

# Innovative Learning Strategy Using H5P to Create Engaging Learning Modules for Students

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## Abstract

*Technology in education plays a crucial role in delivering effective learning, especially for students in Indonesian schools abroad. This study aims to develop and evaluate an interactive learning website based on WordPress and H5P, with a focus on Indonesian culture, particularly traditional dance. The website was developed locally using XAMPP and integrated with interactive videos, quizzes, and simulations. Evaluation results indicate that most students felt a greater connection to Indonesian culture, and the learning process became more engaging. This strategy has proven to enhance student engagement and strengthen national identity in multicultural environments.*

**Keywords:** H5P, cultural learning, interactive website, Indonesian School, traditional dance

## 1. Introduction

This research aims to develop and test an H5P H5P-embedded web teaching of Indonesian Culture for Indonesian Students. Driven by traditional dance as its first topic, the project aims to foster cultural pride, increase student enthusiasm, and develop a scalable model for other overseas schools in Indonesia. Nevertheless, careful design of digital cultural learning for international students is still required. According to Mayer's multimedia learning theory [1], integrating words and relevant pictures can help improve understanding of concepts and knowledge retention. For Indonesian students, it has been shown that paper methodologies can be applied to things like Indonesian dances and folklore, as well as local customs, using H5P-enriched digital modules.

It has been demonstrated that using H5P in educators' learning programs has the best impact on student performance. Abdul Haqq showed that the informal nature of teaching using H5P has been very well utilized and evaluated based on improving students' understanding of abstract subjects using visual and interactive components [2]. Similarly, Utari et al. stressed that H5P provides teachers with an effective opportunity to create learning resources, particularly for language and cultural teaching [3]. Jacob and Centofanti also found that H5P-based modules increased student motivation and understanding in an online education environment [4].

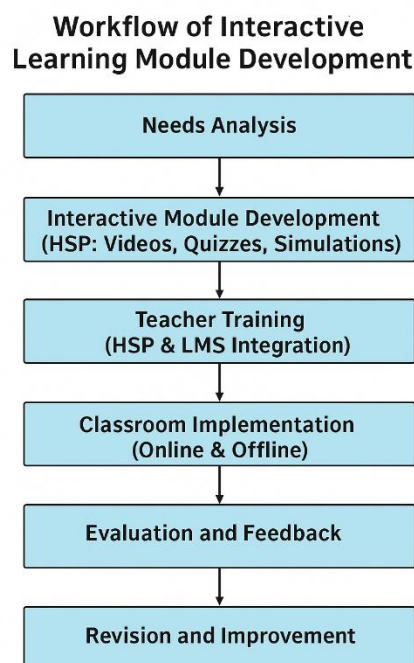
As a solution to this problem, digital learning tools have become essential in providing interesting content relevant to the context. H5P—a free, open-source HTML5-based framework—has recently attracted interest because it allows educators to develop, share, and reuse interactive learning material [5], [6]. H5P can create diverse types of educational content, including interactive videos, drag-and-drop questions, image hotspots, and simulations that engage and encourage learner participation. [7], [8].

The development of information and communication technologies (ICT) has changed the face of education in rural and cross-cultural settings. In this case, Indonesian students at overseas Indonesian schools (hereinafter referred to as Indonesian students) face a distinct problem: the lack of access to Indonesian culture and history, compounded by the physical distance from Indonesia. Exposure to such elements usually produces a weak emotional/intellectual bond with their identity.

As part of the global movement of emerging Indonesian schools abroad, students do not have enough opportunities to witness the distinctive Indonesian culture and history, especially the local Indonesian cultural aspects from their home base, due to limited geographical access. That is why they have a weaker emotional attachment to their national identity. A technologically supported learning approach is required to overcome these issues. One potential solution is to employ H5P, an open-source authoring tool for interactive learning content at the core.

## 2. Method

This study uses a system development method with a participatory approach. The stages include analyzing learning needs with Indonesian student teachers, developing interactive H5P content, conducting teacher training, implementing the website locally using XAMPP, and evaluating its effectiveness based on five key indicators: content engagement, ease of use, cultural connection, technical performance, and learning support.



*Figure 1. Workflow of website development methodology using H5P.*

### 3. Results and Discussion

The interactive learning website was successfully developed using WordPress and the H5P plugin. The system includes multiple components: an engaging homepage, modular content themed around Indonesian traditional dance, interactive video lessons, and embedded quizzes. These were implemented based on curriculum alignment and pedagogical goals aimed at increasing student interaction and cultural familiarity.

#### 3.1 Implementation Results

During the implementation phase, students accessed the website both in-class and from home, demonstrating its flexibility for blended learning environments. Teachers reported that H5P's features, such as drag-and-drop tasks and interactive video quizzes, encouraged students to participate more actively compared to previous static materials. The modules allowed for asynchronous review, which benefited students with varied learning speeds.

The website design emphasized visual cues and cultural symbols, such as traditional attire, musical instruments, and regional dance forms, to enhance immersion and context. These visual elements were aligned with Mayer's Multimedia Learning Theory [14], which emphasizes that learners retain more information when exposed to both visual and verbal content.

#### 3.2 Evaluation Results

The system was evaluated through a user acceptance test involving students and teachers. The feedback was collected through online surveys based on five key indicators:

Indicator	Satisfaction (%)
Content Engagement	88%
Ease of Use	82%
Cultural Connection	85%
Technical Performance	80%
Learning Support	90%

Content Engagement (88%): Students found the lessons significantly more interesting due to the interactive elements. This aligns with previous studies where H5P increased learner motivation and attention span [9].

Ease of Use (82%): Most users described the interface as intuitive and easy to navigate. However, some students encountered initial difficulties with the drag-and-drop interface on mobile devices, indicating a need for responsive design improvements.

Cultural Connection (85%): Students reported feeling more emotionally connected to Indonesian culture, even if they had never lived in Indonesia. This confirms the hypothesis that interactive digital content can serve as a cultural bridge for diaspora learners [13].

Technical Performance (80%): A small percentage of users experienced lag during video playback. This may be attributed to bandwidth limitations, especially for users accessing the site from mobile networks.

Learning Support (90%): Teachers appreciated the structured flow of content and the ability to reuse or adapt modules for different topics. They noted that H5P allowed for formative assessment and self-paced exploration.

### 3.3 Discussion

The findings suggest that interactive media tools like H5P can meaningfully enhance learning outcomes, particularly in culturally embedded education for geographically distant learners. This supports the claims made by Song and Fox [13], who stressed the importance of emotional and cultural presence in online education. As pointed out by Laurillard [15], teaching as a design science requires educators to iteratively build, test, and refine learning environments—exactly what this project exemplifies.

Moreover, the high levels of engagement and cultural connection highlight H5P's potential for academic achievement and identity reinforcement among Indonesian students abroad.

Nevertheless, improvements in system optimization are needed. Implementing media compression and providing alternative low-bandwidth modes could address technical issues. Future iterations may also expand the content to include regional languages, folklore, culinary heritage, and historical narratives.

## 4. Conclusion

The cultural learning website using H5P has proven effective in delivering interactive cultural content to Indonesian students. Students felt more engaged, and teachers found the materials supportive. Future improvements should focus on technical performance and expanding the content to other aspects of Indonesian culture.

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