

Guidance, Creation, and Utilization of Interactive Digital Comics Based on Indonesian Culture for Lecturers of the Malay Language Department at Thaksin University

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Abstract: This Community Service (PkM) activity aims to improve the competence of lecturers of the Thaksin University Malay Language Department in developing and utilizing interactive digital comics based on Indonesian culture as a learning medium. The material for this digital comic is taken from the story of Borobudur Temple. This is because the socio-religious background between Indonesia and Thailand has similarities. The similarity is that Indonesia and Thailand have the same Buddhist religion and are applied to historical heritage through Borobudur Temple. The background of this activity is the still limited use of innovative and contextual digital learning media in teaching Indonesian language and culture in the partner environment. The implementation method includes several stages, namely observation, needs analysis, training and mentoring in creating interactive digital comics, as well as evaluation of activities and products. The results of the activity show an increase in lecturers' knowledge and skills in designing storylines, composing scripts, and operating digital comic creation platforms, as well as the birth of a number of interactive digital comic products that are relevant to teaching materials and depict the richness of Indonesian culture. In addition, participants showed a positive attitude and high motivation to integrate interactive digital comics in the learning process. Thus, this PkM activity contributes to strengthening innovation in learning media and the introduction of Indonesian culture in the Thaksin University Malay Language Department environment.

Keywords: Interactive digital comics, Indonesian culture, learning media, temple stories.

1. Introduction

The development of information and communication technology in the Industrial Revolution 4.0 era has brought significant changes in the world of education, including in the way lecturers design and present learning materials (Lase, 2019). Learning is no longer sufficient to rely on lectures and written texts, but requires the use of digital media that are creative, interactive, and appropriate to the characteristics of today's generation of learners (Friesen, 2017). Various studies show that the use of technology-based learning media can increase learning motivation, student engagement, and deeper understanding of concepts (Tsai et al., 2020). One form of digital media that is increasingly used in language learning is interactive digital comics. Comics as a visual narrative medium have the advantage of presenting material in a contextual, concrete, and engaging manner through a combination of text and images (Clark, 2017). When developed in an interactive digital format, comics not only present stories but can also be enriched with links, quizzes, audio, and other participatory elements that encourage active learner engagement (Rasmet et al., 2025). Previous research has shown that digital comics have the potential to improve vocabulary comprehension, reading skills, and cultural appreciation in language learning (Marini et al., 2023).

In the context of Indonesian language learning and cultural studies abroad, media that contain authentic cultural representations is crucial. Learning media that integrate cultural elements can help students understand the meaning of language in a social context and the values that underlie it. As a country with highly diverse cultures, Indonesia provides

a rich source of material to be adapted into digital comics, such as traditions, cuisine, traditional clothing, local wisdom, and everyday social interactions (Prihantini et al., 2025). Packaging Indonesian cultural materials in the form of interactive digital comics not only supports language learning but also serves as a means of cultural diplomacy (Arief et al., 2022). Thaksin University's Malay Language Department plays a strategic role in introducing regional languages and cultures, including Indonesian, to students in Thailand. However, based on initial communications with partner lecturers and observations of teaching practices, the use of innovative digital learning media remains limited.

The learning process tends to be dominated by printed text, static presentation materials, and conventional exercises, while the use of interactive visual media such as digital comics is not optimal (Berger et al., 2023). This situation aligns with the findings of several studies showing that despite lecturers' high awareness of the importance of media innovation, many still encounter technical, design, and time constraints in developing digital media independently (Al-Hail et al., 2024). This limited use of digital media results in a low variety of learning strategies, even though today's generation of students tends to be more responsive to material presented visually, narratively, and interactively. Without media innovation, language and culture learning has the potential to become less engaging, difficult to understand, and less accommodating to diverse learning styles. Therefore, systematic efforts are needed to improve lecturers' capacity to design and use digital learning media relevant to their needs. One such approach is through the Community Service (PkM) program, which provides mentoring in the creation of interactive digital comics based on Indonesian culture.

Indonesia, as a country with highly diverse cultures, provides a rich source of material for digital comics, including traditions, cuisine, traditional clothing, local wisdom, and everyday social interactions (Nugraheni et al., 2025). In the context of Indonesia-Thailand relations, cultural recognition through historical and religious intersections serves as a crucial bridge for building closeness and understanding across borders. One such common ground is the shared roots of religious and cultural traditions influenced by Hinduism and Buddhism in Southeast Asia, including Indonesia and Thailand (Sweaer, 2010). In Indonesia, strong traces of Hindu-Buddhist influence are evident in various historical relics, such as large temples that serve not only as religious sites but also as symbols of civilizational achievement and cultural aesthetics (Ramesh, 2025). Borobudur Temple, although theologically based on Mahayana Buddhism, is situated within a cultural landscape long influenced by Hindu-Buddhist traditions and reflects the religious syncretism of the archipelago.

2. Methodology

This Community Service activity uses a descriptive participatory approach by involving lecturers from the Malay Language Department of Thaksin University as the main partners in all stages of the program, from identifying needs to producing interactive digital comics. This approach was chosen because it allows lecturers to play an active role while also being the subjects of capacity development in the use of Indonesian culture-based digital learning media. In general, the implementation of PkM follows the following stages: observation, needs analysis, training and mentoring, activity evaluation, and production of technology and innovation in the form of interactive digital comics.

2.1 Observation

The observation phase was conducted to obtain an initial overview of the actual conditions of Indonesian language and culture learning in the Malay Language Department, particularly regarding the use of digital learning media. Observations were conducted through lecture observations, review of teaching materials used, and informal interviews with several partner lecturers (Sullivan et al., 2012). This phase is crucial for understanding the socio-cultural and academic contexts underlying learning practices, in line with the view that language learning is always linked to the context and culture in which it is taught. The observation results serve as the basis for formulating relevant interventions that are inseparable from the realities of lecturers' work.

2.2 Needs Analysis

A needs analysis was conducted after initial observations with the aim of more specifically mapping the needs, challenges, and potential of lecturers in developing interactive digital comic media. The techniques used included distributing questionnaires, focus group discussions, and short in-depth interviews (Adams & Cox, 2008). The needs analysis instrument was designed to explore several aspects: the lecturers' level of understanding of digital learning media, experience using comics or similar visual media, technological readiness, and interest in integrating Indonesian cultural materials, including the theme of Hindu-Buddhist religious similarities and an introduction to Borobudur Temple. This needs analysis is in line with the principles of learning media development that emphasize the suitability between participant characteristics, learning objectives, and the context of media use.

2.3 Training and Mentoring Stage

- a. The training and mentoring phase is the core of the Community Service Program (PKM) activities, designed in the form of workshops and hands-on practice. The training is divided into several main sessions:
- b. Introduction to digital learning media and interactive comics. This session explains the basic concepts of learning media, the advantages of digital media, and the role of interactive comics in increasing motivation

and understanding of learning, particularly in language and culture learning. Lecturers are introduced to examples of digital comics that integrate text, images, and interactive elements.

- c. Cultural and religious content design workshop. Participants are facilitated in developing story ideas that combine Indonesian language material with cultural content, including the intersection of Hindu-Buddhist traditions in Indonesia and Thailand, as well as cultural representations through Borobudur Temple. This approach aligns with the idea that language and culture teaching should position students as actors confronting cultural diversity and fostering an intercultural perspective.
- d. Technical training on creating interactive digital comics. In this session, participants are introduced to one or two user-friendly digital comic creation platforms. Facilitators demonstrate the technical steps, from storyboarding and character design to setting and dialogue writing, to adding simple interactive features. The use of digital learning technology aligns with the view that technology can be a resource and vehicle for strengthening cross-cultural learning experiences.
- e. Individual and group mentoring. After the training session, participants were divided into small groups to develop an interactive digital comic title. The PkM team provided step-by-step mentoring, both offline and online, to help refine the script, address cultural and religious content, and technical design aspects. This mentoring model allowed lecturers to practice independently while still receiving targeted feedback.

2.4 Activity Evaluation Stage

Activity evaluation was conducted through process and outcome evaluation. Process evaluation included monitoring attendance, active participation, and participant responses to training materials and methods. Outcome evaluation focused on the quality of the interactive digital comic products produced, as seen from several indicators: suitability to learning objectives, accuracy and appropriateness of cultural and religious representations, visual neatness, and level of interactivity and readability. Additionally, questionnaires and/or short interviews were used to assess changes in lecturers' knowledge and attitudes toward the use of digital media in learning (Gakuu, 2006). This evaluation aligns with guidelines that media and learning development programs need to be assessed in terms of both process and product to ensure the effectiveness and sustainability of innovation.

2.5 Technology and Innovation Products

The technological and innovative products of this activity are several interactive digital comics featuring Indonesian cultural themes, including Borobudur Temple and the intersection of Hindu-Buddhist traditions in the context of Indonesia and Thailand, tailored to the learning needs of the Malay Language Department at Thaksin University. The products are designed to be accessible online, used in various teaching scenarios, and easily adapted by lecturers for other topics. In addition to the comics, this activity also produced a training model and mentoring for the development of digital learning media that can be replicated in other contexts and institutions.

3. Discussion and Implications

The approach used in community service activities is participant-active learning, as all participants are expected to actively participate. These activities take the form of interactive training and mentoring, fostering two-way interaction between the community service team and participants. Langkah-langkah Pelaksanaan Solusi Mitra Garis besar langkah-langkah prosedur kerja dalam kegiatan PKM ini terdiri atas tahap perencanaan, pelaksanaan, follow up kegiatan, simulasi, dan tahap evaluasi. Tahapan tersebut sebagai berikut.

- 1) Conducting observations, interviews with lecturers in the Malay Language Department at Thaksin University, and analyzing school documents to identify issues related to digital literacy, cross-cultural understanding of Indonesia, and the use of interactive media based on Indonesian culture. This phase aims to collect data on the conditions of lecturers, students, and the learning environment.
- 2) Analyzing the need to improve lecturers' media and digital literacy, and developing a training and mentoring plan for the creation of Indonesian culture-based digital comics.
- 3) Designing local wisdom values and deep learning approaches into engaging digital media content.
- 4) Determining supporting technology and applications (CapCut, Pinterest, ChatGBT, Remini, and Google Studio AI, Web) for lecturers' digital comic creation.
- 5) Conducting training and mentoring for lecturers in the Malay Language Department at Thaksin University.
- 6) Facilitating a simulation of the use of digital comics by lecturers. The community service team conducted observations, documentation, and provided feedback.
- 7) Following up on training results, through reflection with lecturers, discussions on challenges, module improvements, and strengthening technical skills.
- 8) Conducting evaluations of lecturers' digital comic products in terms of content, technological integration, local wisdom content, and potential to support deep learning.

3.1 Community Service Implementation Stage Method

- a. Socialization: A lecture-based socialization method is used to deliver training materials.
- b. Training: A question-and-answer method is used to provide clarity on information/knowledge and concepts. Mentoring participants are given the opportunity to ask questions of the community service team to clarify any unknown information, and vice versa.
- c. Technology Implementation: Implementation involves participants in discussing and completing tasks within the mentoring activities. The discussion method aims to foster interaction between the community service team and participants, or between participants, to exchange ideas and concepts.
- d. Mentoring: Mentoring activities are carried out by mentoring participants according to the facilitator's direction. At this stage, mentoring participants (lecturers from the Malay Language Department at Thaksin University) practiced creating and integrating digital comics based on Indonesian culture.
- e. Evaluation and Sustainability of the Community Service Program: The results of the community service program have improved digital literacy skills through the creation of digital comics based on Indonesian culture.

3.2 Results of Activity Implementation

- a. Delivery Penerapan Produk Teknologi dan Inovasi ke Masyarakat
 - 1) The Community Service Program (PkM) entitled Mentoring, Making, and Using Interactive Digital Comics Based on Indonesian Culture for Lecturers of the Malay Language Department of Thaksin University. The implementation of the activity took place for two days, namely on October 20–21, 2025, with the method of preparation, socialization, training, mentoring, and product evaluation. In general, the activity was active, participatory, and collaborative between the PkM team and partner teachers. This community service activity consists of several stages as follows.
 - 2) Initial Observation Stage The results of initial observations and interviews indicate that most lecturers in the Malay Language Department at Thaksin University still apply conventional learning in introducing Indonesian culture. Lecturers have not made extensive use of interactive digital media.
 - 3) The needs analysis stage is a very important initial step in the implementation of this Community Service (PkM) activity. The needs analysis was conducted to determine the initial conditions of Thaksin University's Malay language lecturers, regarding their ability to create digital videos (introducing Indonesian and Thai culture through the story of the Temple). At this stage, the PkM team conducted field observations, short interviews, and distributed questionnaires to map the needs and problems faced by lecturers in the learning process. Based on the results of the analysis, it was found that most lecturers still rely on conventional media such as textbooks and sheets that have not integrated digital elements or local cultural values. The results of this analysis became the basis for the PkM team to design a mentoring program in the form of training in creating interactive digital comics. This training was designed so that lecturers are not only able to create technology-based learning media, but also can introduce the values of the temple story as a cultural identifier in Indonesian language learning in elementary schools. Tahap Pelatihan dan Pedampingan
 - 4) The training took place on October 20-21, 2025, at the Malay Language Department at Thaksin University. The program was conducted online (Zoom meeting) due to the significant flooding in Thailand. The program began with an opening session and program orientation by the program team, followed by training on the use of various digital learning platforms.



Figure 1. Delivery of PkM

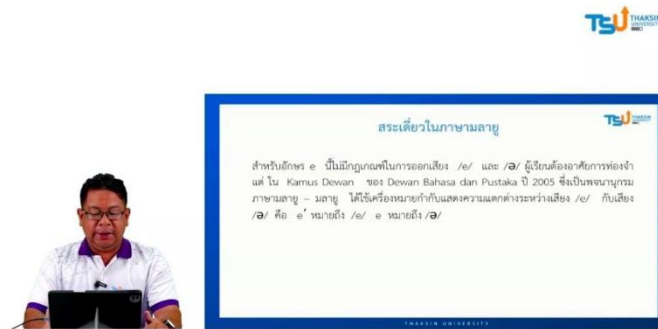


Figure 2. Delivery of Material to Lecturers of the Malay Language Department, Thaksin University



Figure 3. Results of Making a Digital Comic Introducing Indonesian Culture

Link to the PkM video results:

<https://drive.google.com/file/d/1bsnzX10qdXKZOBcoSF07UNfYI8KRwLdG/view?usp=sharing>

Based on these activities, there are several stages introduced by lecturers from the Malay Language Department regarding the introduction of technology-based culture. These stages are as follows: (1) delivery of interactive digital comic products, (2) demonstration of use, (3) trial use in the user environment, (4) increasing user knowledge and skills, (5) initial impact on learning.

4. Conclusion

The Community Service Program, "Mentoring, Creating, and Using Interactive Digital Comics Based on Indonesian Culture for Lecturers in the Malay Language Department at Thaksin University," successfully achieved its primary

objective: enhancing the knowledge and skills of lecturers in developing creative and contextual digital learning media. The partner lecturers were able to design storylines, write scripts, and operate an interactive digital comic platform that incorporated elements of Indonesian culture, including themes of the intersection of Hindu-Buddhist traditions and the introduction of Borobudur Temple as an icon of cultural and religious heritage. The resulting interactive digital comic product is ready for use in learning and demonstrates significant potential for enhancing student motivation and understanding of Indonesian language and culture in a more vibrant and meaningful way. Furthermore, the active involvement of lecturers throughout the stages of observation, needs analysis, training, mentoring, and evaluation reflects the development of a participatory and sustainable partnership. More broadly, this Community Service Program contributed to strengthening learning media innovation within Thaksin University while strengthening the Indonesia-Thailand academic network by identifying cultural and religious intersections that are closely related to the experiences of both countries. In the future, similar activities have the potential to be developed into follow-up programs in the form of expanding digital comic banks, research into the impact of using this media on learning outcomes, and more intensive curricular collaboration between universities.

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Conflict of Interest

The authors declare no conflicts of interest.

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