การออกแบบและทดลองใช้สื่อการสอนเพื่อป้องกันการใช้เทคโนโลยีที่ไม่ปลอดภัยในสถานศึกษาเขตพื้นที่กรุงเทพมหานครและปริมณฑล

Design and Test of Instructional Media to Prevent Unsafe Technology Use in Educational Institutions in Bangkok and the Metropolitan Region

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Abstract

This study had the objective to design and try out instructional media to prevent the use of unsafe technologies in educational institutions in Bangkok and the Metropolitan Region since these areas are at risk of crime in many aspects due to the highest rate of technology use in Thailand. A mixed-method research approach was employed, including a literature review, in-depth interviews, focus group discussions with 22 administrators, teachers, and personnel, and data collection from questionnaires with 341 lower secondary school students, and the try out with 136 students. The results discovered that appropriate instructional media should be animated to cover three areas: test cheating, online gambling, and raising awareness. After the try out, positive opinions were obtained on the application in learning and factors affecting the misuse of technology from students' motivation, awareness, attitudes, and perceptions. However, this study highlights the importance of developing effective instructional media to sustainably cope with social and technological changes. Future research should focus on designing instructional methods along with the development of policy

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mechanisms and enforcing laws to prevent corruption in educational institutions as a start of widespread social crimes.

Keywords: Design and Test of Instructional Media; Prevention Guidelines; Unsafe Technology; Bangkok and Metropolitan Region

บทคัดย่อ

การศึกษาวิจัยนี้มีวัตถุประสงค์เพื่อออกแบบและทดลองใช้สื่อการสอนเพื่อป้องกันการใช้เทคโนโลยีที่ไม่ปลอดภัยในสถานศึกษาเขตพื้นที่กรุงเทพมหานครและปริมณฑล เนื่องจากเป็นพื้นที่ที่มีความเสี่ยงต่อการเกิดอาชญากรรมได้ในหลายแง่มุมอันเป็นผลมาจากอัตราการใช้เทคโนโลยีที่สูงที่สุดในประเทศไทย โดยใช้วิธีการวิจัยแบบผสมผสานเริ่มต้นจากการทบทวนวรรณกรรม การสัมภาษณ์เชิงลึก และสนทนากลุ่มกับผู้บริหาร ครู และบุคลากร 22 คน รวมถึงการเก็บข้อมูลจากแบบสอบถามกับนักเรียนมัธยมศึกษาตอนต้น 341 คน พร้อมทั้งนำไปทดลองใช้กับนักเรียน 136 คน ผลการศึกษาพบว่าสื่อการสอนที่เหมาะสมควรเป็นรูปแบบอนิเมชั่นและมีเนื้อหาครอบคลุม 3 ด้าน ได้แก่ การโกงข้อสอบ การพนันออนไลน์ และการปลูกจิตสำนึก หลังจากนำไปทดลองทำให้ทราบถึงความคิดเห็นเชิงบวกที่มีต่อการนำไปประยุกต์ใช้ในการเรียนรู้ และปัจจัยที่ส่งผลต่อการใช้เทคโนโลยีในทางที่ผิดจากแรงจูงใจ การรู้เท่าทัน ทัศนคติ และการรับรู้ของนักเรียน อย่างไรก็ตาม งานวิจัยนี้ชี้ให้เห็นถึงความสำคัญของการสร้างสื่อการสอนที่มีประสิทธิภาพเพื่อรับมือกับการเปลี่ยนแปลงทางสังคมและเทคโนโลยีได้อย่างยั่งยืน ทั้งนี้ แนวทางการวิจัยในอนาคตควรมุ่งเน้นการออกแบบวิธีการสอนควบคู่ไปกับการพัฒนากลไกเชิงนโยบายและการบังคับใช้กฎหมายเพื่อป้องกันการทุจริตในสถานศึกษาซึ่งถือเป็นจุดเริ่มต้นของการก่ออาชญากรรมทางสังคมในวงกว้าง

คำสำคัญ: การออกแบบและทดลองสื่อการสอน, แนวทางการป้องกัน, เทคโนโลยีที่ไม่ปลอดภัย, กรุงเทพมหานครและปริมณฑล

INTRODUCTION

The transition to information technology has introduced challenges to the educational environment, posing risks to student safety and data reliability. This underscores the need for instructional media designed with precision and tailored to each age group to mitigate potential dangers while enhancing learning outcomes (Lee et al., 2023). In Thailand, slow educational development stems from unequal infrastructure, limited digital resources, insufficient teacher readiness, and inadequate policy follow-up or investment aligned with national strategies (OECD/UNESCO, 2016). Compounding these issues is the lack of awareness among administrators and teachers about the importance of safe technology use, alongside insufficient planning, collaboration, and training budgets (Mangkharat et al., 2024). Addressing these gaps requires the design of instructional media that meets the diverse needs of

educational institutions and fosters a shared understanding of safe and effective technology use.

According to statistics on the use of information technology by Thai students from 2019 to 2023, each age group tended to increase, especially in the age group between 12-14 years old studying in lower secondary school. They all had smartphones, and the internet usage rate has increased from 91.8% to 99.1%. Moreover, considering deeply into the area aspect, in the Bangkok Metropolitan Region, students mostly used the internet in the country, accounting for 98.9 percent (National Statistical Office, 2024). Access to information technology by students through the internet is both a learning opportunity and a security risk. The direction of instructional model development must keep up with shifts and context. The responsibility of creatively using all media channels is also crucial so that hidden threats in society and educational fields can be exposed.

However, unsafe technology use in educational institutions poses risks that can escalate to societal and national issues, undermining trust in the education system and technology adoption. Analyzing students' behavior provides insights into its impact on peers, teachers, and parents, helping to prevent online rights violations and corruption. Understanding the factors driving unsafe technology use is essential for prioritizing the design of instructional media that aligns with rapidly changing social trends.

Accordingly, the research team recognizes the importance of the influence of unsafe technology use in educational institutions, especially in the Bangkok Metropolitan Region, where technology use is likely to be higher than in other areas in Thailand. Additionally, lower secondary students are still in the age of learning and are open to new things all the time. Without proper and correct technology use guidelines, it will inevitably affect their perception on a large scale. Raising students' awareness of the root causes of crime and misconduct in schools is critically important. Therefore, the design of instructional media must be carefully reviewed and tested to develop appropriate media for each school context. Furthermore, the effort to foster participation from all sectors is essential so that social organizations play a role in building robust learning measures and ecosystems.

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The educational gap in Thai society underscores information technology as a key factor driving inequality between rich and poor students. Addressing this requires analyzing students' technology behaviors and evaluating institutional readiness to adapt, monitor usage, and

implement tools to prevent misuse. Promoting awareness, fostering anti-corruption values, and encouraging transparent technology use are essential for cultivating responsible behavior. The STRONG model, focusing on sufficiency, transparency, realization, progress, knowledge, and generosity, offers a framework for cultivating responsible technology use through consistent evaluation and monitoring (Heliany et al., 2023; Tenissara & Ruangsan, 2021). However, the result measurement requires an evaluation and monitoring mechanism to specify guidelines for appropriate instructional media development for students.

Moreover, as digital crimes such as academic dishonesty, cyber fraud, and unauthorized data access become more prevalent, integrating crime prevention strategies into instructional media is essential. The misuse of technology in educational settings can serve as an entry point for more severe forms of misconduct, reinforcing the need for early intervention and digital ethics education. Schools must adopt preventive mechanisms that not only address technology misuse but also mitigate risks associated with cybercrime, fraud, and online exploitation. This study examines behaviors and environmental factors in Thai schools, highlighting four key elements from Chuangcham et al. (2021) attitudes toward technology use, perceived ability, technology literacy, and motivation. These factors are essential for addressing unsafe technology use and developing instructional media suited to current needs. Institutions must support teaching with modern tools, create prevention guidelines, and produce effective media. Teachers play a crucial role and should engage in training and seminars to meet societal demands (Ediyani et al., 2020; Mfreke et al., 2020). The research team designs a conceptual framework as shown below:

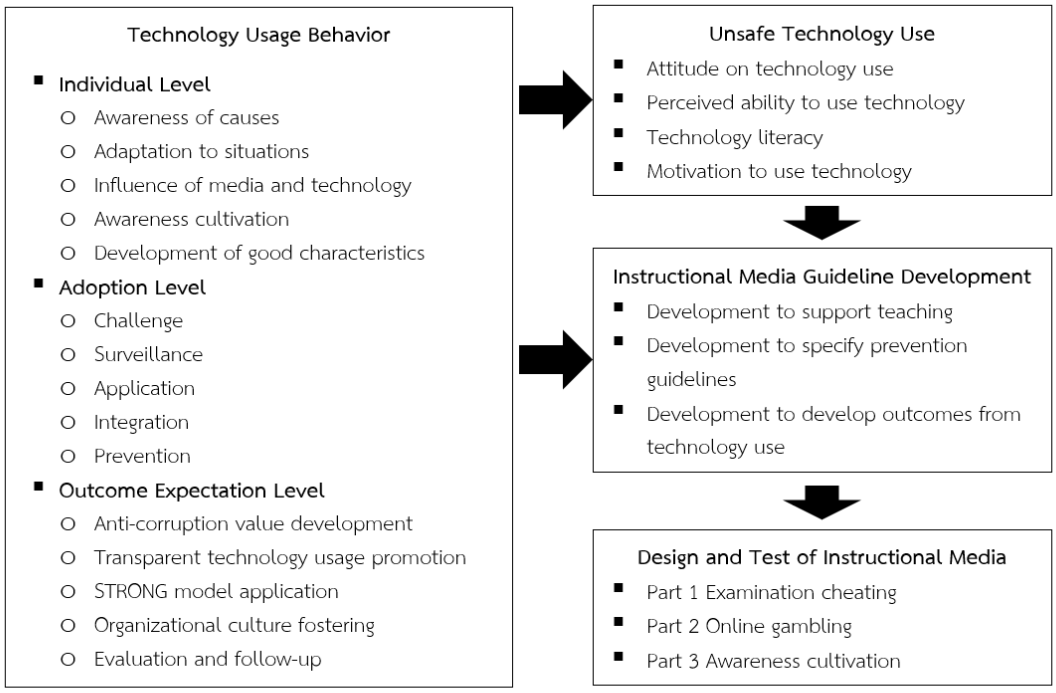


Figure 1 Conceptual Framework

The arrows illustrate the progression from analyzing technology usage behavior to preventing technology-facilitated crimes in education. Individual awareness and adoption strategies influence unsafe technology use, necessitating instructional media for prevention. This framework guides media development to curb academic fraud, online gambling, and digital misconduct, fostering ethical awareness and digital responsibility among students.

METHODOLOGY AND RESEARCH DESIGN

The objectives were achieved through mixed-method research, beginning with a field survey on unsafe technology use in educational institutions. The survey revealed that student behaviors influenced societal expectations, particularly through technology altering the value of the learning process. Developing age-appropriate instructional media emerged as a key mechanism. After identifying challenges, target groups, and research areas, a systematic design was conducted with the study guidelines as follows:

1) *Study Area*: Data collection began at the National Anti-Corruption Commission (NACC) to explore policy implementation addressing unsafe technology use, particularly cybersecurity risks in educational institutions. This includes exposure to online gambling, misinformation, academic dishonesty through digital tools, and social engineering threats. Three model schools recognized for technology adoption were selected: two under the Secondary Education Service Area Office in Bangkok and one under the Office of the Basic Education Commission (OBEC).

2) *Key Informant*: Purposive sampling selected 22 participants based on their direct roles in preventing technology-related crimes in education. This included 10 NACC executives overseeing cybersecurity policies, 3 school executives managing digital safety, and 9 teachers promoting ethical technology use. Executives provided policy insights via interviews, while school personnel discussed real-world challenges in focus groups.

3) *Population and Sample:* The lower secondary student population across the three schools totaled 2,280. Using Yamane's formula (1973), a sample of 341 students was determined, with proportions adjusted for each school. Class teachers selected participants for questionnaires to minimize learning disruption.

4) *Design and Test of Instructional Media:* Design and Testing of Instructional Media: Three storyboards were developed based on findings from prior analysis and aligned with educational crime prevention objectives. These were reviewed by external experts specializing in cybersecurity education and instructional design to validate content accuracy, ethical considerations, and pedagogical effectiveness. Upon expert validation, the finalized media were produced and pilot-tested with 136 students to assess engagement, comprehension, and applicability. Feedback from both students and experts was integrated to refine the final instructional materials before broader implementation.

However, the research objectives required diverse methods: behavior analysis on unsafe technology use utilized surveys, interviews, focus groups, and observation; factors influencing instructional media development were examined through these methods, desk research, and expert-reviewed questionnaires, with results analyzed via stepwise regression; and the design and testing of instructional media employed experimental design, action research, and evaluation. This approach aims to create age-appropriate instructional media and advance Thailand's educational model globally.

RESULT AND DISCUSSION

The conceptual framework in Figure 1 guided the research methodology and design, focusing on factors influencing unsafe technology use and their impact on shifting student behavior through instructional media design. The study results and result discussions are delivered with each research objective as follows:

1) Analysis of Unsafe Technology Use Behavior in Educational Institutions

1.1) Individual Level

(1) *Awareness of causes:* Students and educational personnel must understand the causes of unsafe technology use or corruption, often linked to a lack of control, knowledge, and ethics. Social pressure and irresponsibility exacerbate these issues, negatively impacting education (Aydin, 2024). Awareness serves as a foundation for changing unsafe behaviors within the context of each institution.

(2) *Adaptation to situation:* Rapid technological shifts require students to adapt creatively and responsibly. Educational institutions should promote technology use to enhance learning while fostering awareness to prevent corruption. Continuous learning helps students navigate high-risk situations, such as careless social media use, minimizing negative societal impacts.

(3) *Influence of media and technology:* Technology advancements bring both benefits and risks, such as exposure to cheating, plagiarism, and online gambling, which harm learning. Schools must regulate and educate students on safe technology use, ensuring personnel guide them to mitigate risks.

(4) *Awareness cultivation:* Building responsibility from a young age, combined with corruption prevention knowledge, fosters moral values and ethical technology use (Muhammad et al., 2023). Institutions must instill ethics throughout education, enabling students to distinguish correct from incorrect technology use and apply it in daily life.

(5) *Development of good characteristics:* All youth should have opportunities to develop safe technology use skills. Institutions should reflect on the pros and cons of technology, promoting literacy, analytical thinking, and problem-solving. Indicators must evaluate academic outcomes and creative, ethical technology use to prevent corruption.

1.2) Adoption Level

(1) *Challenge:* Technology adoption in educational institutions faces challenges such as budget constraints, limited tools, personnel gaps, and a lack of understanding of safe technology use. Students with learning difficulties are particularly affected in this digital age. Institutions must develop modern instructional media to address societal issues like online fraud and inappropriate content while promoting safe technology use and effective learning.

(2) *Surveillance:* Monitoring students' online behavior is essential to address concerns such as addiction, distraction, and emotional impacts (Berges-Puyo, 2024). Proactive surveillance, including behavior monitoring systems and technology safety measures, should involve cooperation among all sectors and focus on raising awareness among teachers and students.

(3) *Application:* Information technology enhances learning by building knowledge and skills but must be carefully regulated to prevent misuse. As students increasingly use AI tools like ChatGPT, proper guidance is needed to ensure technology supports learning without causing pressure or dependency (Javaid et al., 2023).

(4) *Integration:* Modern technology should be systematically integrated into learning to develop analytical thinking, problem-solving, and awareness. Teachers must adapt to students' diverse backgrounds and maintain meaningful connections to prevent detachment in the learning process.

(5) *Prevention:* Clear policies and measures are essential to prevent unsafe technology use, including appointing teacher inspectors, installing CCTVs, filtering internet access, and training personnel. These measures help minimize risks and ensure safe and ethical technology practices in schools.

1.3) Outcome Expectation Level

(1) *Anti-corruption value development:* Developing anti-corruption values is crucial for shielding students and personnel from unethical influences. Predicting the impact of wrongdoing before involvement is key, supported by training, instructional media, and daily practices. Sarmini et al. (2017) highlighted the role of instructional media in fostering awareness and reducing corruption, creating a better educational ecosystem.

(2) *Transparent technology use promotion:* Schools must use technology to prevent corruption, employing tools like LMS (e.g., Google Classroom, Moodle) to monitor progress, assignments, and attendance systematically. Real-time tracking through ID cards enhances data management and communication, reducing corruption risks and promoting transparency, ensuring tangible accountability and integrity in educational institutions.

(3) *STRONG model application:* The STRONG model focuses on sufficiency, transparency, awareness, and compassion to foster morality and ethics. Revised to STRONGER with Excellence and Reformity, it strengthens students' adaptability to rapid social changes, involving community collaboration to monitor and report inappropriate behaviors like cheating and online gambling.

(4) Organizational culture fostering: Building a sustainable, ethical school culture takes time and effort. Embedding safe technology practices into school environments ensures students, teachers, and parents understand the importance of responsible use. Despite differing school limitations, strengthening culture can mitigate challenges like access to inappropriate content (Martin et al., 2023).

(5) *Evaluation and follow-up:* Continuous evaluation ensures the effectiveness of instructional methods and technology use. Media design must be relatable and inclusive for all students, fostering awareness through interconnected episodes. Evaluation should measure real outcomes, enabling students to actively contribute to a society free from corruption and technology misuse.

2) Factors affecting instructional media development to prevent unsafe technology use in educational institutions

The design of instructional media involves studying factors influencing successful technology adoption in educational institutions. These include appropriate media selection for the target group and support from stakeholders like teachers, students, and parents, ensuring instructional methods align with the digital age. Table 1 presents an overview of the key factors in instructional media development as follows:

Table 1 The factors affecting the success of teaching media adoption

Factors in order of importance and academic consistency			
Factor	**Issue**	**Scholar**	**Main Theme**
Motivation to use technology	Educational institutions lacked motivation and guidance to teach students to use technology safely and creatively.	Gómez-Trigueros et al. (2024)	Highlighting technology's positive value enhances motivation, requiring trained teachers to address current issues.
		Li et al. (2024)	Digital tools boost engagement, foster creative learning, and reduce risks.
		Liu et al. (2024)	Motivation, emotional engagement, and innovative technology build confidence and improve achievement.
Technology literacy	Educational institutions lacked the promotion of students to know how to use technology for benefits and avoiding risks.	Almufarreh & Arshad (2023)	Instructional media enhances students' freedom to learn, improving safe technology skills while supporting academic learning.
		Casal-Otero (2023)	Integrating artificial intelligence education at the K-12 level strengthens safe technology skills in the educational context.
		Consoli et al. (2023)	Educational institutions should promote technology to boost intellectual engagement, collaboration, and online research.
Attitude on technology	Students lacked the reason to try new technology,	Brocca (2024)	Video instructional media enhance student engagement, but limitations arise when teachers resist modern technology.

	even when teachers, peers, and others recommended them.	Getenet et al. (2024)	Attitudes toward digital technology require social, collaborative, and emotional engagement to facilitate effective online learning.
		Ly et al. (2024)	The link between students' rationale, convenience, utility, and technology behavior is crucial, with attitudes driving digital adaptation.
Perceived ability to use technology	Students lacked acceptance and trust in new technology, media, and digital devices.	Albayati (2024)	ChatGPT adoption faces gaps between technology and students, influenced by policies and regulations.
		Timbang & Velasco (2024)	Digital technology enriches learning and social experiences but requires behavior understanding to prevent misuse.
		Keane et al. (2023)	Inconsistent technology expectations between school and college cause resistance without improved student satisfaction.

Note: The issues found are caused by results of the factors with the greatest influence first.

The table highlights key factors for successful instructional media development to reduce unsafe technology use in educational institutions. Motivation is the most influential factor, followed by technological literacy, attitudes, and perceived ability to use technology. Consistency in teacher training, instructional design, motivation, and student participation are essential mechanisms. The table emphasizes boosting students' motivation for safe technology awareness and aligning media with their needs, with priorities ranked based on the success of instructional media development as follows:

Table 2 Ranking Based on Level of Achievement of Instructional Media Development

Objective	Ranking by the Results of Instructional Media Use		
	1	2	3
Preventive measures	Students are ready to safely apply technology in their daily lives.	Students can advise peers against using technology for fraud.	Educational institutions train teachers and students on risks of misuse leading to corruption.
Teaching support	Students adapt learning behavior to align with technological advancements.	Students can share opinions on technology use in learning.	Educational institutions promote understanding of E-Learning benefits.

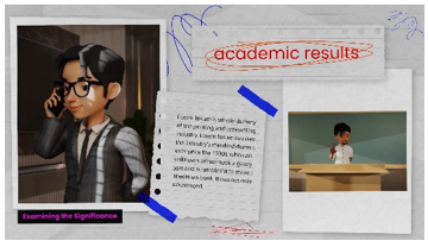
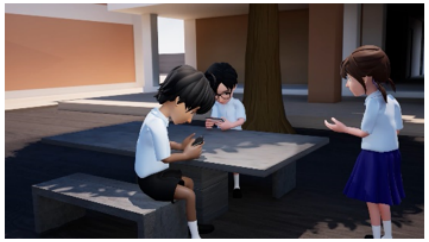
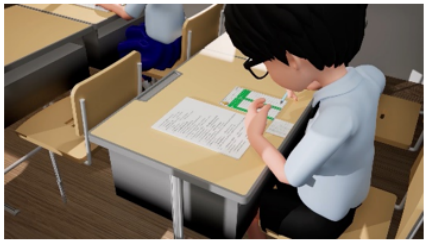
Outcomes from technology use	Students recognize the influence of technology adoption in their schools.	Educational institutions campaign for safe technology use with external partners.	Educational institutions set E-Learning guidelines to enhance student potential.

The table highlights the direction of instructional media use, emphasizing prevention guidelines as the key outcome. Students must use technology safely, warn against dishonesty, and align with advancements, supported by trained teachers. Institutions should foster awareness, promote safe technology use, and develop E-Learning guidelines to enhance potential. Linking media with student motivation fosters innovation and academic honesty. Teachers facilitate unbiased exploration, while institutions nurture moral identity through cooperation. Success relies on engaging instructional media and addressing student needs, as disinterest or unengaging tools lead to failure.

3) Design and Test of Instructional Media to Prevent Unsafe technology Use

The research team developed animation-based instructional media addressing exam cheating, online gambling, and responsible technology use. Expert consultations ensured accuracy, ethical considerations, and pedagogical effectiveness. External validation confirmed its reliability, and pilot testing with 136 students assessed engagement, comprehension, and behavioral impact, demonstrating its potential to enhance digital responsibility and prevent technology-facilitated misconduct in educational settings.

Table 3 Instructional Media (Animation) to Prevent Unsafe Technology Use in Educational Institutions

Episode 1: The Beginning (Exam Cheating)	Episode 2: The Game of Deception (Online Gambling)	Episode 3: Be Aware (Awareness Cultivation)
 Scene: Kao's father calls the teacher in charge of the exam.	 Scene: Irene asks her friend who is playing a game.	 Scene: The school director announces at the flagpole.
 Scene: Kao is copying key answers in the exam room.	 Scene: Irene asks Kao where they are rushing off to.	 Scene: Teacher Palm speaks in front of the class.
 Scene: School governing conference room	 Scene: Belle and Kao apologize to Teacher Top.	 Scene: Introduction of the Cyber Threat Booth

Based on the table above, the animation consists of three interconnected episodes, helping students understand issues and impacts of unsafe technology use. These episodes promote awareness and caution, using diverse characters to address and prevent corruption. The animation details are as follows:

1. Episode 1: The Beginning (Exam Cheating): This episode has a total duration of 7.49 minutes. The story begins with Kao's father, a politician, offering Preecha a 1-million-baht grant to secure Kao's Grade 7 English Program (EP) entrance. At Irene's house, her mother suggests she take a break, but Irene remains determined to attend the school. In Kao's bedroom, his father gives him a Grade 7 test to memorize for a top score. After the EP list was announced, with Kao ranking 4th and Irene 17th, Kao performed poorly in the mid-term exam, leading his father to demand better results. Under pressure, Kao paid Belle 2,000 baht per subject to help him cheat using a phone vibration system. Their plan worked during the final exam, but Teacher Top noticed identical scores. Confronted, Belle confessed, and the school summoned their parents. The school allowed Kao and Belle to retake the exam, staying in the special class if they passed or moving to a regular class if they failed. When Kao's father offered 2 million baht annually to keep Kao in the special class, the director refused. Furious, he threatened to transfer Kao, but the school proposed a collaborative approach, emphasizing understanding, patience, and parental involvement to foster morality. Teacher Top advised Kao and Belle to learn from the incident and embrace honesty as a shield for future challenges.

The episode "The Beginning" highlights how parents shape young people's thoughts and behaviors, both positively and negatively. Educational institutions also play a vital role in nurturing morality and ethics, working alongside parents to support students in becoming good citizens. This collaboration aims to help young people grow into responsible individuals who can thrive in society and serve as role models for others.

2. Episode 2: Game of Deception (Online Gambling): This episode has a total duration of 8.21 minutes. The story follows the Grade 8 characters as Irene notices Belle engrossed in her phone, with Jay joking that she's practicing to become a millionaire but playing a game instead. Suspicious, Irene and her friends observe Belle, who later buys a new watch with money from the game, encouraging Kao to try it. Both become addicted, losing money and borrowing from Win, a friend introduced by Jay. Unable to repay their growing debt, they avoid Win at school. Irene and Baibua see them fleeing and report it to

Teacher Top. Win confronts Belle and Kao, demanding repayment within three days. Realizing Jay's involvement, they request a delay due to exams, but Win refuses. At lunch, Irene offers help, and Belle and Kao confide in her under secrecy. Irene records their confession and informs Teacher Top, who reassures them after they admit their gambling mistake. Teacher Top shows news of a celebrity-linked gambling site, shocking Kao as it's the site they used. Commending Irene and Baibua for reporting early, Teacher Top calls Jay, who confesses to gambling after seeing an ad and tricking others to cover his losses. Police confirm they were all deceived. Jay is placed on probation, loses behavior points, and must perform daily good deeds until completing Grade 9.

The episode "Game of Deception" highlights the dangers of technology misuse, showing how easily young people can be deceived in the cyber world, leading to significant social harm. It warns about technological shifts linking online access to corruption, with propaganda tactics concealing risks and illegal activities. Developing media that addresses this issue can help students understand the dangers and impacts of online gambling on themselves and others.

3. Episode 3: Be Aware (Awareness Cultivation): This episode, lasting 8.33 minutes, follows the Grade 9 characters as Teacher Palm becomes their new class teacher. The school director welcomes students and announces a campaign for safe technology use after reports of misuse and corruption. In class, Teacher Palm introduces herself as skilled in technology, offering assistance and support for activities. During homeroom, Belle asks about integrating technology into education, and Teacher Palm explains its role in highlighting benefits and risks, emphasizing motivation and safe use. Irene suggests collaborating with external agencies to address safe technology use. At the school's cyber threat prevention event, the director welcomes NACC speakers, who stress distinguishing personal and public benefits and guiding others against misuse. Irene suggests readiness to apply technology, and Belle highlights teaching responsible use, earning praise. The speaker emphasizes cultivating self-awareness and supportive teaching technologies. At exhibition booths, Teacher Palm explains technology as a double-edged sword, advising caution and consultation when unsure. Baibua raises concerns about cheating, and Teacher Palm stresses understanding technology's purpose and impacts. In the final scene, Irene and her friends reflect on the importance of cautious, responsible technology use and the role of reading in national development.

In conclusion, at the end of this animation, they learn how to use technology mindfully and "be aware." They not only use technology to their advantage and safety but also use their knowledge as role models for the youth in society, demonstrating the correct use of technology. These characters become role models of how to handle problems appropriately. This awareness and learning not only enhances the understanding of technology but also fosters shifts in the thinking and actions of the next generation.

Based on the presentation of 3 episodes of animation from the research, each offers valuable perspectives for cultivating awareness among students, teachers, parents, and others. Tested with students, the results are summarized as follows:

Table 4 Summary of Opinions from Instructional Media Test in Educational Institutions

Evaluation	Opinion (n = 136)					
	Agree	Neutral	Disagree	$\bar{x}$	SD	Interpret
Format						
1) The presentation is unique and interesting.	108 (79.4)	20 (14.7)	8 (5.9)	1.73	0.560	Agree
2) The images and language used are clear and easy to understand.	112 (82.4)	24 (17.6)	-	1.82	0.382	Agree
3) The order of the story is appropriate and easy to understand.	128 (94.1)	4 (2.9)	4 (2.9)	1.91	0.374	Agree
4) The presentation time is appropriate.	132 (97.1)	4 (2.9)	-	1.97	0.169	Agree
Content						
5) Modern and up-to-date	132 (97.1)	4 (2.9)	-	1.94	0.339	Agree
6) Interesting and appealing to watch	132 (97.1)	4 (2.9)	-	1.94	0.339	Agree
7) Concise, clear, and not too complicated	132 (97.1)	4 (2.9)	-	1.97	0.169	Agree
8) Create imagination or new and diverse perspectives on the current moral and ethical issues	124 (91.2)	12 (8.8)	-	1.91	0.284	Agree
9) Stimulate learning on moral and ethical issues	124 (91.2)	12 (8.8)	-	1.91	0.284	Agree

10) Creative and useful for further use or dissemination	132 (97.1)	4 (2.9)	-	1.97	0.169	Agree
Total				**1.90**	**0.271**	**Agree**

Note: Agree at 1.51-2.00, Neutral at 0.51-1.50, and Disagree at 0.01-0.50

The table above shows that 136 students participated in evaluating instructional media based on format and content. Most students expressed positive opinions, confirming its effectiveness in enhancing learning. Regarding format, 79.4% found it engaging and innovative, while 97.1% believed the content was sequential with appropriate timing. Most students agreed that the visuals and language used were clear and easy to understand, aiding comprehension. For content, 97.1% considered it modern and engaging, while 91.2% noted its concise and straightforward presentation provided a fresh perspective on ethics and morality. Additionally, students found the media creative and useful for wider dissemination. The positive reception highlights its potential in cultivating awareness of safe technology use through modern instructional approaches.

CONCLUSION

This study emphasizes designing and testing instructional media to prevent unsafe technology usage, particularly in Bangkok, where technology usage is high. Behavioral analysis revealed factors like technology literacy, attitude, and motivation influencing students' learning and decision-making. The animation-based media effectively addressed real-world issues, including exam cheating, online gambling, and digital fraud, using interactive storytelling and case-based learning. For instance, in one scenario, students were presented with the consequences of sharing exam answers through messaging apps, reinforcing ethical decision-making. Another scenario illustrated the risks of online gambling through a character who faced financial and academic consequences.

Instructional media proved instrumental in enhancing knowledge and fostering understanding. Its development must integrate knowledge, awareness, and participation from students, teachers, parents, and relevant agencies to create a safe learning environment and deliver sustainable societal benefits. Moreover, instructional media development should be continuous and involve collaboration among educators, students, parents, and relevant agencies to create a secure learning environment and mitigate

technology-driven crimes. Enhancing online danger literacy equips students with critical skills to recognize and prevent cyber threats, fraud, and digital exploitation. This foundation is essential for preparing students to navigate evolving technological risks while fostering ethical responsibility and resilience against cyber-related offenses in education and beyond.

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