ATU PRESS

ISSUES IN LANGUAGE TEACHING (ILT)
VOL. 14, NO. 2, 361-402, December 2025
https://doi.org/10.22054/ilt.2026.89156.942 Document Type: Research Paper

Mobile-assisted ACMC: Effects on EFL Learners' Pragmatic Competence of Apologies and Requests

Karim Shabani*
Associate Professor of TEFL, Allameh Mohaddes Nouri University, Nour, Iran

Armin Zakariyanejad
MA in TEFL, Allameh Mohaddes Nouri University, Nour, Iran

Received: October 27, 2025**; Revised:** December 25, 2025**; Accepted:** December 29, 2025

Abstract

While a growing body of research testifies to the benefits of asynchronous computer-mediated communication (ACMC) for foreign language learning, its contributions within the field of interlanguage pragmatics (ILP) have remained underexplored. To address this gap, the present study aimed to unveil the impact of mobile-assisted (text vs. voice messaging) ACMC on Iranian English as a foreign language (EFL) learners' pragmatic learning of apologies and requests. Utilizing a mixed method, pretest-posttest design, data from sixty intermediate Iranian EFL learners studying English at Shokouh Language Institute in Babolsar, Mazandaran were obtained based on the results of an Oxford Placement Test (OPT). The participants were assigned into two experimental groups (text-messaging, N = 20; voice-messaging, N = 20) and one control group (N = 20). A Written Discourse Completion Test (WDCT) and semi-structured interviews were used for data collection. The pretest and posttest analysis revealed the experimental groups' significant gains through both text and voice messaging, with only a negligible difference between their effectiveness. The qualitative findings led to the detection of three significant themes a posteriori, namely flexibility and convenience, lower pressure, and promotion of collaborative learning and emotional engagement. The findings suggest that by incorporating multiple modes of interaction, mobile-assisted ACMC grants learners a variety of technological affordances to enrich their pragmatic learning.

Keywords: Apologies, MALL, Requests, Speech Act Production, Text Messaging, Voice Messaging

*Corresponding author's email: k.shabani@mohaddes.ac.ir

INTRODUCTION

Learning how to use language appropriately in a new tongue can be difficult in traditional classrooms. Limited time, packed rooms, and lack of real-world examples make it challenging to truly grasp subtle communication rules (Badjadi, 2016; Bardovi-Harlig & Dörnyei, 1998; Derakhshan & Arabmofrad, 2018). As a result, technology-driven lessons – using computers or phones – are becoming more popular because they offer learning opportunities whenever and wherever they are needed. Students gain many chances to practice a second language (L2) outside of school, particularly helpful when studying English abroad where real-world practice can be limited (Hsu, 2016; Li, 2023). Computer- and mobile-assisted learning create spaces for back-and-forth conversations regardless of location (Shadiev et al., 2020), broadening experience while letting students achieve more than they might in class (Sydorenko et al., 2018). Still, mobile learning stands out because it is easily carried around unlike traditional computer labs or desktops (Hsu & Liu, 2023). Mobile devices help teachers monitor student work, give updates on how they are doing - all while creating a relaxed setting for students to learn (Klímová, 2018).

In the research on interlanguage pragmatics (ILP), despite the omnipresence of technology among L2 learners, most computer-assisted language learning (CALL) and mobile-assisted language learning (MALL) studies have leaned toward linguistic features such as grammar, vocabulary, and pronunciation, or on general language abilities (Plonsky & Ziegler, 2016), and little attention has been given to ILP, which is essential for effective communication (González-Lloret, 2019; Zain & Bowles, 2021).

The ILP knowledge comprising the pragmalinguistic (what to say) and sociopragmatic (how to say) components helps L2 learners perform different speech acts (e.g., thanking, apologizing, requesting, congratulating, greeting, etc.) appropriately within the social norms of the target community (Eslami & Zohoor, 2023; Kasper & Rose, 2002). Among the different types of speech acts, apologies and requests are particularly crucial, as a poor command of

these might lead to pragmatic errors and communication breakdowns even among advanced L2 learners (Kasper, 1997; Shakki et al., 2023). Research has shown that pragmatic-focused instruction, either explicit or implicit, is necessary to remedy such errors (Cohen & Olshtain, 1993; Eslami & Eslami, 2008). However, despite abundant reports on the effectiveness of pragmatic instruction in the classroom setting (Cohen, 2012; Derakhshan & Eslami, 2015; Limberg, 2015; Takahashi, 2010; Tateyama, 2019), the research on technology-supported instruction of pragmatic speech acts has received scant attention (Morady Moghaddam, 2025; Taguchi & Roever, 2017).

Among mobile affordances, text and voice chats via synchronous computer-mediated communication (SCMC) or asynchronous computer-mediated communication (ACMC) can provide conducive spaces to support learners' apprenticeship in pragmatic learning (González-Lloret, 2024; Ishihara & Cohen, 2021; Taguchi & Roever, 2017; Yus, 2016). Whereas SCMC (e.g., text, audio and video messaging) helps establish spontaneous interaction and immediate feedback, ACMC (e.g., email, texting, recorded audio or audiovisual chat, forums, blogs, etc.) grants learners sufficient time to receive, reflect, and respond to messages, thereby reducing anxiety due to the lack of time pressure (Jepson, 2005; Nguyen, 2008). The offline nature of ACMC gives learners the chance to edit and polish their outputs (Ajabshir, 2019; Mohamadi Zenouzagh, 2022), resulting in texts that are carefully crafted, adapted to the audience, dense with meaning, coherent, and complete (Lapadat, 2002). Compared with SCMC, the number of studies on ACMC in the field of ILP is relatively small (Abe & Roever, 2020; Gonzales, 2013). While a few studies have explored the positive impact of text and voice chat in developing pragmatic competence (e.g., Ajabshir, 2019; Eslami et al., 2015; Mirzaei et al., 2016), no research has directly compared the differential effects of text versus voice messaging within ACMC.

Studies on social media use for language teaching have evolved beyond simple chat environments to examine learner engagement, emotional and social presence, and interactional dynamics in digital spaces (Kreijns et al., 2022). Therefore, the use of platforms like Telegram is not merely an

"outdated" topic; rather, it represents a continuing and contextually meaningful site for investigating pragmatic learning in real communication contexts. Prior studies also indicate that social media platforms like Facebook (Blattner & Fiori, 2011; Reinhardt & Ryu, 2013) and Reddit (Yeh & Swinehart, 2019) can support different modes of communication (verbal vs. visual and oral vs. written) both offline and online, serving as potential sites to enrich L2 learners' pragmatic competence and sociopragmatic awareness (Gonzales, 2017), but the research in this area is still in its infancy, pointing to a need for further investigation (Noor et al., 2025).

To address these gaps, the present study was designed to investigate how text-based and voice-based interaction via Telegram impacts Iranian English as a foreign language (EFL) learners' production of apologies and requests. The study also explored learners' perceptions of how these ACMC-based modalities affect their pragmatic competence. To meet these goals, the following research questions guided the study:

(1) Does text messaging have any statistically significant impact on Iranian EFL learners' production of apologies and requests?
(2) Does voice messaging have any statistically significant impact on Iranian EFL learners' production of apologies and requests?
(3) Are there any significant differences between the impacts of text and voice messaging on Iranian EFL learners' production of apologies and requests?
(4) What are the Iranian EFL learners' perceptions about voice and text messaging in learning the speech acts of apologies and requests?

LITERATURE REVIEW

Mobile-assisted Pragmatics Instruction: Theoretical Perspectives

The cognitive approaches to second language acquisition (SLA) on pragmatics highlight the role of noticing and explicit or implicit methods of

instruction (i.e., Form-on-Form (FFI) instruction) in drawing learners' attention to specific pragmatic features (Nguyen et al., 2012; Schmidt, 2001). The expansion of technology into the field of pragmatics led to the emergence of *cyberpragmatics*, a subdomain of ILP that studies pragmatic learning in internet-mediated interactions (Yus, 2016). This fledgling domain focuses on how technological tools (e.g., email, chat, social networks, simulations, virtual environments, games, etc.) contribute to the development of ILP (González-Lloret, 2024). To capture the multidimensional aspects of technology-enhanced pragmatic learning, social constructivism inspired by Vygotsky's (1978) sociocultural theory (SCT) seems to present a more comprehensive view. According to social constructivism, learning is the result of inter-individual cooperation and interaction in social context (Lantolf & Thorne, 2006). Learners bridge their Zone of Proximal Development through mediated social interaction with language experts (i.e., peers or more competent others) and scaffolding (Lantolf, 2000).

Mobile devices acting as tools for artifact mediation (Lantolf & Thorne, 2006) create a digital space for social interaction and collaboration via discussion forums and chat rooms (Hsu et al., 2013). Mobile applications enable learners to access authentic and pragmatically rich language input through multimedia content such as audio files, videos, and interactive exercises (Kukulska-Hulme, 2009).

Apart from linguistic and cognitive dimensions, social constructivism emphasizes the emotional aspects of L2 learning (Poehner & Swain, 2017). In this view, synchronous or asynchronous messaging through social media platforms such as *Telegram*, *WhatsApp*, and *WeChat* can provide emotional scaffolding. These platforms utilize paralinguistic elements like emoticons, stickers, Graphics Interchange Format (GIFs), and voice or text messaging features that compensate for the absence of direct face-to-face nonverbal feedback, thereby boosting emotional engagement (Estrada Molina, 2022), social presence and sense of belonging (Kreijns et al., 2022; Wang et al., 2022). By creating an ambient virtual co-presence, text and voice messaging

via CMC assists in establishing, maintaining, and reinforcing social relationships (Gonzales, 2013; Thurlow & Poff, 2013).

Empirical Studies on Technology-enhanced Pragmatics Instruction

Classroom-based studies on ILP consistently indicate that explicit instruction tends to be more effective than implicit methods in fostering learners' pragmatic competence (Derakhshan & Arabmofrad, 2018; Derakhshan & Shakki, 2020; Plonsky & Zhuang, 2019; Taguchi, 2009; Taguchi, 2015; Taguchi & Roever, 2017; Ziafar, 2020). Badjadi (2016) conducted a meta-analysis of 24 articles between 2003 and 2013 to summarize the studies addressing the effects of task design and outcome measures on the effectiveness of ILP instruction. The analysis revealed that meta-pragmatic discussion (explicit) brings about larger overall effects than input-based tasks (implicit). Furthermore, feedback instruction was found to be more effective than no-feedback instruction regardless of task type.

The fusion of technology and L2 pragmatics sparked a new wave of studies capturing the interface of technology and ILP development. Yousefi and Nassaji (2019) conducted a meta-analysis of 39 studies on pragmatics from 2006 to 2016 to see whether face-to-face and CMC modes of instruction would result in differential outcomes. Their results indicated that CMC exerted greater impacts than the traditional face-to-face instruction. A number of other studies have tried to display the effectiveness of CMC tools—such as email (Nguyen, 2018), telecollaboration (Akiyama & Cunningham, 2018), web-based self-access materials (Cohen & Ishihara (2005), virtual worlds (Sydorenko et al., 2018; Sykes, 2013; Timpe-Laughlin & Dombi, 2020), and games (Palmer, 2010; Reinders & Wattana, 2015; Taguchi, 2024; Zhang, 2025) in fostering pragmatics. For example, Sykes (2005) documented that written chat via SCMC was more effective than oral and face-to-face chat in teaching refusals. In a descriptive study, Jepson (2005) explored the patterns

of repair moves in synchronous CMC-based text and voice chatting on the internet and found a higher frequency for voice chat repairs.

Extending the contribution of technology to the social media context, other researchers have reported the potential of social media platforms in teaching Korean honorifics (Reinhardt & Ryu, 2013), greetings and leave takings in Spanish (Blattner & Fiori, 2011), and cyberpragmatic awareness (Yeh & Swinehart, 2019) in the SCMC mode. Kreijns et al. (2022) highlighted the role of social presence and emotional engagement in online learning environments, while Li (2023) and Hsu and Liu (2023) demonstrated that mobile-assisted environments can support learners' language development through flexible interaction opportunities. Taken together, these international studies indicate that both synchronous and asynchronous digital communication contribute to pragmatic knowledge, yet many aspects such as comparing different asynchronous modalities remain underexplored.

Building on international research, several studies conducted in Iran have examined the role of technology in pragmatic development, particularly through CMC and social media platforms. In an empirical study, Ajabshir (2019) reported the positive effects of text-based chatting within SCMC and ACMC on EFL learners' acquisition of request speech acts. Using an asynchronous CMC framework, Eslami et al. (2015) investigated Iranian EFL learners' development of request strategies through email exchanges with native-speaker tutors. Based on their findings, learners who received either explicit or implicit feedback achieved significant pragmatic gains, highlighting the value of extended processing time and reduced communicative pressure in asynchronous settings.

Other Iranian studies have explored pragmatic development through social media–mediated instruction. Mirzaei et al. (2016) compared synchronous and asynchronous CMC modules delivered via social networking platforms and found that both modes enhanced learners' comprehension of implicatures, with the asynchronous group demonstrating greater improvement. These findings align with research suggesting that

asynchronous environments allow learners more time for reflection, planning, and self-regulation during pragmatic production.

However, research in Iran has largely focused on text-based CMC or how technology impacts related skills such as oral proficiency and anxiety rather than pragmatic production itself. For example, Namaziandost et al. (2022) compared synchronous text chat and voice chat in terms of oral proficiency and anxiety, reporting that while both modes improved speaking ability, text chat was more effective in reducing anxiety. Although informative, this study did not address pragmatic outcomes, nor did it examine asynchronous modes of communication, raising questions about the relative effects of text and voice modalities on pragmatic development.

Taken together, international and Iranian studies demonstrate the effectiveness of technology-assisted instruction for L2 pragmatics; however, important gaps remain. Notably, no empirical study to date has systematically compared the effects of text messaging and voice messaging within an ACMC framework on learners' pragmatic production. Moreover, the use of mobile-assisted social media platforms such as Telegram for teaching pragmatic speech acts through asynchronous voice and text modalities remains underexplored, particularly in EFL contexts.

Addressing these gaps, the present study investigates the impact of mobile-assisted text and voice messaging via Telegram on Iranian EFL learners' pragmatic production of apologies and requests within an ACMC environment. By situating the study at the intersection of international research and local instructional practices, this study seeks to extend existing knowledge on technology-enhanced pragmatics instruction and to bridge identified gaps in the literature.

METHOD

Design

The research pursued a mixed-methods design to investigate the impact of mobile-assisted text and voice messaging on Iranian EFL learners' production

of apologies and requests. The design allowed quantitative analysis of speech act production as well as qualitative exploration of participants' attitudes toward the intervention. Data collection was conducted through a sequential design in which the qualitative data served as an added component to the quantitative phase. The research design recommended by Caracelli and Greene (1997) was followed in this process.

Participants

The research was conducted at Shokouh Institute in Babolsar, Mazandaran, and the population was composed of 60 intermediate EFL learners. The research participants were chosen non-randomly through convenience sampling from a population of 85 language learners. To ensure the participants' linguistic homogeneity, they were administered the Oxford Placement Test (OPT), and the students who scored 30 to 39 were selected (Geranpayeh, 2003). As a result, 60 learners met the inclusion criteria and were retained for data analysis, while 25 learners were excluded due to proficiency mismatch, irregular attendance, or incomplete data. The selected participants were male and female students aged 14-21 years, consisting of 33 females and 27 males. They were then divided into three groups: a text messaging (TM) group (N = 20), a voice messaging (VM) group (N= 20), and a control group (N = 20). Ten students from the participants in the two experimental groups were selected to participate in a semi-structured interview session.

Instrumentation

The following instruments were used in this study:

Oxford Placement Test (OPT)

In order to ensure a consistent level of proficiency among all participants, learners were mandated to complete the OPT. The test encompasses cloze and multiple-choice questions designed to assess participants' vocabulary,

grammar, and reading comprehension abilities. Among the 85 learners in the entire population, those who achieved scores ranging from 30 to 39 on the OPT were classified as intermediate learners (Geranpayeh, 2003).

Written Discourse Completion Test (WDCT)

The Written Discourse Completion Test (WDCT) is a frequently used test to assess pragmatic competence and speech act production of EFL learners as it is valid, reliable, and practicable (Aufa, 2012). While controlling the situational variables (e.g., power, social distance, age, etc.), the test can provide learners with situational prompts requiring written responses to elicit specific speech acts like requests, apologies, or refusals (Brown, 2001). Researchers argue that although WDCTs may not be able to precisely replicate the dynamic nature of oral performance (Yamashita, 1996), they can effectively elicit learners' responses in using pragmatically appropriate language and allow for uniform and standard assessment (Aufa, 2012; Kasper & Rose, 2002). In this study, a revised version of the WDCT adapted from Tajeddin and Bagherkazemi (2014) comprising 16 items (eight on apology, eight on request) in the pretest and posttest was employed. The WDCT contains various situations focusing on the target speech acts of apologies and requests. The participants are asked to read each situation and then produce their immediate reaction in written form. Appendix A illustrates samples of WDCT prompts for apologies and requests.

Two PhD holders of TEFL were asked to rate the students' written production according to the scale of 0 (no performance) to 5 (excellent) proposed by Taguchi (2006). The inter-rater reliability index was estimated as .88, confirming the acceptable reliability coefficient (Pallant, 2011). Table 1 displays Taguchi's WDCT scale.

Table 1. WDCT Rating Scale (adapted from Taguchi, 2006, p. 520)

Ratings	Descriptors
5 = Excellent	Expressions are fully appropriate for the situation. No or almost no grammatical and discourse errors.
4 = Good	Expressions are mostly appropriate. Very few grammatical and discourse errors.
3 = Fair	Expressions are only somewhat appropriate. Grammatical and discourse errors are noticeable, but they do not interfere appropriateness.
2 = Poor	Due to the interference from grammatical and discourse errors, appropriateness is difficult to determine.
1 = Very poor	Expressions are difficult or too little to understand. There is no evidence that the intended speech acts are performed.
0 = No performance	No performance

Semi-Structured Interview

Semi-structured interviews adapted from Chen (2009) were conducted with ten learners to explore their perceptions of the effect of mobile-assisted voice and text messaging on students' production of apologies and requests. Interview sessions were conducted after the treatments and sessions were audio-recorded for further qualitative analysis (see Appendix B). The construct and face validity of the questions was checked and confirmed by two experts in statistics.

Data Collection Procedure

Before the study, the researchers obtained permission from the private language center. Efforts were made to adhere to ethical guidelines throughout the research. The details of the identity of the institute were kept confidential, and the students were made aware of the purpose of the study. The students were free to withdraw at any time without any consequences. The students gave the researchers their consent regarding the publication of the research findings. To maintain confidentiality, the students were assigned numerical codes. The data collected were saved securely, accessible only to the

researchers, and used for research purposes only. The data collected were reported in aggregate form.

Initially, 85 participants in the study completed the OPT to ensure they had similar levels of proficiency. From this group, 60 participants were selected as the main participants and allocated into three groups: text messaging, voice messaging, and control, with 20 learners in each group. The participants were then briefed on the primary objectives of the study. Before starting data collection, the researchers obtained necessary permissions from the target language institute. Following this, the participants were given a pre-test to assess their production of speech acts.

The second author conducted ten one-hour sessions with the use of mobile-assisted voice and text message exercises for both groups via the Telegram communication platform. She created a Telegram group where all selected participants were asked to remain online throughout the sessions. The classes were assigned selected short stories—"Acme" by Colin Galsworthy, "Post Haste" by Colin Howard, and "The Happy Prince" by Oscar Wilde—to practice speech acts. The teacher shifted students' attention to the parts where the characters utilized specific speech acts and provided a contextualized meaning for every speech act. Additional input of target speech acts was shared by the teacher to ensure sufficient input. Students were asked to notice speech acts separately in the stories, and ambiguities in the meaning of sentences was resolved. After understanding was ensured, the teacher presented model scenarios through discourse completion tasks to the students to produce the target speech acts themselves.

Besides the short stories, some selected clips from the *Lost* series demonstrating various speech acts were shared on Telegram. The clips gave the students exposure to real, natural usage of speech acts by native speakers. The teacher deliberately chose the scenes containing the target speech acts and discussed their meaning and communicative use. Students observed the teacher's model and received an assignment to create their own utterances. In order to enhance understanding, the instructor encouraged the students by inquiring why certain speech acts were employed in a given situation,

encouraging learners to think about and comment on the pragmatic purposes of the speech acts in the context of the videos. This exercise was meant to minimize misunderstandings and ensure pragmatic competence. In the discussion phase, the interactions between the teacher and students proceeded differently in each group.

In the text-based mobile-assisted group, all interactions were carried out in the form of written messages on Telegram. The participants could participate at different times, without the need for live or real-time responses. This allowed the learners to carefully read and reflect on their peers' messages before writing their own. The teacher encouraged students to engage in meaningful, reflective dialogue by discussing comments on requests and apologies used in the assigned short stories and video clips. Students were able to review previous messages, browse explanations, and edit responses before sending, which aided in more profound understanding and better application of pragmatic language functions. The teacher actively monitored the discussions, provided written comments, and clarified confusion or highlighted good examples, scaffolding student learning in a supportive written discourse.

On the other hand, the voice-based mobile-assisted group interacted orally via Telegram's voice messaging feature. Students left and posted voice messages in the group, which were heard and replied to by other learners at their convenience. Similar to the text-messaging group, the students were encouraged to share their responses after carefully thinking about their responses but in the oral form. The recorded voice messages shared in the group gave students the chance to zoom in on minute intonation features, stress, and pragmatic meaning shared by their classmates and the teacher. Oral feedback was also given asynchronously, either in private or within the group. The feedback included the correction of students' pragmatic errors, modeling of appropriate uses of speech acts, and clarification of intercultural differences. Students in both groups were also allowed to consult other sources before sharing their messages in the group. On occasions, the interactions became synchronous in either group; however, there was no

obligation to be online or respond immediately, allowing for flexible engagement according to students' schedules and preferences.

The control group received the same instruction as in the experimental groups in the form of short stories and video clips via Telegram but there was no teacher-student or peer interaction in this group. They were required to follow the lessons at their own pace without participating in discussions or receiving personalized feedback. After implementing text and voice messaging, the post-tests of speech act production were administered to the learners. Semi-structured interviews were also conducted with ten learners in the experimental groups.

Data Collection and Analysis

The research study in the present context employed a mixed research approach in which the quantitative and qualitative data were collected and analyzed separately and then interpreted together. The quantitative data collected through the Written Discourse Completion Test (WDCT) were analyzed using the statistical tool SPSS to examine the differences between the groups at the pretest and posttest levels. The analysis was carried out by adhering to the standard procedures for data analysis in SPSS (Pallant, 2011). The qualitative data were collected through a semi-structured interview to investigate the learners' perceptions of the instructional treatment.

To ensure the face and construct validity of the research questions, the first draft of the interview guide was examined and confirmed by a pair of specialists in the areas of applied linguistics and technology-supported language education. The specialists were instructed to judge how understandable the research questions were, if they were suitable, and how well they matched the study's goals and the ideas being explored (such as how useful something seems, involvement, and knowing how to use language appropriately, among other things). The comments provided by the specialists were utilized to slightly alter the wording of some research questions, with the goal of ensuring they were easy to understand and consistent in meaning.

The interview data were analyzed using grounded theory coding procedures (Glaser & Strauss, 1967), which involved three main stages: initial (open) coding, axial coding, and selective coding. In the initial coding stage, interview transcripts were read multiple times, and meaningful units of data were identified and labeled. For example, a participant's statement such as "*I felt more comfortable recording my voice because I could think before sending it*" was initially coded as '*reduced anxiety*' and '*planning opportunity*'. In the axial coding stage, conceptually related initial codes were grouped into broader categories by identifying relationships among them. For instance, the codes '*reduced anxiety*', '*more time to think*', and '*less pressure*' were clustered under the category '*affective support*'.

In the final stage of selective coding, core themes were identified by integrating and refining the categories that were most frequently observed and most relevant to the research questions. Continuing the example above, the category 'affective support' was integrated with other related categories such as '*increased confidence*' and '*willingness to participate*' to form the overarching theme '*emotional affordances of asynchronous voice messaging*'. This iterative process continued until thematic saturation was reached and no new themes emerged from the data. To enhance trustworthiness, the coding process was revisited multiple times, and ambiguous cases were discussed by the two researchers until agreement was reached.

RESULTS

Effect of Asynchronous Text Messaging on Pragmatic Production

The first research question examined whether text messaging had a statistically significant effect on Iranian EFL learners' production of apologies and requests. Initial evaluations of the data confirmed a normal distribution, enabling the implementation of parametric statistical methods.

The descriptive statistics indicated that participants in the text messaging group showed improvement in scores from the initial assessment (apologies: M = 20.80; requests: M = 20.75) to the final assessment (apologies: M = 24.75; requests: M = 24.55). Matched paired t-tests demonstrated that these observed improvements were statistically significant for both apologies, $t(19) = 13.41$, $p < 0.001$, and requests, $t(19) = 13.71$, $p < .001$. The extent of these impacts was considerable (apologies: Cohen's d = 3.01; requests: Cohen's d = 3.06), pointing toward a noteworthy influence of text messaging on the learners' pragmatic language production. Therefore, the initial hypothesis of no effect was disproved.

Effects of Asynchronous Voice Messaging on Pragmatic Production

The second inquiry in this study aimed to determine if employing voice messages notably impacted Iranian students learning EFL when they were producing apologies and making requests. The descriptive data showed a rise in scores from the initial assessment (apologies: M = 21.35; requests: M = 20.95) to the final assessment (apologies: M = 25.05; requests: M = 24.85). The outcomes of dependent t-tests revealed that these enhancements were notably substantial in both areas of apologies, $t(19) = 13.58$, $p < 0.001$, and requests, $t(19) = 13.93$, $p < 0.001$. Assessments of the effect size exhibited considerable impacts due to voice messages (apologies: Cohen's d = 3.04; requests: Cohen's d = 3.11), implying that utilizing voice messages greatly and favorably affected the learners' pragmatic production. Consequently, we refuted the corresponding hypothesis that there would be no effect.

Comparison of Asynchronous Text Messaging, Voice Messaging, and Traditional Instruction

The third research question investigated whether there were differences among the effects of text messaging, voice messaging, and traditional instruction on learners' production of apologies and requests. Post-test scores were analyzed using one-way Analysis of Variance (ANOVA) after confirming the assumption of homogeneity of variances.

Table 2. One-Way ANOVA for the Speech Act Production Post-Tests of the Apologies and Requests of Three Groups

		Sum of Squares	df	Mean Square	F	Sig.
POST-test apology	Between Groups	159.600	2	79.800	14.230	.000
	Within Groups	319.650	57	5.608		
	Total	479.250	59			
POST-test request	Between Groups	98.100	2	49.050	8.383	.001
	Within Groups	333.500	57	5.851		
	Total	431.600	59			

The ANOVA results revealed significant group differences for both apologies, $F(2, 57) = 14.23$, $p < 0.001$, and requests, $F(2, 57) = 8.38$, $p = 0.001$. Effect size estimates indicated a large effect for apologies ($\eta^2 = 0.33$) and a medium-to-large effect for requests ($\eta^2 = 0.23$), suggesting that instructional mode accounted for a meaningful proportion of variance in pragmatic production.

Table 3. Post-Hoc LSD Test for the Speech Act Production Post-Tests of the Apologies and Requests of Three Groups

Dependent Variable	(I) code1	(J) code1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
POST-test apology	Text messaging	voice messaging	-.300	.749	.690	-1.80	1.20
		control	3.300*	.749	.000	1.80	4.80
	voice messaging	Text messaging	.300	.749	.690	-1.20	1.80
		control	3.600*	.749	.000	2.10	5.10
	control	Text messaging	-3.300*	.749	.000	-4.80	-1.80
		voice messaging	-3.600*	.749	.000	-5.10	-2.10
POST-test request	Text messaging	voice messaging	-.300	.765	.696	-1.83	1.23
		control	2.550*	.765	.002	1.02	4.08
	voice messaging	Text messaging	.300	.765	.696	-1.23	1.83
		control	2.850*	.765	.000	1.32	4.38
	control	Text messaging	-2.550*	.765	.002	-4.08	-1.02
		voice messaging	-2.850*	.765	.000	-4.38	-1.32

Post-hoc LSD comparisons showed that both the text messaging and voice messaging groups significantly outperformed the control group in the production of apologies and requests ($p < .01$). However, no statistically significant difference was observed between the text messaging and voice messaging groups for either speech act ($p > .05$). These findings indicate that while mobile-assisted instruction was more effective than traditional instruction, text and voice messaging were comparably effective in enhancing learners' pragmatic production.

Learners' Perceptions of Engagement and Motivation in Asynchronous Messaging

The fourth research question qualitatively examined the learners' attitude toward voice and text messaging in relation to the production of requests and apologies. The interview feedback of the learners were coded with Dörnyei's (2007) three-stage coding process (open, axial, and selective coding) for determining well-structured items that express the learners' views effectively. The three main themes extracted from the interview data were: (1) flexibility, convenience, and lower pressure; (2) collaborative learning, and (3) emotional engagement. Each of these categories is addressed below in turn to illustrate learners' views. Since interviews were held in Persian, English translations are provided.

Flexibility, Convenience, and Lower Pressure

Asynchronous communication empowered students to take part whenever and wherever they chose, removing any demands for set times or instant replies. This adaptability allowed students to get involved when they felt most attentive and advance as quickly or slowly as they needed. The lack of urgency also lowered stress levels, providing students enough time to prepare, reflect, and produce pragmatically appropriate answers. The extracts below confirm these assertions:

Extract 1

> *Having the ability to learn on my own schedule helped me learn more. I did not feel pressured to respond to someone waiting for my response.* (TM4)

Extract 2

> *The option to pause and revisit lessons whenever needed meant I could focus on understanding the material thoroughly.* (VM3)

Extract 3

> *Having known that I didn't have to respond immediately relieved me of some anxiety. I could take time to reflect on how to respond, which made me more confident.* (TM5)

Based on the learners' experiences, the flexibility in timing offered by written and spoken messaging fostered an environment that promoted thoughtful consideration of pragmatic language use and carefully managed language creation. Different from real-time conversations, asynchronous messaging eliminated the urgency of immediate responses, which enabled learners to focus more intently on social communication rules and language-specific choices when formulating apologies and requests. The decrease in stress during communication seemingly encouraged more thorough mental engagement and increased self-assurance in making pragmatic language decisions. For instance, TM4's comment that "*I did not feel pressured to respond to someone waiting for my response*" suggests that delayed response time enabled learners to engage in metapragmatic planning, a process widely recognized as essential for pragmatic development. Similarly, VM3's reference to revisiting lessons highlights the role of self-paced engagement in reinforcing pragmatic noticing and form–function mapping.

These perceptions are consistent with models of instructed ILP, which emphasize the importance of time for reflection and hypothesis testing in acquiring context-sensitive language use. The learners' reduced anxiety, as reflected in Extracts 3 and 4, further supports the claim that asynchronous environments lower affective barriers, thereby increasing learners' willingness to experiment with pragmatically appropriate expressions. This mechanism helps explain the significant gains observed in both experimental groups in the quantitative phase of the study.

Collaborative Learning

Asynchronous messaging facilitated peer interaction by creating opportunities for dialogue and meaning negotiation. Through sharing and responding to messages, learners collaboratively constructed pragmatic knowledge, engaged actively with one another, and learned from peers as well as the instructor, thereby forming a community of practice that supported pragmatic development.

Extract 4

> *The tasks including video clips and short stories urged us to be much more energetic and also join conversation inquiries to get the general concept of the apology and request. It was an energetic class when the instructor asked us to scaffold our classmates' mistakes by writing texts to discover the use of requests and apologies.* (TM7)

When TM7 mentioned how classmates supported each other in correcting errors, it indicated that students were actively involved in creating shared understanding rather than just passively receiving feedback. This interactional engagement reflects sociocultural views on pragmatics learning, claiming that mediated interaction leads to pragmatic competence. These types of group activities probably helped students do better on the post-test by increasing the range of their pragmatic language abilities and strengthening their understanding of what is appropriate in different situations.

Emotional Engagement

Asynchronous communication was lauded by learners for its emotional advantages, in addition to its cognitive and interactive strengths. Aspects like emoticons, voice tone, and multimedia content were seen as diminishing the sense of rigidity and fostering a heightened sense of emotional bonds between the participants. It seemed that

these emotional facets worked to amplify students' drive and consistent participation in activities centered on pragmatic language use.

Extract 5

> *Reading my classmates' messages and replying to their ideas was a huge learning experience. Sometimes I caught something in a phrase or a phrasing I had not thought of previously. I especially liked the emoticons shared by the classmates, which made the class atmosphere less formal and more friendly.* (TM5)

Extract 5 demonstrates that peer interaction in asynchronous messaging environments functioned as a form of distributed pragmatic scaffolding. By reading classmates' messages and responding to alternative formulations, learners were exposed to multiple realizations of the same speech act, enabling comparison, evaluation, and refinement of pragmatic choices. TM5's observation that noticing peers' phrasing "*I had not thought of previously*" illustrates how collaborative dialogue fostered pragmatic noticing, a central mechanism in ILP development. TM5's reference to emoticons creating a "friendly" atmosphere suggests that emotional engagement supported participation by mitigating fear of negative evaluation. However, contrasting accounts from voice-messaging participants reveal that emotional engagement was not uniformly positive. Anxiety related to voice recording—particularly fear of pronunciation errors—acted as an affective constraint for some learners, partially limiting participation. This divergence helps explain why text messaging did not differ significantly from voice messaging in quantitative outcomes despite learners' distinct affective experiences.

DISCUSSION

The present study aimed to examine the contribution of mobile-assisted ACMC through text and voice messaging to pragmatic development among EFL learners in Iran. The overall results suggest that ACMC, when combined

with instructional video input and pragmatic tasks, can significantly facilitate pragmatic development for EFL learners. Rather than supporting one modality as more effective than another, the results suggest that text and voice messaging present different but complementary opportunities for pragmatic development, depending on learners' cognitive, affective, and interactional needs. Both experimental conditions affirmed notable changes in pragmatic development for EFL learners, suggesting that asynchronous interaction, regardless of modality, may offer valuable opportunities for reflection, noticing, and practice. This outcome aligns with earlier studies, which highlighted the significant role of using mobile devices and CMC affordances to help people learn languages (Shadiev & Hwang, 2020; Yus, 2016; Zain & Bowles, 2021). The current study also found that pragmatic development for EFL learners can benefit from the use of Telegram as a social media platform that offers an interactive space for learners to focus on speech acts, interact with peers, and discuss and comment on the relationship between forms and functions, thereby promoting conditions for pragmatic development (Taguchi & Sykes, 2013). Consistent with previous research on ACMC, it appears that the asynchronous nature of interaction allowed learners sufficient time for processing and refining their responses, which may have played an important role in facilitating pragmatic development for EFL learners (Lapadat, 2002).

The better performance by learners in the text messaging condition can be seen as a result of decreased performance pressure and increased opportunities for reflection. In text-based communication, learners can devote more resources to pragmatic form-function mapping and less to real-time production pressure. Similar processes have been noted in previous research on ACMC (Ajabshir, 2019; González-Lloret, 2019). One possible reason is the permanent record offered by text messaging, allowing learners to review and analyze their communication and detect pragmatic patterns and errors under low-pressure conditions (Tabatabaei & Heidari Goojani, 2012). In addition, the lack of pressure from real-time oral and non-verbal features may reduce learners' anxiety and cognitive load, making text-based communication less stressful compared to face-to-face and voice-mediated

communication (Derakhshan & Kaivanpanah, 2011; Kennedy & Levy, 2008). More control over the production and sending of responses allows learners to engage more thoughtfully with pragmatic tasks (Behforouz & Frumuselu, 2020), which may explain the better performance by learners in the text messaging condition.

The positive yet comparatively weaker effect of voice messaging may reflect a tension between increased access to paralinguistic cues and heightened production demands. While exposure to intonation and emotional cues can facilitate pragmatic interpretation, the requirement to produce oral messages may simultaneously increase anxiety and cognitive load, thereby limiting learners' ability to fully capitalize on these affordances (Ghahreman et al., 2021; Reid & Reid, 2007). Prior research suggests that voice messaging may expose learners to salient paralinguistic features of spoken language, such as intonation, emphasis, and emotional cues, which can support the interpretation of intended meaning and pragmatic conventions (Wang & Crosthwaite, 2021; Wu & Cai, 2024). Although the present study did not directly measure learners' perceptions of authenticity or immersion, the observed pragmatic gains may be partly attributable to such exposure. In addition, voice messaging offers opportunities for learners to practice pronunciation and intonation by recording and listening to their own speech, potentially increasing phonological awareness and contributing to more natural speech act realization (Ghahreman et al., 2021; Maldonado & Dack, 2024).

Despite these benefits, text messaging was found to be more effective than voice messaging overall. This pattern contrasts with studies that emphasize the advantages of voice-based interaction for language learning efficiency and communicative richness (Ghahreman et al., 2021; Namaziandost et al., 2022; Wang & Crosthwaite, 2021). A likely explanation lies in learners' affective responses to oral production. For Iranian EFL learners, voice messaging may inhibit active participation due to speaking anxiety, fear of negative evaluation, and discomfort with hearing one's own voice (Babapoor et al., 2018; Nasri et al., 2021). Furthermore, producing

voice recordings imposes additional cognitive and performance demands, requiring careful attention to prosodic features such as stress and intonation (Reid & Reid, 2007). These demands may divert learners' attention away from pragmatic form–function mappings, thereby reducing the overall effectiveness of voice-based interaction in this context.

The findings also underscore the importance of interaction for pragmatic development. Learners in the control group, who received instruction without interactive engagement, showed the least improvement, suggesting that input alone is insufficient for meaningful pragmatic learning. From an SCT perspective, interpsychological engagement through interaction is essential for intrapsychological development (Rogoff, 1990; Wertsch & Stone, 1999). Interactive ACMC environments facilitate negotiation of meaning, scaffolded support, and expert–novice collaboration, all of which promote the internalization of pragmatic knowledge in contextually meaningful ways (Bardovi-Harlig, 2014).

This positive but relatively weaker effect of voice messaging might be related to the trade-off between the benefits of increased access to paralinguistic features and the pressure of increased production demands. Increased access to intonation and emotional features might aid the interpretation of pragmatics, but the pressure to produce oral messages might also increase stress and cognitive load, which might limit the full benefits that the learner might have achieved (Ghahreman et al., 2021; Reid & Reid, 2007). Past studies have indicated that voice messaging might provide the learner with access to paralinguistic features of spoken language, such as intonation, stress, and emotional features, which might aid the interpretation of meaning and pragmatics (Wang & Crosthwaite, 2021; Wu & Cai, 2024). Although the current study did not examine the learner's perception of the authenticity or immersion, the positive effect on pragmatics might be partially related to the learner's access to paralinguistic features. Voice messaging might also provide the learner with the opportunity to practice pronunciation and intonation by listening to their own voice, which might aid the learner in

becoming more phonologically aware and thus improve the naturalness of the speech act (Ghahreman et al., 2021; Maldonado & Dack, 2024).

Despite the advantages of text messaging, the results showed that text messaging was more effective than voice messaging. This finding runs counter to the findings of the studies highlighting the advantages of voice interaction for the efficiency of language learning (Ghahreman et al., 2021; Namaziandost et al., 2022; Wang & Crosthwaite, 2021). The reason for this could be the emotional factors of the learners. For Iranian EFL learners, voice messaging could be a barrier for active interaction because of speaking anxiety, fear of negative evaluation, and aversion to listening to the sound of their own voice (Babapoor et al., 2018; Nasri et al., 2021). Moreover, the cognitive load of voice interaction is more than that of text interaction, as voice interaction requires the learner's attention to be paid to the stress of words (Reid & Reid, 2007). As a result, the learner's attention is distracted from the form-function relationships of pragmatic items, making voice interaction less effective than text interaction.

The results also showed the significance of interaction for the development of pragmatic competence. The results revealed that the learners in the control group, who had not engaged in interaction, showed the least development of pragmatic competence. This suggests that the development of pragmatic competence is not just a matter of receiving input. According to SCT, interpsychological development is a prerequisite for intrapsychological development (Rogoff, 1990; Wertsch & Stone, 1999). The interactive ACMC environment enables the learners to engage in meaning negotiation, receive scaffolding, and cooperate with experts, which are all conducive to the development of pragmatic competence.

In addition, Iranian students learning EFL may be less likely to take an active part in using voice messaging because they feel nervous while speaking, worried about obtaining negative feedback, and feel awkward when they listen to their own voices (Babapoor et al., 2018; Nasri et al., 2021). Moreover, producing voice messages requires more cognitive load and performance pressure since students need to pay close attention to features

such as intonation and stress while speaking (Reid & Reid, 2007). As a result, students may not be able to comprehend the relationship between pragmatic form and function adequately, and this would consequently reduce the effectiveness of voice communication.

Moreover, the results also emphasize the importance of the role played by interaction in pragmatic learning. It is evident that the control group students, who did not receive interactive instruction, had the lowest improvement; thus, it is not possible to learn pragmatics adequately without interactive instruction. From a sociocultural perspective, it is believed that it is essential to take part in interactions with others to develop personally (Rogoff, 1990; Wertsch & Stone, 1999). In addition, it is also believed that the negotiation of meaning, help from more knowledgeable others, and collaboration between experts and novices are facilitated by interactive ACMC environments that enable contextual internalization of pragmatic knowledge in meaningful ways (Bardovi-Harlig, 2014).

The qualitative findings shed more light on the patterns identified, as the learners reported that voice messaging made them feel more stressed and apprehensive about negative evaluations, while text messaging was seen as more manageable and reflective. These factors may account for the more positive pragmatic outcomes from text-based ACMC, despite the richer input provided through voice messaging (Li et al., 2011; Singh & Embi, 2007). The reduced levels of anxiety, especially in text-based communication, were found to play a crucial role in pragmatic engagement, similar to the findings reported in the study on language anxiety and oral production (Horwitz, 2001; MacIntyre & Gardner, 1991). The sense of collaboration and emotional involvement may also highlight the potential benefits of social media-based ACMC for the development of CoP, where pragmatic knowledge is co-constructed through dialogic interactions (Blake, 2008; Kreijns & Weidlich, 2022; Taguchi & Kim, 2016).

Overall, the results suggest that utilizing both written and spoken communication methods through ACMC can support the growth of pragmatic language skills, albeit in distinct ways. Although written

messages could offer greater advantages, specifically by lowering stress and promoting careful consideration, spoken messages might expose students to auditory and non-verbal cues that could improve their real-world language abilities.

CONCLUSION AND IMPLICATIONS

This study was designed to compare the effects of mobile-assisted ACMC on Iranian EFL learners' pragmatic competence. The quantitative findings revealed that sharing instructional videos followed by interaction through text and voice messaging contributed to learners' improvement in speech act production. This finding could be attributed to the affordances of mobile technology to support interaction within ACMC, which offer reflective, authentic, and convenient learning environments. While voice-based interaction exposed students to oral language prosodic elements, text messaging offered a low-pressure environment, additional time for planning and revision, and greater comfort for students with shyness or fear. The findings also confirmed that mere exposure to pragmatics instruction via ACMC without interaction generates little gain, a point that underscores the central role of social interaction in pragmatic acquisition. Besides, qualitative findings showed how flexibility, reduced anxiety, and cooperative learning through ACMC can boost the learning process. Together, these results advocate for integrating diverse ACMC features in tailoring pragmatics instruction to the learners' sociocultural needs, thereby optimizing pragmatic achievements and fostering autonomous, confident language use in authentic contexts.

The findings of this study offer important implications. From an SCT perspective, the ACMC-based text and voice messaging served as artifact mediation to engage learners in socially mediated interactions, creating spaces for interactive involvement and active participation and boosting their motivation for learning. The social media platform provided a conducive environment to understand the sociocultural nuances of speech acts across

Persian and English languages. Pedagogically, the use of text and voice messaging granted the learners the opportunity to initiate conversations, engage in interactive exchanges, and receive teacher and peer feedback. The ACMC nature of interactions allows communication with a reduced cognitive load in a less pressured atmosphere. Text messaging can benefit learners who are more susceptible to communication apprehension while voice messaging may be particularly helpful for those who feel more at ease in observing the prosodic aspects of oral language. Teachers can also try out various L2 tasks such as role-plays, discussions, and problem-solving to involve students in pragmatic learning.

Despite its positive contributions, the study also had its own limitations that indicate directions for future research. In addition to replicating the current study using different data sources such as language-related episodes (LREs) and oral discourse completion tasks, future studies may consider more innovative and creative instructional designs using emerging technologies. For example, Future studies could use AI technology, such as chatbots, to provide learners with pragmatic feedback and allow them to practice speech acts with diverse interlocutor profiles while using ACMC environments. Another direction for future research is the use of virtual reality (VR) and augmented reality (AR) environments to provide learners with contextualized scenarios for pragmatic practice and instruction. For example, VR environments could simulate real-life conversations with interlocutors in real-world scenarios, such as service encounters, academic conversations, and workplace communication, could enable learners to practice speech acts while controlling contextual variables.

Gamification is also another area that future studies may focus on to explore its potential benefits for pragmatics instruction using ACMC environments. Gamification involves using gamified elements such as quests and role-based missions, points, and collaborative games to promote learners' motivation and engagement with pragmatics instruction. For example, future studies may explore the potential benefits of gamified pragmatic instruction on learners' willingness to communicate and pragmatic anxiety levels.

Finally, future studies may also explore the role of individual differences such as learners' anxiety levels and their potential impact on the effectiveness of AI technology, gamification, and immersion in pragmatics instruction.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Karim Shabani https://orcid.org/0000-0002-1574-1122
Armin Zakarianejad https://orcid.org/0009-0008-2077-0383

References

Abe, M., & Roever, C. (2020). Task closings in L2 text-chat interactions: A study of L2 interactional competence. *CALICO Journal*, *37*(1), 23–45. https://doi.org/10.1558/cj.38562

Ajabshir, Z. F. (2019). The effect of synchronous and asynchronous computer-mediated communication (CMC) on EFL learners' pragmatic competence. *Computers in Human Behavior*, *92*, 169–177. https://doi.org/10.1016/j.chb.2018.11.015

Akiyama, Y., & Cunningham, D. J. (2018). Synthesizing the practice of SCMC-based telecollaboration: A scoping review. *Calico Journal*, *35*(1), 49–76. https://doi.org/10.1558/cj.32541

Aufa, F. (2012). The assessment tool of L2 learners' pragmatic competence: Written discourse completion test (WDCT). *Journal of English and Education (JEE)*, *6*(1), 24–31. https://doi.org/10.20885/jee.vol6.iss1.art3

Babapoor, M., Seifoori, Z., & Chehreh, M. (2018). Intermediate EFL learners' shyness, communication apprehension, the accuracy and fluency of their oral performance. *Research in English Language Pedagogy (RELP)*, *6*(2), 205–222. https://doi.org/10.30486/relp.2018.542580

Badjadi, N. E. I. (2016). A meta-analysis of the effects of instructional tasks on L2 pragmatics comprehension and production. In S. F. Tang & L. Logonnathan (Eds.) *Assessment for Learning Within and Beyond the Classroom: Taylor's 8th Teaching and Learning Conference 2015 Proceedings* (pp. 241–268). Singapore: Springer Singapore. https://doi.org/10.1007/978-981-10-0908-2_21

Bardovi-Harlig, K. (2014). Awareness of meaning of conventional expressions in second-language pragmatics. *Language Awareness*, *23*(1-2), 41–56. https://doi.org/10.1080/09658416.2013.863894

Bardovi-Harlig, K., & Dörnyei, Z. (1998). Do language learners recognize pragmatic violations? Pragmatic versus grammatical awareness in instructed L2 learning. *TESOL Quarterly*, *32*(2), 233–259. https://doi.org/10.2307/3587583

Behforouz, B., & Frumuselu, A. D. (2020). The impact of text messaging as an instructional tool to enhance learner autonomy and perception. *International Journal of Learning, Teaching and Educational Research*, *19*(11), 184–202. https://doi.org/10.26803/ijlter.19.11.11

Blake, R. (2008). Distance learning for second and foreign language teaching. In N. H. Hornberger (Ed.) *Encyclopedia of language and education* (pp. 1454–1465). Springer, Boston, MA. https://doi.org/10.1007/978-0-387-30424-3_111

Blattner, G., & Fiori, M. (2011). Virtual social network communities: An investigation of language learners' development of sociopragmatic awareness and multiliteracy skills. *CALICO Journal*, *29*(1), 24–43. https://doi.org/10.11139/cj.29.1.24-43

Brown, J. D. (2001). Pragmatics tests: Different purposes, different tests. In K. Rose & G. Kasper (Eds.), *Pragmatics in language teaching* (pp.301–326). Cambridge University Press. https://doi.org/10.1017/CBO9781139524797.020

Caracelli, V. J., & Greene, J. C. (1997). Crafting mixed-method evaluation designs. *New directions for evaluation*, *74*, 19–32. https://doi.org/10.1002/ev.1069

Chen, G. M. (2009). Beyond the dichotomy of communication studies. *Journal of Asian Communication*, *19*(4), 398–411. https://doi.org/10.1080/01292980903293312

Cohen, A. D. (2012). Teaching pragmatics in the second language classroom. *The European Journal of Applied Linguistics and TEFL, 1*(1), 33–50. https://doi.org/10.2307/41756418

Cohen, A. D., & Ishihara, N. (2005). A web-based approach to strategic learning of speech acts. https://archive.carla.umn.edu/speechacts/Japanese%20Speech%20Act%20Report%20Rev.%20June05.pdf

Cohen, A. D., & Olshtain, E. (1993). The production of speech acts by EFL Learners. *TESOL Quarterly, 27*(1), 33–56. https://doi.org/10.2307/3586950

Derakhshan, A., & Arabmofrad, A. (2018). The impact of instruction on the pragmatic comprehension of speech acts of apology, request, and refusal among Iranian intermediate EFL learners. *English Teaching & Learning, 42*(1), 75–94. https://doi.org/10.1007/s42321-018-0004-6

Derakhshan, A., & Eslami, Z. (2015). The effect of consciousness-raising instruction on the pragmatic development of apology and request. *TESL-EJ, 18*(4), 1–24. http://www.tesl-ej.org/wordpress/issues/volume18/ej72/ej72a6/

Derakhshan, A., & Kaivanpanah, Sh. (2011). The impact of text-messaging on EFL freshmen's vocabulary learning. *The EUROCALL Review, 19*, 47–55. https://files.eric.ed.gov/fulltext/ED542608.pdf

Derakhshan, A., & Shakki, F. (2020). The effect of implicit vs. explicit metapragmatic instruction on the Iranian intermediate EFL learners' pragmatic comprehension of apology and refusal. *ZABANPAZHUHI (Journal of Language Research), 12*(35), 151–175. https://doi.org/10.22051/JLR.2019.23938.1636

Eslami, Z. R., Mirzaei, A., & Dini, S. (2015). The role of asynchronous computer mediated communication in the instruction and development of EFL learners' pragmatic competence. *System, 48*, 99–111. https://doi.org/10.1016/j.system.2014.09.008

Eslami, Z., & Eslami, A. (2008). Enhancing the pragmatic competence of nonnative English-speaking teacher candidates (NNESTCs) in an EFL context. In E. A Soler & A. Martı´nez-Flor (Eds.), *Investigating pragmatics in foreign language learning, teaching, and testing*, (pp. 178–197). Britain: Cromwell Press. https://doi.org/10.2307/jj.27195521.13

Eslami, Z., & Zohoor, S. (2023). Second language (L2) pragmatics and computer assisted language learning (CALL). *Technology Assisted Language Education*, *1*(3), 1–17. https://doi.org/10.22126/tale.2023.2788

Estrada Molina, O. (2022). The effects of WhatsApp and Telegram on student engagement: An analysis from the mixed-methods approach. *Education Research International*, *2022*(1), 2881404. https://doi.org/10.1155/2022/2881404

Geranpayeh, A. (2003). A quick review of the English Quick Placement Test. *Research Notes, 12,* 8–10. https://www.cambridgeenglish.org/Images/23127-research-notes-12.pdf

Ghahreman, H., Salehi, M., & Fakhraee Faruji, L. (2021). The effect of teacher's voice vs. written messages via WhatsApp on Iranian EFL learners' learning and retention of lexical collocations. *Journal of Research in Techno-based Language Education, 1*(1), 1–21. https://doi.org/10.22034/jrtle.2021.133012

Glaser, B. G., & Strauss. A. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Chicago: Aldine. https://doi.org/10.4324/9780203793206

Gonzales, A. (2013). Development of politeness strategies in participatory online environments: A case study. In N. Taguchi & J.M. Sykes (Eds.), *Technology in interlanguage pragmatics research and teaching* (pp. 101–120). John Benjamins.

Gonzales, A. (2017). Social networking site participation and language learner motivation. *Online Language Teaching Research*, 35. https://doi.org/10.1017/S0261444822000167

González-Lloret, M. (2019). Technology and L2 pragmatics learning. *Annual Review of Applied Linguistics*, *39*, 113–127. https://doi.org/10.1017/S0267190519000047

González-Lloret, M. (2024). Technology-enhanced pragmatic instruction. *Applied Pragmatics*, *6*(2), 131–146. https://doi.org/10.1075/ap.00023.gon

Horwitz, E. (2001). Language anxiety and achievement. *Annual Review of Applied Linguistics*, *21*, 112–126. https://doi.org/10.1017/S0267190501000071

Hsu, H. C. (2016). Voice blogging and L2 speaking performance. *Computer Assisted Language Learning*, *29*(5), 968–983. https://doi.org/10.1080/09588221.2015.1113185

Hsu, K. C., & Liu, G. Z. (2023). A systematic review of mobile-assisted oral communication development from selected papers published between 2010 and 2019. *Interactive Learning Environments*, *31*(6), 3851–3867. https://doi.org/10.1080/10494820.2021.1943690

Ishihara, N., & Cohen, A. (2010). *Teaching and learning pragmatics: Where language and culture meet*. Harlow, England: Longman.

Jepson, K. (2005). Conversations—and negotiated interaction—in text and voice chat rooms. *Language Learning & Technology*, *9*(3), 79–98. http://dx.doi.org/10125/44033.

Kasper, G. (1997). Can pragmatic competence be taught? Second Language Teaching & Curriculum Center. http://www.nflrc.hawaii.edu/networks/NW06

Kasper, G., & Rose, K. (2002). *Pragmatic development in a second language*. Oxford, UK: Blackwell.

Kennedy, C., & Levy, M. (2008). L'italiano al telefonino: Using SMS to support beginners' language learning. *ReCALL*, *20*(3), 315–330. https://doi.org/10.1017/S0958344008000530

Kerr, A. (2025). Asynchronous technologies for student engagement and collaborative learning in work-integrated learning environments. *Pacific Journal of Technology Enhanced Learning*, *7*(1), 18–35. https://doi.org/10.24135/pjtel.v7i1.206

Kitade, K. (2008). The role of offline metalanguage talk in asynchronous computer-mediated communication. *Language Learning & Technology*, *1*(12), 64–84. https://doi.org/10.64152/10125/44131

Klímová, B. (2018). Mobile phones and/or smartphones and their apps for teaching English as a foreign language. *Education & Information Technologies*, *23*(3), 1091–1099. https://doi.org/10.1007/s10639-017-9655-5

Kreijns, K., Xu, K., & Weidlich, J. (2022). Social presence: Conceptualization and measurement. *Educational Psychology Review*, *34*(1), 139–170. https://doi.org/10.1007/s10648-021-09623-8

Kukulska-Hulme, A. (2009). Will mobile learning change language Learning? *ReCALL*, *21*(2), 157–165. https://doi.org/10.1017/S0958344009000202

Lantolf, J. P., & Thorne, S. L. (2006). Sociocultural theory and second language acquisition. *Studies in Second Language Acquisition*, *28*(1), 67–109.

https://doi.org/10.1017/S0272263106060037

Lantolf, J. P. (2000). Second language learning as a mediated process. *Language Teaching*, *33*(2), 79–96. https://doi.org/10.1017/S0261444800015329

Lapadat, J. C. (2002). Written interaction: A key component in online learning. *Journal of Computer Mediated Communication*, *7*(4), 1–12. https://doi.org/10.1111/j.1083-6101.2002.tb00158.x

Ledford, V., Wang, X., Anderson, L. B., Leach, J., Lucas, M., & Mazzone, R. (2023). Communication apprehension in the online presentational speaking course: Considerations for synchronous course meetings and asynchronous presentations. *Communication Teacher*, *37*(1), 64–82. https://doi.org/10.1080/17404622.2022.2046284

Li, R. (2023). Effects of mobile-assisted language learning on EFL learners' listening skill development. *Educational Technology & Society*, *26*(2), 36–49. https://doi.org/10.30191/ETS.202304_26(2).0003

Li, L., Finley, J., Pitts, J., & Guo, R. (2011). Which is a better choice for student-faculty interaction: synchronous or asynchronous communication?. *Journal of Technology Research*, *2*, 1.

https://papers.ssrn.com/sol3/Delivery.cfm/4889245.pdf?abstractid=4889245&mirid=1&type=2

Limberg, H. (2015). Principles for pragmatics teaching: Apologies in the EFL classroom. *ELT Journal*, *69*(3), 275–285. https://doi.org/10.1093/elt/ccv012

Lin, W. C., Huang, H. T., & Liou, H. C. (2013). The effects of text-based SCMC on SLA: A meta-analysis. *Language Learning & Technology*, *17*(2), 123–142. https://doi.org/10.64152/10125/44327

MacIntyre, P. D., & Gardner, R. C. (1991). Language anxiety: Its relationship to other anxieties and to processing in native and second languages. *Language learning*, *41*(4), 513–534. https://doi.org/10.1111/j.1467-1770.1991.tb00691.x

Maldonado, N. B. I., & Dack, T. F. (2024). The effect of voice recording as a tool to improve speaking skills. *Runas Journal of Education and Culture*, *5*(10), e240161. https://doi.org/10.46652/runas.v5i10.161

Malmir, A., & Derakhshan, A. (2020). The socio-pragmatic, lexico-grammatical, and cognitive strategies in L2 pragmatic comprehension: The case of Iranian male vs. female EFL learners. *Iranian Journal of Language Teaching Research*, *8*(1), 1–23. https://doi.org/10.30466/ijltr.2020.120805

Morady Moghaddam, M. (2025). Enhancing language learners' pragmatic skills through augmented reality: The speech act of request in the spotlight. *Innovation in Language Learning and Teaching*, 1–21. https://doi.org/10.1080/17501229.2025.2544018

Mirzaei, A., Hashemian, M., & Khoramshekouh, A. (2016). L2 learners' enhanced pragmatic comprehension of implicatures via computer-mediated communication and social media networks. *Iranian Journal of Applied Linguistics*, *19*(1). https://doi.org/10.18869/acadpub.ijal.19.1.141

Mohamadi Zenouzagh, Z. (2022). Language-related episodes and feedback in synchronous voiced-based and asynchronous text-based computer-mediated communications. *Journal of Computers in Education*, *9*(3), 515–547. https://doi.org/10.1007/s40692-021-00212-w

Namaziandost, E., Razmi, M. H., Hernández, R. M., Ocaña-Fernández, Y., & Khabir, M. (2022). Synchronous CMC text chat versus synchronous CMC voice chat: Impacts on EFL learners' oral proficiency and anxiety. *Journal of Research on Technology in Education*, *54*(4), 599–616. https://doi.org/10.1080/15391523.2021.1906362

Nasri, M., Shafiee, S., & Sepehri, M. (2021). An investigation of Iranian intermediate EFL learners' L2 motivation and attitude in a computer-assisted language learning environment. *Issues in Language Teaching*, *10*(1), 355–389. https://doi.org/10.22054/ilt.2021.62359.614

Nguyen, L. V. (2008). Computer mediated communication and foreign language education: Pedagogical features. *International Journal of Instructional Technology and Distance Learning*, *5*(12), 23–44. http://www.itdl.org/Journal/Dec_08/index.htm

Nguyen, T. T. M. (2018). Pragmatic development in the instructed context: A longitudinal investigation of L2 email requests. *Pragmatics*, *28*(2), 217–252. https://doi.org/10.1075/prag.00007.ngu

Nguyen, T. T. M., Pham, T. H., & Pham, M. T. (2012). The relative effects of explicit and implicit form-focused instruction on the development of L2 pragmatic competence. *Journal of Pragmatics*, *44*(4), 416–434. https://doi.org/10.1016/j.pragma.2012.01.003

Noor, A., Waheed, A., Gull, N., Khattak, A., Rehman, S. U., & Noor, A. (2025). Speech acts and politeness strategies in online communication: A Pragmatic

analysis of social media interaction; A review study. *Journal of Applied Linguistics and TESOL (JALT)*, *8*(1), 641–646.

Pallant, J. (2011). *SPSS survival manual: A step by step guide to data analysis using the SPSS program* (4th ed.). Allen & Unwin, Berkshire.

Palmer, D. S. (2010). *Second language pragmatic socialization in World of Warcraft*. University of California, Davis.

Plonsky, L. & Ziegler, N. (2016). The CALL-SLA interface: Insights from a second-order synthesis. *Language Learning & Technology*, *20*(2), 17–37. https://doi.org/10.64152/10125/44459

Poehner, M. E., & Swain, M. (2017). L2 development as cognitive-emotive process. *Language and Sociocultural Theory*, *3*(2), 219–241. https://doi.org/10.1558/lst.v3i2.32922

Plonsky, L., & Zhuang, J. (2019). A meta-analysis of L2 pragmatics instruction. In N. Taguchi (Ed.), *The Routledge handbook of second language acquisition and pragmatics* (pp. 287–307). Routledge. https://doi.org/10.1093/applin/amac055

Reid, D. J., & Reid, F. J. (2007). Text or talk? Social anxiety, loneliness, and divergent preferences for cell phone use. *CyberPsychology & Behavior*, *10*(3), 424–435. https://doi.org/10.1089/cpb.2006.9936

Reinders, H., & Wattana, S. (2015). The effects of digital game play on second language interaction. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, *5*(1), 1–21. https://doi.org/10.4018/IJCALLT.2015010101

Reinhardt, J., & Ryu, J. (2013). Using social network-mediated bridging activities to develop sociopragmatic awareness in elementary Korean. *International Journal of Computer-Assisted Language Learning and Teaching*, *3*(3), 18–33. https://doi.org/10.4018/ijcallt.2013070102

Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in social context*. Oxford university press.

Satar, H. M., & Özdener, N. (2008). The effects of synchronous CMC on speaking proficiency and anxiety: Text versus voice chat. *The Modern Language Journal*, *92*(4), 595–613. https://doi.org/10.1111/j.1540-4781.2008.00789.x

Schmidt, R. (2001). Attention. In R. Robinson (Ed.), *Cognition and second language instruction* (pp. 3–32). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781139524780.003

Shadiev, R., Liu, T., & Hwang, W. Y. (2020). Review of research on mobile-assisted language learning in familiar, authentic environments. *British Journal of Educational Technology*, *51*(3), 709–720. https://doi.org/10.1111/bjet.12839

Shakki, F., Naeini, J., Mazandarani, O., Derakhshan, A. (2020). Instructed second language English pragmatics in the Iranian context. *Journal of Teaching Language Skills*, *39*(1), 201–252. https://doi.org/10.22099/jtls.2020.38481.2886

Shakki, F., Neaini, J., Mazandarani, O., & Derakhshan, A. (2023). A meta-analysis on the instructed second language pragmatics for the speech acts of apology, request, and refusal in an Iranian EFL context. *Language Related Research*, *13*(6), 461–510. https://doi.org/10.52547/LRR.13.6.15

Singh, R. K. G., & Embi, M. A. (2007). Learner autonomy through computer mediated communication (CMC). *Jurnal Teknologi (Sciences & Engineering)*, 99â–112. https://doi.org/10.11113/jt.v46.311

Sykes, J. (2005). Synchronous CMC and pragmatic development. *CALICO Journal*, *22*(3), 399–431. https://doi.org/10.1558/cj.v22i3.399-431

Sydorenko, T., Daurio, P., & L. Thorne, S. (2018). Refining pragmatically-appropriate oral communication via computer-simulated conversations. *Computer Assisted Language Learning*, *31*(1-2), 157–180. https://doi.org/10.1080/09588221.2017.1394326

Sykes, J. M. (2013). Synchronous CMC and pragmatic development: Effects of oral and written chat. *CALICO Journal*, *22*(3), 399–431. https://doi.org/10.1558/cj.v22i3.399-431

Tabatabaei, O., & Heidari Goojani, A. (2012). The impact of text-messaging on vocabulary learning of Iranian EFL learners. *Cross-Cultural Communication*, *8*(2), 47–55. https://doi.org/10.4995/eurocall.2011.16271

Taguchi, N. (2006). Analysis of appropriateness in a speech act of request in L2 English. *Pragmatics*, *16*(1), 513–533. https://doi.org/10.1075/prag.16.4.05tag

Taguchi, N. (2009). Comprehension of indirect opinions and refusals in L2 Japanese. In N. Taguchi (Ed.), *Pragmatic competence* (pp. 249–274). New York, NY: Mouton de Gruyter. https://doi.org/10.1515/9783110218558.249

Taguchi, N. (2015). Instructed pragmatics at a glance: Where instructional studies were, are, and should be going. *Language Teaching*, 48, 1–50. https://doi.org/10.1017/S0261444814000263

Taguchi, N. (2024). Technology-enhanced language learning and pragmatics: Insights from digital game-based pragmatics instruction. *Language Teaching*, *57*(1), 57–67. https://doi.org/10.1017/S0261444823000101

Taguchi, N., & Kim, Y. (2016). Collaborative dialogue in learning pragmatics: Pragmatic-related episodes as an opportunity for learning request-making. *Applied Linguistics*, *37*(3), 416–437. https://doi.org/10.1093/applin/amu039

Taguchi, N., & Roever, C. (2017). *Second language pragmatics*. Oxford University Press.

Taguchi, N., & Sykes, J. M. (2013). *Technology in interlanguage pragmatics research and teaching*. Philadelphia, PA: John Benjamins.

Tajeddin, Z., & Bagherkazemi, M. (2014). Short-term and long-term impacts of individual and collaborative pragmatic output on speech act production. *Teaching English Language*, *8*(1), 141–166. https://doi.org/10.22132/tel.2014.54568

Takahashi, S. (2010). The effect of pragmatic instruction on speech act performance. In A. MartinezFlor & E. Uso-Juan (Eds.), *Speech act performance. Theoretical, empirical and methodological issues* (pp.126–142). Amsterdam: John Benjamins Publishing Company. https://doi.org/10.1075/lllt.26.08tak

Tateyama, Y. (2019). Pragmatics in a language classroom. In N. Taguchi (Ed.), *Routledge handbook of second language acquisition and pragmatics* (pp. 400–412). Routledge. https://doi.org/10.4324/9781351164085

Thurlow, C., & Poff, M. (2013). Emoji, emoticons, and the paralinguistics of digital communication. In Herring, S. C., Stein, D., & T. Virtanen (Eds.), *Pragmatics of Computer-Mediated Communication* (pp. 159–177). Mouton de Gruyter.

Timpe-Laughlin, V., & Dombi, J. (2020). Exploring L2 learners' request behavior in a multi-turn conversation with a fully automated agent. *Intercultural Pragmatics*, *17*(2), 221–257. https://doi.org/10.1515/ip-2020-0010

Vygotsky, L. S. (1978). *Mind and society: The development of higher mental processes.* New York: Plennum.

Wang, H., & Crosthwaite, P. (2021). The affordances of WeChat voice messaging for Chinese EFL learners during private tutoring. *Computer Assisted Language Learning*, *22*(1), 223–245. https://callej.org/index.php/journal/article/view/329

Wang, L. (2022). Effects of regulation on interaction pattern in web-based collaborative writing activity. *Computer Assisted Language Learning*, *35*(1/2), 1–35. https://doi.org/10.1080/09588221.2019.1667831

Wang, Y., Cao, Y., Gong, S., Wang, Z., Li, N., & Ai, L. (2022). Interaction and learning engagement in online learning: The mediating roles of online learning self-efficacy and academic emotions. *Learning and Individual Differences*, 94, 102128. https://doi.org/10.1016/j.lindif.2022.102128

Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language Teaching, 31*, 57–71. https://doi.org/10.1017/S0261444800012970

Wertsch, J. V., & Stone, C. A. (1999). The concept of internalization in Vygotsky's account of the genesis of higher mental functions. *Lev Vygotsky: Critical assessments*, *1*, 363–380.

Wu, H., & Cai, Z. G. (2024). Speaker effects in spoken language comprehension. *arXiv preprint arXiv:2412.07238*. https://doi.org/10.48550/arXiv.2412.07238

Yamashita, S. O. (1996). *Comparing six cross-cultural pragmatics measures*. Temple University.

Yeh, E., & Swinehart, N. (2019). Testing the waters: Developing interlanguage pragmatics through exploration, experimentation, and participation in online communities. *CALICO Journal*, *37*(1), 66–84. https://doi.org/10.1558/cj.38529

Yousefi, M., & Nassaji, H. (2019). A meta-analysis of the effects of instruction and corrective feedback on L2 pragmatics and the role of moderator variables: Face-to-face vs. computer-mediated instruction. *ITL-International Journal of Applied Linguistics*, *170*(2), 277–308. https://doi.org/10.1075/itl.19012.you

Yus, F. (2016). Towards a cyberpragmatics of mobile instant messaging. In J. Romero-Trillo (Ed.), *Yearbook of Corpus Linguistics and Pragmatics 2016: Global Implications for Society and Education in the Networked Age* (pp. 7–

26). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-41733-2_2

Zain, D. S. M., & Bowles, F. A. (2021). Mobile-assisted language learning (MALL) for higher education instructional practices in EFL/ESL contexts: A recent review of literature. *Computer-Assisted Language Learning Electronic Journal*, *22*(1), 283–307. https://old.callej.org/journal/22-1/Zain-Bowles2021.pdf

Zhang, Y. (2025). The influence of game-enhanced communication on EFL learners' pragmatic competence in compliment responses. *Applied Linguistics*, *46*(1), 110–127. https://doi.org/10.1093/applin/amad082

Ziafar, M. (2020). The influence of explicit, implicit, and contrastive lexical approaches on pragmatic competence: The case of Iranian EFL learners. *International Review of Applied Linguistics in Language Teaching*, *58*(1), 103–131. https://doi.org/10.1515/iral-2016-0018

Appendix A
Written Discourse Completion Test (WDCT)

Apology Prompt:

You are out shopping. Your sick father calls from home and asks you to buy him some tablets on your way back. When you get home, you realize you have forgotten to get him the tablets and the drugstore is now closed. What would you say to apologize?

You say: ……

Request Prompt:

You are watching a football game. Your brother, who is about the same age as you, comes and stands just in front of you blocking your view. You want to ask him not to block your view. What would you say?

You say: ……

Appendix B
Semi-structured Interview

1. Do you think you benefited from instruction in making apologies in English? Why or why not? Please state your reasons.
2. Do you think you benefited from instruction in making requests in English? Why or why not? Please state your reasons.
3. Do you think the teaching materials were suitable? Why or why not? Please state your reasons.
4. During instruction, what difficulties did you encounter? Please state your reasons.
5. What are your suggestions for more practical instruction of speech acts?