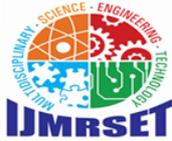# International Journal of Multidisciplinary
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eLibod: A Web-Based Application for Tourism Promotion and Local Business

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ABSTRACT: This study presents eLibod, a mobile-based tourism promotion and reservation application developed to address fragmented tourism information and limited digital access to local attractions in the municipalities of Carrascal, Cantilan, Madrid, Carmen, Lanuza, and Cortes (CarCanMadCarLanCor). Using an Agile development approach and guided by ISO 25010 software quality standards, the system integrates tourist spot information, interactive maps, itinerary planning, and accommodation booking. Evaluation results indicate high user acceptance in usability, functionality, and performance, demonstrating eLibod's effectiveness in enhancing tourist experience and supporting local tourism development.

KEYWORDS: Tourism Mobile Application; Destination Promotion; Online Reservation System; ISO 25010; Local Tourism Development

I. INTRODUCTION

Tourism plays a significant role in economic development by generating employment, increasing local revenue, and promoting cultural heritage. Despite having rich natural attractions, cultural festivals, and local products, the municipalities of CarCanMadCarLanCor face challenges in tourism promotion due to limited digital exposure and fragmented information systems. Tourists often depend on social media posts or word-of-mouth recommendations, which are insufficient for efficient trip planning.

With the advancement of mobile and web-based technologies, tourism industries worldwide have adopted digital platforms to enhance visitor experiences. Mobile tourism applications provide easy access to destination information, maps, accommodations, and reservation services. However, most existing tourism platforms focus on major destinations, leaving smaller and developing areas digitally underserved. To address this gap, this study developed eLibod, a mobile-based application that centralizes tourism information, supports online cottage reservations, and promotes local businesses across CarCanMadCarLanCor.

II. LITERATURE SURVEY

The application of information and communication technology (ICT) in the tourism industry has continuously evolved, significantly transforming how tourists search for information, plan trips, and experience destinations. Early tourism information systems primarily focused on static websites, which later progressed into dynamic and interactive platforms as mobile technologies became widely adopted. Recent studies emphasize that mobilebased tourism

applications are now essential tools in destination marketing and management due to their accessibility, real-time capabilities, and user-centered design.

Several foreign studies have shown that mobile tourism applications positively influence tourist decision-making by providing accurate destination information, interactive maps, and booking functionalities. Researchers note that applications integrating location-based services, itinerary planning, and reservation systems enhance travel efficiency and overall satisfaction. These systems reduce uncertainty during travel and allow tourists to make informed decisions before and during their trips. Moreover, usability and performance efficiency are identified as key success factors, as tourists prefer applications that are intuitive, responsive, and reliable. Local literature similarly highlights the role of digital platforms in promoting underdeveloped and rural tourist destinations. Studies conducted in the Philippine context reveal that many local tourism areas remain digitally underserved despite having strong tourism potential. Researchers recommend the development of localized tourism applications to improve destination visibility, support small-scale tourism enterprises, and strengthen community participation. Digital tourism systems are also recognized as effective tools for preserving cultural heritage by providing structured information about local traditions, festivals, and attractions. In addition, previous research underscores the importance of integrating online reservation systems within tourism applications. Reservation features not only improve convenience for tourists but also enhance operational efficiency for accommodation providers and tourism stakeholders. By centralizing booking processes, these systems minimize manual transactions, reduce errors, and improve data management. Studies further indicate that adopting internationally recognized software quality standards, such as ISO/IEC 25010, provides a reliable framework for evaluating system performance and user satisfaction.

Table1. Summary of Related Literature

No.	Paper Title	Author Name	Key Points	Remarks
1	Mobile Tourism Application for Cultural Sites	Cabrera et al. (2021)	Demonstrated that mobile applications with navigation and informational features significantly enhance tourist engagement and cultural exploration. [1]	Supports the use of mobile platforms for destinationfocused tourism promotion.
2	Interactive Tourism Systems	Sustacha et al. (2023)	Found that personalization and interactive content improve tourist satisfaction and decisionmaking efficiency. [2]	Validates the inclusion of itinerary planning and interactive features in eLibod.
3	Digital Tourism Platforms	Putra et al. (2024)	Reported that centralized digital platforms increase destination visibility and tourist interest, particularly in developing regions. [3]	Supports the digital promotion approach of eLibod for local destinations.
4	Tourism Infrastructure Development	PesimoAbundabar & Pongpong (2022)	Emphasized that improved accessibility and information availability contribute to tourism growth in rural areas. [4]	Aligns with mapping and navigation features integrated in eLibod.
5	Digital Marketing in Tourism	Buted & Felicen (2024)	Concluded that online and mobile-based marketing tools strengthen destination competitiveness and local business exposure. [5]	Supports eLibod's role in promoting local businesses and tourism services.
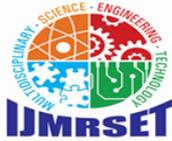
In conclusion the reviewed studies collectively indicate that mobile-based tourism applications are effective tools for improving destination visibility, tourist satisfaction, and operational efficiency. Both foreign and local literature emphasize the importance of usability, performance, and integrated reservation features in achieving successful tourism platforms. However, gaps remain in the availability of localized systems dedicated to emerging rural destinations. This gap justifies the development of eLibod, which seeks to extend the benefits of digital tourism solutions to underrepresented municipalities while adhering to recognized software quality standards.

III. METHODOLOGY

This section presents the research methods and procedures employed in the development and evaluation of the eLibod mobile application. It discusses the research design, research instrument, data collection and participants, and data analysis techniques used in the study.

Research Design
The study utilized a developmental–descriptive research design. The developmental approach was applied in designing, developing, and implementing the eLibod mobile application as a tourism promotion and reservation system. This approach focused on identifying existing problems in local tourism promotion and addressing them through a technology-based solution. The descriptive method, on the other hand, was used to assess user perceptions of the system after development. This design is appropriate for evaluating software systems, as it allows the researchers to describe the level of acceptability, usability, and performance of the application based on user feedback.

Research Instrument
The primary research instrument used in this study was a structured survey questionnaire. The questionnaire was designed based on the ISO/IEC 25010 Software Quality Model, which evaluates systems according to five quality characteristics: functional suitability, performance efficiency, usability, reliability, and compatibility. Each criterion consisted of several statements rated using a five-point Likert scale, where 5 represented Strongly Agree, 4 Agree, 3 Neutral, 2 Disagree, and 1 Strongly Disagree. The instrument was reviewed and validated to ensure clarity, relevance, and alignment with the objectives of the study.

Data Collection and Participants
Data were collected after the successful development and deployment of the eLibod application. The respondents included tourists, local residents, tourism stakeholders, and IT practitioners from the CarCanMadCarLanCor area. Participants were selected using purposive sampling to ensure that respondents had relevant experience in using mobile applications or were involved in tourism-related activities. Respondents were given sufficient time to explore the application before answering the questionnaire. All responses were collected ethically and used solely for academic and research purposes.

Data Analysis
The data collected from system evaluations and survey questionnaires were processed using appropriate statistical and analytical methods. The following treatments were applied to analyze the data gathered for the eLibod mobile application:
1. Weighted Mean: This was computed to determine the overall scores of the software quality attributes based on the ISO/IEC 25010 model, including functional suitability, performance efficiency, usability, reliability, and compatibility. The weighted mean provided a clear measure of user perception regarding each quality characteristic of the system.
2. Scale Interpretation: The computed mean values were interpreted using a fivepoint descriptive scale to describe the level of acceptability of the system. The scale used was as follows: 4.21–5.00 = Strongly Agree, 3.41–4.20 = Agree, 2.61– 3.40 = Neutral, 1.81–2.60 = Disagree, and 1.00–1.80 = Strongly Disagree. This interpretation aided in translating numerical results into meaningful qualitative descriptions.
3. Qualitative Data Analysis: Responses from interviews and open-ended survey questions were categorized and summarized to identify patterns, trends, and insights relevant to system usage and operational needs.
4. Triangulation: Data from different sources (surveys, interviews, and observations) were cross-checked to validate findings and ensure consistency
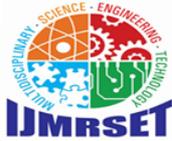
IV. RESULTS AND DISCUSSIONS

System Features

eLibod digitizes tourism promotion and local business support in CarCanMadCarLanCor through an interactive map, online cottage booking, detailed tourist spot information, travel guides, and a platform for promoting local products. The system uses role-based access for users and business owners, ensuring secure and organized management of tourism and business data.

Performance Evaluation

Based on the ISO 25010 evaluation, eLibod received very high acceptability ratings across functional suitability, usability, reliability, compatibility, and security. Usability ranked the highest, indicating that users found the system easy to use, while performance efficiency showed minor limitations due to internet dependency.

Table2. Performance Evaluation System Tabulation

	Weighted Mean (WM)	Interpretation
Functional Suitability	4.33	Agree
Performance Efficiency	3.89	Agree
Usability	4.45	Agree
Reliability	4.67	Strongly Agree
Compatibility	4.44	Agree
Total	**4.36**	**Agree**

V. CONCLUSION

eLibod meets international software quality standards and proves to be an effective digital solution for promoting tourism and supporting local businesses in CarCanMadCarLanCor. By centralizing tourism information, enabling online reservations, and increasing the visibility of local enterprises, the system bridges the gap between tourists and destinations while improving public access to travel-related services. The very high acceptability rating confirms that eLibod is reliable, secure, and user-friendly, contributing to enhanced tourism engagement and local economic growth. Despite its strong performance, further improvements such as system optimization, offline accessibility, and additional automated features are recommended to ensure long-term sustainability and adaptability to future tourism needs.

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