

Integration of Hospitality Training and AI Chatbot Implementation to Enhance the Competitiveness of Bakas Tourism Village, Bali

Raden Roro Rieta Anggraheni*, Ni Nyoman Harini Puspita, I Gusti Agung Mirah Sanjiwani, I Ketut Utama

Politeknik Negeri Bali, Bukit Jimbaran, Badung, Bali, 80364, Indonesia

*Corresponding author, email: rororietaanggraheni@pnb.ac.id

doi: 10.17977/um065.v5.i12.2025.3

Article history

Submitted: 2 September 2025

Revised: 13 October 2025

Accepted: 14 October 2025

Published: 21 October 2025

Keywords

AI chatbot

Competitiveness

Digital branding

Hospitality

Tourism village

Abstract

Hospitality services and digital technology are essential to improve the development of tourism villages in Bali, yet some tourism villages in Bali still face challenges in optimizing the quality of hospitality services and adopting digital technology. Bakas Tourism Village in Klungkung, Bali still has limitations in hospitality skills, foreign language proficiency, and digital promotion and information management. This article aims to describe the integration of hospitality training and the implementation of an artificial intelligence (AI)-based chatbot as a strategy to enhance the competitiveness of Bakas Tourism Village. A case study approach was applied through training activities on professional hospitality standards and green ethics, English and French language skills, designing a practical conversation handbook, and implementing an AI-based chatbot to assist administrators in creating and updating website content. The findings show improvements in the tourism actors' competencies in service delivery and cross-cultural communication, efficiency in digital information management, and consistency in destination branding. Overall, this program contributes positively to service quality and the competitiveness of Bakas Tourism Village as a technology-driven destination.

1. Introduction

Tourism is one of the key sectors in Bali Province that contributes significantly to the region's economy. Along with the development of global tourism trends, the focus of destination development has shifted from mass tourism to more sustainable community-based tourism. One such development is the tourist village, which not only offers natural and cultural attractions but also emphasizes the active participation of local communities in managing their regional potential (Dangi & Jamal, 2016; Giriwati, et al., 2019). However, the development of tourist villages still faces challenges, particularly in the areas of hospitality service quality, cross-cultural communication skills, and the use of digital technology in promotional strategies and branding.

Bakas Tourism Village, located in Klungkung Regency, is one of the potential destinations for development. This village offers unique natural and cultural attractions, as well as community-based activities. However, the quality of tourism services is still limited because the hospitality skills of tourism stakeholders do not meet professional standards, particularly in mastering foreign languages like English and French. This situation hinders effective interaction with international tourists and could potentially decrease visitor satisfaction. Furthermore, the management of destination information through the village website is still not optimal, with limited content and infrequent updates. This weakens the digital branding efforts of the tourism village and reduces its competitiveness in the face of other destinations that are more adaptive to technological advancements.

Figure 1 shows a cultural activity offered by Bakas to foreign tourists, where they had the opportunity to play traditional music instruments widely known as gamelan and angklung. The activity itself is called *megambel*. This has been one example of the exciting activities favored by the visitors as it gives new experience and enjoyment to them.



Figure 1. A Cultural Activity in Bakas

Along with the Industry 4.0 revolution, the utilization of digital technology has become a key factor in enhancing the competitiveness of the tourism sector. One innovation that has emerged is AI-based chatbots, which can accelerate content production, maintain information consistency, and support communication management with tourists (Gursoy et al., 2019; Tusyadiah & Miller, 2019). Chatbots are not only useful for customer service but can also be used internally to assist tourism destination administrators in managing and updating information more efficiently. Therefore, the integration of hospitality training and the implementation of AI chatbots becomes a relevant strategy to address the challenges in developing Bakas Tourism Village.

Previous literature emphasizes that improving the human resources (HR) competencies in tourism is an important factor in the success of tourist villages (Ernawati et al., 2022; Suansri, 2003; Utami et al., 2023). Hospitality training and mastery of foreign languages have been proven to improve service quality and strengthen the tourist experience (Jendra et al., 2023; Kusumaningrum & Wachyuni, 2020). On the other hand, research on digital tourism shows that the use of technology, including chatbots, can improve the efficiency of information management, strengthen destination branding, and support tourist satisfaction (Ananta et al., 2025; Ivanov & Webster, 2019; Mariani et al., 2018; Sousa et al., 2024;). Meanwhile, a study by Ayu et al. (2024) suggests that hospitality training, foreign language instruction, and website development collectively strengthen the promotional capacity and competitiveness of Kerta Tourism Village in attracting visitors. By integrating human capital training and AI-based technology, it is hoped that Bakas Tourism Village can enhance its competitiveness as a leading destination based on technology and community.

Based on the literature review, there are several gaps that underpin this research. First, most studies on tourist villages focus on the development of attractions and community participation (Dangi & Jamal, 2016; Suansri, 2003) but are still limited in improving the quality of hospitality services and foreign language proficiency for tourism stakeholders. Second, research on digital technology in tourism generally focuses on promotion through social media or e-commerce platforms (Mariani et al., 2018), while the use of AI chatbots to support the internal content management of tourism destinations has been seldom studied, particularly in the context of tourist villages in Indonesia. Third, there are not many studies that integrate tourism HR training with the simultaneous implementation of AI-based technology as a strategy to enhance destination competitiveness.

These gaps form the basis of this research, with the hope of contributing both academically and practically to the development of competitive, community-based tourist villages through an integrative approach between human resource capacity building and the utilization of digital technology. In general, this research aims to describe and analyze the integration of hospitality training with the implementation of AI-based chatbots in efforts to enhance the competitiveness of Bakas Tourism Village.

2. Method

This study is a case study conducted in Bakas Tourism Village, Klungkung Regency, Bali, using a descriptive qualitative approach. The phenomenon of the limited hospitality skills of tourism stakeholders and the suboptimal use of digital technology in promotion and information management in Bakas Tourism Village is examined in depth and described in words (Anggito & Setiawan, 2018). Data was collected through a case study with observations, evaluation questionnaires, and unstructured interviews as research instruments to provide a comprehensive picture of the challenges faced by Bakas Tourism Village and the solutions implemented to address these challenges during a specific period, from April to September 2025 (Fiantika, et al., 2022).

The respondents of this study are the tourism stakeholders in Bakas Tourism Village, selected using a purposive sampling method. All respondents are residents of Bakas Tourism Village who are involved in the tourism activities there. Fifty (50) selected respondents include both men and women, ranging in age from 20

to 60 years, with diverse occupations such as tour guides, vendors, farmers, village office staff, and security officers. The respondents have various educational and economic backgrounds, but most of them have not specifically studied tourism in formal education. Fifty respondents were chosen to represent the diversity of tourism stakeholders in Bakas Tourism Village while ensuring the data remained focused and manageable. This number was sufficient to include participants from various occupations, age groups, and educational backgrounds, allowing the study to capture a comprehensive picture of the community's involvement in tourism and their capacity to benefit from the training programs.

The design of the AI-based chatbot system was carried out based on the situational analysis of Bakas Tourism Village to optimize the use of the website as both an informational medium and a tool for digital promotion and branding. The system was then tested involving students from the Information Technology Department as participants before being deemed suitable for deployment on the Bakas Tourism Village website. Assistance and monitoring of the system's usage by the website administrators were also conducted to measure the comfort level, ease of use, and accessibility of the chatbot system. The design, testing, installation, monitoring, and evaluation of this system took place over a 6-month period, from April to September.

Observations were made during foreign language training sessions, including English and French, as well as hospitality management and green ethics training. These sessions involved interactions between the tourism stakeholders in Bakas Village and an expert from Management and Science University (MSU) Malaysia, as well as foreign students from the University of Angers and Université Polytechnique Hauts-de-France (UPHF), France, studying at Bali State Polytechnic. The training was conducted in three sessions: hospitality management and green ethics training, foreign language training, and a practice session where the respondents directly simulated the skills learned in the training. The evaluation questionnaire focused on the respondents' feedback regarding the training process. Unstructured interviews were conducted with representatives of the training participants and village officials to gather feedback on the activities and the solutions implemented. Table 1 demonstrates the interview guide used in this study. The collected data was then analyzed qualitatively, and the results were described in words, referencing relevant literature.

Table 1. Interview Guide

No	Focus Area	Questions
1	Training Experience	How do you feel about the training sessions (hospitality, green ethics, language)?
2	Practical Application	Have you applied or do you plan to apply the skills learned in your daily activities or village tourism services?
3	Interaction with Foreign Experts/Students	What was your impression of learning with international students and trainers?
4	Green Tourism Awareness	How did the training influence your understanding of green ethics in tourism?
5	Overall Feedback	What aspects of the training were most useful or need improvement?

3. Results and Discussion

The data analysis revealed positive results towards the improvements of respondents' hospitality and language skills, digital information management and digital branding of Bakas Tourism Village.

3.1. Skill Trainings to Improve Tourism Actors' Competencies in Service Delivery and Cross-Cultural Communication

The research was conducted in Bakas Tourism Village, which is located in Bakas, Tusan, Banjarangkan District, Klungkung Regency, Bali 80752. This village has been developed into an agriculture tourism village and allowed its people to grow financial autonomy by being tourism actors such as tour guides, tourist package providers, sellers, homestay and kiosk owners, and crafters. What has made this village potentially developed as an agricultural tourism destination is the famous irrigation system called 'Subak', Bali's traditional, democratic and sustainable irrigation system for rice fields which is deeply intertwined with Balinese concept or philosophy, Tri Hita Karana. This concept emphasizes the harmony between humans and humans, humans and God, and also humans and nature. As a tourist village, Bakas offers a variety of attractions, including exceptional agricultural landscape, agriculture trekking, water sports and outdoor activities, traditional cooking class, kite making and playing, and learning some local cultural activities like playing traditional music instruments (*megambel*) and traditional dancing (*joget*). These attractions have become a magnet for tourists, particularly international tourists who lately are excited in sustainable and rural tourism. From the interview result with a tourism actor in Bakas, Wayan, there is an increasing number of tourists from Europe especially France, India and the United States. This has increased the necessity of quality hospitality service and foreign language mastery. Therefore, the researchers organised two skill trainings namely hospitality management and green ethic training and foreign language (French and English) training. Figure 2 shows the hospitality training participated by the village stakeholders.



Figure 2. Hospitality Training

The program started with designing training modules which were adjusted with the tourism actors' needs. The hospitality training module focused on sustainable tourism and green ethics as well as the implementations of these concepts. Meanwhile, the language training module was designed in a way so that it could help the people even at the most basic level of French and English competence be able to communicate with foreign tourists. This included learning basic French and English expressions such as greetings and introductions, talking about food and restaurants, talking about homestay and the surroundings, buying and selling, giving directions, and tour guiding. The training was conducted in two sessions and involved 50 participants from Bakas. The hospitality training was delivered by an expert in tourism and hospitality, and it helped the people to understand more deeply about the core functions of hospitality management, the key principles of sustainable tourism and green ethics, and the guest experience enhancement. The training materials were delivered in interactive manners so that the participants could engage actively in the discussions by asking questions and sharing their opinions and experiences. The language training was delivered by native speakers and involved direct participation from the people such as speaking practices and fun games. At the end of the two sessions, the participants practiced the skills they learned in the training in the real world by guiding a mini tour around the village and explaining the main attractions and some local cultural activities. Figure 3 shows how the participants actively engaged in one of the foreign language training activities in the form of a game.



Figure 3. Foreign Language Training

The results of these skill trainings indicated a significant improvement in the participants' confidence and ability to interact with tourists from diverse cultural backgrounds. This can be seen through the observations during the trainings and interviews with the stakeholders. Tourism actors who previously relied on limited phrases or gestures to communicate with international visitors were able to apply the newly acquired English and French expressions in practical situations. This not only enhanced the flow of communication but also contributed to building a warmer, more professional guest experience. Moreover, the integration of hospitality management and green ethic training enabled the participants to link service delivery with principles of sustainability, thereby promoting practices that are both guest-oriented and environmentally responsible. The Head of the Bakas tourism actors representing the training participant stated:

"Pelatihan ini sangat bermanfaat bagi kami karena kami bisa langsung mempraktikkan keterampilan hospitaliti dan bahasa dengan mahasiswa internasional. Hal ini membuat kami lebih percaya diri untuk menyambut wisatawan mancanegara di Desa Bakas dan juga mengingatkan kami tentang pentingnya etika hijau dalam pariwisata." (The training was very useful for us because we could directly practice hospitality and language skills with international students. It gave us more confidence to welcome foreign visitors in Bakas Village and also reminded us about the importance of green ethics in tourism.)

The simulation of tour guiding activity is presented in Figure 4, where some representatives of the tourism actors practised the learned hospitality and language skills. Based on the observation, the foreign students could follow and comprehend the explanations during the tour guiding activity around the village area.



Figure 4. Practicing the Learned Skills in Real Life

Another positive outcome was the strengthened sense of professionalism among the tourism actors in Bakas. The training fostered an awareness that hospitality services go beyond providing basic needs; they involve cultivating memorable experiences grounded in cultural identity and respect for the environment. As participants applied their skills during the mini tour, they showcased not only their improved linguistic competence but also their ability to highlight the uniqueness of Bakas through stories about Subak, Tri Hita Karana, and local cultural practices. This combination of improved communication skills and deeper understanding of hospitality ethics ultimately enhanced the overall competitiveness of Bakas Tourism Village in the growing market of sustainable and cultural tourism.

3.2. Implementing AI Chatbot to Optimize Digital Information Management and Foster Digital Branding

The integration of AI chatbot technology into the digital ecosystem of Bakas Tourism Village has proven to be a practical solution to overcome challenges in managing and disseminating tourism-related information. The chatbot functions as a digital assistant that supports administrators in updating website content, ensuring that information about attractions, accommodations, and activities remains accurate and accessible. This digital intervention reduces the reliance on manual content management and enhances the efficiency of communication between the tourism village and potential visitors. By facilitating timely responses and real-time updates, the chatbot contributes to improving the quality of digital information management.

In addition to improving efficiency, the chatbot also strengthens the visibility and consistency of Bakas Tourism Village's digital branding. Consistent use of language, tone, and structured information generated by the AI system ensures that the village projects a professional image aligned with hospitality and sustainability values. This contributes to building trust among domestic and international audiences while positioning Bakas Tourism Village as a destination that embraces modern technology without neglecting its cultural identity. Through this approach, the chatbot becomes not only a tool for operational support but also an instrument for strategic branding in the competitive tourism landscape.

Furthermore, the adoption of chatbot technology fosters an innovative learning environment for local tourism actors. By interacting with the system, administrators and community members develop digital literacy and gain insights into how technology can be integrated with service quality and cultural promotion. This capacity-building aspect is essential for sustaining long-term competitiveness, as it empowers the local community to actively manage their destination's branding and communication strategies. Ultimately, the implementation of the AI chatbot exemplifies how digital innovation, when coupled with hospitality training, can optimize information management while simultaneously fostering a stronger and more coherent digital branding for tourism villages in Bali.

3.3. Integrating Hospitality Service Improvement and Digital Information Technology to Enhance the Competitiveness of Bakas Tourism Village

The integration of hospitality service improvement and digital information technology in Bakas Tourism Village represents a holistic approach to strengthening its position as a distinctive agricultural tourism destination. The village's unique character, rooted in the Subak irrigation system and the Tri Hita Karana

philosophy, provides a cultural and environmental foundation that appeals strongly to tourists seeking sustainable and authentic experiences. By combining training in hospitality skills and foreign language proficiency with the implementation of AI chatbot technology, the program has enabled the community to deliver service excellence while ensuring effective digital communication and branding. This dual strategy creates a synergy where traditional values are preserved while modern tools are employed to expand market reach. The beauty of Bakas as an agricultural tourism destination can be seen in Figure 5.



Figure 5. An Agricultural Landscape in Bakas

Through targeted hospitality and language training, local tourism actors gained the competencies necessary to serve diverse visitors while highlighting the cultural essence of Bakas. The ability to explain traditional practices, agricultural landscapes, and local cultural activities in both English and French enriches the visitor experience and fosters cross-cultural appreciation. At the same time, embedding green ethics into hospitality training ensures that service delivery aligns with sustainable tourism principles. This reinforces the identity of Bakas not only as a place of natural beauty but also as a community committed to ecological balance and cultural integrity.

On the digital side, the implementation of an AI chatbot has played a key role in optimizing information dissemination and strengthening the village's digital branding. With its capability to manage content updates efficiently and provide consistent messaging, the chatbot ensures that visitors receive accurate, timely, and appealing information about Bakas. This technological intervention allows the community to compete with more established destinations by maintaining a strong online presence while showcasing the uniqueness of agricultural attractions and cultural activities. The integration of digital information management also helps create a narrative of Bakas as a forward-looking village that values both tradition and innovation.

Ultimately, the combination of improved hospitality services and advanced digital information systems positions Bakas Tourism Village as a model for sustainable rural tourism in Bali. The program demonstrates that strengthening local human resources through skill development, while simultaneously adopting digital innovations, can generate a powerful competitive advantage. By balancing traditional agricultural heritage with modern service and promotional strategies, Bakas is able to offer tourists an authentic yet professional experience. This integrated approach not only enhances visitor satisfaction but also ensures the long-term resilience and competitiveness of Bakas as an agricultural tourism village in the global tourism market.

4. Conclusion

The integration of hospitality training and digital information technology in Bakas Tourism Village has shown that empowering local tourism actors with service, language, and sustainability competencies significantly enhances the quality of visitor experiences. By grounding hospitality practices in the values of Tri Hita Karana and the unique agricultural heritage of the Subak system, the community is able to maintain cultural authenticity while meeting international service standards. The skill training has not only improved cross-cultural communication but also fostered a stronger sense of professionalism and environmental responsibility among the tourism actors. At the same time, the adoption of AI chatbot technology has optimized digital information management and strengthened the village's digital branding, ensuring that Bakas remains competitive in an increasingly technology-driven tourism industry. This combination of human capacity building and digital innovation demonstrates a replicable model for other tourism villages aiming to balance tradition and modernity. Overall, the program contributes to sustainable tourism development by enhancing service delivery, improving digital visibility, and reinforcing Bakas's position as a competitive agricultural tourism destination.

Author Contributions

All authors have equal contributions to the paper. All the authors have read and approved the final manuscript.

Funding

No funding support was received.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/ or publication of this article.

Data Availability

The datasets generated during and/ or analysed during the current study are available from the corresponding author on reasonable request.

Acknowledgement

We would like to express our sincere gratitude to the Indonesian Minister of Higher Education, Science and Technology through the *Pusat Penelitian dan Pengabdian kepada Masyarakat* (Center for Research and Community Service) of Politeknik Negeri Bali for the generous grant, which made this research possible. Their support has been crucial in enabling us to conduct this study and explore innovative solutions for Bakas Tourism Village. We also wish to thank our partners at Management and Science University (MSU) Malaysia, the University of Angers, and Université Polytechnique Hauts-de-France (UPHF), France, for their invaluable collaboration. Their expertise and contribution to the training sessions and overall project have greatly enriched our work. Without the support of the Ministry, P3M, MSU, the University of Angers, and UPHF this project would not have been achievable. Thank you for your continued partnership.

References

- Ananta, Y. E., Yuniati, D., Rolliawati, D., Kunaefi, A., & Permadi, A. (2025). Pengembangan aplikasi Sido Chatbot sebagai aplikasi pengenalan objek wisata Kediri menggunakan rule-based pattern matching. *Jurnal Teknologi dan Informasi*, 15(1), 40–53. doi:10.34010/jati.v15i1.15219
- Anggito, A., & Setiawan, J. (2018). *Metodologi penelitian kualitatif*. CV Jejak (Jejak Publisher).
- Ayu, P. G. A. I., Puspitawati, N. M. D., & Sari, P. A. P. (2024). Merajut pesona desa wisata Kerta melalui pelatihan hospitality, bahasa asing dan pengembangan website sebagai strategi promosi dalam menyongsong Era 5.0. *LOSARI: Jurnal Pengabdian Kepada Masyarakat*, 6(2), 148–155. doi:10.53860/losari.v6i2.348
- Dangi, T. B., & Jamal, T. (2016). An integrated approach to “sustainable community-based tourism”. *Sustainability*, 8(5), 475. doi:10.3390/su8050475
- Ernawati, N. M., Arjana, I. W. B., Puspita, N. P. L. A., Voda, M., & Hazra, S. (2022). Human resource development for rural tourism: A green tourism approach. *International Journal of Green Tourism Research and Applications*, 4(2), 50–57. doi:10.31940/ijogtra.v4i2.50-57
- Fiantika, F. R., Wasil, M., Jumiyati, S. R. I., Honesti, L., Wahyuni, S. R. I., Mouw, E., ... Ambarwati, K. (2022). *Metodologi penelitian kualitatif*. Padang: PT Global Eksekutif Teknologi.
- Giriwati, N. S. S., Hawa, L. C., Pamungkas, S. T., Iyati, W., & Hidayat, A. T. (2019). Local community participation in ecotourism development: The case of Sumberwangi Hamlet Destination, East Java, Indonesia. *PEOPLE: International Journal of Social Sciences*, 5(1), 81–98. doi:10.20319/pijss.2019.51.8198
- Gursoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2019). Consumers' acceptance of artificially intelligent (AI) devices used in service delivery. *International Journal of Information Management*, 49, 157–169. doi:10.1016/j.ijinfomgt.2019.03.008
- Ivanov, S., & Webster, C. (Eds.). (2019). *Robots, artificial intelligence, and service automation in travel, tourism and hospitality*. Emerald Publishing Limited.
- Jendra, I. W., Harisal, H., Kanah, K., & Astuti, N. W. W. (2023). Pengajaran bahasa asing bagi pelaku pariwisata di Pantai Melasti, Desa Ungasan, Kecamatan Kuta Selatan, Kabupaten Badung. *Bhakti Persada Jurnal Aplikasi IPTEKS*, 9(1), 59–66. doi:10.31940/bp.v9i1.59-66
- Kusumaningrum, D. A., & Wachyuni, S. S. (2020). The shifting trends in travelling after the COVID-19 pandemic. *International Journal of Tourism & Hospitality Reviews*, 7(2), 31–40. doi:10.18510/ijthr.2020.724
- Mariani, M. (2020). Big data and analytics in tourism and hospitality: A perspective article. *Tourism Review*, 75(1), 299–303. doi:10.1108/TR-06-2019-0259
- Suansri, P. (2003). *Community based tourism handbook* (pp. 11–14). Bangkok: Responsible Ecological Social Tour (REST).
- Sousa, A. E., Cardoso, P., & Dias, F. (2024). The use of artificial intelligence systems in tourism and hospitality: The tourists' perspective. *Administrative Sciences*, 14(8), 165. doi:10.3390/admsci14080165
- Tussyadiah, I., & Miller, G. (2018, December). Perceived impacts of artificial intelligence and responses to positive behaviour change intervention. In *Information and Communication Technologies in Tourism 2019: Proceedings of the International Conference in Nicosia, Cyprus, January 30–February 1, 2019* (pp. 359–370). Cham: Springer International Publishing. doi:10.1007/978-3-030-05940-8_28

Utami, D. D., Dhewanto, W., & Lestari, Y. D. (2023). Rural tourism entrepreneurship success factors for sustainable tourism village: Evidence from Indonesia. *Cogent Business & Management*, 10(1), 2180845. doi:10.1080/23311975.2023.2180845