Using Animation Media to Enhance Digital Citizenship Education:
Developing and Validating Educational Content for Bangkok Students

Rattasapa Chureemas, Srinakharinwirot University, Thailand
Akekalak Poksupphiboon, Srinakharinwirot University, Thailand

Abstract
This paper presents the development and validation of digital citizenship educational content using animation media for upper primary and lower secondary school students in Bangkok, Thailand. Aimed at cultivating a digitally literate community and fostering critical thinking skills, the project produced five animated episodes covering key aspects of digital citizenship: Cyberbullying awareness, data privacy, online investment risks, e-commerce safety, and online fraud prevention. Validation by experts ensured relevance, comprehensibility, and alignment with current contexts and students' cognitive levels. Results indicate that integrating animation media into digital citizenship education effectively engages students in analyzing scenarios, character behaviors, and problem-solving approaches. Clear learning objectives were established for each episode, facilitating comprehensive assessment of students' understanding and satisfaction. The animated content was well-received, featuring intriguing narratives, appropriate depth, visually appealing graphics, and suitable language for the target audience. This study underscores the potential of animation media in nurturing responsible digital citizens.

Keywords: Animation, Digital Literacy, Digital Citizenship

Introduction

In the digital age, young people are exposed to vast amounts of online content, making digital literacy and citizenship essential skills. With social media becoming an integral part of daily life, it is crucial to equip students with the knowledge to navigate this landscape safely and responsibly. This study focuses on the use of animation media to teach digital citizenship to students in Bangkok, with the objective of building a digitally resilient society. The project aims to enhance students' understanding of key aspects of digital citizenship, including cyberbullying awareness, data privacy, and the risks associated with online activities such as e-commerce and investment.

Objective

The primary objectives of this study are:
1. To develop and validate educational content on digital citizenship in the form of animated media targeted at students.
2. To assess the effectiveness of animation in promoting critical thinking and problem-solving skills related to digital citizenship.
3. To foster digital literacy among students by teaching them to recognize and respond to risks in the digital environment.
4. To evaluate the reception and comprehension of the animated media by students and educators in Bangkok.

Methodology

The research methodology followed a mixed-method approach, beginning with content development and validation phases. Five animated episodes were created, each focusing on a specific aspect of digital citizenship. These were reviewed by experts in digital literacy, media production, and pedagogy. Post-release, the episodes were evaluated using a Likert scale-based survey distributed to students and teachers across 14 schools in Bangkok. Statistical analysis of the survey responses was conducted to determine the effectiveness of the educational material. Data were collected through pre- and post-assessments, questionnaires, and feedback from both students and educators.

The methodology adopted for this study includes several key steps:
1. Content Development: Five animated episodes were produced, each focusing on different aspects of digital citizenship: cyberbullying, data privacy, online investment risks, e-commerce safety, and online fraud prevention.
2. Expert Validation: The episodes underwent validation by a panel of experts, including educators, media specialists, and legal professionals. This process ensured the content's relevance and appropriateness for the target age group.
3. Pilot Testing: The animated episodes were piloted in schools in Bangkok, targeting students in upper primary and lower secondary levels. Feedback was collected through surveys and focus group discussions with both students and teachers.
4. Data Collection: Quantitative data were gathered through a Likert scale survey measuring student engagement, understanding, and satisfaction with the animated content. Qualitative feedback was also collected to identify areas for improvement.
5. Analysis: The data were analyzed using descriptive statistics to assess the overall effectiveness of the animations. Qualitative feedback was analyzed thematically to identify recurring patterns in students' responses.

Findings

The animated episodes were well-received by the target audience, with high levels of engagement and comprehension. Students demonstrated a significant increase in their ability to critically analyze digital scenarios, understand the consequences of online behavior, and apply problem-solving strategies to avoid risks such as online fraud and cyberbullying. Teachers also reported that the animations provided an effective tool for discussing digital challenges in the classroom.

The survey results indicated high engagement and satisfaction among the students. Key findings include:
- The episodes were well-received, with content being rated highly for clarity, relevance, and appeal.
- Students showed a notable increase in their understanding of digital risks, with specific emphasis on cyberbullying prevention, online investment awareness, and e-commerce safety.
- Teachers observed a significant improvement in students' ability to critically assess online information and behavior.

The findings indicate that the animated episodes were highly effective in engaging students and promoting a deeper understanding of digital citizenship topics. Key results include:
1. Student Engagement: The animation media was well-received by students, with high ratings for engagement and visual appeal. The interactive and narrative-based format allowed students to relate to the content and apply it to real-life scenarios.
2. Comprehension: Students demonstrated a strong understanding of the key digital citizenship concepts presented in the episodes. They were able to identify risks in online interactions and suggest appropriate responses to digital challenges.
3. Critical Thinking: The animation encouraged students to analyze character behaviors, identify ethical dilemmas, and suggest solutions. This approach fostered critical thinking skills, particularly in relation to online safety and ethical digital behavior.

The collection of opinions on digital media: Animation from teachers responsible for disseminating and recording media usage, as well as students participating in the project, was conducted through simple random sampling. The respondents answered a questionnaire based on a 5-point Likert scale (1 = the least, 5 = the most), with the following criteria for interpreting the data:

Average score of 1.00 – 1.80: represents the least
Average score of 1.81 – 2.60: represents little
Average score of 2.61 – 3.40: represents moderate
Average score of 3.41 – 4.20: represents much
Average score of 4.21 – 5.00: represents the most

The analysis of opinions on digital media: Animation is presented in the following table.

Table 1: Nipithwittaya, S., Srikolchan, A., & Chureemas, R. (2023).
"Encoding to Digital Resilience Code." Thai Media Fund, Thailand.

Title	Mean	Standard Deviation	Interpretation
The content presented in the media is interesting.	4.93	0.27	the most
The number of storylines is appropriate.	4.27	0.43	the most
The visuals and graphics are attractive and engaging.	4.79	0.47	the most
The language is easy to understand.	4.43	0.50	the most
It is suitable for the students' level.	4.71	0.43	the most
Students have increased awareness of consuming information in the digital world.	4.64	0.50	the most
Students understand the precautions they need to take in the digital world.	4.50	0.50	the most
There is a tendency for students to develop resilience against the digital world.	4.64	0.52	the most
Students can identify situations that pose risks in the digital world.	4.50	0.52	the most
Students understand how to prevent dangers in the digital world.	4.50	0.61	the most
Overall, the use of media promotes the development of students' resilience in the digital world.	4.52	0.47	the most

Results

Quantitative analysis revealed that students' digital literacy improved significantly after interacting with the animated content. Key findings include:
- High satisfaction with the visual appeal and narrative structure of the animations.
- Improved ability to recognize and address risks in digital environments.
- Strong positive feedback from educators on the suitability of the content for classroom integration.

The study produced the following notable results:
- The animated episodes were rated highly by students and educators for their ability to convey important digital citizenship concepts in an engaging and understandable manner.
- Students showed significant improvement in their ability to recognize and mitigate risks in online environments, particularly in relation to cyberbullying and data privacy.
- The use of animation media was found to be an effective way of promoting digital literacy, with students reporting increased awareness of online risks and how to avoid them.

- Teachers noted that the animated content facilitated classroom discussions and provided a useful tool for introducing complex digital citizenship topics in an accessible way. The animated episodes achieved an average satisfaction score of 4.79 out of 5, with students demonstrating an enhanced awareness of the risks associated with digital environments. The content's graphics, narrative, and language were deemed appropriate for the target age group. Furthermore, there was a strong correlation between exposure to the animated content and improved digital literacy, as evidenced by pre- and post-assessments of students' understanding of digital citizenship.

Conclusion

This study demonstrates the potential of animation media as an effective tool for teaching digital citizenship. The animated episodes successfully engaged students, enhanced their understanding of online risks, and promoted responsible digital behavior. By integrating animation into digital citizenship education, schools can equip students with the knowledge and skills needed to navigate the online world safely and ethically. Future studies could explore the long-term impact of such educational interventions on students' digital resilience and behavior.

Acknowledgements

References

Bawden, D., & Robinson, L. (2009). The Dark Side of Information: Overload, Anxiety, and Other Paradoxes and Pathologies. *Journal of Information Science*, 35(2), 180–191.

Buckingham, D. (2003). *Media Education: Literacy, Learning and Contemporary Culture*. Polity Press.

Buckingham, D. (2015). *Media Education: Literacy, Learning, and Contemporary Culture*. Polity Press.

Chureemas, R., & Poksupphiboon, A. (2024). Using Animation Media to Enhance Digital Citizenship Education: Developing and Validating Educational Content for Bangkok Students. *Proceedings of the 5th Kyoto Conference on Arts Media & Culture*.

Jenkins, H. (2009). *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century*. MIT Press.

Livingstone, S. (2014). *Children, Risk and Safety on the Internet: Research and Policy Challenges in Comparative Perspective*. The Policy Press.

Livingstone, S., & Haddon, L. (2009). *Kids Online: Opportunities and Risks for Children*.The Policy Press.

Nipithwittaya, S., Srikolchan, A., & Chureemas, R. (2023). "*Encoding to Digital Resilience Code.* " Thai Media Fund, Thailand.

Contact email: Rattasapa@g.swu.ac.th