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Evaluating the Use of Generative AI Travel Assistants in Smart Tourism through Student Feedback

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Abstract

The rapid infusion of artificial intelligence into the tourism industry is reshaping service quality, operational efficiency, and the user experience. Among recent advances, generative AI-powered travel assistants can recommend destinations, build itineraries, and answer trip-planning queries through natural conversation. This paper presents a case study involving 35 hospitality management students who interacted with a generative AI travel assistant for travel planning purposes and subsequently evaluated its performance in terms of accuracy, ease of use, response speed, personalization, trust, and overall satisfaction. Findings indicate that students generally perceived the tool as helpful, fast, and user-friendly for early-stage planning. However, concerns emerged regarding the reliability of the information, occasional inconsistencies in response, and limited socio-emotional sensitivity. At the same time, participants valued generative AI for ideation and comparison, but most preferred human guidance for final decisions. Situated within the context of smart service design and smart tourism, the study offers practical implications for hospitality education and service designers. The results highlight both the opportunities and constraints of generative AI travel assistants in shaping traveler decision-making and perceived service quality.

Keywords: Generative Artificial Intelligence; Smart Tourism; Travel Assistant; Hospitality Education; User Perception

1. Introduction

Tourism and hospitality are being reshaped by artificial intelligence (AI). Recent advances in generative AI (GenAI) allow conversational travel assistants to recommend destinations, prepare itineraries, and answer planning queries through natural dialogue. These tools are positioned as part of smart tourism, which emphasizes context-aware, data-driven, and adaptive services. Adoption of such tools is not driven by technology alone but also by user acceptance and trust. The Technology Acceptance Model (TAM) remains a widely used framework in this regard. TAM highlights perceived usefulness and perceived ease of use as predictors of system acceptance [1]. Extensions of this model show that trust and perceived risk strongly influence the intention to adopt AI systems [2, 3]. For generative models, the risk of producing fluent but inaccurate responses makes trust calibration an essential issue [4]. Theories of trust in automation also contribute to understanding this process. Hoff and Bashir [5] distinguish dispositional trust, situational trust, and learned trust. Interaction with AI often leads to rapid changes in trust, which increases after successful responses but declines sharply after errors [6]. In education, researchers further describe human-AI trust as a category different from interpersonal trust or purely technical trust [7]. These perspectives suggest that user acceptance of GenAI travel assistants depends on both ease of use and a dynamic trust relationship. Research in tourism has examined the role of chatbots and conversational agents. Prior studies confirm that chatbots support efficiency in booking and information services but often fail to provide deep personalization or emotional sensitivity [8–10].

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Reviews and bibliometric analyses highlight the rapid growth of this field and the emergence of generative AI as a major theme in tourism research [11–13]. However, comparative studies show that human interaction is still preferred for complex or sensitive tasks [14, 15]. At the same time, there is limited evidence on how hospitality students view such systems. These learners are future professionals who will design and manage AI-enabled guest services. Education studies on AI adoption provide useful insight. Sergeeva et al. [16] found that performance expectancy, effort expectancy, and social influence predicted students’ adoption of GenAI under the UTAUT2 framework. Abulail [17] and Mustofa [18] also emphasized the role of subjective norms, ethics, and trust in shaping adoption intentions. Such findings suggest that students are an important group for empirical research in AI acceptance. This study aims to evaluate how hospitality students perceive the usefulness, ease of use, trustworthiness, and adoption potential of a GenAI travel assistant. The objectives are threefold: (i) to measure perceptions of efficiency and usability, (ii) to assess trust and risk concerns, and (iii) to identify implications for hospitality education and smart tourism. The study contributes by integrating TAM, trust in automation, and human–AI trust theories with empirical evidence from future hospitality professionals.

2. Methods

2.1. Participants

The study involved 35 respondents who completed an online survey between June and July 2025. Most were undergraduate hospitality management students aged 18–23. A smaller number were master’s students and working professionals with prior exposure to the hospitality or tourism sector. Both male and female participants took part. Approximately 40% had completed industry internships, providing a mix of academic and workplace perspectives.

2.2. Survey Design

The survey included both closed and open questions. An initial consent form clarified voluntary participation and confidentiality. Demographic items recorded age, gender, education level, and internship experience. Familiarity with AI tools such as ChatGPT, Gemini, and Expedia’s chatbot was measured on a four-point scale (1 = not familiar, 4 = very familiar). Perceptions of the generative AI travel assistant were assessed on five-point Likert scales (1 = strongly disagree, 5 = strongly agree). Items covered efficiency, quality of information, ease of use, effort, pleasantness, usefulness in hospitality settings, comfort with AI-driven services, and adoption intention. Two open questions asked participants to describe helpful features and suggest improvements.

2.3. Procedure

Participants interacted with a generative AI travel assistant for a simulated trip-planning task such as searching hotel options or creating itineraries. After the interaction, they completed the survey through an online form. This ensured that responses reflected direct experience rather than hypothetical opinions.

2.4. Data Analysis

Quantitative data were analyzed using descriptive statistics. Mean values, standard deviations, and frequency distributions were calculated for all Likert items. Reliability of the scale was assessed with Cronbach’s alpha (α), which measures internal consistency for multi-item constructs. The coefficient was computed as:

$$\alpha = \frac{N}{N-1} \left(1 - \frac{\sum_{i=1}^N \sigma_i^2}{\sigma_T^2} \right), \quad (1)$$

where N is the number of items, σ_i^2 is the variance of item i , and σ_T^2 is the variance of the total score (sum across items). Values of $\alpha \geq 0.70$ indicate acceptable reliability, $\alpha \geq 0.80$ good reliability, and $\alpha \geq 0.90$ excellent reliability. Open responses were coded thematically into categories of helpful features and areas for improvement. Patterns were compared with prior literature on AI adoption in tourism and education.

3. Results

3.1. Demographic Profile

The survey included 35 respondents. Table 1 presents their demographic characteristics. A majority (74.3%) were between 18 and 23 years old. Females accounted for 54.3% of the sample. Most participants were undergraduate students, with a smaller proportion of master’s students and working professionals. Forty percent reported prior internship experience in hospitality or tourism.

Table 1: Demographic Characteristics of Respondents (N=35)

Variable	Category	Percentage (%)
Age	18–20 years	51.4
	21–23 years	22.9
	24–26 years	8.6
	27 or above	17.1
Gender	Male	45.7
	Female	54.3
Academic Program	Bachelor’s	65.7
	Master’s	20.0
	Working Professionals	14.3
Internship Experience	Yes	40.0
	No	60.0

3.2. Familiarity with AI Tools

Participants reported varied familiarity with AI applications such as ChatGPT, Gemini, and Expedia’s chatbot. About one-third described themselves as “very familiar,” another third as “somewhat familiar,” while the rest reported little or no experience. Figure 1 shows the distribution.

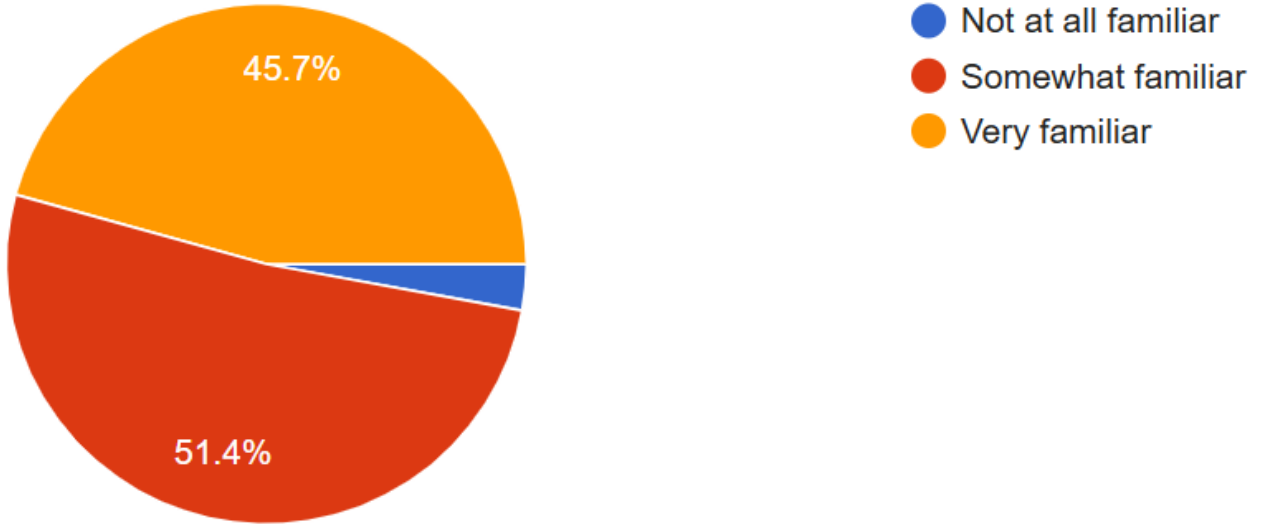


Figure 1: Self-reported familiarity with AI tools (N=35).

3.3. Reliability of the Scale

Internal consistency for the 12-item perception instrument (N=35) was high: Cronbach’s alpha was $\alpha = 0.886$, indicating strong reliability. Table 2 details per-item variances and the overall calculation summary. We also examined subscale reliability aligned with the TAM framing: Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude/Acceptance (ATT), and Behavioral Intention (INT). Subscale alphas were: PU ($\alpha = 0.696$), PEOU ($\alpha = 0.696$), ATT ($\alpha = 0.756$), and INT ($\alpha = 0.910$).

3.4. Perceptions of the Generative AI Assistant

Respondents evaluated the assistant on efficiency, quality of information, usability, trust, and adoption intention. Table 3 summarizes mean scores, standard deviations, and agreement percentages. Mean values ranged from 3.7 to 4.3. The highest ratings were for perceived usefulness in hospitality settings and the general idea of using AI in operations. Ease of use and efficiency also scored well. Lower ratings were observed for effort and accuracy-related items, indicating moderate concerns about reliability.

Table 2: Reliability Statistics for Perception Scale (N=35)

Item	Variance
Efficiency	1.087
Quality of Information	0.617
Usefulness in Hospitality	0.857
Ease of Use	0.812
Low Effort	1.205
No Technical Help Needed	1.432
Pleasant Experience	0.734
Good Idea to Use AI	1.232
Comfort with AI	0.793
Future Use Intention	0.970
Recommendation for Industry	1.029
Professional Intention	0.820
Sum of Item Variances	11.588
Variance of Total Score	61.782
Cronbach's Alpha (12 items)	0.886
PU (3 items)	0.696
PEOU (4 items)	0.696
ATT (2 items)	0.756
INT (3 items)	0.910

Table 3: Perceptions of the Generative AI Assistant (N=35)

Survey Item	Mean	SD	Agree (%)
The assistant improved task efficiency.	4.0	0.9	71.4
The information provided was of good quality.	3.9	1.0	68.6
The tool would be useful in hospitality contexts.	4.2	0.8	77.1
The assistant was easy to use.	4.1	0.8	74.3
The task required little effort.	3.7	1.1	62.9
Tasks were completed without technical help.	3.9	0.9	68.6
The experience was pleasant.	3.8	0.9	65.7
Using GenAI in hospitality is a good idea.	4.3	0.7	80.0
Comfort with AI-driven guest services.	4.0	0.8	71.4
Intention to use in future travel planning.	4.1	0.9	74.3
Recommendation for industry adoption.	4.0	0.8	71.4
Intention to use in professional practice.	3.9	1.0	68.6

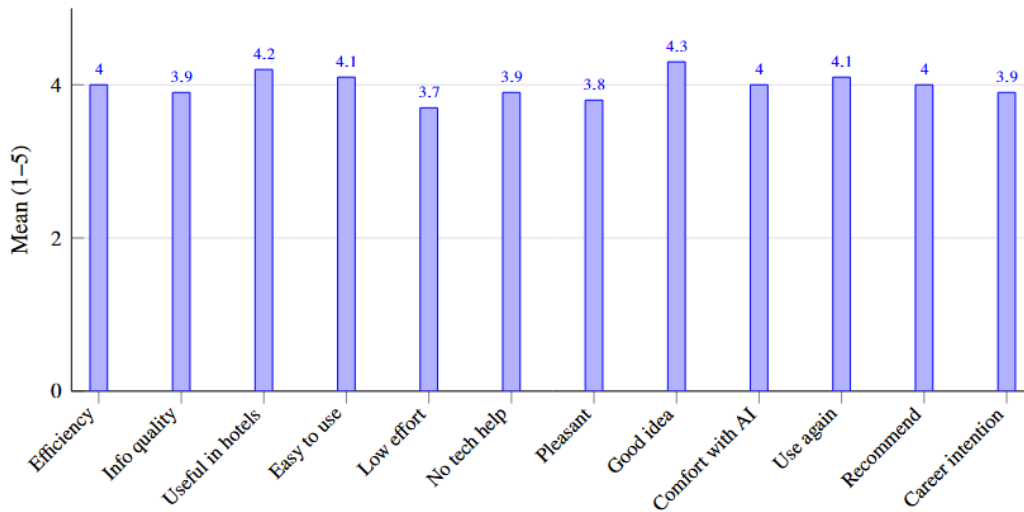


Figure 2: Mean ratings for perceptions of the generative AI travel assistant (1 = strongly disagree, 5 = strongly agree).

3.5. Qualitative Findings

Open-ended responses reinforced these results. Three positive themes emerged: (i) efficiency, (ii) ease of use, and (iii) information support. Participants described the assistant as quick, flexible, and helpful for both travel and academic purposes. Areas for improvement focused on accuracy, personalization, and human–AI balance. Many emphasized that AI should complement human expertise rather than replace it. Table 4 summarizes the themes.

Table 4: Themes from Open-Ended Responses (N=35)

Theme	Illustrative Responses	Interpretation
Efficiency	“Quick solutions,” “Saves time and money”	Emphasis on speed and accessibility.
Usability	“Easy to use,” “Helpful in many tasks”	Appreciation of intuitive interaction.
Information Support	“Helpful in drafting text,” “Clear explanations”	Recognition of broader academic support.
Accuracy	“Not always perfect,” “More detail needed”	Concern about reliability of outputs.
Personalization	“Adjust recommendations in real time,” “Add more languages”	Demand for adaptive and multilingual features.
Human–AI Balance	“AI cannot replace the human brain”	Preference for supportive rather than substitutive role.

4. Discussion

The findings indicate that generative AI travel assistants are viewed as useful and easy to use, yet concerns remain about accuracy and reliability. These perceptions reflect the Technology Acceptance Model, where usefulness and ease of use are central predictors of adoption [1]. Similar results have been reported in tourism studies showing that chatbots improve efficiency but fall short in personalization and contextual accuracy [10, 12]. Lower ratings for accuracy suggest that adoption depends on trust as well as performance. Earlier reviews note that generative AI can produce fluent but unreliable responses [11]. Such errors weaken user confidence, a trend consistent with trust in automation theory. Trust is not static; it increases after successful use but can decline rapidly after mistakes [5, 6]. The qualitative responses in this study confirmed that students accepted AI as a supportive tool but did not view it as a replacement for human expertise. This aligns with findings from hospitality workforce studies that warn of skepticism and resistance without adequate safeguards [15]. Students also emphasized the need for personalization and transparency. Prior research shows that adaptive recommendations, multilingual features, and visible source attribution are important for building user confidence [14]. These requirements are especially relevant in hospitality, where guest expectations extend beyond efficiency to trust and comfort. Educational implications are evident. Previous studies in higher education demonstrate that effort expectancy, performance expectancy, and ethical concerns shape students’ willingness to adopt AI tools [16–18]. The present results are consistent with these observations, showing that while students recognize the value of generative AI, they remain cautious about dependence. Integrating AI literacy into hospitality curricula can help prepare students to use such tools critically and responsibly. For the industry, the assistant is best positioned as a complement to human service. It can accelerate early-stage planning and guest engagement, but cannot replace human judgment in complex or emotional contexts. Investments in accuracy, personalization, and error management will be necessary for broader adoption. The study is limited by its small sample size and focus on students from one institution. Only the generative AI tool, restricting cross-platform comparison, was evaluated. Broader studies across regions, cultures, and user groups are needed. Longitudinal research would further clarify how trust and adoption evolve with continued exposure.

5. Conclusions

The study assessed the perceptions of hospitality students and early-career professionals toward a generative AI travel assistant. Survey results showed positive evaluations for efficiency, ease of use, and usefulness in hospitality settings. Accuracy and reliability were rated lower, indicating cautious acceptance. Open responses emphasized speed and convenience as strengths, while personalization and contextual sensitivity were noted as limitations. The findings suggest that generative AI is best applied as a supportive tool in early-stage travel planning. Its adoption is shaped by perceived usefulness and ease of use but moderated by trust and concerns about risk. Students expressed willingness to use such tools for idea generation and comparisons but continued to rely on human input for final decisions. For education, the results point to the importance of integrating AI literacy into hospitality curricula. Training should focus on evaluation of AI outputs, risk awareness, and ethical application. For industry, improvements in transparency, adaptive personalization, and multilingual support will be necessary to strengthen user confidence.

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Declaration of Competing Interests

The author declares no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

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Ethical Approval

The study was conducted in accordance with institutional guidelines for ethical research. Participation was voluntary, informed consent was obtained from all respondents, and data were collected anonymously for academic purposes only.

Data Availability

The datasets generated and analyzed during this study are available from the corresponding author on reasonable request.

Author Contributions

Sharmi Banerjee: Conceptualization, Methodology, Data Collection, Data Analysis, Manuscript Writing, Manuscript Revision.

Use of Generative AI

Generative AI tools were used only for language refinement and formatting support during manuscript preparation. All data analysis, interpretation, and conclusions were carried out directly by the authors, who take full responsibility for the originality and integrity of the manuscript.

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