

Synthesis of Digital Content and Activities to Promote Thai Students' Perceptions through the Four Principles of Buddhism

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Abstract:

The purpose of this study was to synthesize the research and development of online digital content combined with activities to promote perception based on the Sangha Vatthu 4, the 4 principles of Buddhism for undergraduate students of the Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi, Bangkok, Thailand. The analysis was conducted using a seven-step educational operational framework to consider the quality assessment of content and presentation media and evaluate the perception and satisfaction of the sample group toward digital content and promotion of activities disseminated in international journals or conferences and national academic journals or conferences in the 2019-2022 academic years in Thailand. The sample group consisted of Thai undergraduate students selected by purposive sampling; all participated in the activities from start to finish and were willing to respond to questionnaires. The quality of online digital content combined with activities to promote perception based on the Sangha Vatthu 4 was found to be superb. The quality of the media presentations was also found to be superb. The perception of the sample group toward online digital content combined with activities to promote perception based on the Sangha Vatthu 4 was measured at the highest level. The satisfaction of the sample group was found to be the highest. Therefore, the developed online digital content combined with activities to promote perception for Thai undergraduate students can be used and should be further developed. Therefore, communicating to promote Thai students' perception through the four principles of Buddhism, which can be challenging for Gen Z individuals to understand, should incorporate digital content following the ADDIE model combined with communication activities. This approach can lead to better understanding and satisfaction.

Keywords: digital content, activities, perception, the four principles of Buddhism.

综合数字内容和活动，通过佛教四原则提升泰国学生的认知

摘要:

本研究的目的是综合在线数字内容的研究和开发,并结合基于僧伽瓦图 4 的活动来促进认知,僧伽瓦图 4 是先皇国王大学工业教育与技术学院本科生的佛教 4 原则。技术 泰国曼谷吞武里。该分析采用七步教育操作框架进行,考虑内容和演示媒体的质量评估,并评估样本组对数字内容和在国际期刊或会议以及国家学术期刊或国家学术期刊上传播的活动的看法和满意度。2019-2022 学年在泰国举行的会议。样本组由有目的抽样选出的泰国本科生组成;所有人从始至终都参与了活动,并愿意回答问卷。在线数字内容的质量与基于僧伽瓦图 4 的促进认知的活动相结合,被发现是一流的。媒体演示的质量也非常出色。样本组对在线数字内容的感知以及基于僧伽瓦图 4 的促进感知的活动的感知处于最高水平。结果发现,样本组的满意度最高。因此,开发的在线数字内容与促进泰国本科生认知的活动相结合是可以使用的,并且应该进一步开发。因此,通过佛教四原则进行交流以促进泰国学生的认知,这对 Z 世代个人来说可能具有挑战性,应该将遵循阿迪模型的数字内容与交流活动结合起来。这种方法可以带来更好的理解和满意度。

关键词: 数字内容、活动、感知、佛教四原则。

1. Introduction

An online platform is a digital space where users can interact, communicate, and engage in various activities. The benefits of online platforms are extensive, ranging from easier communication through social media and online services to convenient and cost-effective online purchases and home delivery. Online platforms also provide ubiquitous access to information through internet search engines (Mariniello, 2022). The Ministry of Digital Economy and Society conducted a survey of internet users in Thailand from April to July 2022, with 46,348 respondents. There are several key findings. Thai people spend an average of 7 h and 4 min online daily. Generation Y (aged 22-41) spends most time online, 8 h and 55 min per day on average, followed by Generation Z (aged under 22) at 8 h and 24 min per day. Content creation is most popular among Generation Y. The top five social media platforms used by respondents were Facebook (93.3%), LINE (92.8%), Facebook Messenger (84.7%), TikTok (79.6%), and Instagram (68.7%). Regarding the reasons for using social media, 44.2% use it for reading news and new stories. The global use of the internet for various activities has led to significant changes in lifestyle behaviors (ETDA, 2022); therefore, both the public and private sectors need to adapt to these changes. The government should understand the changing behaviors of the population and design services that meet these changing needs. Similarly, the private sector should understand changing consumer behaviors to design and offer products and services that align with consumer preferences.

In this environment, careful creation and management of online digital content is crucial. Educational institutions, as promoters of knowledge, should prioritize designing and developing content that aligns with the media consumption behaviors of Generation Z students, who spend a substantial amount of time online. This is especially pertinent for the Faculty of Industrial Education and Technology at King Mongkut's University of Technology Thonburi

(KMUTT), Bangkok, Thailand, which is committed to becoming a leading institution in innovation-driven learning. Aligning with its philosophy, vision, objectives, and mission, the faculty aims to be a leader in learning innovation, helping it to develop into one of the top three institutions in ASEAN. Therefore, the faculty places importance on integrating modern technology into learning by supporting both in-curriculum and extracurricular activities for students. Following SMART philosophy (success, morality, attitude, reality, and trust), the faculty emphasizes continuous adaptation to the changing landscape of technology-enhanced learning. Over the past 60 years, the faculty has developed numerous curricula, activities, and research projects related to various learning innovations. The researchers are affiliated with the Department of Educational Communications and Technology, which is dedicated to producing graduates with strong theoretical and practical knowledge. These graduates should be capable of systematic analysis and synthesis, seeking knowledge and abilities, effective communication, and ethical conduct. The goal is to apply knowledge appropriately and meet societal needs (Department of Educational Communications and Technology, 2022). Furthermore, the faculty has been actively involved in creating media and activities to promote learning among undergraduate students for more than a decade (Princhankol et al., 2023; Thamwipat & Princhankol, 2023; Waiwingrob et al., 2023; Kaewsomnues et al., 2023; Thamwipat et al., 2024). This long-term commitment has sparked an interest in the research and development of online digital content and communication activities aligned with the Sangaha Vatthu 4, which comprises four principles (Department of Cultural Promotion, 2022):

1. *Generosity*: giving, sharing, or sacrificing without expecting anything in return. It is giving without attachment and with the intention of relieving others from suffering. This includes three aspects: giving material possessions or money, giving knowledge or teaching the Dhamma, and forgiving and letting go of any wrongdoing done by others without

holding a grudge.

2. *Kind speech*: speaking in a pleasing, gentle, and truthful manner and communicating with words beneficial and appropriate for the occasion. Proper speech is crucial because it can be a double-edged sword, either fostering friendships or creating enemies. It generates physical and mental strength, encouragement, and solace.

3. *Beneficial action*: acting for the benefit of others according to one's abilities and resources. This can be achieved through physical and mental efforts or by providing material resources. It involves engaging in activities that are beneficial to the collective, whether to a place, an organization, or a community.

4. *Equanimity*: being equanimous and treating everyone consistently and fairly. It involves adapting oneself appropriately to the social roles one occupies, such as being a parent, teacher, leader, or member of a group. Regardless of the role, one should present oneself consistently and act equitably, maintaining regularity in behavior toward others. It also includes empathy, sharing joy and sorrow, understanding, and collaborating to solve problems for the common good.

It can be seen that each principle of the Sangha Vattu 4 is a fundamental principle of mutual assistance and cooperation. At the same time, the combined principles provide a way of forming alliances and creating harmony with others. Whether the principles of behavior address giving, speaking kindly, acting for the benefit of others, or being fair and consistent, they not only unite people's hearts but also make practitioners likable. Furthermore, they bring benefits to society at all levels, making the world a better place to live. Therefore, the Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi (KMUTT), not only promotes proactive learning but also has a responsibility to cultivate students to be virtuous individuals who follow Buddhist principles.

Synthesis of research is the process of seeking knowledge or answering research questions using scientific methods. It involves collecting research related to a specific problem, analyzing it using statistical methods or qualitative data analysis, and systematically summarizing the information to obtain answers to the research problem. There are broadly two approaches to engaging in research synthesis (Wongwanich, 2011):

1. *Content synthesis* involves three main components: research description, detailed research methodology, and research outcomes. This process uses meta-analysis, a quantitative synthesis method that requires statistical procedures. The standardization of statistical methods is essential for presenting findings from various research works in a standardized unit. The meta-analysis method involves integrating the findings of many research reports and using statistical procedures to present the collective results. It simplifies the process using a straightforward counting method.
2. Specific content synthesis focuses on the

research findings of individual reports, using a descriptive synthesis method. This method allows for summarizing and presenting the findings without necessarily retaining the specifics of each research work. The synthesis may choose to maintain the essence of each study or provide an overarching summary of the collective characteristics without delving into the specifics of each study.

2. Materials and Methods

For this study, the research team chose the first method, quantitative content synthesis. This method involved synthesizing online digital content development combined with activities to promote perception based on the Sangha Vattu 4. The focus of these activities was on undergraduate students from the Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi (KMUTT). The studied research had been disseminated at international conferences and in journals, both nationally and internationally, during the 2019-2022 academic years; these selected studies comprised four articles chosen by using a process that led to the creation of summaries of academic works that discussed the same topic, but under different contextual conditions. In this study, the sample group consisted of undergraduate students who were part of Gen Z. Each study has a sample group ranging from 30 to 40 individuals or more. The students have varied academic performances. The objective of synthesizing these academic works was to obtain clearer and more distributed summary texts.

The overall procedure for analyzing academic works or research studies consisted of seven steps, following the methodology proposed by Kenaphoom (2019). These steps were as follows: 1) defining the purpose of the synthesis; 2) setting the conceptual presentation framework; 3) summarizing the information; 4) arranging the synthesis issues; 5) explaining the meaning; 6) interpreting; 7) summarizing.

The researchers applied these steps to develop and analyze online digital content combined with activities to promote perception based on the Sangha Vattu 4 for undergraduate students.

3. Results

Here are the results presented in the order of the seven steps:

1) *Defining the purpose of the study*: to synthesize research on developing online digital content along with activities to promote awareness based on the four sublime states of mind for undergraduate students of the Faculty of Industrial Education and Technology, KMUTT.

2) *Setting the conceptual presentation framework*: the conceptual presentation framework outlined for synthesizing the research.

The development of online digital content combined with activities to promote perception based on the

Sangha Vatthu 4 was carried out through four research projects, following the ADDIE Model format (Nichols Hess & Greer, 2016).

The process comprised:

Analysis: analyzing the content to be presented on the online platform;

Design: designing the learning format to be used on the online platform;

Development: developing digital content resources for use on the online platform;

Implementation: implementing the digital content resources and activities;

Evaluation: evaluating the perception and satisfaction levels of the sample group toward the digital content and activities, as summarized in Table 1.

Table 1. Framework along with a summary of the research (The authors)

Phase	Activity	Month	Description
Phase 1	Analysis	Month 1	Analyzing and planning the use of online digital content and activities to promote awareness
Phase 2	Design	Month 2	Drafting the design of media and activities to promote awareness
Phase 3	Development	Month 3	Producing digital content, including video clips and informative posters
Phase 4	Implementation	Month 4	Implementing digital content and activities to promote awareness in the sample group, specifically undergraduate students of the Faculty of Industrial Education and Technology
Phase 5	Evaluation	Month 5	Evaluating the perception and satisfaction levels of the sample group regarding online digital content and activities to promote awareness

3) *Summarizing the information:* Within a one-semester period, the research projects aimed at developing online digital content along with activities to promote awareness based on the principles of the four sublime states for undergraduate students of the Faculty of Industrial Education and Technology established a conceptual framework and synthesized data, as summarized in Table 1.

4) *Arranging the synthesis issues:* This research involved synthesizing research on the development of online digital content combined with activities to promote awareness according to the Sangha Vatthu 4. The research is focused on undergraduate students from

the Faculty of Industrial Education and Technology, King Mongkut's University of Technology Thonburi (KMUTT). The findings of the studied research comprising four research papers (Thamwipat et al., 2019; Kongsuwan et al., 2021; Nualnimnoi et al., 2022; Namaso et al., 2022) were disseminated at international conferences and in journals during the 2019-2022 academic years in Thailand.

a. Development of Content Sets and Activities for Public Relations with a Focus on Participation in the Video Clip Contest Project Titled "The Scholarship for Children, Funding for the Future" (Research Project in 2021)

This research project involved the development of infographic posters and motion graphics on the faculty's Facebook page to publicize a video clip competition project and communication activities emphasizing student participation in the video clip contest project titled "The Scholarship for Children, Funding for the Future." The content aligned with the principles of the Sangha Vatthu 4, specifically emphasizing giving, sharing, and donating money to help undergraduate students overcome financial difficulties and successfully complete their education, as well as becoming quality graduates contributing to society, all without expecting any return.

b. Design and Development of Interactive Multimedia and Activities for New Normal Public Relations to Promote the Public Image of the Continuing Education Center 2022 (Research Project in 2022)

This research focused on the design and development of interactive multimedia and activities for 'new normal' public relations to enhance the public image of the Continuing Education Center. The project aimed to create interactive media along with public relations activities in the 'new normal' context, and was aimed at raising awareness among undergraduate students about the Continuing Education Center.

In terms of content, it aligned with the principle of kind speech and emphasized that students should be acquainted with effective organizational communication by using words that are pleasant, melodious, polite, sincere, and spoken in a manner that is beneficial and suitable for the occasion. These elements contribute to creating a positive perception of the organization among the audience while fostering cooperation and productive collaboration in future work.

c. Development of Multimedia and Activities to Promote Products Made by State Enterprise Communities in the Bangmod Project 4.0 through Community-Based Learning (Research Project in 2019)

This research focused on the development of multimedia and activities to promote products made by state enterprise communities in the Bangmod Project 4.0 through community-based learning. The study, conducted in 2019, involved the creation of YouTube

video clips for 12 products, a calendar that used QR code technology, and one seminar involving opinion leaders in communities, teachers, and undergraduate students. The content of the research aligned with the principle of beneficial action, emphasizing that students should provide assistance to others according to their abilities, whether through physical strength, intellectual capabilities, or financial resources. The activities carried out were beneficial to the community, as they involved helping to produce media and organizing events to promote the products of the Bangmod community enterprise. This contributed to the improvement of the community's well-being, particularly in the vicinity of the university.

d. Development of an Online Content Set with Interactive Communication Activities to Promote Fake News Literacy in Students (Research Project in 2022 (1))

This research focused on the development of online content sets with interactive communication activities to promote fake news literacy in undergraduate students. The study, conducted in 2022, involved the creation of infographic posters and motion graphics on the department's Facebook page to enhance awareness of fake news. In addition, it included activities for knowledge reinforcement with undergraduate students by using the Kahoot game. The content of the research aligned with the principle of equanimity, emphasizing that students should be consistent and present themselves well to everyone. This involved maintaining a balanced and appropriate presence both in the real world and on social media platforms. The goal was to equip students with critical thinking skills and the ability to discern various forms of misinformation in the online world.

In this context, it was found that all studies included an assessment of quality in terms of content and presentation media. The evaluations included perceptions and satisfaction scores from the sample groups regarding digital content and activities to promote perception based on the Sangha Vatthu 4. These findings are presented in Table 2, including an explanatory section at the end.

Table 2. Results of assessment of the content quality (The authors)

Evaluation Items	Results of the Analysis		
	\bar{x}	S.D.	Level of Quality
1. Research Project in 2021/Generosity	4.75	0.44	Excellent
2. Research Project in 2022 (2)/Kind Speech	4.81	0.24	Excellent
3. Research Project in 2019/Beneficial Action	4.67	0.20	Excellent
4. Research Project in 2022 (1)/Equanimity	4.67	0.23	Excellent
Overall average	4.72	0.27	Excellent

Statistics and scoring criteria: This study used statistical measures, specifically mean and standard deviation. The interpretation of the scores was as follows (Soontornthai, 1996):

- 4.51-5.00: excellent/the highest;
- 3.51-4.50: good/high;
- 2.51-3.50: average;
- 1.51-2.50: below average;
- 1.00-1.50: very poor.

5) *Explaining the results*

Results of the assessment of content quality

The assessment was conducted by content experts, three for each aspect, with a minimum of 5 years of experience in media and content.

As shown in Table 2, the evaluation of the quality of online digital content combined with activities shows that all the four aspects were rated at a superb level (\bar{x} = 4.72, S.D. = 0.44). Specifically, in the research project in 2022 (2), Kind Speech had the highest average score (\bar{x} = 4.81, S.D. = 0.24), followed by the research project in 2021, in which Generosity had the highest average score (\bar{x} = 4.75, S.D. = 0.44).

Results of the assessment of media presentation quality

The assessment was conducted by media presentation experts, three experts per aspect, with a minimum of five years of experience in media.

As shown in Table 3, the evaluation of the quality of online digital content presentation media combined with activities shows that all the four aspects were rated at a superb level (\bar{x} = 4.74, S.D. = 0.38). Specifically, in the research work in 2022 (1), Equanimity had the highest average score (\bar{x} = 4.92, S.D. = 0.26), followed by the research work in 2019, in which Beneficial Action had the highest average score (\bar{x} = 4.87, S.D. = 0.24).

Table 3. Results of assessment of media presentation quality (The authors)

Evaluation Items	Results of the Analysis		
	\bar{x}	S.D.	Level of Quality
1. Research Project in 2021/Generosity	4.63	0.59	Excellent
2. Research Project in 2022 (2)/Kind Speech	4.56	0.43	Excellent
3. Research Project in 2019/Beneficial Action	4.87	0.24	Excellent
4. Research Project in 2022 (1)/Equanimity	4.92	0.26	Excellent
Overall average	4.74	0.38	Excellent

Results of perception assessment of the sample group

The sample group comprised 30 participants selected by a purposive sampling method from individuals who participated in the activities from start to finish and were willing to respond to the questionnaire.

As displayed in Table 4, the sample group's perception of online digital content and activities based on the Sangaha Vatthu 4 was at the highest level (\bar{x} = 4.51, S.D. = 0.31). Specifically, in the research project in 2021, Generosity had the highest average score (\bar{x} = 4.70, S.D. = 0.54), followed by the research project in 2022 (2), in which Kind Speech had the highest average score (\bar{x} = 4.68, S.D. = 0.48).

Table 4. Results of the sample group's perception assessment (The authors)

Evaluation Items	Results of the Analysis		
	\bar{x}	S.D.	Level of Perception
1. Research Project in 2021/Generosity	4.63	0.54	The Highest
2. Research Project in 2022 (2)/Kind Speech	4.68	0.48	The Highest
3. Research Project in 2019/Beneficial Action	4.41	0.18	High
4. Research Project in 2022 (1)/Equanimity	4.30	0.07	High
Overall average	4.51	0.31	High

Results of satisfaction assessment of the sample group

The sample group consisted of 30 participants selected by the purposive sampling method from individuals who participated in the activities from start to finish and were willing to respond to the questionnaire.

As shown in Table 5, the sample group's satisfaction with online digital content and activities based on the Sangha Vatthu 4 was at the highest level for all the four aspects ($\bar{x} = 4.71$, S.D. = 0.47). Specifically, in the research project in 2019, Beneficial Action had the highest average score ($\bar{x} = 4.80$, S.D. = 0.79), followed by the research project in 2022 (2), in which Kind Speech had the highest score ($\bar{x} = 4.76$, S.D. = 0.44).

Table 5. Results of the sample group's satisfaction assessment (The authors)

Evaluation Items	Results of the Analysis		
	\bar{x}	S.D.	Level of Satisfaction
1. Research Project in 2021/Generosity	4.58	0.55	The Highest
2. Research Project in 2022 (2)/Kind Speech	4.76	0.44	The Highest
3. Research Project in 2019/Beneficial Action	4.80	0.79	The Highest
4. Research Project in 2022 (1)/Equanimity	4.69	0.10	The Highest
Overall average	4.71	0.47	The Highest

6) *Interpretation/discussion*: From studying research projects in Thailand that analyzed the research and development of online media, a correlation was observed by Borvornsirawut et al. (2022). The objective of this study was to synthesize research on the development of electronic books, integrating QR code technology with training related to online social media. The analysis, which was completed in the 2020 academic year, was based on the characteristics of electronic book development incorporating QR code technology. The study found that research on the development of electronic books incorporating QR code technology and training related to online social media in Thailand was of very high quality. Expert evaluations rated the content quality and presentation at a superb level. Perception by the sample group was high or the

highest. The evaluation of the sample group's satisfaction was also at the highest level. Furthermore, the target group gained knowledge from electronic books incorporating QR code technology and training on online social media as a learning medium that was easily understandable, interesting, and accessible. The learning medium also effectively and comprehensively reached the target group. In conclusion, the developed electronic book incorporating QR code technology and training on online social media was found to be of high quality and applicable.

It was also found to be consistent with the research by Pongpimol et al. (2022). The objective of this study was to synthesize research on the development of e-books combined with QR code technology and training related to online social media. The research, undertaken in the 2020 academic year, presented the synthesis outcomes of developing e-books using QR code technology and analyzed characteristics of e-book development using QR code technology.

The study found that content evaluation from experts on the development of e-books combined with QR code technology and online social media training received high ratings. The presentation media quality was also rated at a superb level. The sample group's perception was at high or the highest levels, and its satisfaction with the developed e-book content was at the highest level. Additionally, the target group perceived that e-books combined with QR code technology and online social media training were easy to understand, interesting, and easily accessible by the sample group. In conclusion, the developed e-books combined with QR code technology and online social media training were of high quality and applicable.

It can be observed that the research works analyzed by the researchers are consistent with each other. Particularly interesting is that the perception assessment results from the sample group were at the highest level, which was not yet the case in every aspect, as reflected in the synthesis of this research. Examining international research on the synthesis of research and development of online social media, Schober et al. (2016) highlighted the potential of analyzing social media content alongside traditional survey methods. This sparked discussions about the feasibility of replacing or supplementing surveys with more cost-effective and less cumbersome data mining of existing social media content. However, the reliability of such measurements, especially when replacing official statistics, remains uncertain. Survey researchers and data scientists have approached crucial questions from different perspectives, starting assumptions, and analytical traditions. These include the necessity of representative samples covering the entire population. Navigating these differences requires engaging scholarly communities in new conversations to explore potential points of alignment and non-alignment. Therefore, the research

team chose to analyze relevant research before designing and developing media and activities suitable for the target sample group. The primary goal was to maximize undergraduate students' levels of perception through exposure to media on online platforms combined with communication activities.

An interesting point to discuss is that the quality of content and presentation by experts was rated at a superb level. All the four topics studied in analyzing the development of online digital content combined with activities to promote perception based on the Sangha Vatthu 4 for undergraduate students received the highest level of perception from the sample group. This aligns with research by Phothipol (2019), who studied the development of living one's life based on the Sangha Vatthu 4 for undergraduate students in government universities in Pathumthani Province.

The research findings indicate that undergraduate students in government universities in Pathumthani Province underwent development that enabled them to peacefully live together in society according to the four principles of the Sangha Vatthu 4: a) generosity, sharing for the benefit of others, cultivating selflessness, providing generosity as a virtue, and giving with good intention; b) kind speech, speaking gently, sincerely, avoiding harsh and aggressive speech, speaking in ways that are beneficial, and being suitable for the occasion; c) beneficial action, acting for the benefit and assistance of others in the community; d) equanimity, adapting oneself appropriately to the current situation, behaving well, and promoting mutual understanding. This helped students become compassionate, responsible, and happy individuals who contributed positively to themselves, their families, communities, universities, societies, and the nation. Therefore, the development of online media and activities to promote perception in undergraduate students should incorporate content related to morality, ethics, and religious teachings. This will allow producing well-rounded graduates.

7) *Summary/conclusion*: From the analysis of previous research on designing and developing online media with activities to promote undergraduate students' perceptions, it is noteworthy that there have been several studies in this area. They performed the content synthesis as follows: 1) defined the purpose of the synthesis; 2) set the conceptual presentation framework; 3) summarized the information; 4) arranged the synthesis issues; 5) explained the meaning; 6) interpreted; 7) summarized. Most of these studies received high-quality assessments from experts, and the satisfaction levels and perception assessments of the sample groups were also rated at the highest level. Therefore, it is essential to prioritize these aspects in the design and development of online platforms following the ADDIE model combined with communication activities to promote perception among students in future endeavors. Media producers and activity organizers should prioritize these aspects, ensuring that content promoting morality, ethics, and fundamental

principles is integrated into the design and development of online platforms.

Recommendations from the research findings

1. Researchers should analyze existing research before diving into design and development. Performing a thorough literature survey can reveal critical perspectives that might have been previously overlooked. This could provide an opportunity to uncover significant issues in future research.

2. Consider using the TikTok platform as a tool for developing media that enhances perception. Undergraduate students often show interest in this platform, which boasts a large user base.

3. Emphasize communication activities that focus on student participation to efficiently promote awareness.

4. Limitations and Further Study

1. Researchers should seamlessly integrate research and development with traditional survey-based research. This approach ensures interesting findings applicable in the current societal context.

2. Use storytelling techniques complemented by modern technology to capture student interest. This approach caters to the preferences of younger people.

3. Blend content that promotes ethics, morality, and fundamental values into research and development efforts. This ensures that the results will align with contemporary societal needs.

Authors' Contributions

Kittipongpisut, A.: conceptualization, data curation, formal analysis, and writing the original draft.

Princhankol, P.: investigation, validation, and review of the article.

Thamwipat, K.: methodology, editing of the article, and corresponding author.

References

- [1] BORVORNSIRAWUT, S., PRINCHARNKOL, P., & SUPINANON, P. (2022). A Synthesis of the Outcomes of the Development of Electronics Book Combined with QR Code Technology and Training on Online Social Media. Proceedings of the Conference on National Level Administration, Management, Education, and Interdisciplinary Studies, 16 December 2022, pp. 455-470. Retrieved from <https://rcim-ncame.rcimacademy.com/wp-content/uploads/2023/02/Proceedings-NCAME2022.pdf>
- [2] DEPARTMENT OF CULTURAL PROMOTION. (2022). *Let me tell you a story about "The Four Sanghavatthus of Mutual Support and Cooperation"*. Retrieved from http://www.culture.go.th/culture_th/ewt_news.php?id=5921&filename=i
- [3] DEPARTMENT OF EDUCATIONAL COMMUNICATIONS AND TECHNOLOGY. (2022). *Mission*. Retrieved from

- <https://sites.google.com/view/ect-kmutt>
- [4] ETDA. (2022). *Thailand Internet User Behavior 2022*. Retrieved from <https://www.etcha.or.th/getattachment/78750426-4a58-4c36-85d3-d1c11c3db1f3/IUB-%2065-Final.pdf.aspx>
- [5] KAEWSOMNUES, A., JIRACHAI, P., & THAMWIPAT, K. (2023). Development of an e-exhibition in conjunction with a game-based learning communication activity. *Science, Engineering and Health Studies*, 17, 23040014. Retrieved from <https://li01.tci-thaijo.org/index.php/sehs/article/view/260236>
- [6] KENAPHOOM, S. (2019). Principles and Guidelines for Synthesizing Academic Work. *Journal of Administration, Governance, and Local Innovation*, 3(2), 89-106. Retrieved from <https://so03.tci-thaijo.org/index.php/JLGISRRU/article/view/216449/150315>
- [7] KONGSUWAN, S., THAMWIPAT, K., JIRACHAI, P., PRINCHANKOL, P., JADSADANURAUKKIT, T., & WONGSUMPAN, A. (2021). The Development of Content Set and Activity for Public Relations Focusing on Participation in the Video Clip Contest Project Titled in "The Scholarship for Children, Funding for the Future". *Journal of Learning Innovation and Technology*, 1(1), 72-79. Retrieved from <https://so06.tci-thaijo.org/index.php/JLIT/article/view/251719/170088>
- [8] MARINIELLO, M. (2022). An Introduction to Online Platforms. In: *Digital Economic Policy: The Economics of Digital Markets from a European Union Perspective*. Oxford: Oxford Academic, pp. 173-206. <https://doi.org/10.1093/oso/9780198831471.003.0008>
- [9] NAMASO, K., THAMWIPAT, K., & PRINCHANKOL, P. (2022). The Design and Development of Interactive Multimedia and Activities for New Normal Public Relations to Promote the Public Image of the Continuing Education Center. Proceedings of the 13th Global Conference on Business and Social Sciences. [https://doi.org/10.35609/gcbssproceeding.2022.1\(13\)](https://doi.org/10.35609/gcbssproceeding.2022.1(13))
- [10] NICHOLS HESS, A.K., & GREER, K. (2016). Designing for Engagement: Using the ADDIE Model to Integrate High-Impact Practices into an Online Information Literacy Course. *Communications in Information Literacy*, 10(2), 264-282. <https://doi.org/10.15760/comminfolit.2016.10.2.27>
- [11] NUALNIMNOI, J., THAMWIPAT, K., & MEEJALEURN, S. (2022). The Development of Online Content Set with Interactive Communication Activity to Promote Fake News Literacy for Students. *Journal of Learning Innovation and Technology*, 2(1), 85-96. Retrieved from <https://so06.tci-thaijo.org/index.php/JLIT/article/view/257279/173269>
- [12] PHOTHIPOL, P. (2019). *The Development of Living Life Based on Sangahavatthu IV Undergraduate Students in Government Universities in Pathumthani Province*. Master's thesis, Mahachulalongkornrajavidyalaya University. Retrieved from <https://e-thesis.mcu.ac.th/thesis/339>
- [13] PONGPIMOL, P., SUPINANONT, P., & THAMWIPAT, K. (2022). A Synthesis Results from the Development of Public Relations Media Combined with Communications Activities on Online Social Media. Proceedings of the Conference on National Level Administration, Management, Education, and Interdisciplinary Studies, 16 December 2022, pp. 471-481. Retrieved from <https://rcim-ncame.rcimacademy.com/wp-content/uploads/2023/02/Proceedings-NCAME2022.pdf>
- [14] PRINCHANKOL, P., THAMWIPAT, K., & WAIWINGROB, P. (2023). Outcomes from Professional Experience Provision for Students through Media Development and Special Hybrid Event during Covid-19 Pandemic. *International Education Studies*, 16(4), 11-20. <https://doi.org/10.5539/ies.v16n4p11>
- [15] SCHOBER, F.M., PASEK, J., GUGGENHEIM, L., LAMPE, C., & CONRAD, F.G. (2016). Social Media Analyses for Social Measurement. *Public Opinion Quarterly*, 80(1), 180-211. <https://doi.org/10.1093/poq/nfv048>
- [16] SOONTORNTHAI, V. (1996). *Reason behind the Development of Decision Criteria 5 Levels*. Retrieved from <https://www.gotoknow.org/posts/50236>
- [17] THAMWIPAT, K., & PRINCHANKOL, P. (2023). The Result of Lesson Learned to Develop a Manual for Development of Social Media Knowledge Project in Southern Border Provinces of Thailand. Proceedings of the 4th Kyoto Conference on Arts, Media & Culture, Kyoto and online, 10-13 October 2023, pp. 541-550. Retrieved from https://papers.iafor.org/wp-content/uploads/conference-proceedings/KAMC/KAMC2023_proceedings.pdf
- [18] THAMWIPAT, K., PONGPIMOL, P., SUPINANONT, P., & PRINCHANKOL, P. (2024). The Development of Digital Content in the Metaverse Combined with Participatory Communication and Learning with Religious Leader to Enhance Students' Perception of the Community Mosque. *International Education Studies*, 17(1), 58-

68. <https://doi.org/10.5539/ies.v17n1p58>
- [19] THAMWIPAT, K., PRINCHANKOL, P., & DEEYEN, N. (2019). The Development of Multimedia and Activities to Promote Products Made by State Enterprise Communities in the Bangmod Project 4.0 through Community-Based Learning. *International Education Studies*, 12(4), 49-59. <https://doi.org/10.5539/ies.v12n4p49>
- [20] WAIWINGROB, P., THAMWIPAT, K., & PRINCHANKOL, P. (2023). Active learning extracurricular activities using digital content to raise awareness of Thai arts and culture among undergraduate students. *Humanities, Arts and Social Sciences Studies*, 23(3), 642-655. <https://doi.org/10.14456/hasss.2023.54>
- [21] WONGWANICH, S. (2011). *The Synthesis of Research in the Development of Educational Innovation for the Reform of Education towards Teacher Development*. Office of the Education Council. Retrieved from <http://www.thaiedresearch.org/home/paperview/166>
- 参考文献:**
- [1] BORVORNSIRAWUT, S., PRINCHANKOL, P. 和 SUPINANON, P. (2022)。结合二维码技术和在线社交媒体培训的电子图书发展成果综合。国家级行政、管理、教育和跨学科研究会议论文集，2022年12月16日，第455-470页。检索自 <https://rcim-ncame.rcimacademy.com/wp-content/uploads/2023/02/Proceedings-NCAME2022.pdf>
- [2] 文化推广部。(2022)。我给大家讲一个“四大僧伽瓦尊”的故事。检索自 http://www.culture.go.th/culture_th/ewt_news.php?id=5921&filename=i
- [3] 教育传播与技术系。(2022)。使命。检索自 <https://sites.google.com/view/ect-kmutt>
- [4] 埃达。(2022)。2022年泰国互联网用户行为。摘自 <https://www.etda.or.th/getattachment/78750426-4a58-4c36-85d3-d1c11c3db1f3/IUB-%2065-Final.pdf.aspx>
- [5] KAEWSOMNUES, A., JIRACHAI, P. 和 THAMWIPAT, K. (2023)。结合基于游戏的学习交流活动开发电子展览。科学、工程和健康研究，17, 23040014。摘自 <https://li01.tci-thaijo.org/index.php/sehs/article/view/260236>
- [6] 肯纳胡姆, S. (2019)。综合学术工作的原则和指南。行政、治理和地方创新杂志，3(2), 89-106。检索自 <https://so03.tci-thaijo.org/index.php/JLGISRRU/article/view/216449/150315>
- [7] KONGSUWAN, S., THAMWIPAT, K., JIRACHAI, P., PRINCHANKOL, P., JADSADANURAUUKIT, T. 和 WONGSUMPAN, A. (2021)。以参与“儿童奖学金，资助未来”视频剪辑大赛项目为重点的公关内容设置和活动开发。学习创新与技术杂志，1(1), 72-79。检索自 <https://so06.tci-thaijo.org/index.php/JLIT/article/view/251719/170088>
- [8] 马里尼洛, M. (2022)。在线平台简介。见：数字经济政策：欧盟视角下的数字市场经济学。牛津：牛津学术界，第173-206页。 <https://doi.org/10.1093/oso/9780198831471.003.0008>
- [9] NAMASO, K., THAMWIPAT, K. 和 PRINCHANKOL, P. (2022)。新常态公关互动多媒体及活动设计与开发，提升继续教育中心公众形象。第十三届全球商业和社会科学会议论文集。 [https://doi.org/10.35609/gcbssproceeding.2022.1\(13\)](https://doi.org/10.35609/gcbssproceeding.2022.1(13))
- [10] 尼科尔斯·赫斯, A.K. 和 格里尔, K. (2016)。参与设计：使用阿迪模型将高影响力的实践整合到在线信息素养课程中。信息素养传播，10(2), 264-282。 <https://doi.org/10.15760/comminfolit.2016.10.2.27>
- [11] NUALNIMNOI, J., THAMWIPAT, K. 和 MEEJALEURN, S. (2022)。开发具有互动交流活动的在线内容集，以提高学生的假新闻素养。学习创新与技术杂志，2(1), 85-96。检索自 <https://so06.tci-thaijo.org/index.php/JLIT/article/view/257279/173269>
- [12] 菲提波尔, P. (2019)。基于巴吞他尼府政府大学僧伽哈瓦图四世本科生的生活发展。硕士论文，玛哈胡拉隆功拉贾维迪亚拉亚大学。检索自 <https://e-thesis.mcu.ac.th/thesis/339>
- [13] PONGPIMOL, P., SUPINANONT, P. 和 THAMWIPAT, K. (2022)。公关媒体发展与网络社交媒体传播活动相结合的综合结果。国家级行政、管理、教育和跨学科研究会议论文集，2022年12月16日，第471-481页。检索自 <https://rcim-ncame.rcimacademy.com/wp-content/uploads/2023/02/Proceedings-NCAME2022.pdf>
- [14] PRINCHANKOL, P., THAMWIPAT, K. 和 WAIWINGROB, P. (2023)。新冠肺炎大流行期间通过媒体开发和特殊混合活动为学生提供专业经验的成果。国际教育研究，16(4), 11-20。 <https://doi.org/10.5539/ies.v16n4p11>
- [15] SCHOBER, F.M., PASEK, J., GUGGENHEIM, L., LAMPE, C. 和 CONRAD, F.G. (2016)。用于社会衡量的社交媒体分析。舆论季刊，80(1), 180-211。 <https://doi.org/10.1093/poq/nfv048>
- [16] SOONTORNTHAI, V. (1996)。制定决策标准5个级别背后的原因。检索自 <https://www.gotoknow.org/posts/50236>

- [17] THAMWIPAT, K. 和 PRINCHANKOL, P. (2023)。制定泰国南部边境省份社交媒体知识项目开发手册的经验教训结果。第四届京都艺术、媒体和文化会议论文集，京都和在线，2023年10月10日至13日，第541-550页。摘自 https://papers.iafor.org/wp-content/uploads/conference-proceedings/KAMC/KAMC2023_proceedings.pdf
- [18] THAMWIPAT, K.、PONGPIMOL, P.、SUPINANONT, P. 和 PRINCHANKOL, P. (2024)。虚拟宇宙数字内容的开发结合与宗教领袖的参与式交流和学习，以增强学生对社区清真寺的认知。国际教育研究，17(1), 58-68。
<https://doi.org/10.5539/ies.v17n1p58>
- [19] THAMWIPAT, K.、PRINCHANKOL, P. 和 DEEYEN, N. (2019)。通过基于社区的学习，在邦莫德项目 4.0 中开发多媒体和活动来推广国有企业社区制造的产品。国际教育研究，12(4), 49-59。
<https://doi.org/10.5539/ies.v12n4p49>
- [20] WAIWINGROB, P.、THAMWIPAT, K. 和 PRINCHANKOL, P. (2023)。利用数字内容积极学习课外活动，提高本科生对泰国艺术和文化的认识。人文、艺术和社会科学研究，23(3), 642-655。
<https://doi.org/10.14456/hasss.2023.54>
- [21] WONGWANICH, S. (2011)。面向教师发展的教育改革的教育创新发展研究综述。教育委员会办公室。摘自 <http://www.thaiedresearch.org/home/paperview/166>