



Digitalization of Local Culture Products as a Strategy to Enhance the Competitiveness of Creative Trade (The Case of Aceh Rencong)

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A B S T R A C T

This study aims to analyze and develop a digitalization strategy for the local cultural product Rencong Aceh as an effort to increase competitiveness in creative trade. Rencong as a symbol of Acehese identity has high historical, artistic, and economic value, but its development still faces challenges in modern marketing, particularly in aspects of market access, product visualization, and cultural branding. To address these needs, this study collaborated with the Informatics study program in designing and building a web-based e-commerce platform specifically designed for the marketing of Rencong Aceh products. The research method used a qualitative descriptive approach combined with user-centered design (UCD) in the system development process. Data were obtained through observations of Rencong artisans, interviews with MSMEs, and literature studies on the digitalization of culture and creative trade. The system development stages included user needs analysis, interface design, digital catalog creation, cultural storytelling feature integration, and platform functionality testing. The research results show that digitalization through e-commerce significantly increases the visibility and market access of Acehese Rencong products. Craftsmen gain a broader marketing space, cultural documentation becomes more standardized, and consumers can understand the historical value of Rencong through an integrated digital narrative. Cross-disciplinary collaboration between Accounting, Creative Economy, and Informatics has been shown to strengthen innovation while maintaining the authenticity of cultural products. This research recommends further developments in the form of digital payment integration, product tracking features, and social media-based promotions to strengthen global marketing.

INTRODUCTION

Rencong, a traditional weapon originating from Aceh, represents a significant cultural heritage embodying historical values, philosophical meanings, and the identity of the Acehese people. Beyond its function as a weapon, rencong has evolved into a cultural artifact with aesthetic and symbolic value. However, in the context of globalization and modernization, its existence is increasingly marginalized, particularly among younger generations and within contemporary market systems (Novita et al., 2022). This decline reflects a broader issue faced by many traditional cultural products, where limited adaptation to modern economic systems restricts their sustainability and global recognition.

From the perspective of the creative economy, as emphasized by UNCTAD and John Howkins, cultural assets such as rencong possess significant economic potential when managed through innovation and value creation. In parallel, the rise of the digital platform economy has transformed how cultural products are produced, distributed, and consumed globally. Digital platforms enable small-scale artisans to access international markets, bypass traditional barriers, and directly engage with global consumers. Additionally, the concept of cultural branding highlights how heritage products can be repositioned as premium cultural commodities through storytelling, identity strengthening, and symbolic value enhancement.

Despite these opportunities, rencong craftsmen in Gampong Baet Lamphuot still rely heavily on conventional production and

marketing methods, limiting their market reach and competitiveness (Barroso et al., 2022; Wulandari et al., 2022). Existing studies have discussed digital marketing and cultural product commercialization; however, there remains a research gap in integrating digital technology with cultural preservation strategies specifically for traditional weapons like rencong. Moreover, limited bibliometric mapping—such as through tools like VOSviewer—shows that research intersections between digital platforms, cultural heritage commodification, and local artisan empowerment are still underexplored, particularly in the Southeast Asian context.

In response to this gap, this study introduces the DREAM (Digital Rencong E-Commerce and Art Market) platform as an innovative approach that integrates digital technology with cultural preservation. Unlike conventional e-commerce, DREAM is designed not only as a transactional platform but also as a cultural showcase that communicates the historical, philosophical, and artistic value of rencong to a global audience. This approach reflects an international perspective, aligning with global trends in digital heritage promotion and creative economy development, where cultural products are increasingly positioned within global value chains (UNCTAD, 2025).

The main problem addressed in this research includes: (1) the current condition of rencong marketing in Gampong Baet Lamphuot, (2) the challenges faced by craftsmen in accessing global markets, and (3) how a culture-based digital platform can enhance the competitiveness and global positioning of rencong. Furthermore, this study explores how the design and

implementation of the DREAM platform can strengthen cultural identity while simultaneously increasing economic value through digital innovation.

The novelty of this research lies in the integration of cultural heritage commodification with advanced digital technologies, including e-commerce systems, digital storytelling, and potential future integration with immersive technologies such as Virtual Reality (VR) and Non-Fungible Tokens (NFTs). By positioning rencong within the global digital marketplace, this study contributes to both theoretical and practical discussions on how traditional cultural products can be sustained, transformed, and globally recognized in the era of digital transformation.

METHOD

This study was conducted in Baet Lamphuot Village, Kuta Baro District, Aceh Besar, Indonesia, which is recognized as a center for traditional rencong production. The research employed a descriptive qualitative approach combined with Research and Development (R&D). This method was selected to both understand the existing conditions of rencong marketing and to develop a prototype of a digital platform, namely DREAM (Digital Rencong E-Commerce and Art Market). The qualitative approach allows for an in-depth exploration of socio-cultural and economic conditions, while the R&D method supports the design and testing of an applicable technological solution.

Research Subjects and Sampling

1. The research subjects consisted of: rencong craftsmen as primary producers,
2. supporting MSMEs within the cultural product value chain,
3. cultural figures and digital marketing experts,
4. potential consumers from local and international markets.

A purposive sampling technique was used to select respondents based on their direct involvement and relevance to the research objectives. A total of 38 respondents participated in this study, including 20 craftsmen, 5 MSME actors, 3 experts, and 10 potential consumers. This sample size is considered adequate to represent stakeholder perspectives in digital rencong marketing.

Types and Sources of Data

This study utilized both:

1. Primary data, obtained from interviews, observations, and field documentation
2. Secondary data, derived from literature related to digitalization, cultural economy, and e-commerce platforms

Data Collection Methods

Data were collected through the following procedures:

1. Literature review to identify theoretical frameworks, research gaps, and digitalization models for cultural products.
2. Field survey to obtain an overview of current marketing conditions.
3. Participatory observation to examine production processes, business practices, and socio-cultural dynamics.

4. In-depth interviews with all respondent groups to explore perceptions, challenges, and opportunities in digital marketing.
5. Documentation including photographs, field notes, and supporting records.

Findings from the field indicate that rencong marketing remains predominantly traditional, relying on local sales, exhibitions, and custom orders, with minimal access to digital and global markets. Key challenges include limited digital literacy, lack of capital, inadequate export-standard packaging, and restricted international networks.

Data Analysis Techniques

Data were analyzed using thematic analysis supported by NVivo to identify key patterns and themes. Subsequently, a SWOT analysis was applied to formulate a digital branding strategy based on cultural values.

In the development phase, the DREAM platform prototype was evaluated using:

1. Black Box Testing to assess system functionality
2. Usability Testing and User Experience (UX) Evaluation to measure user interaction and satisfaction
3. User feedback analysis to refine system performance

Data Validity

To ensure data validity, this study applied:

1. Source triangulation, by comparing interview, observation, and documentation data
2. Member checking, by confirming findings with key respondents

Research Process Overview

The research process can be summarized as follows:

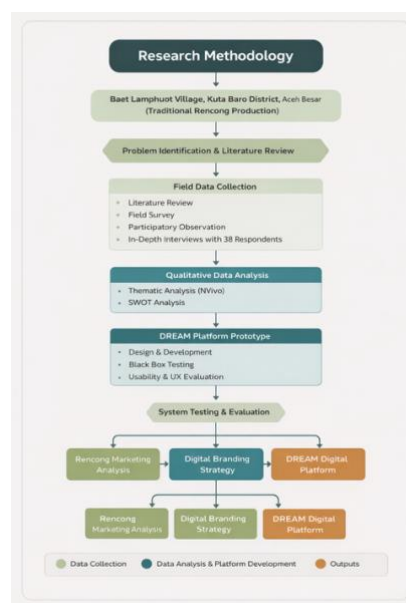


Figure 1. Research Methodology Flowchart

Research Outputs

1. The main outputs of this research include:
2. an analysis of rencong marketing conditions,
3. a cultural-based digital branding strategy, and a prototype of the DREAM digital platform.

RESULTS AND DISCUSSION

Digital Constraints and Structural Challenges in Rencong Marketing

The findings reveal that the primary barriers in rencong marketing are both structural and digital in nature. Thematic analysis using NVivo identified five major themes, with artisan digital literacy emerging as the most dominant factor (60% of respondents). Most craftsmen have limited ability to utilize social media, online marketplaces, and digital transaction systems, resulting in continued reliance on conventional marketing methods such as local sales, exhibitions, and private orders.

Table 1. NVivo Processing Results

Main Theme	Category	Number of Quotes	Number of Respondents Mentioned	Percentage of Respondents
Digital Literacy of Craftsmen	Limited use of social media	15 quotes	12 people	60%
Strategic Cultural Branding Strategy	Need for historical narrative	10 quotes	8 people	40%
E-Commerce Technology	Expectations for easy transaction features	9 quotes	7 people	35%
Global Market Opportunities	Interest of foreign consumers	8 quotes	6 people	30%
Product Quality	Design variations & quality standards	6 quotes	5 people	25%

This condition highlights a significant gap between the cultural value of rencong and its technological adaptation. From the perspective of the digital platform economy, limited digital literacy restricts artisans from integrating into global market ecosystems. This finding is consistent with previous studies emphasizing that low digital capability remains a key barrier for small and medium enterprises (SMEs) in accessing international markets.

In addition, **product quality and standardization** remain critical challenges. Inconsistent design variations and the absence of standardized production processes indicate that artisans are not yet fully prepared to meet global market expectations. These issues are not only technical but also reflect the lack of structured production management systems.

<https://doi.org/10.58835/jspi.v6i1.592>

Structurally, limited financial capital, restricted international marketing networks, and weak intellectual property rights (IPR) protection further constrain the competitiveness of rencong products. These findings suggest that digital transformation must be supported by a broader institutional and policy framework to be effective.

Digital Platform Strategy and Cultural-Based Competitive Advantage

The study demonstrates that a cultural branding strategy is essential in enhancing the global competitiveness of rencong. Approximately 40% of respondents emphasized the importance of integrating historical and philosophical narratives into product presentation. Within the creative economy framework, as promoted by UNCTAD, symbolic and cultural values are key drivers of product differentiation in global markets.

To address these challenges, this research proposes the DREAM (Digital Rencong E-Commerce and Art Market) platform as an integrated digital solution. Unlike conventional marketplaces, DREAM is designed as an experience-based platform that combines:

1. **E-commerce functionality** (secure and user-friendly transactions)
2. **Digital storytelling** (historical and philosophical narratives of rencong)
3. **Interactive visual content** (production process videos and artisan profiles)

Policy Implications for Cultural Digitalization and Creative Economy Governance

The findings offer several important implications for policy and governance. First, enhancing digital literacy among artisans is a fundamental prerequisite for successful digital transformation. Without sufficient human resource capacity, technological adoption will remain ineffective.

Second, there is a need for institutional support in developing culture-based digital platforms such as DREAM, as part of a broader national strategy to strengthen cultural identity in the global market. This approach not only promotes economic growth but also supports cultural preservation.

Third, strengthening intellectual property rights (IPR) protection is essential to prevent product imitation and to safeguard the authenticity of rencong as a cultural heritage product. In the global marketplace, such protection plays a crucial role in maintaining both economic value and cultural integrity.

Overall, this study highlights that cultural digitalization should be understood as an integrated process involving technology, economy, and cultural identity. The DREAM platform demonstrates how digital innovation can serve as a strategic tool to expand market access, enhance competitiveness, and ensure the sustainability of traditional cultural heritage in the era of digital transformation.

The thematic analysis reveals that artisan digital literacy is the most dominant issue, indicating significant limitations in the ability of craftsmen to utilize digital technology and social media for marketing. This finding not only reflects a technical gap but also highlights a structural constraint within the digital platform economy, where participation in global markets is

highly dependent on digital capabilities. This result is consistent with previous studies (Meinarto, 2025; Muhaimin, 2025), which emphasize that low technological capacity and limited access to digital markets remain primary barriers for culture-based MSMEs in Indonesia. From a theoretical perspective, this condition confirms that digital transformation in the creative economy cannot be achieved without strengthening human capital and technological readiness.

At the same time, the emergence of **cultural branding strategy** as a key theme indicates that artisans and stakeholders are aware of the importance of embedding historical and philosophical narratives into rencong products. This finding supports the concept of cultural branding, where symbolic value and storytelling enhance product differentiation and market appeal. Empirically, this aligns with the findings of Muhaimin et al. (2025) and Jauharoh (2023), which demonstrate that story-based branding significantly increases the perceived value of traditional products in competitive markets. In this context, rencong is not merely positioned as a physical artifact, but as a cultural identity product with emotional and symbolic value.

Furthermore, the themes of **e-commerce technology** and **global market opportunities** reflect respondents' expectations for an integrated digital platform that facilitates transactions while expanding international market access. This indicates a shift in mindset among stakeholders, from traditional market dependence toward digital-based global engagement. Such findings are consistent with reports from UNCTAD (2023), which highlight the increasing global demand for authentic cultural products distributed through digital channels. This reinforces the argument that digital platforms are not only tools for efficiency but also strategic infrastructures for integrating local cultural products into global value chains.

Although less frequently mentioned, the theme of **product quality** remains critical, as it reflects the need for standardization and design consistency to meet international market expectations. This finding supports prior research (Jauharoh et al., 2023), which identifies consistent quality as a key determinant of successful global market penetration. From an analytical standpoint, this suggests that competitiveness is shaped not only by digital access and branding but also by the ability to meet standardized production requirements.

Integrating these findings, the development of the DREAM (Digital Rencong E-Commerce and Art Market) platform emerges as a strategic and comprehensive solution. Unlike conventional e-commerce systems, DREAM is designed as a hybrid platform that combines **transactional functionality with cultural representation**. The platform integrates product catalogs, shopping carts, multi-channel payment systems, and shipping features with cultural narratives, artisan profiles, and production process videos. This approach aligns with the concept of experience-based digital platforms, where consumers engage not only in purchasing but also in cultural learning and interaction.

From a design perspective, the DREAM interface incorporates Acehnese visual identity through traditional motifs and culturally inspired color schemes, while maintaining usability and accessibility for both artisans and consumers. This reflects the application of user-centered design principles within a cultural context. In addition, the inclusion of educational features such as articles, blogs, and rencong care guides strengthens the platform's role as a medium for cultural

dissemination. Future development plans involving immersive technologies such as AR/XR further position the platform within the evolving landscape of digital heritage innovation.

From a policy perspective, these findings highlight the need for integrated strategies that combine **digital literacy development, cultural-based platform innovation, and quality standardization**. The DREAM platform not only enhances market access and competitiveness but also serves as a model for cultural preservation through digital means. Moreover, this study contributes to the broader discourse on creative economy governance by demonstrating how local cultural products can be transformed into globally competitive assets through the integration of technology, culture, and economic value.

Overall, this research provides both theoretical and practical contributions by proposing a replicable model for the digitalization of cultural products. The DREAM platform prototype, along with its cultural branding strategy and digital empowerment approach, offers a scalable framework that can be applied to other local cultural industries in different regions.

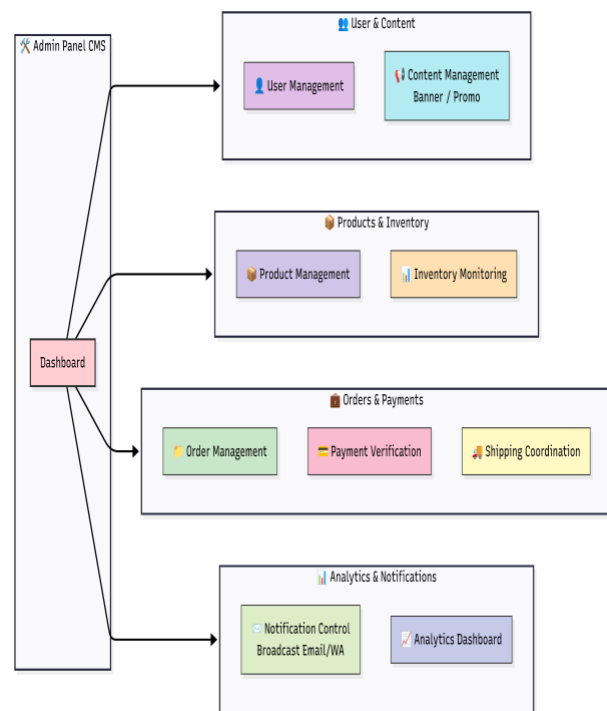


Figure 1. Admin E-Commerce Block Diagram

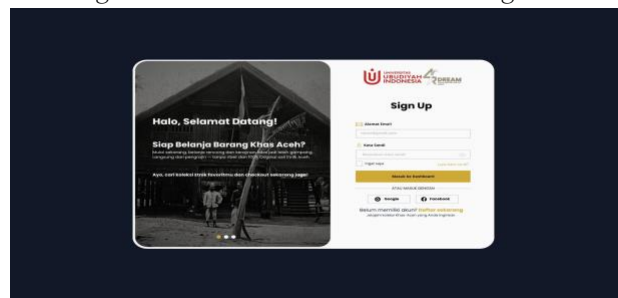


Figure 2. Digital Rencong and Art Market Customer Login Page

CONCLUSION

This study highlights that the main constraints in rencong marketing lie in low digital literacy among artisans, limited adoption of digital platforms, and the absence of standardized product quality. At the same time, significant opportunities emerge from the growing global demand for authentic cultural products and the expansion of digital ecosystems. The findings demonstrate that cultural value—particularly historical and philosophical narratives—can serve as a strong competitive advantage when effectively integrated into digital platforms. In this regard, the DREAM (Digital Rencong E-Commerce and Art Market) platform offers a strategic solution by combining e-commerce functionality with cultural storytelling, thereby enhancing both market reach and cultural preservation. This study suggests that successful digital transformation in cultural industries requires an integrated approach involving technology adoption, cultural branding, and capacity building for artisans.

However, this study is limited to a single case study in Baet Lamphuot Village and relies primarily on qualitative data, which may restrict broader generalization. In addition, the DREAM platform remains at the prototype stage and has not yet been tested on a large scale. Future research should expand the scope to multiple regions, incorporate quantitative analysis to measure economic impacts, and explore the integration of advanced technologies such as AI, AR, and blockchain to enhance platform effectiveness and sustainability.

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REFERENCES

- Barroso M. Digital transformation and the emergence of the Fintech sector: Systematic literature review. *Digital Business*; 2. Epub ahead of print 2022. DOI: 10.1016/j.digbus.2022.100028. DOI:[10.1016/j.digbus.2022.100028](https://doi.org/10.1016/j.digbus.2022.100028)
- Jauharoh, Y., Saputra, M. H., & Rahmawati, F. (2023). Pengaruh Orientasi Pasar, Inovasi Produk, dan Kreativitas Strategi Pemasaran Terhadap Kinerja Pemasaran. *Volatilitas Jurnal Manajemen dan Bisnis*, 5(5), 253-278.
- Meinarto, D. P. (2025). analisis Analisis Tantangan Dan Strategi Digitalisasi Umkm Di Daerah Perdesaan: Studi Pada Umkm Di Kabupaten Malang: Analisis Tantangan Dan Strategi Digitalisasi Umkm Di Daerah Perdesaan: Studi Pada Umkm Di Kabupaten Malang. *Transparan*, 17(1), 104-114.
- Mohammed I. The effect of brand heritage in tourists' intention to revisit. *Journal of Hospitality and Tourism Insights* 2022; 5: 886–904. DOI:[10.1108/JHTI-03-2021-0070](https://doi.org/10.1108/JHTI-03-2021-0070)
- Muhaimin, Wahyudi, Juniati, Merina (2025). Kearifan Lokal Sebagai Kunci Sukses UMKM di Pantai Pasir Putih : Membangun Ekonomi Kreatif Berbasis Budaya. *Jurnal Manajemen Pendidikan dan Ilmu Sosial (JMPIS)* 2025;6:6. <https://doi.org/10.38035/jmpis.v6i4>
- Novita N, Irwan I, Hasanah I. Aceh Rencong Making in Baet

Village, Aceh Besar District as A Preserved Cultural Heritage. *Proceedings of International Conference on Multidisciplinary Research* 2022; 5: 50–56. DOI:[10.32672/pic-mr.v5i2.5406](https://doi.org/10.32672/pic-mr.v5i2.5406)

UNCTAD Secretariat Calculation Based on UNCTAD TRAINS database (2023). <https://unctad.org>. (2-09-2025).

Wulandari T, Pratiwi MP, Faza S. Pelatihan Digital Imaging Untuk Design Product Guna Meningkatkan Nilai Jual Produk. *SELAPARANG: Jurnal Pengabdian Masyarakat Berkemajuan* 2022; 6: 1170. DOI:[10.31764/jpmb.v6i3.9703](https://doi.org/10.31764/jpmb.v6i3.9703)

Yacub R, Mustajab W. Analisis Pengaruh Pemasaran Digital (Digital Marketing) Terhadap Brand Awareness Pada E-Commerce. *Jurnal MANAJERIAL* 2020; 19: 198–209. DOI:[10.17509/manajerial.v19i2.24275](https://doi.org/10.17509/manajerial.v19i2.24275)