

Augmented Reality Eki Stamps as an Innovative Tool for Language Education and Cultural Preservation

^{*1}Nor Arseha Karimon, ²Fatrisha Mohamed Yusof, ³Nur Fatiyah Roslan, ⁴Mohd Faizul Bin Noorizan, ⁵Nurin Elani Makrai

¹UiTM Melaka, ²UiTM Shah Alam, ³UiTM Machang, ⁴UiTM Machang, ⁵UiTM Machang

DOI: <https://dx.doi.org/10.47772/IJRISS.2025.924ILEIHD00104>

Received: 23 September 2025; Accepted: 30 September 2025; Published: 30 October 2025

ABSTRACT

This study looks at how Augmented Reality (AR) can be combined with Eki Stamps to create a fresh and engaging way of learning languages while deepening cultural understanding. At its heart, the research responds to the concern that younger generations are less connected to traditional cultural items like stamps, which limits their chances to learn language through heritage. The idea introduces a blended experience where each stamp design carries symbols of local culture and is enhanced with AR features. Through mobile devices, users can unlock multilingual stories, interactive dialogues, and animated visuals, turning stamp collecting into a lively and educational journey.

In Melaka, this approach highlights the city's unique heritage, especially along the river cruise route and historic sites such as Kampung Morten, Stadthuys, and Dutch Square. Early results suggest that using AR and gamification in cultural tourism not only captures attention but also strengthens community pride and draws in younger, tech-savvy audiences. What makes this approach especially promising is its adaptability, AR content can be refreshed in step with cultural events or linguistic activities, keeping the experience relevant and interactive over time.

By weaving together tradition and technology, this initiative encourages language learning, nurtures cultural appreciation, and promotes digital inclusivity. Ultimately, AR-powered Eki Stamps show great potential, serving both as a means to preserve heritage and as a modern tool for inclusive, effective education in today's digital world.

Keywords: Eki Stamps, Augmented Reality (AR), Cultural Heritage, Tourist Engagement, Melaka river

INTRODUCTION

In today's digital era, the link between cultural heritage and education has become more important than ever, especially as younger generations show less interest in traditional artifacts like stamps. Once valued as cultural symbols and educational tools, stamps have gradually lost their relevance with the rise of digital communication. This decline is not only a concern for heritage preservation but also limits the integration of cultural narratives into language learning. When learners interact less with heritage-based items such as stamps, they also lose opportunities to develop language skills in meaningful cultural contexts.

In Malaysia, like many multicultural societies, language learning is most effective when it is rooted in cultural traditions, values, and stories. Yet, current educational approaches often remain confined to formal classroom methods, with little emphasis on interactive or experiential learning that resonates with today's tech-driven students. Likewise, cultural education is frequently delivered through static mediums such as museum exhibits or textbooks, which, while informative, do not fully engage younger audiences. This disconnect highlights the need for creative strategies that merge cultural preservation with language learning through dynamic, technology-enhanced platforms.



This research responds to that gap by exploring the integration of Augmented Reality (AR) with Eki Stamps as a hybrid educational tool. By embedding AR features into stamp designs, learners and visitors can unlock interactive multilingual stories, animated cultural visuals, and contextual dialogues. This innovation aims to reimagine stamp collecting as an immersive and enjoyable learning experience—one that deepens cultural appreciation while strengthening language skills. Ultimately, the study positions AR Eki Stamps as a forward-looking solution for inclusive language education and sustainable cultural preservation in Malaysia.

LITERATURE REVIEW

Gamification in Education and Tourism

Gamification has become a well-established strategy to boost motivation and participation across education and tourism. As Aguiar-Castillo et al. (2020) note, introducing game-like features into everyday contexts not only sustains user engagement but also strengthens knowledge retention. Within tourism, strategies such as digital trails and collectible systems have successfully encouraged visitors to explore more destinations while connecting with cultural stories (Pasca et al., 2021). A well-known example is Japan's Eki Stamp system, where travelers collect distinctive stamp designs from train stations and heritage sites. The joy of collecting and the sense of achievement fostered by this system inspires visitors to keep exploring.

Augmented Reality (AR) is increasingly being used in language education as a way to create interactive, immersive experiences. Research shows that AR can enhance memory retention and make learning more active by tying vocabulary to visual and real-life contexts (Punar Özçelik et al., 2022). Recent innovations include AR-based mobile apps that weave vocabulary exercises into physical surroundings, helping learners practice in meaningful, authentic environments (Belda-Medina & Marrahi-Gomez, 2023). This ability to bridge classroom instruction with experiential learning makes AR particularly appealing for younger, tech-driven learners.

The preservation of intangible cultural heritage remains a pressing challenge. UNESCO (2018) stresses the need for technology in sustaining oral traditions, folklore, and other cultural practices. Scholars argue that AR and VR are increasingly effective in revitalizing heritage, making it more accessible and engaging for contemporary audiences (Achille & Fiorillo, 2022; Yu, 2023). Evidence from Europe and East Asia demonstrates how AR-driven cultural applications not only safeguard heritage but also draw in broader and younger audiences by reimagining tradition through interactive formats.

Linking Language and Culture

Language and culture are inseparable, as Sneha Kannusamy (2021) emphasizes, cultural contexts give depth and richness to language learning. When cultural narratives are embedded into language lessons, learners gain a more authentic grasp of vocabulary, idioms, and communicative practices. Recent directions in applied linguistics highlight the importance of situating language instruction within cultural heritage, ensuring that students build both linguistic competence and cultural appreciation (Nguyen, 2021).

Current trends show a growing convergence between gamification, AR, and cultural heritage in educational contexts. Case studies from Japan, South Korea, and Europe demonstrate that combining cultural artifacts with digital interactivity enhances both learning and tourism experiences (Jamaica Vizcarra Garcia, 2022). Yet, despite these advances, little research has focused on how these strategies might be applied in Malaysia—particularly in connecting AR-enabled cultural experiences with language education. This gap highlights the importance of exploring AR Eki Stamps as a hybrid innovation that can simultaneously strengthen cultural preservation and promote inclusive, engaging language learning.

METHODOLOGY

This study adopts a qualitative, design-based research approach to explore and test the potential of AR-enabled Eki Stamps as a hybrid tool for both education and cultural engagement. Two main participant groups are targeted: tourists and visitors to cultural heritage sites along the Melaka River, such as Kampung Morten,

Stadthuys, and Dutch Square and students or young learners, who are most likely to benefit from language learning through digital interactivity. These groups are purposively chosen to capture both the cultural perspectives of visitors and the educational experiences of learners.

Data collection is structured to examine the feasibility, usability, and overall impact of the AR Eki Stamps. The process begins with prototype development, where stamp designs incorporate Malay cultural motifs, legends, and traditions. Pilot testing will then be conducted at selected heritage sites, with stamp stations set up and stamp books distributed to participants. To better understand user experiences, multiple feedback methods will be employed, including structured surveys, semi-structured interviews, and focus group discussions. Additionally, observational notes will be used to record usage patterns, levels of engagement, and participant interaction with the AR features.

The analysis combines both quantitative and qualitative methods. Survey responses will be examined using descriptive statistics to evaluate user satisfaction, motivation, and perceived language learning outcomes. In parallel, data from interviews and focus groups will undergo thematic analysis to identify common themes related to cultural appreciation, language development, and acceptance of the technology. These findings will guide iterative refinements to the AR Eki Stamp prototypes, ensuring improvements in both effectiveness and user appeal.

The methodology is grounded in two complementary theoretical perspectives. Constructivist Learning Theory suggests that learners build knowledge more effectively through meaningful, authentic experiences. AR Eki Stamps support this by embedding learning directly within cultural heritage contexts. The Gamification Framework further explains how elements such as collection, progression, and rewards can enhance motivation and engagement, encouraging participants to take a more active role in cultural exploration and language learning.

RESULTS AND DISCUSSION

While empirical data collection has not yet begun, several important outcomes are expected from the integration of Augmented Reality (AR) with Eki Stamps.

The first anticipated result is stronger engagement among both tourists and students. By turning stamp collecting into a gamified experience enriched with AR storytelling, participants are likely to feel more motivated to visit cultural sites and interact with heritage content. This expectation aligns with existing studies showing that game-like elements foster a sense of achievement and progression, which helps sustain user participation.

Secondly, AR Eki Stamps are projected to enhance language learning by embedding vocabulary and communication practice within authentic cultural settings. For instance, scanning a stamp featuring Kampung Morten could introduce learners to related Malay words, idiomatic phrases, or historical stories. Because this method combines visual, auditory, and textual input, it is expected to improve memory retention and comprehension. In doing so, the project contributes to the expanding field of technology-enhanced language education, particularly for younger learners who thrive on interactive and digital approaches.

A third anticipated outcome relates to cultural preservation. By digitizing intangible heritage, such as folklore, oral histories, and traditional practices, AR transforms these narratives into interactive experiences, ensuring they remain accessible and relevant to future generations. The adaptability of AR also allows content to be updated in line with cultural festivals, language initiatives, or tourism events, keeping both the learning and cultural engagement dynamic and meaningful.

Finally, the findings are expected to highlight the dual value of AR Eki Stamps: as an inclusive educational tool for effective language learning and as a sustainable strategy for cultural tourism. In combining gamification with AR, the initiative not only appeals to younger, tech-driven audiences but also builds a bridge between cultural appreciation and linguistic development.

Table 1 Description of the table

Theme	Expected Findings	Implications
Engagement	Increased motivation to explore sites through gamified stamp collection	Strengthens tourism experience and promotes active cultural learning
Language Learning	Improved vocabulary retention via contextualized AR narratives and dialogues	Enhances language acquisition beyond the classroom
Cultural Preservation	Digital revival of folklore, traditions, and oral histories	Safeguards intangible heritage in a modern, interactive format
Inclusivity & Innovation	Appeals to students, tourists, and tech-savvy audiences	Positions AR Eki Stamps as a strategic hybrid for education and heritage tourism

CONCLUSION

This concept paper proposes the integration of Augmented Reality (AR) with Eki Stamps as an innovative hybrid tool to strengthen both language learning and cultural heritage preservation. It addresses the challenge of younger generations becoming less engaged with traditional cultural artifacts and positions AR Eki Stamps as a creative response that blends gamification, interactivity, and cultural storytelling.

The outlined methodology demonstrates how this innovation can be developed, tested, and evaluated within the Malaysian context, particularly at heritage sites along the Melaka River. The central idea is to reimagine stamp collecting as an immersive educational activity, one that not only supports linguistic development but also nurtures cultural appreciation. By embedding language learning within authentic cultural contexts, the initiative draws on constructivist learning principles while using gamification to sustain motivation and participation.

The anticipated outcomes suggest wider benefits for sustainable cultural tourism, inclusive education, and digital heritage conservation. Moving forward, future research should emphasize pilot testing the prototypes, refining AR content in response to user feedback, and assessing scalability across other heritage sites and learning environments. There is also potential to explore cross-cultural applications of AR Eki Stamps in multilingual settings, positioning the model as a replicable and forward-looking strategy for bridging language education and cultural preservation in the digital era.

ACKNOWLEDGEMENTS

The author(s) wish to extend heartfelt gratitude to the cultural institutions, academic peers, and local stakeholders whose insights and support have greatly shaped the development of this concept. Particular acknowledgment is given to the Japanese Eki Stamp model, which served as an important point of reference and inspiration for this study. The work has also been informed by the wider body of scholarship on Augmented Reality, gamification, and cultural preservation, which provided essential theoretical grounding. In addition, the author(s) deeply appreciate the contributions of colleagues and educators in the fields of language education and heritage studies, whose constructive dialogue and thoughtful suggestions have enriched the direction and scope of this research.

REFERENCES

1. APA 7th Edition, arrange them in alphabetical order Achille, C., & Fiorillo, F. (2022). Teaching and learning of cultural heritage: Engaging education, professional training, and experimental activities. *Heritage*, 5(3), 1792–1806. <https://doi.org/10.3390/heritage5030094>
2. Ager, A., & Strang, A. (2008). Understanding integration: A conceptual framework. *Journal of Refugee Studies*, 21(2), 166–191. <https://doi.org/10.1093/jrs/fen016>
3. Aguiar-Castillo, L., Hernández-López, L., De Saa-Perez, P., & Pérez-Jiménez, R. (2020). Gamification as a motivation strategy for higher education students in tourism face-to-face learning. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 27, 100267. <https://doi.org/10.1016/j.jhlste.2020.100267>



4. Belda-Medina, J., & Marrahi-Gomez, V. (2023). The impact of augmented reality (AR) on vocabulary acquisition and student motivation. *Electronics*, 12(3), 574. <https://doi.org/10.3390/electronics12030574>
5. Kannusamy, S. (2021). Reformation of culture through language and translation. *The Creative Launcher*, 6(4), 168–174. <https://doi.org/10.53032/tcl.2021.6.4.25>
6. Pasca, M., Renzi, M. F., Ciasullo, M. V., & Mugion, R. G. (2021). Gamification in tourism and hospitality research in the era of digital platforms: A systematic literature review. *Journal of Service Theory and Practice*, 31(5), 745–772. <https://doi.org/10.1108/JSTP-04-2020-0069>
7. Punar Özçelik, N., Yangin Ekşi, G., & Baturay, M. (2021). Augmented reality (AR) in language learning: A principled review of 2017–2021. *Participatory Educational Research*, 8(4), 195–215. <https://doi.org/10.17275/per.21.86.8.4>
8. Vizcarra Garcia, J. (2022). Integration of intercultural communicative competence: A case of English language teachers in higher education. *English as a Foreign Language International Journal*, 2(1), 1–12.
9. Wang, Y., Chen, C., & Deng, Y. (2021). Museum-authorization of digital rights: A sustainable and traceable cultural relics exhibition mechanism. *Sustainability*, 13(4), 2118. <https://doi.org/10.3390/su13042118>
10. Yu, L. (2023). Digital sustainability of intangible cultural heritage: The example of the “Wu Leno” weaving technique in Suzhou, China. *Sustainability*, 15(12), 9348. <https://doi.org/10.3390/su15129348>