

Evaluating AI Platforms for Tourism English: Insights into Sociolinguistic and Pragmatic Competence Development

I Nengah Laba^{1*}, Putu Chrisma Dewi¹, I Gede Astawa²

¹Universitas Dhyana Pura, Indonesia, ²Akademi Pariwisata Denpasar, Indonesia

Abstract The multifunctionality of English in tourism has been a subject of considerable sociolinguistic and pragmatic research, highlighting its role in both communication and the creation of destination. This study examined the effectiveness of AI-driven language learning platforms in fostering linguistic, sociolinguistic, and pragmatic competence in Tourism English. The sample population of this study consisted of nine experts who evaluated three language learning platforms: Duolingo, ELSA Speak, and ChatGPT. Using a qualitative content analysis approach, the study evaluated these platforms' strengths and limitations in facilitating realworld tourism communication skills. The analysis proceeded through a systematic and multi-stage process encompassing data extraction, content analysis, expert evaluation, and thematic analysis, culminating in a comparative analysis and contextualization of findings. The findings showed that AI-driven tools have proven effective in reinforcing linguistic competence, such as grammar and vocabulary retention, yet they fail to fully address the complexities of sociolinguistic and pragmatic competence required for professional tourism communication.

Keywords: AI, Tourism English, Sociolinguistic competence, Pragmatic competence, Language learning

*Corresponding Author: I Nengah Laba

laba@undhirabali.ac.id

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1. Introduction

he tourism industry plays a crucial role in global economic development, with English serving as the primary language for international communication (UNWTO, 2022). Effective communication in tourism settings requires not only linguistic proficiency but also sociolinguistic and pragmatic competence to navigate diverse cultural interactions (Blyth & Sykes, 2020; Byram, 1997; Eckert, 2022). The multifunctionality of English in tourism has been a subject of considerable sociolinguistic and pragmatic research, highlighting its role in both communication and the creation of destination identities in the global world (Crystal, 2003; Fox, 2008; González-Lloret; 2019; Taguchi, 2019). Traditional language learning approaches often struggle to replicate authentic tourism-specific communication scenarios. This gap has led to the increasing

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use of AI-powered tools such as Duolingo (Von Ahn, 2009), Elsa Speak (Van, 2015), and ChatGPT (OpenAI, 2023), which offer personalized learning experiences and adaptive feedback mechanisms (Andriivna et al., 2020; Blyth & Sykes, 2020; Godwin-Jones, 2019; Huang et al., 2021). AI-driven platforms often lack adaptive features that highlight a gap between theoretical language acquisition principles and the practical application of AI in tourism English learning. However, chatbots have many advantages for language learners, such as improving student autonomy and allaying learner anxiety, as well as their being convenient since users can use them regardless of the time and location (Shin et al., 2021; Wang, 2022; Zeng & Yang, 2024).

By examining these crucial issues through evaluating AI platforms for tourism English, this research seeks to provide practical and actionable recommendations for educators, curriculum developers, and AI developers, effectively bridging the gap between technological advancements and the nuanced demands of contemporary tourism language learning. This study aims to provide insights into the effectiveness of these AI-driven platforms in fostering sociolinguistic and pragmatic competence development for tourism professionals and identifying both strengths and limitations for future improvements.

2. Theoretical Framework

2.1. Tourism English

Tourism English is not only about mastering linguistic elements such as vocabulary and grammar. It requires learners to interact with speakers from diverse linguistic and cultural backgrounds, making sociolinguistic and pragmatic skills critical for successful communication. It also requires learners to navigate and effectively engage with speakers from diverse linguistic and cultural backgrounds. This dual demand places a significant emphasis on sociolinguistic and pragmatic skills, which are essential for successful communication within the tourism sector.

The tourism industry demands that professionals not only possess linguistic fluency but also develop a deep understanding of how language varies across different social and cultural contexts. The ability to communicate effectively in a multicultural setting requires skills in understanding local customs and etiquette and recognizing the subtleties of language use in different sociocultural contexts. Such competence goes beyond grammatical accuracy and requires awareness of power dynamics, politeness strategies, and the ability to modulate one's communication style according to the situation and interlocutors (Brown & Levinson, 1987). While AI-driven tools like Duolingo may provide exposure to some vocabulary relevant to tourism contexts, they often fail to simulate the real-world social interactions and cultural nuances that tourism professionals regularly encounter. Research has shown that while AI tools have made significant strides in enhancing linguistic competence, they frequently fall short in addressing the complexities of real-world tourism communication, especially with respect to sociolinguistic and pragmatic competence (Chapelle & Sauro, 2017).

Sociolinguistic competence refers to the ability to choose the appropriate language form based on social factors like status, roles, and cultural norms, while pragmatic competence involves the use of language to achieve communication goals in contextually appropriate ways. In the dynamic and intercultural environment of tourism, the interplay between these two competencies is crucial, as it influences how well tourism professionals can adapt their communication style to various social situations (Canale & Swain, 1980; Taguchi, 2015). Danial et al. (2024) highlight the limitations of AI-driven language learning tools in fostering the cultural adaptability and role-based negotiation skills necessary for success in the tourism industry. For tourism professionals, engaging with diverse cultural groups means not only understanding language structure but also mastering the social and cultural norms that shape communication.

Pragmatic competence is particularly significant in tourism, where effective communication is essential not only for conveying information but also for fostering positive relationships with tourists and colleagues. Pragmatic competence entails understanding the appropriate use of language in specific situations, such as how to make requests, offer assistance, or resolve misunderstandings (Taguchi, 2015). Tourism professionals must be capable of adapting their language use to a range of contexts,

including those that involve turn-taking, negotiation, conflict resolution, and rapport-building (Brown & Levinson, 1987; Richards, 2015). AI-driven tools like Duolingo, ELSA Speak, and ChatGPT, while effective in reinforcing basic linguistic elements such as vocabulary and grammar, often fail to incorporate these complex aspects of communication. These platforms tend to focus on individual, isolated language tasks, often neglecting the interactive and context-dependent nature of communication in tourism (Sabaruddin et al., 2023).

2.2. AI-Driven Tools

Duolingo, ELSA Speak, and ChatGPT have emerged as significant AI-driven tools in language acquisition, providing accessible and engaging ways for learners to build vocabulary and grammar. Duolingo uses a gamified structure to encourage user engagement and reinforce language patterns through repetitive exercises. While these approaches have proven effective in supporting vocabulary acquisition and grammatical understanding, they often rely on decontextualized drills that may lack the contextual richness and situational appropriateness required in real-world interactions, particularly in specialized fields like tourism (Danial et al., 2024; Kristiawan et al., 2024; Sabaruddin et al., 2023). The simplification of language learning tasks for the sake of engagement and ease of use often leads to a significant gap between the theoretical application of language rules and the practical usage needed in complex, dynamic environments like tourism.

Several studies have highlighted the promise of AI-based platforms in supporting language learning. Duolingo has been praised for its effectiveness in reinforcing vocabulary and grammar, providing learners with instant feedback and encouraging spaced repetition (Loewen et al., 2019). This platform has leveraged AI to tailor learning experiences based on individual progress and performance, ensuring that the learner's journey is both personalized and efficient. This tool excels at the acquisition of linguistic competence, but they are often criticized for neglecting the development of sociolinguistic and pragmatic skills, which are essential in the tourism industry (Godwin-Jones, 2019; Loewen et al., 2019).

ELSA Speak, a platform designed to improve pronunciation and fluency, is an AI-driven tool that has shown promise in enhancing specific aspects of language proficiency. By using speech recognition technology, ELSA Speak provides learners with immediate feedback on their pronunciation, helping to refine their fluency and reduce accent barriers (Chiu et al., 2021). While this is an essential feature for learners aiming to speak more confidently and clearly, the platform still falls short in addressing the broader sociocultural contexts of language use in tourism. As Byram (1997) argues, sociolinguistic competence, which includes understanding and adapting to cultural nuances, is critical in communication, particularly in intercultural exchanges common in tourism settings.

Despite the advances of these platforms, there remains a gap in their ability to simulate real-world, contextualized interactions that reflect the unpredictability and diversity of the tourism environment. Studies show that the lack of emphasis on contextual learning in these AI-driven tools limits their effectiveness in preparing learners for the complex social dynamics that define tourism encounters (Sabaruddin et al., 2023). ChatGPT, which leverages large language models (LLMs), offers the ability to generate diverse conversational scenarios, they still rely heavily on pre-programmed patterns and may not fully capture the nuances of spontaneous conversation that is often encountered in tourism settings (Godwin-Jones, 2019).

Traditional language instruction faces limitations in recreating the authentic communication scenarios encountered in tourism settings. The lack of real-world context in many language lessons means that learners may struggle to communicate effectively in culturally diverse and unpredictable tourism environments. This limitation points to the necessity of exploring advanced educational technologies, especially AI-based solutions, to bridge this gap. AI-powered tools have the potential to address these challenges by offering adaptive learning pathways, personalized feedback, and the capacity to simulate real-life conversations that mirror the dynamic interactions typical in the tourism sector (Godwin-Jones, 2019; Laba, 2024).

While AI platforms have shown promise in developing linguistic competence, their limitations in fostering sociolinguistic and pragmatic competence highlight the need for a more holistic approach to AI-driven tourism English learning. Canale and Swain (1980) argue that a comprehensive model of communicative competence incorporates linguistic, sociolinguistic, and pragmatic competence, with each element playing a vital role in effective communication in the tourism sector.

2.3. Sociolinguistic and Pragmatic Competence

The field of technology and language learning, also known as CALL (computer-assisted language learning), is now a robust area of study informed by research and practice in the fields of language education (Wu & Chen, 2024). Sociolinguistic and pragmatic competence are two of the essential components of communicative competence, and most of the technologies today could be used to aid the development of these competencies (González-Lloret, 2019; Rusmiyanto, 2023; Taguchi, 2019).

Linguistics provides a robust theoretical framework for analyzing how AI tools can play their roles and effectively support language learning by examining sociolinguistic contexts and pragmatic competence (Amin, 2023; Ellis, 2015; Laba et al., 2024). This framework allows researchers to investigate the alignment of AI tools with established principles of second language acquisition and communicative competence. Woo and Choi (2021) argued linguistics plays a crucial role in understanding how language is learned, used, and taught, especially in professional domains like tourism. Eckert (2022) states that language is not a monolithic entity but rather a dynamic system that varies across social contexts. This is crucial because tourism English will exhibit variations depending on the target audience, purpose of interaction, and social setting.

Sociolinguistic and pragmatic competence, the ability to use language effectively in sociopragmatic-tourism contexts to achieve communicative goals, is frequently underrepresented in existing AI tools. Taguchi (2015) argues that developing pragmatic skills requires context-specific tasks and authentic materials that simulate real-world interactions. Current AI tools often struggle to replicate the complexities of professional tourism scenarios, such as handling customer complaints diplomatically or navigating cultural misunderstandings (Richards, 2015). The integration of AI into language learning presents both challenges and opportunities, and it must be addressed to ensure culturally appropriate and equitable learning experiences to meet sociolinguistic and pragmatic competence (Daniel et al., 2024; Luckin et al., 2016). Chen et al. (2020) suggest that the integration of augmented reality (AR) with AI tools holds promise for creating more immersive and realistic learning environments that can better simulate real-world tourism encounters. This study seeks to bridge the gap and evaluate the extent to which current AI platforms align with sociolinguistic and pragmatic competence frameworks and the practical language needs of tourism professionals.

3. Methodology

3.1. Participants

The sample population of this study consisted of nine experts who evaluated three language learning platforms: Duolingo, ELSA Speak, and ChatGPT. These experts were selected based on their extensive experience in AI-assisted language learning and tourism communication, ensuring a diverse range of perspectives. Among them, six were linguistics experts responsible for data collection. Four of these experts were lecturers at Udayana University, while the remaining two were affiliated with Denpasar Tourism Academy. Additionally, three tourism English lecturers from Dhyana Pura University contributed their insights. All experts had more than 12 years of experience in linguistics and teaching, making them highly qualified to assess the effectiveness of these platforms.

3.2. Materials

The materials for this study were sourced from three AI-driven language learning platforms: Duolingo, ELSA Speak, and ChatGPT. Duolingo provided gamified vocabulary exercises and grammar drills activities designed to reinforce key language structures. These materials were analyzed for their effectiveness in developing vocabulary and grammar essential for tourism English.

ELSA Speak focused on pronunciation exercises, speech recognition feedback, and fluency drills aimed at improving learners' pronunciation accuracy and fluency, vital for clear communication in tourism contexts. These materials were assessed for their contribution to phonological competence, specifically in relation to real-world tourist interactions.

ChatGPT offered simulated conversations and role-playing scenarios that mimicked real-life tourism interactions, such as handling guest requests, complaints, and tourist professional interactions. These dynamic, open-ended conversations were examined for their ability to simulate and enhance sociolinguistic and pragmatic competence, incorporating cultural context. The materials from all three platforms were reviewed for their learning alignment with enhancing language proficiency in tourism English, focusing on the integration of linguistic, sociolinguistic, and pragmatic elements.

3.3. Procedure

3.3.1. Data Collection

The study used two primary methods, including content analysis and expert interviews, for data collection. Content analysis was used to explore the systematic functionalities, lesson structures, and feedback mechanisms of each AI platform (Krippendorff, 2018). This analysis assessed the contribution of each tool to the development of linguistic, sociolinguistic, and pragmatic competence relevant to the tourism industry. Expert interviews were conducted to explore how well the AI tools align with the best practices in language learning.

3.3.2. Data Analysis

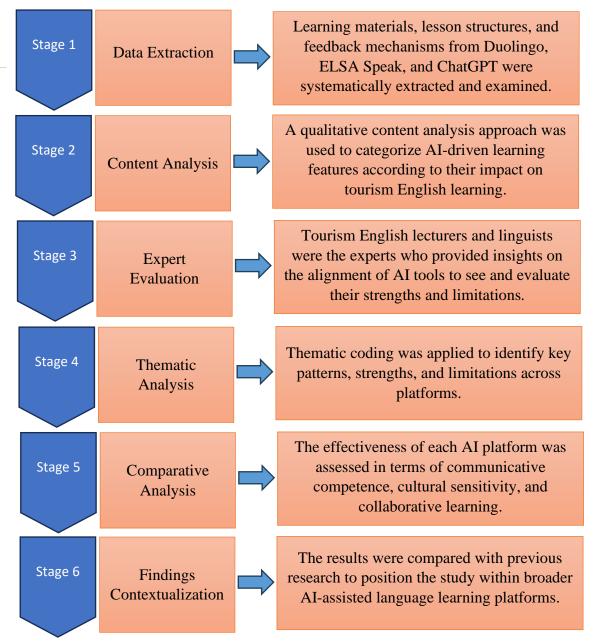
This study employed a comprehensive, multi-stage data analysis approach to evaluate the AI-driven learning platforms: Duolingo, ELSA Speak, and ChatGPT. The analysis began with the extraction and systematic examination of the learning materials and feedback mechanisms from each platform. These elements were categorized based on their linguistic components, such as vocabulary and pronunciation, as well as their contribution to communicative competence, which encompasses both sociolinguistic and pragmatic skills essential for the tourism industry.

By applying Canale and Swain's (1980) communicative competence framework, the effectiveness of these platforms was assessed using structured assessment tools. A qualitative content analysis methodology, as outlined by Krippendorff (2018), was utilized to assess the relevance and effectiveness of these linguistic features in supporting tourism English learning. The analysis focused on how well each platform facilitated the development of core linguistic skills and communication strategies, especially those necessary for engaging with culturally diverse and dynamic environments in the tourism sector. This approach provided a clear understanding of each platform's role in promoting sociolinguistic and pragmatic competencies for effective communication in tourism contexts.

In addition to content analysis, expert interviews were conducted to gain insights from Tourism English lecturers and linguists, who assessed how well the AI tools aligned with established best practices in language acquisition. These expert evaluations provided a critical perspective on the strengths and limitations of each platform. The interviews were subjected to thematic coding, allowing for the identification of recurring patterns and issues across the platforms. Thematic analysis in this study highlighted the key strengths, limitations, and unique features of each platform. The insights generated from this coding process formed the basis for the comparative analysis, which examined the platforms' effectiveness in fostering communicative competence, sociolinguistic and pragmatic competence.

The findings were contextualized by comparing them with previous research on AI-assisted language learning platforms. This comparison helped position the current study within the broader discourse on AI-driven tools for language acquisition, providing a more nuanced understanding of their effectiveness in the tourism sector. The systematic data analysis procedure, as illustrated in Figure 1, outlines the stages of this comprehensive evaluation process.

Figure 1Stages of the Systematic Data Analysis Procedure



4. Results

This study, employing a qualitative research approach, seeks to evaluate the strengths and limitations of AI-based language learning platforms, Duolingo (Figure 2), ELSA Speak (Figure 3), and ChatGPT (Figure 4), in fostering sociolinguistic and pragmatic competence in the context of tourism English. Utilizing content analysis of data extracted from these platforms, the findings provide a comprehensive evaluation of the platforms' strengths and limitations, offering valuable perspectives on tourism English learning.

The findings are based on an evaluation of these platforms' effectiveness, including accuracy and feedback mechanisms, adaptability to tourism contexts, inclusion of cultural elements, and their overall impact on communicative competence. Additionally, expert evaluations from tourism English lecturers and linguists provided qualitative insights into their pedagogical soundness and limitations.

Figure 2Data Extracted from Duolinguo (Von Ahn, 2009)



Figure 3

Data Extracted from ELSA Speak Providing American, British and Australian Accent (Van, 2015)

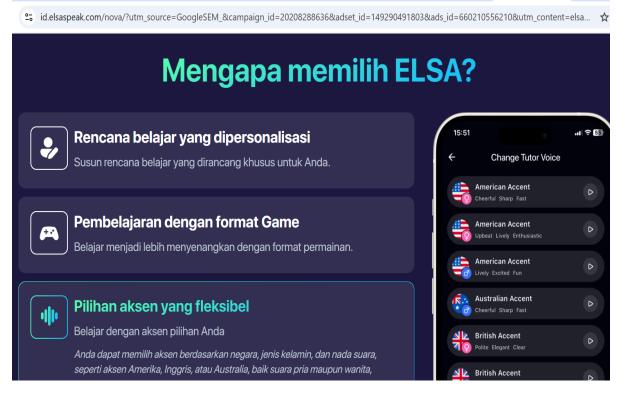


Figure 4
Data Extracted from ChatGPT (OpenAI, 2023)



4.1. Content Analysis

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Table 1 shows the evaluation of three AI-driven language learning platforms—Duolingo, ELSA Speak, and ChatGPT—in fostering sociolinguistic and pragmatic competence for tourism professionals. To systematically compare the performance of Duolingo, ELSA Speak, and ChatGPT, an analytical framework was adopted to evaluate their effectiveness based on their interaction methods, strengths, and limitations, as summarized in Table 1. The comparison is conducted by analyzing data derived from the AI-driven learning platforms.

 Table 1

 The Comparison of Duolinguo, Elsa Speak, and ChatGPT in Tourism English Context

Platform	Interaction Method	Strengths	Limitations
Duolingo	AI-based exercises, gamified learning	Enhances vocabulary retention through gamification; engaging for beginners	Lacks two-way interaction and spontaneous communication practice needed for tourism professionals
ELSA Speak	Speech recognition & pronunciation scoring	Provides precise phonetic feedback in different accents to boost confidence in pronunciation	Limited contextual and conversational practice in real-world tourism context
ChatGPT	Conversational practice & scenario-based learning	Highly flexible; allows for adaptive, tourism-specific dialogues	Lacks specific pronunciation feedback and deep cultural adaptability

The comparison of these platforms is based on content analysis of their learning features. A qualitative approach is employed to assess the degree to which these platforms enhance tourism professionals' ability to engage in contextually appropriate communication. The evaluation further considers expert

analyses. Drawing from the framework of communicative competence, the following observations are described and explained:

4.1.1. Linguistic Competence

Linguistic competence refers to a learner's ability to use correct grammar, vocabulary, and sentence structure in communication. It is essential for providing clear directions, explaining travel policies, and engaging in professional dialogue with tourists. The sample data is a fill-in-the-blanks test and multiple-choice on industry-specific terminology:

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Question 1 in Figure 2 (Fill-in-the-Blank):

Tuliskan kata yang hilang (write the missing word)

To attract more visitors, the government continues to improve the _____ of its tourist attractions.

Correct answer: kualitas (quality)

Question 2 (Multiple Choice):

Which phrase is most appropriate when offering a discount?

- a) I will cut the price for you.
- b) We are offering a special promotion on this package.
- c) You can take it for cheaper.

Correct answer: b

It is evaluated that Duolingo is an effective tool for building linguistic competence, particularly in expanding learners' vocabulary through structured exercises. Linguistic competence, defined as the ability to utilize correct grammar, vocabulary, and sentence structure, is crucial for professional communication in the tourism industry. It enables individuals to provide clear directions, explain travel policies, and engage in formal dialogue with tourists. However, an analysis of a sample assessment comprising fill-in-the-blank questions and multiple-choice on industry-specific terminology reveals limitations in Duolingo's approach. In one fill-in-the-blank question, learners were required to complete the sentence: "To attract more visitors, the government continues to improve the __ attractions." The correct response, "kualitas" (quality), indicates that Duolingo effectively supports vocabulary acquisition in tourism-related contexts. Similarly, a multiple-choice question assessing appropriate phrasing when offering a discount presented the following options: (a) "I will cut the price for you.", (b) "We are offering a special promotion on this package.", and (c) "You can take it for cheaper." The correct answer, (b), demonstrates that learners can recognize and recall industryappropriate expressions. Despite these strengths, a key limitation of Duolingo is its lack of interactive dialogue and contextualized word usage. While learners may accurately identify and complete industryspecific phrases in structured exercises, they often struggle to produce spontaneous, contextually appropriate responses in real-world tourism scenarios. For instance, while they may correctly select the phrase "We are offering a special promotion on this package", they may find it challenging to use this phrase naturally in a professional conversation with tourists.

These findings suggest that although Duolingo provides a strong foundation in vocabulary acquisition, its limited focus on interactive and situational language practice diminishes its effectiveness in preparing learners for spontaneous communication. Given the dynamic nature of tourism interactions, language learning tools should integrate interactive and context-driven exercises to better equip learners with the ability to engage fluently and professionally in real-world tourism settings.

4.1.2. Phonological Competence

Phonological competence refers to a speaker's ability to pronounce words correctly, apply proper stress, and use natural intonation patterns. This is vital for ensuring clarity in giving directions, explaining policies, and handling guest inquiries. The sample is a speech recognition of pronunciation accuracy.

Task: The learner reads aloud:

Welcome to our hotel. Would you like assistance with your luggage?

Mispronounced Word: "luggage" pronounced as "lug-age" instead of 'lagida as in American and British accents.

ELSA Speak is a highly effective tool for developing phonological competence, which involves accurate pronunciation, proper stress, and natural intonation patterns—key elements for clear communication in the tourism industry. Through real-time phonetic analysis and pronunciation drills, learners can refine their articulation and reduce pronunciation errors, such as mispronouncing "luggage" as "lug-age" instead of the correct "lagidz" both in American and British accents. However, despite these strengths, ELSA Speak lacks context-driven conversation practice, which limits its effectiveness in developing fluency and natural rhythm in speech. While learners show noticeable improvement in pronouncing individual words, they often struggle with spontaneous speech, such as naturally welcoming guests or explaining policies in real-time interactions. The absence of contextualized conversations prevents learners from fully integrating pronunciation skills into real-world tourism scenarios, making it challenging to achieve fluid and engaging communication with travelers.

4.1.3. Sociolinguistic and Pragmatic Competence

Sociolinguistic and pragmatic competence refers to the ability to use language appropriately in social and cultural contexts. This includes politeness, tone, indirect speech, and cultural sensitivity, which are essential for handling guest requests, complaints, and professional interactions.

Task: I want to explain tourist destinations in Bali using proper tourism English ChatGPT-generated response:

Exploring Uluwatu Temple: A Stunning Cliffside Destination in Bali

Welcome to Uluwatu Temple, one of Bali's most breathtaking cultural and natural attractions. Perched on a dramatic cliff 70 meters above the Indian ocean, this ancient sea temple offers spectacular sunset views, rich cultural heritage, and an unforgettable Balinese experience (Figure 4).

ChatGPT is a valuable tool for enhancing sociolinguistic and pragmatic competence, which involves using language appropriately in different social and cultural contexts. When given the task, "I want to explain about a tourist destination in Bali using proper tourism English," ChatGPT generates well-structured and engaging descriptions, such as an introduction to Uluwatu Temple that highlights its breathtaking cliffside views, rich cultural heritage, and stunning sunsets. This helps learners develop fluency and improve their ability to present information in a professional tourism setting. However, despite its strengths in formulating appropriate responses, ChatGPT does not provide phonetic correction or feedback on cultural sensitivity, which are essential for real-world interactions. As a result, learners may struggle with intonation, indirect speech, and politeness strategies, which play a crucial role in handling guest requests, complaints, and professional conversations. While ChatGPT is highly effective for improving language structure and adaptability, additional training in pronunciation and cultural awareness is needed to refine overall communication skills in tourism.

4.2. Interview Analysis

Table 2 presents insights from expert interviews, offering a critical evaluation of three AI-driven language learning tools, Duolinguo, ELSA Speak, and ChatGPT, in developing sociolinguistic and pragmatic competence among tourism professionals. The findings highlight the unique strengths and limitations of each platform, revealing key gaps in AI-based language education for tourism English.

Table 2 *Responses from Experts*

Platform	Expert 1
Duolingo	Aplikasi ini membantu dalam pembelajaran kosa kata dasar, tetapi kurang dalam aspek komunikasi verbal yang penting untuk pekerja di sektor pariwisata. (The app helps with basic vocabulary learning but lacks in the verbal communication aspect, which is important for workers in the tourism sector)

Experts consistently recognize Duolingo's effectiveness in facilitating vocabulary acquisition through gamified learning. Duolingo's lack of interactive, impromptu communication practice, which is essential for tourism workers, is a significant drawback, according to the experts.

Experts acknowledge that ELSA Speak excels in pronunciation training, particularly in enhancing learner confidence and phonetic accuracy. Even with these advantages, there is an equally powerful disadvantage. ELSA Speak cannot encourage the use of language naturally or in context. The tourism industry does need to pay great attention to the phonological aspect of language, but tourism professionals also need to learn discourse management, culture-specific behavior and negotiation skills.

ChatGPT stands out as the most versatile tool for learning English for tourism among the three platforms. It is especially useful for developing pragmatic competence because, according to the experts, it can replicate authentic, context-driven conversations like those found in guided tours and hotel check-ins. In contrast to ELSA Speak and Duolingo, ChatGPT facilitates user-driven, open-ended

discussions, which promotes increased language flexibility and discourse management abilities—two essential components of successful tourism communication (Richards, 2015).

While the platform excels in facilitating contextualized communication, it does not offer real-time corrections or targeted pronunciation training, unlike ELSA Speak. This gap highlights the need for an integrated AI-based learning approach that combines ChatGPT's conversational adaptability with ELSA Speak's phonological accuracy. Additionally, while ChatGPT can model culturally appropriate responses, its AI-driven interactions are not always sensitive to nuanced cross-cultural communication strategies, which are critical in tourism discourse (Byram, 1997; Taguchi, 2019).

The expert evaluations provide valuable insights into the role of AI in tourism English learning. While current platforms contribute to different aspects of communicative competence, none fully meet the holistic linguistic needs of tourism professionals. Tourism professionals require training that goes beyond isolated vocabulary acquisition and pronunciation drills to encompass interactive, culturally adaptive communication (Byram, 1997; Taguchi, 2019). ChatGPT's interactive capabilities position it as a promising tool for pragmatic competence development, yet its lack of pronunciation feedback highlights the necessity of hybrid AI methodologies. This analysis reaffirms the need for continuous AI advancements that align with the sociolinguistic and pragmatic demands of tourism communication. By leveraging AI's evolving capabilities, educators and developers can create more immersive, authentic learning environments that equip tourism professionals with the comprehensive communicative skills necessary for cross-cultural engagement and professional success.

5. Discussion

This study, employing a qualitative content analysis of Duolingo, ELSA Speak, and ChatGPT, complemented by expert evaluations, contributes to the growing body of literature examining AI applications in specialized tourism English learning. The findings, summarized in Table 1 and further contextualized by expert insights in Table 2, reinforce prior research indicating that while AI platforms can effectively reinforce linguistic competence (Amin, 2023; Daniel et al., 2024; Ellis, 2015; Richards, 2025; Taguchi, 2019), they often fall short in replicating the nuanced, context-sensitive communication required in tourism settings. This discrepancy is particularly evident in the development of sociolinguistic and pragmatic competence, as defined by Canale and Swain's (1980) communicative competence model.

Systematic integration of findings derived from platform functionalities and their comparisons in the context of tourism English with expert evaluations reveals distinct patterns in the contribution of these tools to the development of communicative competence, which includes sociolinguistic and pragmatic competence. Duolingo demonstrates efficacy in enhancing lexical competence through gamified activities (Chapelle & Sauro, 2017; Loewen et al., 2019), as seen in its effective reinforcement of industry-specific vocabulary through exercises like fill-in-the-blank and multiple-choice questions ("kualitas" and discount phrasing). This study is consistent with prior research (Eckert, 2022; Richards, 2015) and confirms its limitations in fostering dynamic, situationally adaptive communication.

The observed difficulty in applying learned phrases spontaneously in real-world scenarios highlights Duolinguo's reliance on decontextualized, rote-based exercises. This aligns with Byram's (1997) assertion that sociolinguistic competence requires more than isolated vocabulary, necessitating turntaking, bargaining, and culturally relevant responses, especially within the context of tourism English. This limitation underscores the need for AI-assisted tools to transcend algorithmic language modeling and incorporate immersive, socially adaptive learning approaches (González-Lloret, 2019; Mahyudi, 2023).

The findings indicate that Duolinguo enhances linguistic competence but falls short of providing authentic, context-dependent learning experiences. Duolingo facilitates vocabulary retention through gamification, reinforcing word recognition and sentence formation (Loewen et al., 2019). It lacks interactive conversation practice and fails to foster spontaneous, context-driven language use, which is essential in tourism communication settings. Its decontextualized drills do not support the development

of pragmatic and sociolinguistic competence, limiting learners' ability to adapt their speech to different social and cultural contexts (Taguchi, 2015).

ELSA Speak's proficiency in pronunciation training, supported by AI-powered speech recognition (Chiu et al., 2021), is crucial for oral tourism interactions (Taguchi, 2019). Its ability to correct mispronunciations "lug-age" vs. "'lagid3" in relation to American and British accents demonstrates its effectiveness in refining phonetic accuracy. These findings are consistent with González-Lloret (2019) and Taguchi (2015), who highlight its limited contextual and conversational practice, constraining the development of natural discourse. ELSA Speak is effective in pronunciation refinement due to its automated speech recognition (ASR) technology, which provides instant feedback on phonetic accuracy, intonation, and articulation (Chiu et al., 2021). However, while it enhances phonological competence, it does not provide contextualized discourse management training, an essential skill for handling customer interactions, complaints, or negotiations in the tourism industry (Richards, 2015; Woo & Choi, 2021). Learners may develop technical pronunciation accuracy, but without exposure to situationally relevant dialogues, they may struggle to use the language effectively in culturally diverse tourism scenarios (Byram, 1997).

ChatGPT offers a versatile platform for developing pragmatic competence and simulating authentic, context-driven conversations (Luckin et al., 2016). Its ability to generate contextually appropriate responses, as seen in the Uluwatu Temple description (see Figure 4), demonstrates its potential. However, this study, alongside Brown and Levinson (1987) and Masruddin et al. (2023), reveals its lack of a dedicated pronunciation correction system and struggles with deep sociopragmatic context. This limits its capacity to address cultural variability and politeness norms, necessitating integration with pronunciation training and cultural awareness modules. ChatGPT, with its adaptive and scenario-based dialogue capabilities, offers more dynamic conversation practice than the other two platforms. However, it lacks structured pragmatic exercises, particularly in areas such as turn-taking, politeness strategies, and indirect speech, which are critical components of professional tourism interactions (Eckert, 2022; Taguchi, 2019). These findings align with previous research indicating that AI-driven methodologies excel in grammar, vocabulary, and pronunciation training but are limited in replicating real-world, context-sensitive communication (González-Lloret, 2019).

The findings reaffirm that while AI-driven platforms offer valuable language learning tools, they are insufficient in fully addressing the sociolinguistic and pragmatic complexities of professional tourism English. Inherent limitations persist, particularly in replicating paralinguistic cues and providing comprehensive feedback on content, structure, style, and coherence in written communication (Sharadgah & Sa'di, 2022). The study underscores the urgent need for AI-based language learning tools to move beyond decontextualized drills and integrate real-world communicative practices. AI-driven tourism English programs should incorporate task-based learning methodologies, role-playing exercises, and interactive simulations to enhance pragmatic and sociolinguistic competence (Ellis, 2015). Learners should be immersed in realistic scenarios such as handling customer complaints, providing travel recommendations, and engaging in small talk with international tourists (Byram, 1997). Additionally, AI developers should design context-aware feedback mechanisms that recognize regional speech variations, politeness norms, and cultural nuances in professional tourism interactions (Woo & Choi, 2021). To enhance the efficacy of AI-based tourism English learning, future developments should focus on integrating real-world adaptability, cultural awareness, and interactive discourse. This necessitates moving beyond decontextualized exercises and incorporating authentic, socially and culturally adaptive learning experiences.

By aligning with theoretical principles of communicative competence, AI-based language learning can more effectively support the nuanced language needs of tourism professionals and meet the evolving demands of the tourism industry. This study's contribution lies in its focused analysis of specific platform functionalities and their alignment with the communicative competence framework rather than a mere reiteration of previous findings. Based on the evidence presented, future research can investigate the potential of AI-integrated Virtual Reality (VR) and Augmented Reality (AR) environments to simulate authentic tourism interactions. Investigations should focus on the optimization of AI-driven VR and AR simulations for the development of sociolinguistic and pragmatic competence within the

domain of tourism English (Chen et al., 2020; Eckert, 2022; Taguchi, 2019; Qi & Chen, 2025). By providing a data-grounded analysis of AI platform functionalities and their alignment with communicative competence frameworks, this study offers a foundation for subsequent research and development in this field. Furthermore, rigorous empirical studies are warranted to refine AI algorithms, aiming to enhance sociocultural adaptability and pragmatic awareness in professional tourism communication. Such investigations would yield valuable insights into the sustainability and practical applicability of AI-assisted language learning interventions for tourism professionals.

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