the field of contemporary Islamic education that responds adaptively to the challenges of the digital age.

Method

This study employed a multimedia development approach based on the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation), which is commonly used in instructional media development. Each stage in the model was implemented systematically to produce an educational infographic animation video aimed at raising awareness of the risks associated with children's internet use.

1. **Needs Analysis**

This initial stage involved gathering data through recent literature reviews on the negative effects of internet use on children, as well as interviews with three experts: a child psychologist, an Islamic education lecturer, and a parenting practitioner. The goal was to identify the most urgent and relevant informational needs of Muslim parents and educators when accompanying children in digital environments.

2. **Conceptual Design**

This phase focused on drafting the narrative script, storyboard, and visual elements to be used in the animation video. The language used was communicative and easy to understand, and Islamic educational values were embedded throughout. The visual design was tailored to be appealing to adult viewers while maintaining an educational tone.

3. **Media Development**

The video was created using Adobe After Effects and Adobe Illustrator to develop the characters and graphic components. The final video has a duration of 4 minutes and 33 seconds. All visual and audio content was produced in accordance with the approved storyboard. A professional voice-over was used to enhance message clarity and viewer engagement.

4. **Implementation and Trial**

The media trial was conducted on 40 respondents, selected using a purposive sampling technique. The participants were chosen based on specific criteria, including having children under ten years old and being actively involved in supervising their digital media use.

5. **Effectiveness Evaluation**

The effectiveness of the video was evaluated using pre-test and post-test questionnaires, measuring participants' understanding of the negative impacts of internet use before and after viewing the video. The questionnaires were validated

through content validity assessment by two instructional media experts and one Islamic parenting expert. Additionally, structured interviews were conducted with eight selected respondents to collect qualitative feedback on the media's effectiveness and appeal.

Quantitative data were analyzed using a paired-sample t-test, performed with SPSS version 26 to determine statistical significance in comprehension improvement. Qualitative data were analyzed through thematic analysis, categorizing the respondents' statements into key themes and insights.

6. Ethical Considerations

This research adhered to ethical standards by obtaining informed consent from all participants. Detailed information about the study's purpose, benefits, and data confidentiality was provided prior to participation. The study did not involve children directly but instead focused on educating parents and teachers as primary facilitators in the development of children's digital literacy. The study was also reviewed and approved by the internal ethics committee of the researcher's affiliated institution.

Findings and Discussion

Findings

The results of the study indicate that the developed infographic animation video successfully increased parents' and educators' understanding of the negative impacts of the internet on children. Based on the trial conducted with the target group, it was found that most respondents experienced increased awareness of the dangers of internet addiction, exposure to inappropriate content, and the importance of supervision in children's internet usage.

Respondents stated that the animation video had an attractive visual appearance, used easily understandable language, and conveyed messages effectively. According to the questionnaire analysis, more than 80% of respondents reported gaining new insights and feeling more prepared to supervise and guide children in using the internet wisely.

In addition, interviews with several participants revealed that the use of animation in educational media provided greater appeal compared to conventional methods such as reading materials or lectures. This suggests that the visual and interactive approach in infographic animation videos can be an effective means of

conveying complex information in a way that is easier to understand for diverse audiences.

However, several challenges were encountered in the development of the video, such as selecting an animation style appropriate for the target audience and limitations in the duration of information delivery. Therefore, future research may consider developing more interactive content and distributing the video through various digital platforms to reach a broader audience.
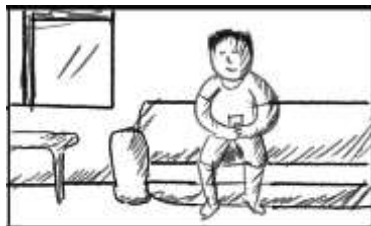
The discussion focused on the production of a 2D infographic animation video about the negative impacts of the internet on children under ten years old. Creating a 2D animation video requires well-thought-out ideas, as it involves bringing characters to life according to the storyline and roles. This process includes idea generation, concept development, and formulating creative ideas for the animation. Ideas can come from various sources such as real-life stories, fairy tales, legends, classic tales, fantasy, technology, and more. The idea must possess uniqueness, strengths, and distinctive features to make it engaging. Most importantly, one must always be creative in seeking, processing, and developing these ideas.

This 2D animation uses bright and light colors, as such colors have unique characteristics that make the visuals more appealing and suitable for child audiences. The 2D animation video was developed and adjusted based on scientific knowledge and stories obtained by the author from various credible references and sources.

After completing all the steps in the design stage, a final product was produced in the form of a 2D infographic animation video titled "Negative Impacts of the Internet," in mp4 format. The video lasts approximately 4 minutes and 33 seconds and is compatible with various video player software. Additionally, it is available on social media platforms, particularly YouTube.

At this stage, the previously prepared elements, such as characters, animation, storyboard, voiceovers, and more, were combined into the final output, which is the 2D infographic animation video. After completing all phases from pre-production to production and post-production, the following table presents a comparison between the storyboard and the final animation video:

Table 1. Comparison Between Storyboard and Final Project

Scene	Panel	Storyboard	Final Project
1	1/1	Captain Net is explaining the negative impacts of excessive internet use	
2	1/1	A child character is depicted as being haunted by fear while accessing the internet.	
3	1/1	Captain Net is explaining the internet as a source of knowledge and a useful tool for adults.	
4	1/1	A young child character is depicted, highlighting that internet use carries negative impacts that need to be watched out for.	

5	1/1		

A child is depicted being accompanied by an adult to use the internet wisely and always under adult supervision.

6	1/1		

The scene contains identity elements to introduce the content.

7	1/1		

The scene represents subtitle 1 in the video content.

8	1/1		

Various types of inappropriate content are depicted, including those that are not entirely suitable or appropriate for the child's age and experience.

9	1/1		

A child character is depicted accessing only websites or applications permitted by parents or teachers.

10	1/1		

A teacher is depicted explaining the permitted applications

11	1/2		

The scene emphasizes not carelessly searching for or visiting inappropriate and dangerous websites.

12	1/1		

The scene represents subtitle 2 in the video content.

13	2/2		

A child character is depicted spending too much time in front of a screen accessing the internet.

14	1/1		

A child character is depicted feeling isolated from their surroundings.

15	1/1		

A child character is depicted playing, highlighting the importance of limiting internet usage time and maintaining a balance between online and offline activities.

16	1/1		

The scene represents subtitle 3 in the video content.

17	1/1		

A child is depicted accessing the internet in a virtual world, where online predators pose a serious danger as they seek opportunities to exploit trust and trap children.
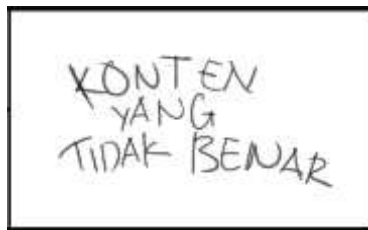
18	1/1		

A child character is depicted feeling confused when facing online predators who pretend to be friends or ask personal questions that should not be answered.

19	1/1	KONTEN YANG TIDAK BENAR	KONTEN YANG TIDAK BENAR

The scene represents subtitle 4 in the video content.

The research findings indicate that the developed infographics animation video successfully enhanced parents' and educators' understanding of the risks associated with internet use for children under the age of ten. The effectiveness evaluation was conducted through pre-test and post-test assessments with 40 respondents. The analysis using a paired-sample t-test revealed a significant improvement in understanding scores ($p < 0.05$) after watching the video.

More than 80% of respondents stated that the video helped them understand internet risks and made them feel more prepared to guide children in using digital technology. Respondents also appreciated the engaging visuals, easy-to-understand language, and communicative message delivery. In-depth interviews showed that the animation-based approach provided a more enjoyable learning experience compared to conventional methods such as lectures or leaflets.

Discussion

The findings of this study indicate that infographic animation videos can significantly increase the awareness and understanding of parents and educators regarding the negative impacts of internet use on children under the age of ten. This aligns with the results of prior research emphasizing the effectiveness of visual media in educational interventions targeting digital literacy and online safety.

Several previous studies support the role of multimedia-based education in improving comprehension. Alkhawaldeh et al. (2022) found that animated infographics not only enhance motivation but also improve conceptual understanding in educational settings. Similarly, Moreno & Mayer (2019) emphasize in their cognitive theory of multimedia learning that combining visual and verbal elements facilitates more effective knowledge transfer compared to text-only formats. These theoretical frameworks support the observed improvements in parents' understanding of online risks after engaging with a video that combines narration, dynamic visuals, and contextual storytelling.

The role of parents in mediating children's internet use has been widely documented. Livingstone and Blum-Ross (2020) argue that "active mediation" — involving explanation, guidance, and collaborative rule-setting — is more effective than restrictive control in ensuring safe digital practices among children. However, research by Çoklar et al. (2021) highlights that many parents lack the necessary digital literacy to perform such mediation roles effectively. The findings of the present study contribute to this discourse by demonstrating how multimedia educational tools can address this gap by providing accessible, engaging, and value-driven content specifically designed for parents.

While existing media on internet safety for children often adopts secular or general moral frameworks, this study integrates Islamic educational values into its design and messaging. As highlighted by Al-Attas (2019), Islamic education is not merely about knowledge transmission, but also the cultivation of adab (moral behavior) and insan kamil (the holistic human being). By embedding concepts such as mas'uliyyah (responsibility), hifz al-nafs (preservation of the self), and ethical supervision, the animation serves not only as a digital literacy tool, but also a medium for moral and religious education.

This research also responds to the call made by Darmi and Albion (2020), who note that Islamic education must adapt to the realities of the digital age while maintaining its spiritual and moral integrity. Unlike most digital parenting tools that treat religion as peripheral or absent, this study offers a culturally and theologically grounded alternative tailored to Muslim families, a group often underserved in mainstream media education.

The novelty of this study lies in its integration of Islamic educational values with infographic animation design, targeting a specific and underrepresented audience—Muslim parents and educators. While many previous interventions focus on school-based digital literacy programs, this study offers a home-based, religiously contextualized approach that is both accessible and engaging.

In terms of academic contribution, this study: (1) Adds empirical support to the effectiveness of infographic animation as a medium for adult education; (2) Offers a faith-integrated framework for addressing internet safety in early childhood education; (3) Provides a model for the development of culturally relevant digital parenting interventions in Islamic educational contexts. This research is expected to inspire further studies in media-based Islamic pedagogy, particularly in developing

media literacy materials that reflect the cultural and spiritual realities of Muslim communities in the digital era.

Conclusion

This study has successfully produced an infographic animation video as an educational medium aimed at increasing parental and educator awareness regarding the negative impacts of internet use on children under the age of ten. The evaluation results indicate that the video is effective in delivering information in an engaging and easily understandable manner, thereby enhancing understanding and awareness of the dangers of internet addiction and exposure to inappropriate content.

The main strengths of the animation video lie in its interactive visual approach, the use of simple and accessible language, and its greater appeal compared to conventional educational methods. However, several challenges were encountered during development, including limitations in conveying information within a short duration and selecting animation styles appropriate for the target audience.

Therefore, this study contributes to the development of animation-based educational media that supports the role of parents and educators in supervising children's internet use. Future research may focus on creating more interactive content and expanding distribution through various digital platforms to reach a broader audience.

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