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# L2 Learners' Pragmatic Output in a Face-To-Face Vs. a Computer-Guided Role-Play Task: Implications For TBLT

Veronika Timpe-Laughlin  
*Educational Testing Service*

Judit Dombi  
*University of Pécs*

Tetyana Sydorenko  
*Portland State University, tsydorenko@pdx.edu*

Shoko Sasayama  
*Waseda University*

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**L2 learners' pragmatic output in a face-to-face *versus* a computer-guided role-play task:  
Implications for TBLT**

Veronika Timpe-Laughlin (corresponding author)

Judit Dombi

Tanya Sydorenko

Shoko Sasayama

### **Abstract**

Accomplishing oral interactive workplace tasks requires various language abilities, including pragmatics (Taguchi & Kim, 2018). While *technology-mediated* tasks are thought to offer various possibilities for teaching and assessing L2 pragmatics (González Lloret & Ortega, 2014), their effectiveness—especially those facilitated by an AI-agent—remains to be explored (Blyth & Sykes, 2020). This study investigated how 47 tertiary-level ESL learners performed on an oral interactive task that required them to make requests to their boss in two distinct modalities. Each participant completed the same task with a fully automated AI-agent and with a human interlocutor in a face-to-face format. Findings showed that both modalities elicited language use relevant to the pragmatics target. However, fully automated interactions were found to be more transactional, while face-to-face interactions were more functionally oriented (e.g., more frequent/varied supportive moves). Although fully automated interactive tasks may be useful for eliciting requests, replicating human-to-human interactions remains a challenge.

*Keywords: modality, Spoken Dialogue System, requests, technology*

## **Introduction**

Workplace interaction is a critical target task domain for many L2 learners (Long, 2015), and accomplishing oral interactive workplace tasks requires various language abilities, including pragmatics (Taguchi & Kim, 2018). Pedagogic tasks that emphasize spoken interaction may provide the optimal instructional vehicle for developing the pragmatic abilities required for such tasks (Doughty & Long, 2003). While TBLT research underscores the benefits of face-to-face interaction (Pica, 2005), there is increasing interest in exploring technology-mediated interactive tasks (González-Lloret & Ortega, 2014). Especially for L2 pragmatics instruction, technology-mediated interactive tasks, in particular those facilitated by a fully automated AI-agent, could provide a solution to a known challenge: the need to find different target language interlocutors with whom learners can interact. Recent improvements in speech recognition and spoken dialogue system (SDS) infrastructure have led to the development of interactive, conversation-based systems that can be programmed to assume the role of different interlocutors (Timpe-Laughlin et al., 2017). However, there may be important differences between technology-mediated and face-to-face interactions, leaving open the question of whether technology-mediated interactive tasks—in particular those facilitated by an AI-agent—are effective for teaching and assessing L2 pragmatics (Blyth & Sykes, 2020).

## **Literature review**

### ***Workplace Interaction in English***

With the increasing globalization of many industries worldwide, the ability to communicate effectively in English has taken on heightened importance in the workplace domain (Nickerson, 2005). Correspondingly, workplace communication is seen increasingly as a

critical “target task” domain (Long, 2015) for many second or foreign language (L2) speakers of English. Previous work on needs analysis for business professionals has revealed that many of the task types that they need to be able to do at work are inherently *interactive* in nature (e.g., Cowling, 2007; Kassim & Ali, 2010), including tasks like communicating with colleagues, facilitating meetings, engaging in business negotiations, and so on. To be able to handle these interactive tasks at work, L2 speakers are required to appropriately map form, function, and context and use the language for a variety of communication purposes—which is central to pragmatic competence (for a complete discussion of the construct of pragmatic competence see Timpe-Laughlin et al., 2015). In other words, interacting effectively with colleagues and clients in English, drawing in particular on pragmatic abilities, is critical to many tasks that typify workplace communication of successful business professionals (Taguchi & Kim, 2018; Timpe-Laughlin, 2019).

However, accomplishing real-life interactive workplace tasks while employing pragmatic phenomena felicitously relative to consistently evolving, co-constructed situational dynamics can be quite challenging, especially for L2 speakers of English (Derwing et al., 2021; Holmes, 2000; Taguchi & Roever, 2017). Clyne (1994) and Holmes (2000), for example, investigated the discourse at different workplaces in Australia and New Zealand, respectively, finding that employers believed that migrant workers had sufficient (English language) skills to accomplish job-related tasks, but that “they seem unfriendly or uncomfortable at work” (Holmes, 2000, p. 126). This observation is underscored by Clyne (1994) who found that generally “intercultural communication breakdown occurs at the discourse and pragmatic levels” (p. 211). Given the centrality of pragmatic competence in accomplishing interactive work tasks and the challenges it can present to L2 speakers (see also Bardovi-Harlig & Harford, 2005 for empirical studies on

institutional discourse), it is key to address aspects of (discursive) pragmatics in English language instruction (González-Lloret, 2019).

### ***Task-based Pragmatics Teaching (TBPT)***

Among different instructional approaches, task-based language teaching (TBLT) has been identified as a particularly fitting framework to design effective learning environments for discursive pragmatics (González-Lloret & Ortega, 2018; Taguchi & Kim, 2018). The basic premise underlying TBLT is to teach interaction through interaction (Long, 1996; 2015), that is, to teach a given real-world task by means of allowing L2 learners to engage in “goal-oriented, meaning-oriented activities that reflect real-world language use” (Taguchi & Kim, 2018, p. 14). By engaging in pedagogic tasks, that is, the activities and materials that are designed by instructors relative to a given real-world target task (Long, 2015; Nunan, 2010), students can employ their L2 resources, including pragmatic abilities. In that regard, interaction constitutes “the main locus of pragmatics development, a focus that aligns well with the interactive nature of typical pedagogic tasks in TBLT” (González-Lloret & Ortega, 2018, p. 193). Given that the pragmatic phenomena are emerging in the interaction that is elicited by a certain pedagogic task, it is critical to review the interactive output to ensure the target pragmatic phenomena are indeed produced and practiced. However, in their methodological review of task-based studies, Plonsky and Kim (2016) found that out of 85 interactionist studies, the majority focused on analyzing grammar, vocabulary, and different features of L2 interaction. Only 6% of the studies focused on pragmatics, leaving pragmatic phenomena in task-based interactions almost entirely unexplored (see also Taguchi & Kim, 2018), an unfortunate gap as these analyses would provide valuable information that can aid language instructors in their efforts to select, sequence, and implement appropriate pedagogic tasks for TBPT in their instructional contexts.

### ***Task design and sequencing in TBPT***

Among a handful of approaches to the issue of task design and sequencing in L2 curriculum development (e.g., Ellis, 2003; Prahbu, 1987; Skehan, 1998), Long and Crookes' (1992) proposal and Robinson's (2010) SSARC (stabilize, simplify, automatize, restructure, and complexify) model may be particularly helpful in thinking about this issue in TBPT. Long and Crookes argued that pedagogic tasks should be sequenced from simple to complex, so they increasingly approximate the real-world target tasks that are often complicated and attention-consuming. Similarly, in his SSARC model, Robinson proposed that in order to support L2 learners' interlanguage development, tasks should be sequenced from simple to complex in their cognitive complexity levels. Robinson (2001) argued that the cognitive complexity of a given task can be manipulated by changing its inherent design characteristics along two dimensions: (a) resource-directing and (b) resource-dispersing. Some examples of the resource-directing features include the number of elements involved in a task and reasoning demands. The larger the number of elements and the greater the reasoning demands, the more cognitively complex the task is theorized to be, and the more attention is proposed to be *directed* to the language required to deal with the increased number of elements and reasoning demands. On the other hand, resource-dispersing features are theorized to *disperse* learners' attention from form when a task is made more complex along this dimension. For example, a task that learners are not familiar with (thus more complex) prevents them from focusing their attention on language use as they have to deal with other non-linguistic issues, such as figuring out the procedures of the task or dealing with new task instructions.

There have not been many studies that attempted to apply these ideas from the Cognition Hypothesis to the design (or sequencing) of pragmatics tasks (Sasayama et al., in preparation), except for a small handful of studies (e.g., Gilabert & Barón, 2018; Taguchi, 2007). Taguchi (2007), for example, designed two role-play tasks with varying degrees of cognitive complexity (which she refers to as task difficulty). In the simpler version of the task, the interlocutors had equal power relationships, they were socially close, and the degree of imposition to be made was low; in the more complex version, the interlocutor was someone who was higher in position, was socially more distant, and the degree of imposition was higher. Through expert judgments, Taguchi verified that the designed-to-be simpler task was less difficult than the designed-to-be more complex task, suggesting that from the pragmatics perspective, having to deal with a situation that requires more extensive face management makes a task cognitively more complex (for a discussion of ‘face’ see Brown & Levinson, 1987). Based on this and other similar studies, a task that requires learners to manage and negotiate face, using appropriate pragmatic moves for its successful completion, seems to pose higher cognitive complexity than a task that does not impose such pragmatic requirements on L2 learners. A meaningful sequencing of tasks for effective learning then may be to start with a task that does not require extensive face management or negotiation and gradually add selected components of pragmatic complexity in order to scaffold their learning.

### ***Face-to-face versus Technology-Mediated Interaction***

While most modality research at the intersection of pragmatics and TBLT has focused on comparisons between written versus oral task modalities (Reagan & Payant, 2018; Tang, 2019; 2020), more recent studies have compared face-to-face (F2F) with technology-mediated task implementations, especially those facilitated by an AI agent, to investigate how interlocutors and



the medium of communication affect what gets elicited during oral interaction (Ockey & Chukharev-Hudilainen, 2021; Timpe-Laughlin et al., 2022). Ockey and Chukharev-Hudilainen (2021), for example, compared how 40 L2 students interacted in a human-human versus human-SDS format via a discussion task. Ratings of four human judges were used to compare the outcome. While human ratings were similar on fluency, pronunciation, grammar, and vocabulary for the two conditions, interactional competence received higher ratings in the human-human condition. Along similar lines, Timpe-Laughlin et al. (2022) investigated L2 learners' output in an F2F versus fully automated role-play task. In a crossed design study, they administered the same role-play task in two different modalities (with a human interlocutor and a fully automated AI agent) to a group of 47 tertiary-level learners of English. They found that the output across both task modalities relative to linguistic features such as fluency, lexical variety, and syntactic complexity was comparable, but noted differences in the functional language, especially the quality and directness of requests, produced across the two modalities. However, neither of these studies provided a detailed account of pragmatic phenomena, in particular requests, elicited by different task implementation conditions. This lack of investigations that compare F2F and technology-mediated task implementations relative to pragmatics warrants additional research—a step that will be taken in this study.

### **This study**

Revisiting the performance data from Timpe-Laughlin et al. (2022), we aim to investigate L2 learners' pragmalinguistic choices when making requests in two different task formats. We hypothesize that there will be a difference in the use of request behavior (i.e., the focus of this task) for three reasons. First, as reviewed above, previous research has found differences in transactional and relational language use between modalities (e.g., Ockey & Chukharev-Hudilainen, 2021; see Brown & Yule, 1983 for a discussion on transactional and relational

language). Second, Timpe-Laughlin and Dombi (2020) found L2 learners issued mainly direct requests when interacting with SDS and used more internal request modifications than studies that featured face-to-face interactions had previously reported. Third, the spoken dialogue system (SDS) underlying our automated version of the task uses regular expressions to identify participants' requests, that is, it matches participants' output against a list of pre-determined semantic tokens in the automated speech recognition (ASR). Given the large linguistic variability of more indirect requests such as hints or external request modifications, the ASR may struggle with comprehension which may impact users' pragmalinguistic choices.

To investigate potential differences, we set out to answer the following research question: Is L2 learners' request-making behavior (i.e., frequency and types of requests) the same when a role-play task is carried out with a human interlocutor versus an AI agent?

## **Methodology**

### **Participants**

We revisited the oral performances elicited from 47 tertiary-level L2 English speakers (27 males, 19 females, 1 other) who engaged in the pedagogic task in the two modalities. Participants were on average 23 years old, ranging from 19 to 30 years, and had various first languages, including Mandarin Chinese ( $n=23$ ), Japanese ( $n=12$ ), Thai ( $n=4$ ), French ( $n=3$ ), and Other ( $n=5$ ). Based on their class levels in their university's Intensive English Language Program (IELP), participants' English language proficiency ranged from A2 to C1 on the Common European Framework of Reference (CEFR; see Table 1).

**Table 1***Number of Participants per Class Level at the University's IELP*

	IELP class level						Graduated from IELP (C1 and beyond)
	2 (A2)	3 (B1+)	3&4	4 (B2)	4&5	5 (B2+)	
Number of participants	1	3	4*	6	2*	22	9

\**Note.* Participants who took classes at two levels such as a level 3 speaking and a level 4 reading course.

### ***The Pedagogic Task***

In determining a pedagogic task to focus on in this study, we first surveyed typical needs experienced by non-native speakers of English in the workplace by looking at available needs analysis studies (e.g., Derakhshan & Shakki, 2021; Yates, 2010). Our goal here was to identify common target *task types*, rather than specific target tasks, in an effort to design pedagogic tasks that would help learners develop linguistic and pragmatic skills that can be generalized to a wide range of workplace settings (Long, 2015). One such target task type that was identified to be particularly important for the L2 workplace was making requests. This act of requesting is critical from the pragmatics point of view as well. Among different speech acts that are common in the workplace, “requests” have been seen as needing classroom intervention given its face-threatening nature of the act (Newton & Kusmierczyk, 2011). Based on these rationales, we designed a pedagogic role-play task to replicate a scenario where L2 learners would have to make requests in a workplace setting.

For participants, the goal of that oral role-play task was to make two requests to a supervisor character named Lisa Green. As shown in Figure 1, participants needed to (a) schedule a meeting with Lisa and (b) ask her to review their presentation slides prior to the meeting. The role-play task was administered in two different formats—on a computer with a fully automated AI agent (i.e., Lisa Green) as the conversation partner and in an interpersonal

face-to-face (F2F) format in which a human played the part of the supervisor (see also Timpe-Laughlin et al., 2022).

In the fully automated version, the dialogue structure, shown in Figure 2 below, was implemented in HALEF, a web-based, open-source spoken dialog system (SDS; Ramanarayanan et al., 2017). This SDS uses regular expressions to identify participants' request, matching participants' output against pre-determined semantic tokens in the automated speech recognition (ASR). For example, if the system detects the words "slide" and "presentation" or a combination of them, it interprets it as a request to Lisa to review the slides. Additionally, we built into the SDS a branching structure that allows the system to respond to the respective request(s) regardless of when in the conversation a participant makes one or both of them (for details see Timpe-Laughlin et al., 2017). If a participant does not use any of the pre-determined regular expressions such as "meet(ing)", "presentation", or "slides", the SDS deploys clarification requests such as "I am sorry I didn't get that. What can I do for you?" in order to give participants the opportunity to reword their utterances (for more information about the validity of the HALEF system see Sydorenko et al., 2019).

[insert Figure 1 here]

In the F2F version of the task, a human interlocutor (L1 English speaker) met in person with each participant and acted out the part of the supervisor. Prior to engaging with students, the human interlocutor underwent a three-hour training to follow the same script and interaction patterns programmed into the SDS task. The training was particularly geared toward ensuring to the extent possible the automaticity as well as the accuracy of response patterns (see also Timpe-Laughlin et al., 2022). However, as will be evident in results, the human interlocutor at times diverted from the script.

[insert Figure 2 here]

### **Procedures**

In a counter-balanced design, the 47 participants engaged with the task in two modalities. 24 participants completed the in-person F2F version first and then the SDS version, whereas 23 participants engaged with the SDS version first. On average, participants spent approximately two minutes on each task. The F2F task was conducted in a university classroom, while the SDS task was completed in a computer lab at the same university. There was approximately a week between participants' engagements with the task in the respective modalities. All task performances were audio-recorded by means of the computer (in the case of the SDS task version) and a hand-held audio recording device in the case of the F2F-administered task. Then all recordings were transcribed verbatim (see Timpe-Laughlin et al., 2022).

## **Analysis**

While Timpe-Laughlin et al. (2022) focused their analysis at the turn or utterance level, in this paper we combined an utterance level approach with a discursive pragmatic approach which examined how each interaction unfolds over multiple turns. The rationale for expanding the utterance level approach and complementing it with a discursive approach was two-fold. First, Kecskés (2017) pointed out that “intercultural interactions may require not only a bottom-up, sequential utterance by utterance analysis, but also a top-down, holistic dialogue segment analysis if we want to make sure that we understand the message of interlocutors” (p.78). Second, a discursive (or a dialogue) approach is useful in the field of computational pragmatics which “focuses on the application of pragmatics to dialogue modelling, especially the development of SDS intended to interact with human beings in task-oriented scenarios” (Kecskés, 2017, p. 78; see also Bunt, 2011 & Morante et al., 2007). Given that in our study we had F2F intercultural interactions, that involve an L2 speaker engaging with an L1 English speaking interlocutor, as well as interactions with an SDS involving computer-directed speech, we found the discursive approach particularly applicable and complimentary to a quantitative analysis.

Combining a turn level analysis with a discursive analysis, two of the researchers first coded the word-level transcriptions of the oral performances for two pragmatic phenomena that were central to the completion of this task as well as for workplace interactions in terms of rapport management (Spencer-Oatey & Franklin, 2009): request head acts and external modifications. Using the coding scheme from Blum-Kulka et al. (1989), request head acts were coded for directness level and strategy use (Table 2); external modification types (Table 3) were also coded primarily following this scheme, with additional categories (discourse orientation

move & sweetener) informed by Woodfield and Economidou-Kogetsidis (2010). External modifications were coded in terms of where they appeared in the dialogue relative to the head act (i.e., in the turn prior to the head act, in the same turn as the head act, or in the turn following the head act).

**Table 2**  
*Head Act Coding for Directness and Strategy Type*

Directness	Strategy Type	Examples
Direct	mood derivable	<sup>a</sup> Please, my presentation check for you.
	explicit performative	<sup>a</sup> I'm going to give a request to meet you.
	hedged performative	<sup>a</sup> I would like to ask what time are you available to meet with me?
	locution derivable	<sup>b</sup> You'll have to move your car.
	want-statement	<sup>a</sup> I want to make appointment with you.
Conventionally indirect	suggestory formula	<sup>b</sup> How about cleaning up the kitchen.
	query preparatory	<sup>a</sup> Could I make the appointment with you?
Nonconventionally indirect	strong hint	<sup>a</sup> I think we have to review them together.
	mild hint	<sup>a</sup> I would like to give you my presentation slides before the meeting.

*Note.* External modification types are based on Blum-Kulka et al. (1989). <sup>a</sup>Examples are from our data; <sup>b</sup>examples from Blum-Kulka et al. (1989).

**Table 3**

*External Modification Types with Examples*

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	Function	Example
grounder	giving reasons, explanations	<sup>a</sup> It's really important to me so I want to meet you.
disarmer	indicating awareness of potential refusal	<sup>b</sup> I know you don't like lending out your notes, but could you make an exception this time?
preparator	checking on possible availability, preparing the hearer for the request	<sup>a</sup> Yeah. Ah, so today, I have one question.
getting precommitment	obtaining precommitment	<sup>a</sup> Actually, can you do a favor for me?
promise (of reward)	indicating the likelihood of reciprocity	<sup>b</sup> (Could you give me a lift home?) I'll pitch in on some gas...
imposition minimizer	acknowledging the imposition and trying to minimize it	<sup>a</sup> It doesn't matter the day. Today or tomorrow uh. As you find your yourself free, just let me know.
apology	showing apology for the possible imposition	<sup>a</sup> I'm so sorry to bother you
*discourse orientation move	serving orientation function to channel the discourse towards the request.	<sup>a</sup> Um I, I found a very important scene from our production.
*sweetener	flattering the interlocutor	<sup>a</sup> It's really important to me so I want to meet you.

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*Note.* External modification types are based on Blum-Kulka et al. (1989) & Woodfield & Economidou-Kogetsidis (2010; marked with an asterisk). <sup>a</sup>Examples are from our data; <sup>b</sup>examples from Blum-Kulka et al. (1989).



Following the individual codings, intercoder agreement was calculated for each coding category in both delivery formats (Table 4). Discrepancies were resolved in a subsequent consensus coding.

**Table 4**

*Intercoder Agreement for Pragmatics-Related Phenomena (Simple Agreement in %)*

	<b>SDS</b>	<b>F2F</b>
Request strategy	98.52	99.89
External modification type	95.13	97.27
Relative position of external modification	97.03	98.00

Then, frequencies were tallied and descriptive statistics calculated. Finally, representative examples of interactions from both task modalities that feature specific pragmatics-related phenomena were identified independently by two of the researchers and matches were extracted to illustrate specific discursive patterns in the dialogues.

## **Results**

In the following, we will outline the findings relative to utterance level and discourse level analyses, providing the frequency counts as well as representative extracts to further contextualize the patterns at the dialogue level.

### **Request head acts**

#### *Utterance-level analysis*

Table 5 displays the frequency counts of the request strategies participants used in both modalities. As shown, participants produced more request head acts in SDS interactions ( $n=113$ ) than in F2F conversations ( $n=94$ ). They also tended to use more direct strategies, especially

want-statements, in SDS interactions, and fewer indirect strategies, whereas this tendency was reversed in the F2F data.

**Table 5**

*Numbers and Percentages of Specific Request Strategies Used in the F2F versus SDS Task*

*Modality*

<b>Type</b>	<b>Strategy</b>	<b>F2F</b>	<b>SDS</b>
Direct	mood derivable	2 (2.2%)	3 (2.7%)
	explicit performative	1 (1.1%)	1 (.9%)
	hedged performative	0	1 (.9%)
	locution derivable	0	0
	want-statement	37 (39.3%)	59 (52.2%)
Conventionally indirect	suggestory formula	0	0
	query preparatory	50 (53.8%)	49 (43.4%)
Nonconventionally indirect	strong hint	3 (3.2%)	0
	mild hint	1 (1.1%)	0
<b>Total Head Acts</b>		<b>94 (45.2%)</b>	<b>113 (54.8%)</b>

When considering request strategies at the level of proficiency across both modalities (Figure 3), the trend seems to be that lower L2 proficiency speakers made more direct than conventionally indirect (CI) requests in both modalities. By contrast, more proficient L2 English speakers made proportionally more CI than direct requests in the F2F version, yet a similar proportion of both in SDS modality. These observations suggest that participants with a lower L2 proficiency issued mostly direct requests, a finding that is in line with previous research that has suggested that direct requests are less complex and thus easier to formulate than more indirect speech acts that require a larger repertoire of proficiency and pragmalinguistic means (Kasper & Rose, 2002). At the same time, these results suggest that higher-level participants do more face work in F2F than in SDS modality; in the SDS modality they attempt to get the task done more “efficiently” (c.f., Dombi et al., 2022).

[insert Figure 3 here]

### **Repeated Requests: Discourse-level Analysis**

As part of the discursive approach to pragmatics, we also examined repeated requests over multiple turns (i.e., requests that were repeated in the subsequent turn or were realized across multiple turns) as they were present in our data. There were 28 repeated requests in the SDS data, but only eight repeated requests in the F2F interactions. Performances elicited in SDS modality included more repeated requests because the SDS required the correct form (i.e., the predetermined regular expression) to progress to the next dialogue state. In case the SDS did not comprehend the participant, it used the clarification request “I am sorry I didn't get that. What can I do for you?”. We observed 20 instances of this type of clarification request in our data. By

means of that prompt, the SDS elicited repeated requests through repairs. This either happened because the participant failed to issue the request in a way the system would comprehend it (Ex. 1), or because of ASR issues (Ex. 2). In Excerpt 1, the participant starts vaguely with “I need to review some things with you” but upon the clarification prompt (l. 05) reformulates the request to “I need to to speak with you to to review the slides.” in their next turn, thus technically repeating the request.

Excerpt 1: Participant ID22, SDS

01 SDS: Hi, how’s it going? What can I do for you?  
02 ID22: Actually, can you do a favor for me? I need to review some things with you  
03 because I need to speak with someone about the work. (pause) Yeah, actually, I, I  
04 have uh...  
05 SDS: I am sorry I didn't get that. What can I do for you?  
06 ID22: Uh, in fact uh I need to to speak with you to to review the slides about about the  
07 next meeting. (...)

In the remaining SDS cases, repeated requests were due to miscommunication that was related to ASR rather than participants’ incorrect word choices, as shown in Excerpt 2 where a correct request is issued in its due turn (ll. 02-05). However, the system did not understand the text and asked for a repetition which ID04 provided (ll. 07-09).

Excerpt 2: Participant ID04, SDS

01 SDS: Hi, how’s it going? What can I do for you?  
02 ID04: Um, so I wanna meet with you this ti-, this week. Um, are you, do you  
03 have any free time in this week? Sorry because my schedule, um, this, um,  
04 in this week my schedule is so flexible for the rest of the week. So I, I will  
05 meet you, I can we-, meet you with you any time.  
06 SDS: I am sorry I didn't get that. What can I do for you?  
07 ID04: Uh, I will meet you. I, I wanna meet you, um, before the meeting.  
08 Because I'm, I wanna review with you my presentation slides, um, before  
09 the meeting, (pause) can I?

10 SDS: Sure, no problem. I'll review the slides as soon as you send them to me,  
11 and I'm available on Friday at 12 for a meeting. Does that work for you?

Another observation was that participants sought common ground with the SDS in that they attempted to identify mutually available linguistic knowledge and accommodated their speech to match the hypothesized competence of the computer (see Dombi et al., 2022). For instance, four participants simplified their repeated requests to be understood by the system, as in Excerpt 3 where the participant started with the conventionally indirect request "Could I make appointment with you?" but after the system misunderstood, the participant added a direct want statement "I want to meet with you." to their repeated request.

Excerpt 3: Participant ID36, SDS

01 SDS: Hi, how's it going? What can I do for you?  
02 ID36: Oh, I want to, um, I have some problem with my presentation, so could I  
03 make appointment with you someday?  
04 SDS: I am sorry I didn't get that. What can I do for you?  
05 ID36: Uh, I have some questions with my Presen presentation so could I, make  
06 appointment with you? I want to meet with you.

Additionally, in three instances in SDS modality, participants complexified their language by changing the original strategy from direct to conventionally indirect, possibly because they had a second chance to think about and formulate their request (e.g., Excerpt 4).

Excerpt 4: Participant ID39, SDS

01 SDS: Hello?  
02 ID39: Hello Lisa, this is (name). (pause) Uh how are you doing? And I'm wanting to ask  
03 you to um review my...  
04 SDS: Hi, how's it going? What can I do for you?  
05 ID39: Oh, I am doing good. How about you?  
06 SDS: I am sorry I didn't get that. What can I do for you?  
07 ID39: Oh, I'm here to ask uh if you could review my presentation slides before the  
08 meeting.

However, we also found 21 instances in our data where the very same request was repeated as in Excerpt 2 above featuring repeated want-statements. ID04 issued the request in line 02 (*I wanna meet*) and again, following the SDS' clarification prompt, in line 07 (*I wanna meet*). Hence, the non-understanding of the system did not always result in participants changing their language.

In contrast to SDS interactions, fewer instances of repeated requests were found in the F2F task format. This seemed to be the result of the interlocutor uptaking participants' formulations of request and making fewer clarification requests ( $n=14$ ), prioritizing function over form. Additionally, the clarification requests by a human interlocutor were more specific, for instance "Ah, um are you asking me to review your slides?", to which the participants typically answered "Yes/Yeah" and did not need to reformulate the request (and at times added further details, such as "I can send you the slide right now"—ID32). In Excerpt 5, the participant's hint was immediately uptaken by the human interlocutor. The participant did not ask for a meeting at all (ll. 02-04), yet the interlocutor did offer the free timeslot (l. 05) without having elicited the targeted language form (request for a meeting). By contrast, the SDS system would not have advanced further without the needed language form, that is, an either direct or indirect request for a meeting.

Excerpt 5: Participant ID22, F2F

01 Human: Just send them over.  
02 ID22: Yeah, but, uh I I think uh I think we have to review them together. It  
03 doesn't matter the day. Today or tomorrow uh. As you find your  
04 yourself free, just let me know.  
05 Human: Uh, well, I am uh available to meet on Friday at twelve o'clock. Does  
06 that sound good?

However, there were five instances of repeated requests in F2F data when the human interlocutor decided not to uptake the request by the participant but used backchanneling to elicit more nuanced language from them (see Table 6 for a frequency count of clarification requests and backchanneling in the F2F data).

**Table 6**  
*Number of repeated request elicitation types per proficiency level*

<b>Proficiency level</b>	<b>Clarification request</b>	<b>Backchanneling to elicit repeated request</b>
Lower (A2 to B1+)	4	0
Higher (B2 to C1+)	10	5

Given the results in Table 6, it is likely that the human interlocutor was not systematic in their behavior despite the training because of attempts to accommodate less proficient speakers (e.g., Filipi, 2015). This type of potential interlocutor effect is apparent when contrasting Excerpt 5 which featured ID22 who took B1 level classes with Excerpt 6 which shows an interaction with ID01 who was approximately at a B2 level based on IELP enrollment: while in Excerpt 5 the human interlocutor offered a meeting (l. 05) without being asked for one (ll. 02-04), in Excerpt 6 they continued to backchannel (ll. 05, 07 & 09) even after having elicited the direct request in line 04.

Excerpt 6: Participant ID01, F2F

01 Human: I'm good. Thanks for asking. What can I help you with?  
02 ID01: Yeah. Ah, so today, I have one question.

03 Human: Yes.  
 04 ID01: So I want to meet you someday.  
 05 Human: Mm-hmm.  
 06 ID01: So I want to, I want to your schedule...  
 07 Human: Mm-hmm.  
 08 ID01: ...so to meet.  
 09 Human: Okay.  
 10 ID01: So what time will you work for you?  
 11 Human: Um, I'm available on Friday at twelve o'clock. Is that okay with you?  
 12 ID01: Friday twelve o'clock? Uh, it's okay so I want to meet you at twelve  
 13 o'clock.

To summarize, the results show that the SDS is more systematic in eliciting pre-programmed request formulae at the utterance level. By contrast, the human interlocutor in the F2F interactions may recognize illocutionary intent even if the phrase did not contain a direct or conventionally indirect request.

### **External Modifications**

#### *Utterance-level analysis*

As part of our discursive investigation, we also analyzed supportive moves, that is, external modifications. According to Blum-Kulka (2005 [1992]), external modifiers are by definition “other-oriented, deference-indicating devices” (p. 267). Looking at the use of external modifiers relative to elicitation modes (Table 7), the analysis showed that requests in F2F interactions were more often modified by external supportive moves than requests issued to the automated agent, an indication that the communication partner affected participants’ choice of supportive moves.

**Table 7**

*Numbers and Percentages of External Modifications by Type Across Task Modality*

<b>Type</b>	<b>F2F</b>	<b>SDS</b>
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grounder	20 (28.2%)	16 (29.1%)
disarmer	0 (0%)	0 (0%)
preparator	16 (22.5%)	13 (23.6%)
getting precommitment	0	1 (1.8%)
promise (of reward)	0	0
imposition minimizer	17 (23.9%)	18 (32.7%)
apology	1 (1.4%)	1 (1.8%)
discourse orientation move	15 (21.1%)	6 (10.9%)
sweetener	2 (2.8%)	0 (0%)
<hr/>		
Total Modifications	71 (56.3%)	55 (43.7%)

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The results show that the frequency of the total number of external modifications was higher in the F2F data than in the output elicited via SDS. As for individual types, discourse orientation moves were twice as frequent in F2F data, whereas imposition minimizers tended to

be more often employed in SDS interactions. Additionally, sweeteners (e.g., *You are so nice.*) are present in F2F data, but not in the SDS interactions, a further indication that participants might have been more concerned about face needs in personal communication than in SDS conversations.

When looking at external modifications by modality and proficiency, we found that none of the participants in the lower proficiency group made more than two external modifications per dialogue. However, several participants in the higher proficiency group made more than two (and up to 5) external modifications per dialogue, a finding that is again in line with previous research about the interconnectedness of proficiency and learners' ability to express pragmatic-related aspects (Kasper & Rose, 2002). As shown in Table 8, this observation applies to both, F2F and the SDS modalities.

**Table 8**  
*Number of external modifications per modality and proficiency*

Number of external modifications per dialogue	F2F		SDS	
	Lower proficiency	Higher proficiency	Lower proficiency	Higher proficiency
	(A2 to B1+)	(B2 to C1+)	(A2 to B1+)	(B2 to C1+)
	<i>n=8</i>	<i>n=39</i>	<i>n=8</i>	<i>n=39</i>
Zero	3	9	4	14
One or two	5	19	4	17
Three or more	0	11	0	8

### *Discourse-level analysis*

Færch and Kasper (1989) pointed out that in conversations supportive moves often assume their own turns in the discourse structure, by either preceding, following, or, in the case of multiple supportive moves, enclosing the request head act. In our data, external request modifications were either realized within one turn (see Ex. 7 with imposition minimizer “Are you able to meet with me”) or spanned over multiple turns in the dialogues (see Ex. 8).

#### Excerpt 7: Participant ID24, SDS

01 ID24: Hi boss. This is (ID24). I have a question about the next presentation this  
02 afternoon. And I want to check with you the presentation slides. Are you able to  
03 meet with me?

#### Excerpt 8: Participant ID09, F2F

01 Human: Hi.  
02 ID09: Hi, my name is (ID09). Uh, *I want to talk something with you*. Is okay?  
(preparator)  
03 Human: Sure.  
04 ID09: *You have free time?* (preparator)  
05 Human: Yeah. Yeah. Sure.  
06 ID09: Yeah, yeah. *Uh in the meeting I will have the presentation. It's really*  
07 *important to me so I want to meet you. Yeah, do you have free time?*  
(discourse orientation move; grounder; imposition minimizer)  
08 Human: Uh yeah. I'm free at twelve on Friday.  
09 ID09: Yeah. I have so many free time so it's okay for me. That's work.

A closer analysis of the dialogue structure revealed that one of the reasons for fewer and longer turns in the SDS than in the F2F modality (see also Timpe-Laughlin, et al., 2022) is the distribution of supportive moves. As shown in Table 9, in SDS external modifications mostly

occur in the same turn, whereas in F2F they are more spread out over various turns. A closer look at the data at a discourse level reveals some possible combinations of supportive moves, most typically a grounder and one or more different moves. As Excerpt 8 shows, Participant ID09 uses several supportive moves over various turns (e.g., Is OK? You have free time?) to soften the imposition generated by the very direct want-statement.

**Table 9**  
*Location of External Modifications Across Turns*

Category	F2F	SDS
Same turn as the head act	33	43
Prior turn	14	5
Subsequent turn	14	0

Given that the ASR underlying the SDS focuses on certain pre-determined semantic tokens, supportive moves are often not understood by the system, as can be seen in Excerpt 9. While in the first turn Participant ID22 attempts to get pre-commitment via “Can you do a favor for me?” (l. 02), the next turn, after the SDS issued a clarification request, does not contain any external modifications (ll. 06-08).

Excerpt 9: Participant ID22, SDS

01 SDS: Hi, how’s it going? What can I do for you?  
 02 ID22: Actually, can you do a favor for me? I need to review some things with  
 03 you because I need to speak with someone about the work. (pause)  
 04 Yeah, actually, I, I have uh...  
 05 SDS: I am sorry I didn't get that. What can I do for you?  
 06 ID22: Uh, in fact uh I need to to speak with you to to review the slides about  
 07 about the next meeting. So I need, I really, really need your help in this  
 08 situation.

Finally, Excerpt 10 shows that smooth interactions in F2F were characterized by participants' effective use of multiple supportive moves. Participant ID28, for example, invested efforts in grounding the task, whereas Participant ID09 (Ex. 8 above) repeatedly checked on the availability of the addressee to support the very direct want statements issued in two different turns (ll. 02 & 07). Thus, our data revealed that external modifications served various functions, among others, orientational function, building common ground (Ex. 10; ll. 02, 04-05 & 07), as well as mitigation, rapport management, and the negotiation of harmonious social relationships (Ex. 8; ll. 02, 04 and 07), which occurred primarily in F2F.

Excerpt 10: Participant ID28, F2F

01 Human: Yes, nice to meet you.  
02 ID28: Um I, I found a very important scene from our production. (discourse orientation move)  
03 Mm-hmm.  
04 ID28: So, I feel maybe we can meeting this week, uh, so I can uh talk  
05 to you what happened. (request and grounder)  
06 Human: Uh-huh. Sure.  
07 ID28: And, uh, and maybe we can talk about uh how to solve that  
08 problem. (grounder)

Additionally, in the F2F modality, 19 participants made up stories or additional details (i.e., 23 times) beyond the description of the task, to which the human interlocutor was able to respond adequately, and which likely added to the authenticity of the task and more engagement (e.g., Participant ID28: "I found a very important scene from our production"). Such creativity was less frequent in the SDS task format, likely because participants knew that the SDS technology would not be able to handle their creative responses that go beyond task description. During the 10 instances when participants tried to be "creative" in the SDS task, the system would not

understand them. For example, when Participant ID9 said “So, um, can you send me, aah, another message about the time and the location we will meet? [pause] hello?” Lisa Green responded with “I am sorry I didn't get that. What else can I do for you?” A related paper (Dombi et al., 2022) shows that many participants are aware, or realize during the interaction, that conversations with the SDS cannot take the same form as those in real life due to the current state of the Natural Language Processing (NLP) component.

### **Discussion**

The goal of this study was to explore if L2 learners’ oral request-making behavior is comparable when a role-play task is carried out with a human interlocutor vis-à-vis an AI agent. Although requests elicited in the SDS and F2F formats were largely comparable at the utterance level with some distinctions in the level of directness (see also Timpe-Laughlin et al., 2022), an in-depth discursive analysis of request behavior revealed considerable differences in the discourse structures of the dialogues elicited in these two modes. For example, in SDS performances participants tended to use more direct strategies, in particular want-statements, and fewer indirect strategies than in F2F conversations, a tendency that was reversed in the F2F data. There may be various reasons for this finding. First, this observation could be related to politeness: in face-to-face interactions participants use conventionally indirect strategies to appeal to the addressee's negative face (Brown & Levinson, 1987) to minimize imposition. However, in SDS interactions participants seem to be less concerned about issues of politeness, opting for illocutionary more transparent direct requests, mostly want-statements (see also Timpe-Laughlin & Dombi, 2020). This may also be the reason why non-conventionally indirect requests, that is, hints, were not observed in the SDS data, while there were four hints in the F2F

data. Hints are very difficult to interpret for automated agents, given that the speakers' illocutionary intent is not apparent from the locution and requires more inferencing from the hearer. This can usually be done by human interlocutors but is difficult for automated agents (Timpe-Laughlin & Dombi, 2020). It is possible that participants were aware of the limitation of the technology due to prior experiences with automated agents—an aspect that could be investigated further in future research.

Also, it is possible that participants' previous experiences with ASR might have influenced their selection of request strategies and decision to refrain from supportive moves. Human-machine interactions have been found to differ from human-human interaction (e.g., Herberg et al., 2008), particularly in terms of the social aspects of the interaction. For instance, as shown in Excerpt 3, some participants started with a conventionally indirect request realization (*Could I*) but may have assumed that the SDS is not understanding it after a communication failure, thus changing to a more direct request strategy (*I want*). However, research on how humans conceptualize their machine interlocutors is controversial (e.g., Mou & Xu, 2017) and reflects individual differences that need to be investigated in further studies (Dombi et al., 2022). For example, future research could employ stimulated recall interviews to explore why the same participants may use different request strategies with a human interlocutor versus an automated agent—a limitation of our study. Also, studies could examine to what extent previous experience with ASR impacts pragmalinguistic choices and to what extent learners really perceive the automated agent as their supervisor and how that might impact their understanding of the sociopragmatic needs.

Second, we found that requests were made primarily at the turn or utterance level in interactions with the AI agent, whereas they often spanned over multiple turns in the F2F

interactions, including external modifications that help mitigate the imposition of the requests. First and foremost, this finding further highlights the importance of a discursive approach to investigating pragmatics in interaction. That is, had requests been analyzed at the utterance level only, a number of supportive moves that have been shown to contribute to the appropriateness of requests would have remained undetected in the F2F data. Studies in interlanguage pragmatics, as well as this study, have shown that learners with lower levels of proficiency often opt for more direct requests (e.g., Ellis, 1992; Félix-Brasdefer, 2007; Kasper & Rose, 2002) which they combine with external request modification (Blum-Kulka & Olshtain, 1984; Economidou-Kogetsidis, 2008; Færch & Kasper, 1989). A possible reason behind this combined strategy is a perceived need for higher illocutionary transparency that learners feel can be achieved through direct requests, and at the same time a desire to mitigate the face threat inherent in requesting. Also, research on intercultural communication (e.g., House, 2002; Kecskés, 2007) has demonstrated that interactants tend to be creative at the discourse level rather than at the utterance level, a behavior we found in our data as well (see, e.g., Ex. 10).

To summarize, the results show that the SDS is more systematic in eliciting pragmalinguistic formulae at the utterance or turn level, but that language tends to be more transactional in the dialogues with an AI-agent compared to interactions with a human. That is, the SDS interactions did not yield the same level of social language use and employment of pragmatic phenomena across the dialogues as the interactions with a human interlocutor in a F2F setting. Conventionally indirect requests are more frequent in the F2F data, while direct requests are more characteristic in SDS interactions. As the application of request strategies is influenced by speakers' judgment of the social distance as well as of the degree of imposition of the request, it appears that participants perceived the SDS task as a communicative setting that requires less



facework. This finding is further strengthened by the larger number of mitigating supportive moves in F2F tasks, which are also meant to compensate for the inherently imposing and face-threatening nature of requests (Blum-Kulka et al., 1989; Hassal, 2001).

Hence, these observations highlight that politeness and facework seem to be more important in F2F tasks than in an SDS context. For instance, the level of directness employed by participants in the two task formats varied, showing that the presence of a human interlocutor does contribute to participants' facework in that they tend to use strategies and supportive moves that appear of less threat to their interlocutors' negative face—a face-threat inherent in requesting (see Taguchi, 2021 for a similar finding). In this regard, the F2F format seems to be a more appropriate platform for pedagogical tasks to practice pragmatic phenomena, including rapport management, at the discourse level. However, a limitation of our study was that the English proficiency of the participants was on average relatively high. Future research may want to include a larger number of speakers with a broad range of proficiencies, and, in particular, lower proficiency speakers of English.

These findings have several implications for task-based pragmatics teaching and assessment. The current study demonstrated the importance of carefully analyzing the language elicited during task performance by different modalities in an effort to design and sequence pedagogic tasks in TBPT curriculum development. Looking at the learner performances elicited by the SDS version of the task, it became clear that the learners perceived the task as an interaction that requires less face management and as a result, they used more direct strategies (e.g., want-statements) to make a request. While such an interaction may not be fully authentic or reminiscent of a face-to-face conversation in the real workplace, this version of the task may contribute to facilitating students' interlanguage development in several ways. The SDS version

of the task likely reduced the task's overall cognitive demands by minimizing the need to deal with complex contextual situations that require face-saving and the use of nuanced pragmalinguistic strategies (Gilabert & Barón, 2018). It can be hypothesized that this, in turn, allowed learners to use their limited attentional resources (Skehan, 1998) to get used to the task scenario and practice the basic language needed to make a request in context (e.g., pragmatic moves such as request head acts). On the other hand, the F2F version of the task provided more advanced opportunities to practice pragmatic moves, including related facework and politeness, across the entire interaction. Although this type of interaction may be more representative of real-world communication, it likely poses higher cognitive demands than does the SDS version of the task due to the need to deal with a variety of contextual requirements, including politeness, turn-taking, rapport-building, social and personal consequences, and so on. While this study was designed to compare the two task formats using a "one-shot" design and did not utilize a pretest-posttest design to measure learning over time, following Long and Crookes' (1992) proposal and Robinson's (2005, 2010) SSARC model, we suspect that a pedagogical sequencing of SDS tasks first, followed by F2F tasks may be appropriate, as has also been suggested by Sydorenko (2015). This sequencing allows for the use of the less complex version of a task (i.e., SDS version) as a type of scaffolding to help learners subsequently achieve the F2F version that is arguably more complex and closer to the real-world, target task. Additionally, a complementary activity such as comparing their performances with the SDS and in a F2F interaction could also help to raise learners' pragmatic awareness (Chan, 2017). These and other possible pedagogical implementations and sequences should be examined in future research.

With regard to assessment, both task modalities have caveats. In the F2F version, the interlocutor that guides the task may not be consistent. As our data shows, in some cases the

human interlocutor uptook participants' hints or other vague language, while in others the same interlocutor used ample backchannels to give the learner a chance to produce the expected request. For assessment purposes (classroom or otherwise), this would introduce a level of variance that would jeopardize reliability. By contrast, one of the strengths of the SDS task, in addition to mitigating the challenge of not having interlocutors to talk to in L2 classrooms, was its systematicity in eliciting requests. The interaction with the AI-agent seems to have provided a more equal (less varied) opportunity for learners to demonstrate their ability to produce requests (albeit at the utterance level) insofar as the AI agent does not accommodate learners in unsystematic ways and expects a request where the illocution is clear (i.e., whether the pre-specified regular expressions are used). In that sense, it may have some use for assessment as the SDS can elicit requests in a systematic and time-efficient way (e.g., simultaneously from all learners within a class) which can then be used for further pedagogical interventions such as awareness raising activities (Chan, 2017). However, the ASR technology is an additional variable. Participants' pronunciation, for instance, plays a role in whether they will be understood by the system or not, which would interfere with the assessment of their pragmatic ability. With further advancements of ASR systems, which are underway (e.g., Faruqui & Hakkani-Tür, 2021; Ruan et al., 2020), the AI agent may be programmed to pick up on social language use and the ASR may become more "stable" in that they will better recognize participants' requests across turns. Furthermore, more advanced SDS systems which provide incremental grounding via backchannels mid-utterance (see Visser et al. 2014) or that utilize machine learning (Khouzaimi et al., 2018) may produce different interactional patterns and therefore provide different pedagogical affordances that could be investigated in future research.

### **Concluding remarks**

In this study we investigated request-making behavior employed by L2 speakers of English who engaged with the same task in two different modalities, with a fully automated agent and in a F2F setting with a human interlocutor. Overall, the analysis has shown that the pragmatic phenomena elicited in the F2F and the fully automated contexts respectively differ considerably, thus offering different affordances for teaching, learning, and practicing pragmatics. The SDS task format elicited mainly transactional language, focusing on certain linguistic realizations. As such, it provides some value as it allows learners to practice and show their pragmalinguistic abilities at the turn level. By contrast, the F2F administered task can elicit more social language use insofar as the data showed requests and supportive moves that unfolded over various turns, as is typical in interpersonal talk-in-interaction (Taleghani-Nikazm & Huth, 2010). We found that if the human interlocutor fully engages in the interaction, the F2F task provides room for practicing not only transactional but also interactional use of language, allowing L2 speakers to produce requests and related pragmatic phenomena at the interactional level which is not quite possible with the particular SDS system we used. Hence, instructors may select the task administration format relative to the instructional goal. SDS task format may lend itself particularly well if the instructional focus is primarily on practicing request head acts—a focus that may be particularly beneficial for low-proficiency level learners. By contrast, more advanced, interactional aspects of requesting may be better practiced in the context of a F2F task administration and may particularly aid more advanced L2 pragmatics learners.

As a final note, it is noteworthy that the mode of communication in many workplaces has changed rapidly to include dramatically more technology-mediated interactions (Darics & Gatti, 2019), and this is even more the case after the COVID-19 pandemic. Technology-mediated

communication in this digital era ranges from face-to-face communication via online conferencing platforms to interactions with AI agents, synchronous communication via video or text chat to perhaps more traditional asynchronous communication like email exchanges (McEwen & Lui, 2021). Being functional in the contemporary business domain thus means not only being able to communicate with someone in person using English, but also being able to do so when communication is mediated by diverse forms of technology. While our study investigated two of the modalities, future research could expand the scope by including analyses of pragmatic performances elicited via additional modalities such as a computer-mediated (video) call with a human interlocutor, a type of communication that has increased considerably in workplace contexts. These real-world needs, in turn, emphasize the importance of teaching technology-mediated communication to L2 speakers of English (González-Lloret & Ortega, 2014) to help them expand their opportunities and increase their possibilities for success. Thus, more research is needed at the intersection of tasks, technology, and pragmatics to better understand how tasks as a vehicle of instruction can be utilized to prepare L2 learners for the various pragmatic challenges in face-to-face and technology-mediated communicative tasks of the English-medium workplace.

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