

Technology-Assisted Informal Pragmatic Learning Among EFL Learners: Awareness, Speech Acts, And AI Tools

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Abstract

In today's digitally connected world, developing pragmatic competence is essential for English as a Foreign Language (EFL) learners. This competence encompasses both pragmalinguistic and sociopragmatic abilities, which are critical for using language appropriately across diverse contexts. This study explores how EFL learners informally develop pragmatic competence through digital and AI-assisted learning outside formal classroom settings. Using a qualitative descriptive approach, data were collected from 20 purposively selected Indonesian EFL learners through questionnaires and interviews. The study investigates three dimensions: learners' pragmatic awareness and practices, types of speech acts acquired informally, and the digital tools they employ. Findings reveal that learners show a notable awareness of context-sensitive and polite language use, which is often shaped by repeated exposure to digital content. Commonly acquired speech acts include polite requests, expressions of gratitude, and compliments—frequently encountered in online media. In contrast, more complex acts such as refusals and complaints were less frequently acquired, suggesting limited exposure and the need for deeper sociopragmatic engagement. Learners demonstrated proactive engagement with digital platforms, highlighting the mediating role of technology in informal pragmatic development. Tools such as

ChatGPT were valued for their dialogic simulation and personalized feedback, while Grammarly assisted with tone adjustment in written communication. Although digital tools enhance pragmatic awareness, their effectiveness in fostering sociocultural sensitivity appears limited without reflective guidance. This study underscores the need for pedagogical scaffolding to complement informal, AI-assisted learning environments.

Keywords: *pragmatic awareness; EFL learners; AI tools; informal learning; speech acts.*

INTRODUCTION

In an increasingly globalized and digitally connected world, English as a Foreign Language (EFL) learners are expected not only to master grammar and vocabulary but also to use language appropriately across various sociocultural contexts. This ability, known as pragmatic competence, encompasses both the knowledge of linguistic forms and the sociocultural conventions that guide their use (Thomas, 1983). It enables learners to perform and interpret speech acts—such as requests, refusals, and apologies—in ways that are socially appropriate and culturally attuned. Pragmatic competence is widely recognized as a core component of communicative competence and is essential for effective interaction in real-life situations. It includes both pragmalinguistic competence, referring to the selection and use of appropriate linguistic forms, and sociopragmatic competence, which involves aligning language use with social norms, relationships, and contextual cues.

Central to the development of pragmatic competence is pragmatic awareness, which refers to the learner's conscious recognition of how language functions in different contexts (Kasper, 1997). According to Schmidt's (1993) *Noticing Hypothesis*, pragmatic features must be consciously noticed in the input to be acquired. Many such features—such as indirectness, politeness, and implicature—are context-sensitive and often implicit in formal classroom instruction, particularly in EFL contexts. Consequently, awareness serves as the cognitive

foundation that enables learners to recognize and internalize pragmatic patterns across various communicative situations.

In the digital era, however, learners' opportunities to develop such awareness have expanded beyond the classroom through Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning (MALL) environments. These technology-mediated modes of learning provide abundant exposure to authentic discourse through online interactions, digital media, and, more recently, AI-assisted tools such as ChatGPT and Grammarly. Within these contexts, pragmatic noticing can occur informally as learners engage with language in authentic, multimodal, and interactive settings. Digital environments facilitate incidental learning of pragmalinguistic and sociopragmatic elements by simulating real-world communication and offering immediate feedback. Consequently, the integration of pragmatic theories with CALL and AI-assisted frameworks provides a coherent foundation for examining how learners informally develop pragmatic competence through digital engagement.

Speech acts—such as requests, refusals, apologies, and compliments—represent the primary means through which pragmatic knowledge manifests in communication (Austin, 1962; Searle, 1979). Understanding and appropriately using these speech acts require not only linguistic accuracy but also sensitivity to speaker intention, interpersonal dynamics, and cultural conventions.

Despite its significance, pragmatic competence often remains a persistent challenge for EFL learners. Research has shown that EFL learners frequently struggle with complex speech acts such as refusals and complaints, which demand nuanced sociopragmatic judgment (Taguchi, 2011). Furthermore, pragmatic failures—such as producing overly direct requests or mismanaging expressions of disagreement—can hinder communication and strain interpersonal rapport. These issues are often attributed to limited exposure to authentic language use and the marginalization of pragmatics within formal instruction. For instance, Muir and Xu

(2011) found that Chinese EFL learners exhibited both pragmalinguistic and sociopragmatic errors in writing, often due to first language interference and insufficient pragmatic awareness. Similarly, Siregar et al. (2024) reported that Indonesian learners experienced difficulties producing contextually appropriate speech acts, underscoring the need for more explicit attention to pragmatics in language pedagogy.

The integration of technology into language learning presents new opportunities to address these challenges. Tools such as mobile-assisted language learning (MALL) applications, digital video platforms, and AI-based tools can increase learners' exposure to diverse linguistic forms and communicative contexts. In particular, mobile apps (e.g., *Duolingo*, *Memrise*), video-sharing platforms (e.g., *YouTube*), and social media (e.g., *Instagram Reels*, *TikTok*) provide learners with frequent and authentic input embedded in naturally occurring discourse. These platforms often feature high-frequency speech acts—such as greetings, requests, or expressions of gratitude—in meaningful, multimodal, and context-rich interactions (Loewen et al., 2020; Taguchi, 2015).

Beyond exposure, emerging AI-powered applications such as *ChatGPT* and *Grammarly* introduce new opportunities for interactive and personalized engagement with pragmatic content. *ChatGPT*, for example, enables learners to simulate dialogues and receive feedback on tone, politeness, and appropriateness, thereby encouraging metapragmatic reflection. *Grammarly*, on the other hand, assists users in adjusting formality, modality, and tone in written communication, indirectly fostering awareness of sociopragmatic norms. These tools extend learners' opportunities for informal pragmatic learning by providing adaptive feedback and dialogic interaction beyond classroom boundaries.

Nevertheless, their pedagogical affordances are accompanied by important limitations that warrant critical attention. AI-driven platforms, while promoting awareness of linguistic appropriateness, may inadvertently reinforce Anglocentric

norms embedded in their training data, shaping learners' perceptions of politeness and formality according to Western discourse conventions. Moreover, the overreliance on automated feedback risks constraining learners' capacity for independent pragmatic judgment and contextual interpretation. Such limitations highlight the need for reflective and guided use of AI technologies to cultivate sociopragmatic sensitivity that transcends culturally homogeneous models of communication.

Recent research has reflected a growing interest in the pedagogical role of AI in language education. For instance, Qiao and Zhao (2023) examined how the *Duolingo* app supports speaking proficiency and learner autonomy among Chinese EFL students. Although their study demonstrated improvements in spoken fluency and self-regulated learning, it did not address the pragmatic appropriateness of language use. Similarly, Qi and Chen's (2025) review of 37 empirical studies on technology-enhanced L2 pragmatic instruction provided valuable insights into digital learning environments, including virtual worlds and computer-mediated communication. However, it did not include widely accessible AI platforms such as *ChatGPT* or *Grammarly*, which are increasingly used by learners for informal, self-directed practice. Butarbutar (2024) further investigated teachers' perspectives on AI in language learning, highlighting perceived benefits such as real-time feedback and personalized learning pathways, yet without empirical evidence of how learners actually engage with these tools to develop pragmatic competence.

Collectively, these studies underscore both the expanding role of AI in language learning and the persistent research gap regarding its contribution to informal pragmatic development. While prior research has emphasized vocabulary growth, grammatical accuracy, and general proficiency, few studies have examined how learners employ AI tools to navigate sociopragmatic norms, perform speech acts, and manage politeness strategies in authentic digital contexts.

This study seeks to address that gap by investigating how Indonesian EFL learners develop pragmatic awareness and competence through informal engagement with AI-based tools. Specifically, the study aims to: *First*, describe learners' pragmatic awareness and language use practices; *Second*, identify the types of speech acts most commonly acquired through informal learning; and explore the AI-based digital tools learners rely on outside the classroom.

By focusing on learner-driven, informal engagement with technology, this study contributes to a deeper understanding of how pragmatic competence may be fostered beyond the boundaries of formal instruction. According to Benson (2011), autonomous learning environments empower students to set goals, manage their own progress, and utilize available technologies to meet their learning needs. Ng (2012) further highlights the importance of digital literacy—the ability to locate, interpret, and apply online resources effectively—as a prerequisite for meaningful engagement with digital learning tools. In pragmatic learning, these capacities enable learners to navigate real-life input, evaluate its relevance, and adapt their language accordingly.

Additionally, theoretical models of technology-enhanced language learning—such as Computer-Assisted Language Learning (CALL), Mobile-Assisted Language Learning (MALL), and Computer-Mediated Communication for Language Learning (CMCL)—offer useful frameworks for understanding how technology mediates language acquisition (Chapelle, 2001; Kukulska-Hulme & Shield, 2008; Thorne, 2003). These models emphasize interaction, contextualization, and real-world application—all of which are essential for pragmatic learning. Importantly, such platforms enable repeated exposure and practice across varied social settings, fostering learners' pragmatic sensitivity over time.

RESEARCH METHODS

This study employed a qualitative case study design to explore how Indonesian EFL learners develop pragmatic competence informally through the use

of digital and AI-based tools. Given the research focus on real-life learner experiences in non-instructional contexts, a case study was deemed appropriate for its ability to examine complex phenomena within their natural settings (Yin, 2018). This approach facilitates a deeper understanding of how learners interpret pragmatic meaning and interact with informal digital resources outside the classroom.

As Gerring (2017) notes, case studies are particularly useful for addressing “how” and “why” questions, making them suitable for uncovering learners’ decision-making processes, strategies, and challenges in autonomous digital learning. Similarly, Ellet (2018) emphasizes the value of case studies in capturing context-sensitive behaviors and reflective practices. Through this design, the study investigates how pragmatic awareness emerges and develops learners’ pragmatic competence via engagement with AI tools, social media content, and mobile language applications, where language is experienced in informal and dynamic ways.

Participants and Context

The study involved twenty undergraduate students enrolled in the English Education program at a public university in Indonesia. None of the participants had received formal instruction in pragmatics, which made them particularly suitable for examining the influence of informal learning environments on pragmatic development. Participants were selected through purposive sampling to ensure they had consistent internet access, personal mobile devices, and prior experience engaging with digital platforms for language learning. The study was situated within an EFL context where English is not used for daily communication, yet digital technologies have become increasingly integrated into students’ academic and personal routines. This environment provides a rich setting for observing informal pragmatic learning facilitated by digital and AI-assisted tools.

While the sample was limited to twenty English Education undergraduates from a single Indonesian institution, the findings are not intended to be statistically generalizable. Instead, they offer **analytical generalization** (Yin, 2018) by illustrating patterns and tendencies that may resonate with similar EFL contexts characterized by restricted natural exposure to English but growing digital engagement. The study's insights are therefore transferable to comparable settings where learners rely on technology-mediated input to supplement limited communicative opportunities.

Data Collection Methods

Data were gathered using two complementary qualitative methods: open-ended questionnaires and semi-structured interviews, which allowed for data triangulation to enhance the credibility and depth of the findings. First, participants were invited to complete a written open-ended questionnaire, designed to elicit their perceptions, experiences, and engagement with technology-based tools in relation to learning English pragmatics. Questions focused on what kinds of tools they use, what aspects of pragmatics they feel they notice or learn (e.g., politeness, speech acts), and in what contexts they use these tools. Following the questionnaire, semi-structured interviews were conducted to probe deeper into the learners' reflections. The interviews provided space to explore learners' noticing processes, their interpretations of pragmatic input, and their strategies for understanding or reproducing pragmatic features in English. The combination of these two methods allowed for methodological triangulation, contributing to the trustworthiness of the data by capturing a multifaceted view of learners' informal pragmatic development (Flick, 2018; Billups, 2020).

Data Analysis Method

The study employed the interactive model of qualitative data analysis as proposed by Miles, Huberman, and Saldaña (2020), which comprises four interrelated and iterative components: data collection, data condensation, data

display, and conclusion drawing/verification. This model is particularly suitable for managing rich, textual data obtained from interviews and open-ended questionnaires. During the data condensation phase, the researcher conducted thematic coding aligned with the study's three main objectives. The initial coding framework was developed deductively based on the research questions and refined inductively as patterns emerged from the data. The following major thematic categories guided the analysis:

1. *Pragmatic Awareness and Learning Practices*

Codes under this category focused on learners' noticing of pragmatic features (e.g., politeness, appropriateness, implicature) and their metacognitive reflections on language use in different social contexts.

2. *Types of Pragmatic Competence*

This category captured the specific speech acts and pragmatic behaviors that learners reported acquiring or practicing informally, such as making requests, giving refusals, apologizing, expressing compliments, or using hedging strategies.

3. *Technology-Based Resources for Informal Pragmatic Learning*

Learners' engagement with digital tools was coded into *AI-based tools*.

Moreover, in the data display phase, the condensed codes were organized into matrices and visual maps to identify recurring themes, co-occurrences, and contrasts between participants. These visual representations facilitated cross-case comparison and enhanced interpretability. Conclusion drawing and verification were achieved through triangulation of data sources (questionnaires and interviews), continuous referential reading, and member checking, in which summary findings were shared with participants for feedback. This process ensured that interpretations remained grounded in participants' actual experiences and perspectives.

FINDINGS

Pragmatic Awareness and Practices among EFL Learners

The findings reveal a strong emergence of pragmatic awareness among the 20 EFL students involved in this study. All participants (100%) reported being aware of the importance of using polite and contextually appropriate language in social interactions—aligning with Kasper’s (1997) definition of pragmatic awareness as the ability to consciously understand language use within specific social and cultural settings. Digital exposure significantly shaped their awareness. All students agreed that technology, including AI tools and social media, helped them understand real-life English usage. A high percentage (92.5%) also credited digital media for enhancing their recognition of context-sensitive expressions. Furthermore, 95% of students reported imitating expressions from digital content, which supports the development of pragmatic intuition and naturalistic communication patterns.

While 82.5% learned polite language through informal platforms like vlogs or podcasts, 70% acknowledged making pragmatic mistakes, such as misjudging tone or overusing politeness formulas—demonstrating that learning is often accompanied by trial and error. Although many engaged in WhatsApp or YouTube practice (67.5%), only 52.5% felt confident applying this knowledge in real-life contexts, suggesting a gap between awareness and practical performance.

Table 1. Frequency Distribution of Student Responses Related to Pragmatic Awareness (*Based on Kasper, 1997*)

No	Statement	Agree / Strongly Agree	Neutral	Disagree
1	I am aware of the importance of using polite and contextually appropriate language in social interactions.	100%	–	–
2	Technology (e.g., digital media, AI tools) helps me understand how	100%	–	–

	English is used in real-life social contexts.			
3	I have learned context-sensitive pragmatic expressions through digital content (e.g., films, vlogs, social media).	92.5%	7.5%	–
4	I often imitate pragmatic expressions from digital sources to improve the naturalness of my communication.	95%	5%	–
5	I actively use digital platforms (e.g., WhatsApp, YouTube) to practice speaking and writing in contextually appropriate ways.	67.5%	32.5%	–
6	Informal digital activities outside the classroom help me understand the social context behind English expressions.	65%	35%	–
7	I have experienced communication errors related to pragmatic use (e.g., inappropriate tone or politeness).	70%	25%	5%
8	I have learned polite and socially appropriate expressions from informal digital resources like podcasts or chat forums.	82.5%	15%	2.5%
9	Exposure to digital content enhances my awareness of how English varies depending on social and cultural settings.	92.5%	7.5%	–
10	I feel confident using English pragmatically in real-life situations due to my exposure to digital materials.	52.5%	40%	7.5%

Pragmatic Competence Acquired Informally through Technology-Based Learning

This study involved 20 purposively sampled EFL learners who reported acquiring various pragmatic speech acts through informal exposure to technology-mediated communication. Table 2 presents the frequency with which specific pragmatic speech acts were reportedly acquired.

Table 2. Frequency of Pragmatic Speech Acts Acquired Informally

No.	Type of Speech Act	Participants (n = 20)	Percentage (%)
1	Requesting politely	18	90%
2	Refusing a request	13	65%
3	Giving compliments	17	85%
4	Expressing gratitude	18	90%
5	Making complaints	7	35%
6	Giving suggestions	10	50%
7	Opening and closing conversations	13	65%
8	Using polite/neutral expressions in forums	8	40%
9	Correcting or responding politely	11	55%

Participants reported high acquisition rates for socially and emotionally expressive speech acts such as polite requests (90%), expressions of gratitude (90%), and compliments (85%). Speech acts involving greater sociopragmatic complexity, including complaints (35%) and polite corrections (55%), were acquired less frequently.

AI-Based Tools in the Development of Pragmatic Awareness and Practices

This study involved 20 purposively selected EFL learners who reported using a variety of AI-based tools to support their pragmatic language development. The most commonly used applications included ChatGPT (used by 75% of participants), Duolingo (70%), and Grammarly (55%).

Participants identified ChatGPT as a primary tool for simulating dialogic scenarios that required context-sensitive responses, such as making requests, issuing polite refusals, or negotiating meaning. Learners utilized ChatGPT to generate alternative phrasings and receive real-time feedback on appropriateness. Grammarly, though typically used for grammatical correction, was employed by learners to assess tone, politeness, and formality in their writing. Users described inputting email drafts or academic texts to ensure their messages conveyed

appropriate levels of indirectness or deference. Duolingo, while primarily focused on vocabulary and grammar, was recognized for including basic pragmatic routines through gamified, interactive prompts. These included greetings, apologies, and polite expressions embedded in simple conversational contexts.

DISCUSSION

Pragmatic Awareness and Practices among EFL Learners

The findings indicate that pragmatic awareness is not only present but also developed through learners' engagement with digital content. This aligns with Thomas's (1983) view that successful communication relies on understanding how language is used in social settings. It also supports Bardovi-Harlig's (1999) argument that pragmatics is a key but often underrepresented area in second language acquisition.

Technology appears to serve as a valuable source of authentic pragmatic input. Participants noted that media such as films, vlogs, and social platforms helped them recognize how language varies according to context. This reflects similar conclusions by Taguchi (2018) and Hui et al. (2024), who emphasize the role of digital environments in providing access to naturalistic language use beyond the classroom. Several learners described imitating expressions they encountered online. For instance, one student mentioned, *"I often repeat phrases I hear in YouTube videos to sound more natural when texting or speaking."* Another said, *"When I watch English movies, I try to notice how they say things politely and use the same phrases when chatting with my friends."* These examples reflect Schmidt's (1993) Noticing Hypothesis, which suggests that conscious attention to language features is essential for acquisition.

However, learners also reported difficulties, particularly when deciding how to express politeness in unfamiliar situations. This is consistent with Ishihara and Cohen's (2010) view that informal exposure alone may not be sufficient for developing pragmatic fluency. One participant reflected, *"Even though I know how*

to be polite, sometimes I'm not sure if it's the right way to say things, especially with teachers or strangers," pointing to a gap between knowledge and practical use (Kasper & Rose, 2002).

In addition to passive observation, students also used digital platforms actively—for instance, to try out new expressions or adjust their tone depending on the situation. This type of experimentation supports the development of both pragmalinguistic competence (e.g., using modals or hedging) and sociopragmatic competence (e.g., understanding levels of directness), as discussed by Bardovi-Harlig and Dörnyei (1998). Nonetheless, differences in self-reported confidence suggest that exposure does not always lead to consistent outcomes across learners.

Overall, while digital resources contribute meaningfully to learners' pragmatic awareness, the data suggest that explicit instruction still plays an important role. Structured opportunities for guided reflection, feedback, and supported practice may help bridge the gap between recognizing pragmatic norms and applying them effectively in real-world interactions.

Pragmatic Competence Acquired Informally through Technology-Based Learning

The findings reveal that EFL learners tend to acquire certain pragmatic speech acts more readily through informal, technology-mediated exposure. Speech acts related to interpersonal warmth and social politeness—such as making polite requests (90%), expressing gratitude (90%), and giving compliments (85%)—emerged as the most frequently acquired. These acts commonly appear in casual digital environments, including YouTube videos, social media clips, and chatbot interactions, where multimodal input (visual and auditory cues) enhances comprehension and contextual interpretation. This tendency supports Schmidt's (1993) *Noticing Hypothesis*, which posits that pragmatic acquisition is facilitated when learners consciously attend to language forms embedded in authentic discourse.

Learner reflections gathered through interviews further illustrate this process. One participant remarked, “When I hear ‘Would you mind...’ many times on YouTube, I start using it naturally. I know it sounds more polite than just ‘Can you...’” (Participant 7). Repeated exposure in affectively engaging or relatable digital contexts appears to foster both recognition and internalization. Bardovi-Harlig (2013) similarly underscores the importance of affective involvement and frequency of input in developing pragmatic competence. Within this study, learners’ informal engagement with digital content seemed to promote pragmalinguistic awareness, particularly for speech acts that are socially salient, emotionally neutral, and frequently modeled in online communication.

In contrast, speech acts requiring deeper sociopragmatic awareness—such as giving suggestions (50%) and refusing requests (65%)—were acquired with less frequency. These acts demand sensitivity to contextual variables, including power distance, degree of imposition, and social appropriateness (Brown & Levinson, 1987). Learners often reported difficulties managing these subtleties. One participant explained, “I can make polite requests now, but refusing someone politely is still difficult. I don’t always know what’s appropriate.” (Participant 13). This finding supports Taguchi’s (2015) argument that face-threatening acts are less likely to be acquired without explicit instruction, as their successful realization depends on nuanced awareness of relational and cultural factors.

Similarly, lower acquisition rates were observed for complaints (35%) and polite interactions in online forums (40%), which are less frequently represented in informal digital input. These speech acts typically occur in more formal or confrontational communicative contexts. One participant noted, “I avoid complaining in English online because I’m not sure how to do it politely. It’s safer to stay silent.” (Participant 18). Such avoidance echoes Kasper and Rose’s (2002) observation that pragmatic input in informal environments is unevenly distributed,

and Thomas's (1983) assertion that pragmatic failure often arises from insufficient sociopragmatic understanding despite adequate grammatical knowledge.

While these patterns provide valuable insights, they are primarily derived from self-reported questionnaires and interviews, which reflect learners' perceptions rather than direct observations of pragmatic performance. Although introspective data are useful for capturing awareness and self-evaluation, they may not fully represent actual pragmatic behavior. Future research could enhance empirical robustness through discourse-based data such as chat transcripts, writing samples, or AI interaction logs. These data sources would enable closer examination of how learners operationalize politeness strategies, indirectness, or mitigation in real communicative acts, offering a more objective measure of pragmatic competence.

In summary, informal, technology-assisted learning environments facilitate selective pragmatic development. Learners tend to internalize speech acts that are emotionally safe, frequently modeled, and pragmalinguistically salient, while sociopragmatically complex acts remain underdeveloped. This imbalance suggests that informal exposure alone cannot ensure comprehensive pragmatic competence. As Taguchi (2011) emphasizes, pedagogical intervention—through guided role-plays, metapragmatic reflection, or the analysis of real-life communicative incidents—can help learners attend to underrepresented pragmatic forms. Combining structured instruction with autonomous digital engagement, as proposed by Benson (2011), may therefore constitute a more balanced and effective framework for fostering pragmatic competence in EFL contexts.

Learner reflections from interviews further support this. One participant explained, *"When I hear 'Would you mind...' many times on YouTube, I start using it naturally. I know it sounds more polite than just 'Can you...'"* (Participant 7). Such recurring exposure, particularly in emotionally engaging or relatable contexts, seems to aid internalization. Bardovi-Harlig (2013) also emphasizes the role of

affective involvement and frequency of input in fostering pragmatic development. Learners' interaction with digital content thus appears to promote pragmalinguistic awareness, especially for expressions that are socially salient and non-confrontational.

In contrast, speech acts that require more sociopragmatic awareness—such as giving suggestions (50%) and refusing requests (65%)—were acquired with less frequency. These acts demand sensitivity to variables such as power distance, degree of imposition, and social appropriateness (Brown & Levinson, 1987). Learners noted difficulties with these expressions. For instance, one student shared, *"I can make polite requests now, but refusing someone politely is still difficult. I don't always know what's appropriate."* (Participant 13). This supports Taguchi's (2015) assertion that face-threatening acts are less likely to be acquired without explicit guidance, as their successful performance depends on a nuanced understanding of context and interpersonal dynamics.

Lower acquisition rates were also found for complaints (35%) and polite interaction in forums (40%), which are less frequently represented in informal digital content. These acts are typically associated with more formal, confrontational, or culturally sensitive communication. One participant stated, *"I avoid complaining in English online because I'm not sure how to do it politely. It's safer to stay silent."* (Participant 18). This aligns with Kasper and Rose's (2002) observation that pragmatic input in informal learning contexts is uneven, and Thomas's (1983) point that pragmatic failure often stems from gaps in sociopragmatic understanding, even when grammatical competence is sufficient.

In summary, while informal digital exposure supports the acquisition of certain pragmatic features, the development is selective. Learners tend to internalize acts that are emotionally safe, frequently modeled, and pragmalinguistically salient. However, sociopragmatically complex speech acts remain underdeveloped. This suggests that informal learning alone is insufficient

for comprehensive pragmatic competence. Taguchi (2011) argues that pedagogical intervention—through methods such as guided role-plays, metapragmatic reflection, and analysis of real-life incidents—can help learners attend to underexposed forms. Integrating such structured activities with autonomous digital engagement, as proposed by Benson (2011), may offer a more balanced and effective approach to pragmatic development.

AI-Based Tools in the Development of Pragmatic Awareness and Practices

The findings highlight the role of AI-based tools as accessible, interactive resources supporting learners' pragmatic development in both spoken and written communication. Learners used tools such as ChatGPT, Grammarly, and Duolingo not only to improve linguistic accuracy but to enhance their awareness of social appropriateness in language use. This suggests a growing orientation toward metapragmatic reflection—a process essential for developing both pragmalinguistic and sociopragmatic competence, as outlined by Thomas (1983).

ChatGPT was identified as particularly effective in helping learners simulate realistic dialogic situations. The tool's interactive design enables learners to experiment with speech acts like polite requests, refusals, and hedging strategies, aligning with Godwin-Jones's (2021) observation that AI chatbots can foster contextualized, learner-driven interaction. One learner shared, *"I asked ChatGPT how to politely disagree in a group discussion, and it gave me several options based on different levels of formality. That helped me feel more confident."* (Participant 9). Such reflective usage reflects what Taguchi (2015) calls adaptive pragmatic learning, where learners modify their output based on evolving contextual sensitivity rather than static memorization of formulas.

Grammarly, although primarily a grammar-focused tool, supported learners in refining their tone and register, especially in written contexts like emails and academic assignments. Its corrective feedback often included suggestions for hedging or softening direct statements—e.g., replacing "You should..." with "It

might be a good idea to...". One participant stated, *"Grammarly suggested changing my sentence to sound less direct. It made my writing feel more polite and appropriate for academic emails."* (Participant 14). This reinforces Bardovi-Harlig's (2013) emphasis on the pragmatic importance of tone modulation, particularly in written modalities where interpersonal cues are less visible.

Duolingo, though more limited in scope, contributed by introducing learners to common pragmatic routines—greetings, thanks, apologies—through gamified interactions. These formulaic expressions form a foundational layer of pragmatic competence (Loewen, Isbell, & Sporn, 2020). One student commented, *"Even though it's a simple app, I started recognizing when to say 'Excuse me' or 'Sorry' more naturally after seeing it often in Duolingo."* (Participant 3). This reflects Schmidt's (1993) Noticing Hypothesis, where repeated exposure in meaningful contexts supports the internalization of pragmatic forms.

Participants also described self-initiated behaviors that demonstrate active, autonomous engagement. Some reported copying phrases from English movies or social media posts and inputting them into ChatGPT to explore alternatives and confirm appropriateness. Expressions like "Would you mind...", "I'm afraid I can't...", or "Thanks for reaching out..." were frequently explored for their contextual nuance. This suggests that learners were not only receiving input but recycling and experimenting with it—key indicators of deeper pragmatic development (Taguchi, 2011).

However, participants also noted the limitations of AI tools. As one student observed, *"Sometimes the suggestions sound okay, but I'm not sure if they fit in real-life conversations, like with older people or teachers."* (Participant 17). This aligns with the critique offered by Godwin-Jones (2018) and Wang & Vásquez (2012), who caution that AI-generated feedback, while helpful, may lack sensitivity to cultural and social subtleties. This highlights the risk of pragmatic fossilization or inappropriate transfer if AI tools are used without critical oversight.

Therefore, while AI-based tools enhance pragmatic awareness and provide immediate, risk-free feedback, they are not substitutes for guided instruction or authentic interaction. Instead, they should be viewed as complementary supports in a broader framework of pragmatic instruction. As Hockly (2018) argues, pedagogically informed integration of technology can support learner autonomy while ensuring alignment with communicative norms.

CONCLUSION

This study examined how EFL learners informally develop pragmatic competence through digital exposure, speech act acquisition, and engagement with AI-based tools. Learners demonstrated growing awareness of politeness, contextual appropriateness, and sociocultural nuance, primarily shaped by immersion in digital environments such as social media, video platforms, and online discussion forums. Nevertheless, several participants reported difficulty transferring this awareness into authentic communication, indicating a persistent gap between pragmatic knowledge and performance. Frequent exposure to affective and socially safe digital content facilitated the acquisition of common speech acts such as polite requests, expressions of gratitude, and compliments. Conversely, more complex acts—such as refusals, complaints, and suggestions—were less frequently encountered and often avoided due to their higher sociopragmatic demands and potential interpersonal risk.

AI tools, including ChatGPT, Grammarly, and Duolingo, enabled learners to experiment with linguistic tone, simulate speech acts, and reflect on pragmatic appropriateness. These tools fostered metapragmatic awareness by allowing learners to test and refine their language use. However, participants observed that AI feedback often lacked sociocultural sensitivity and sometimes offered pragmatically inappropriate suggestions, underscoring the need for human mediation in the learning process.

In light of these findings, informal AI-assisted learning can complement formal instruction by enriching learners' exposure to pragmatic input and offering low-risk spaces for experimentation. To ensure that such learning leads to genuine intercultural communicative competence, EFL curricula should integrate guided reflection, scaffolded practice, and teacher-led debriefing sessions that connect digital experiences to real-life communication. Teachers can serve as mediators who contextualize AI-generated input, model socioculturally appropriate responses, and facilitate reflective dialogue on pragmatic choices. Future research should further explore structured pedagogical models that combine informal digital learning with classroom-based pragmatic instruction to promote sustained, context-sensitive pragmatic development.

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