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ARTICLE

Beyond the curriculum: Extended discourse practice through self-access pragmatics simulations

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Abstract

Usage-based linguistics posits that communicative functions, including pragmatics, are at the core of language (Tomasello, 1992). It is surprising, then, that pragmatics is rarely systematically included in second language curricula (e.g., Bardovi-Harlig, 2017), especially since pragmatics instruction has been shown to significantly contribute to pragmatic development (e.g., Taguchi & Roever, 2017). Addressing this issue, the present study investigates learning outcomes and processes in self-access technology-enhanced instructional simulations for pragmatics that do not require classroom or teacher time. Importantly, these simulations include 1.) oral practice of extended discourse and 2.) feedback—two underexplored aspects of pragmatics instruction (e.g., Holden & Sykes, 2013; Sydorenko, Daurio, & Thorne, 2018).

Two versions of the self-access simulations were examined: implicit-only instruction (15 participants) and implicit combined with explicit instruction (11 participants). The quantitative analysis of learners' production data and self-reported noticing revealed that both groups were similarly able to extract relevant (but varying) pragmatics features from instruction. The qualitative analysis, however, revealed that individual learner differences may be a critical factor in the effectiveness of implicit versus explicit instruction. The present study also illustrates how time spans and competition between cognitive resources affect pragmatics learning. In sum, this research informs further development of self-access pragmatics materials.

Keywords: *Self-Access Pragmatics Instruction, Implicit vs. Explicit Instruction, Individual Differences*

Language(s) Learned in This Study: *English*

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Introduction

Usage-based linguistics posits that language is social in origin, meaning, and function, and that its structures emerge from recurrent and culturally organized forms of communicative action (Tomasello, 1992). As such, pragmatics, the conventionalized expression and comprehension of culturally normative intensions, is at the core of language use, language structure, and language learning. However, although pragmatics instruction has been shown to significantly contribute to pragmatic development (see Bardovi-Harlig, 2017, and Taguchi & Roever, 2017, for reviews), and recent research has examined how to best teach pragmatics, it remains infrequently and often unsystematically addressed in second/foreign language (L2) curricula. This suggests that supplemental materials, such as the self-access instructional pragmatics simulations discussed here, warrant investigation. To produce a paper adequate in scope, we focus on tools designed specifically for L2 education; however,

we recognize that other self-access tools for learning pragmatics (e.g., mainstream digital games; see Sykes & Dubreil, 2019) can be as valuable.

Some research has been done on educational self-access materials (see Sykes, 2016, 2018, for reviews), but only a small portion of these studies examined the oral practice of pragmatics in extended discourse contexts. While oral practice in technology-mediated environments may be challenging to design, such practice is vital for automatized and fluent production (DeKeyser, 2007; Segalowitz, 2003). To address this gap, the present study examines learning outcomes from self-access technology-enhanced pragmatics materials that include oral practice. Importantly, we focus on an even less-studied aspect of computer-assisted oral practice: extended discourse. Empirically, the study compares self-reported noticing and learning outcomes from two groups that received either implicit instruction or implicit + explicit instruction. Such a comparison is motivated by the complexity of findings on the benefits of explicit versus implicit pragmatics instruction (e.g., Taguchi, 2015). Furthermore, because pragmatics is about appropriate morphosyntactic choices in a given situation rather than correct or incorrect statements (e.g., Bardovi-Harlig, 2017), it is especially difficult to provide useful feedback on pragmatics in self-access instructional contexts. We illustrate how generalized feedback can nevertheless be provided in this environment, as well as lessons learned regarding how such feedback can be enhanced.

There are multiple dimensions to pragmatics research and instruction, but all observe the importance of cultural and situational contingency and the negotiated meaning potential of utterances. As we are focused on autonomous self-access pragmatics learning with an emphasis on the language user, we adopt Crystal's (1997) speaker-centered definition of pragmatics: "Pragmatics is the study of language from the point of view of users, especially of the choices they make, the constraints they encounter in using language in social interaction and the effects their use of language has on other participants in the act of communication" (p. 301). Due to the challenges they pose for learners of English (e.g., Bardovi-Harlig & Hartford, 1993), requests were the focus of the instructional materials analyzed here.

Literature Review

Self-Access Instruction and Oral Practice of Extended Discourse

Although systematic in-class pragmatics instruction is rare, practitioners and researchers have experimented with a variety of out-of-class contexts that may facilitate pragmatic development. Below we focus specifically on how technology-enhanced contexts provide opportunities for oral practice of multi-turn discourse. Furniss (2016) and Nguyen, Do, Nguyen, and Pham (2015) argue that oral language development and fluency of production have received little attention in the context of pragmatics, and we concur with this view. Although practice in written formats can draw learners' attention to forms more effectively (e.g., Sykes, 2005), Skill Acquisition Theory states that some language practice needs to be done orally to achieve automatization in spoken language use (DeKeyser, 2010). Importantly, some of this practice needs to occur in extended discourse contexts (e.g., Cunningham, 2016; Roever, 2011). Feedback is also recognized as an important element of self-access materials as it can increase learners' awareness of their language acquisition process (e.g., Holden & Sykes, 2013).

Very few tools are available for learners to practice extended oral discourse. Synchronous computer-mediated communication (SCMC) with learners and expert speakers is a promising approach for pragmatic development that provides ample opportunities for oral multi-turn practice and feedback (Sykes, 2016; Thorne, 2003; see Taguchi & Roever, 2017, for a review). Interaction in mainstream digital games can also be valuable (see Sykes & Dubreil, 2019, for a review). One caveat, however, is that certain types of authentic interactions (e.g., student-teacher or doctor-patient interactions) may be logistically challenging to arrange in SCMC and are not typically targeted in mainstream digital games. Educational game-informed contexts may be more suitable for targeting very specific pragmatic scenarios, such as Wik and Hjalmarsson's (2009) simulation on bargaining at a flea market. Additionally, Holden and Sykes (2013) argue that game-informed contexts are particularly conducive to the provision of just-in-time pragmatic

feedback. Unfortunately, few educational games for pragmatics are available.

Development of digital materials, such as websites on pragmatics, has been another popular route for out-of-class pragmatic practice. Such materials typically include explicit metapragmatic instruction, implicit input, and structured practice and feedback, but opportunities for oral practice are lacking (see Sykes, 2016, 2018 for comprehensive reviews). To our knowledge, only two digital resources (*Pragmatics en español* by Russell & Vasquez, 2011; and *Backchannel trainer* by Ward, Escalante, Bayyari, & Solorio, 2007) include oral practice.

In sum, oral multi-turn practice of highly-specific interactional contexts is difficult to achieve in technology-enhanced environments. Automatic speech recognition technology and natural language processing have been recently utilized for this purpose (e.g., Wik & Hjalmarsson, 2009), but such technologies require expertise in design and implementation and are still constrained by speech recognition error rates, especially for non-native accents. Thus, while several spoken dialogue systems for language learning exist (see Sydorenko, Smits, Evanini, & Ramanarayanan, 2019 for a review), most are at development or exploration rather than implementation stages. In this study, we analyze a self-access system that is comparatively simple in terms of design and technology, includes the practice of speaking in interaction, and provides learners with opportunities for extended discourse (Sydorenko, Daurio, & Thorne, 2018). We empirically examine awareness and learning from the practice of extended discourse with these self-access materials.

Debates within Best Practices in Pragmatics Instruction

There is a general consensus that provision of authentic input, consciousness-raising (or awareness-raising), practice, and feedback are the necessary components of pragmatics instruction (cf. Cohen, 2005; Martínez-Flor & Usó-Juan, 2006; Thorne, Reinhardt, & Golombek, 2008). However, two significant debates focus on explicit versus implicit instruction and types of feedback. These debates are outlined below and inform the investigation of self-access materials in the present study.

Implicit Versus Explicit Instruction

Taguchi (2015) provides a synthesis of research on instructional pragmatics for a variety of target languages and outlines the most effective instructional methods. Taguchi concluded that while explicit instruction with production practice typically presents the largest instructional effects, certain types of implicit instruction can also be effective. Below, we review the possible reasons for these findings.

Out of the ten studies reviewed in Taguchi (2015) that compared explicit and implicit pragmatics instruction, nine studies showed the superiority of explicit teaching. In these studies, explicit teaching involved provision of metapragmatic information—a common operationalization in the field of instructional pragmatics (Bardovi-Harlig, 2017). Schmidt's (2001) noticing hypothesis can be used to explain the superiority of explicit instruction: Metapragmatic information highlights target pragmatic features, making them more salient and available for internalization. Li (2012) is the only study that showed the superior effect of implicit instruction. However, the particular implicit instruction group that outperformed two other groups (one implicit and one explicit) was the only group with output opportunities. The nine studies from Taguchi's (2015) review that found explicit instruction to be more beneficial than implicit all included output. This suggests that in addition to explicit versus implicit input, output is an additional variable that needs to be considered.

Five other studies reviewed in Taguchi (2015) did not find differences between implicit and explicit pragmatics instruction. The explanation for this outcome is that pragmatic features were made salient to learners via other means (e.g. discovery tasks). Takahashi (2015) points out that learners' individual differences (e.g., proficiency, motivation, and consequently ability to pay attention to pragmatic forms and functions) may also play a role in differential effects of implicit and explicit instruction.

In sum, the research reviewed above suggests that learners' ability to notice targeted pragmatic features and the existence of output opportunities may influence the effectiveness of implicit or explicit instruction.

Additionally, because explicit pragmatics instruction is generally operationalized as inclusion of metapragmatic information, but implicit instruction can range from highlighting pragmatic targets (e.g., via input enhancement) to leaving it up to learners to do all the noticing (Taguchi & Roever, 2017), such variation in instantiations of implicit instruction can also produce different findings.

Feedback

Compared to the explicit versus implicit debate, less is known about the effect of feedback on pragmatic development (Bardovi-Harlig, 2017). However, feedback is stipulated as one of the necessary components of pragmatics instruction and, although limited, research on the effects of feedback suggests that it contributes to pragmatic development (Bardovi-Harlig, 2017). We located five studies that have empirically compared the effects of feedback (versus no feedback) on pragmatic development; of these, four found positive effects of feedback (Barekat & Mehri, 2013; Fukuya & Hill, 2006; Fukuya & Zhang, 2002; Nguyen, Do, Pham, & Nguyen, 2017). In Takimoto's (2006) study, however, there was no significant difference between the groups that received consciousness-raising instruction (CI) without corrective feedback versus CI with explicit corrective feedback. Takimoto (2006) concludes that in-depth processing of input likely helped learners pay attention to relevant pragmatic features and immediate corrective feedback was not needed to further enhance their processing of input.

Somewhat more research exists on the effects of different types of feedback. In four studies, explicit feedback groups (operationalized as those receiving metalinguistic feedback, explicit corrections, or both) outperformed implicit feedback groups (typically receiving recasts), at least on the production task (Alcón-Soler, 2005; Guo, 2013; Martínez-Flor & Fukuya, 2005; Nguyen, Pham, & Pham, 2012). On the other hand, Nguyen's et al. (2017) eight-month-long investigation of syntactic downgraders[1] did not reveal differences in outcomes between implicit and explicit feedback types. Similarly, no differences between implicit and explicit feedback were found in Fukuya, Reeve, Gisi and Christianson (1998) (as cited in Nguyen, et al., 2017). The two studies that examined different types of explicit feedback (Nguyen, et al., 2015; Nipaspong & Chinokul, 2010) indicate that learners benefit from the deeper processing that is required when they make corrections on their own rather than being provided with corrective feedback.

While feedback might be one contributing factor to learning pragmatics, studies reviewed above suggest that attention may be an overarching variable.[2] As Takahashi (2015) points out, some learners are able to process implicit input more effectively on their own while other learners benefit from having their attention drawn explicitly by external means such as implicit consciousness-raising (Takimoto, 2006) or self-reflection activities (Nguyen, Pham, and Pham, 2017; Takahashi, 2015). Thus, the field of pragmatics may benefit from more studies that investigate learner noticing and attention and how this interacts with instruction (also see Basturkmen & Nguyen, 2017; Takahashi, 2015; and Sydorenko & Tuason, 2016, for similar arguments and reviews of existing studies on noticing in pragmatics).

Research Questions

Given inconclusive research findings on the benefits of implicit and explicit instruction and various feedback types, we set out to further contribute to these debates within the context of self-access pragmatics materials. Specifically, we compared the benefits of self-access instruction in two conditions: 1.) implicit instruction and 2.) implicit + explicit instruction. The first condition included implicit feedback while the second condition included explicit feedback. For each group of learners, we examined what learners noticed and how their production changed on immediate and delayed posttests.

In SLA research, feedback and instruction are often investigated separately (e.g., Li, 2012). However, in the present study, where feedback is generalized rather than individualized, it was viewed as a component of instruction, and implicitness versus explicitness of instruction as a whole was examined. Our goal was not to isolate the variables of instruction and feedback because, first, as Bardovi-Harlig (2017) states, these

can be difficult to separate, and second, we wanted to design an ecologically-valid exploratory study that would examine the affordances of particular self-access simulations with accompanying computer-guided activities that provide practice opportunities for extended oral discourse. In our comparisons of implicit and explicit dimensions, we examined quantitative data via descriptive statistics; after that, supplemental qualitative analysis was conducted. Such an approach was also undertaken by Sydorenko, Hellermann, Thorne, and Howe (2019).

Specifically, the research questions were:

1. What types of pragmatics-related developments are visible in learners' behaviors, and in what proportions, after implicit versus implicit + explicit instruction?
2. What do learners claim they notice from implicit versus implicit + explicit instruction?

Methodology

Participants

Students enrolled in the advanced levels (aligned with B2 and B2+ of the Common European Framework of Reference; CEFR) of an intensive English language program at a U.S. university were invited to participate in a workshop on student-instructor communication[3]. There were 15 participants in the first group (implicit instruction: II) and 11 participants in the second group (implicit + explicit instruction: IE). The participants' demographic profiles were similar in the two groups (see Table 1). Notably, the most frequent L1 was Chinese; the mean age was 24; and age ranges were comparable. However, there were proportionally more males in the IE group.

Table 1. *Participants' Demographic Profiles*

	II Group (N = 15)	IE Group (N = 11)
L1	9 Chinese	7 Chinese
	3 Thai	3 Arabic
	2 Arabic	1 Spanish
	1 Japanese	
Age	M = 24; Range: 20-35	M = 23.7; Range: 19-32
Gender	8 Male; 7 Female	7 Male; 4 Female

Overview of Instructional Sequencing and Testing Procedures

This section describes the instruction that the II and the IE groups received. The II group was exposed to implicit-only instruction in the form of input, output, opportunities for self-reflection, and implicit feedback. Implicit instruction was designed to be maximally salient, but without the provision of explicit metapragmatic information. For the IE group, part of the implicit input was replaced with explicit instruction. Table 2 indicates which instructional steps were the same for both groups and which ones were different between the groups. Unless labeled as "explicit," the instructional components in Table 2 were deemed to be implicit. The functions served by various instructional steps are described in detail in the sections below. The instructional components that also served as pre and posttests are indicated in Table 2 in bold. Part 1 of the workshop lasted 2.5 hours; part 2, which took place one week later, lasted 30 minutes. For the IE group, we followed Belz and Vyatkina (2008) and Cunningham (2016), who used implicit followed by explicit instructional sequencing. We opted for such sequencing because of the purported benefits of guided discovery (e.g., via discourse analysis tasks) made possible by implicit instruction (Crandall & Basturkmen, 2004).

Table 2. *Instructional Sequencing and Testing Phases*

Step	II Group	Both Groups	IE Group
		Workshop Part 1 (Day 1)	
1		Output: simulations 1 & 2 (pretest)	
2		Model input: simulations 3 & 4	
3		Guided self-reflection on steps 1 & 2	
4	Model input: two role-plays		Explicit metapragmatic instruction: screencast 1 & guided worksheet 1
5	Guided self-reflection on steps 1 through 4		
6		Output: simulations 1 & 2 (immediate posttest)	
7	Model input: simulations 3 & 4		Explicit generalized feedback: screencast 2 with guided worksheet 2
8		Guided self-reflection on steps 1 through 7	
		Workshop Part 2 (Day 8)	
9		Output: simulations 1 & 2 (delayed posttest)	
10		Guided self-reflection on steps 1 through 9	

Computer Simulations (Both Groups)

Computer simulations used in this study were previously designed for the Sydorenko et al. (2018) study. The simulations were delivered via a web application called *SimCon* that was developed at Portland State University (Portland, Oregon). Each simulation begins with a scenario description, as shown in Figure 1. After reading the scenario, learners watch the video that initiates the simulation. The scenario described in Figure 1 begins with a video of an instructor typing on the computer in his office. Next, learners record their spoken response to the video they have just watched. For example, they may say "Hi Professor. Can I come in?"

After this, learners see the next page of the application, where they select the option that best matches the action they have just completed (see Figure 2). Using the example above, the appropriate selection should be "You greet the instructor and ask if you can come in." Note that response options are possible actions, not possible verbatim statements. The program then displays the video that corresponds with the learner's selection; in this case, the instructor in the subsequent video says "Yeah, definitely. What can I do for you?" To summarize, in this program learners move in a step-wise fashion from video watching, to responding orally, to selecting from a list of possible options, until they reach the end of the conversation. Conversation paths differ depending on individual responses. Computer simulations served several functions. Specifically, simulations 1 and 2 were used for testing (pre, immediate, and delayed posttests) and, at the same time, for oral interactive practice of extended discourse. Students completed simulation 1, in which as a student with excellent academic performance and regular course attendance, they needed to ask their instructor for a letter of recommendation that was due in three days (hereafter Three Day Simulation); and simulation 2, in which as a student with average academic performance and irregular course attendance, they needed to ask their instructor for a letter of recommendation that was due in one week (hereafter One Week Simulation). The informal feedback of 65 linguistics students (native and near-native speakers) indicates that most students viewed both simulations as high-imposition requests. Since video sequencing was dependent on selected response options, video recordings of instructor reactions constituted implicit immediate feedback on the appropriateness of pragmatic actions. For example, when students indicated via response selection that they asked for a letter of recommendation due in three days, in the subsequent video the instructor said "Um I really wish you would have brought this to me a little sooner. It's gonna be kind of rough to get it done in three days." Students, of course, needed to deduce that this indicates an indirect

refusal, but no explicit feedback and no feedback on the language students used was built into computer simulations.

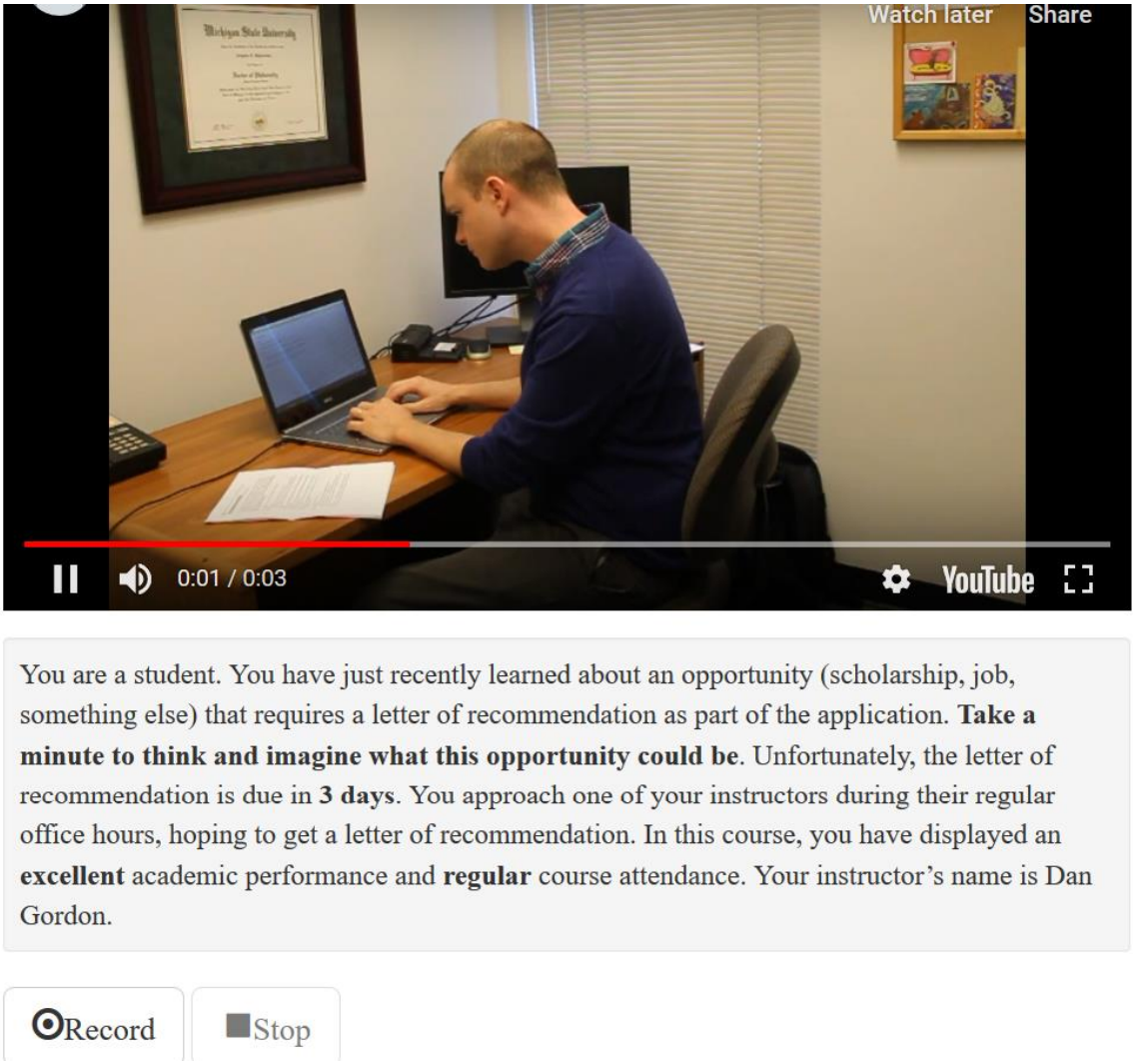

Figure 1. *Screenshot of video 1.*

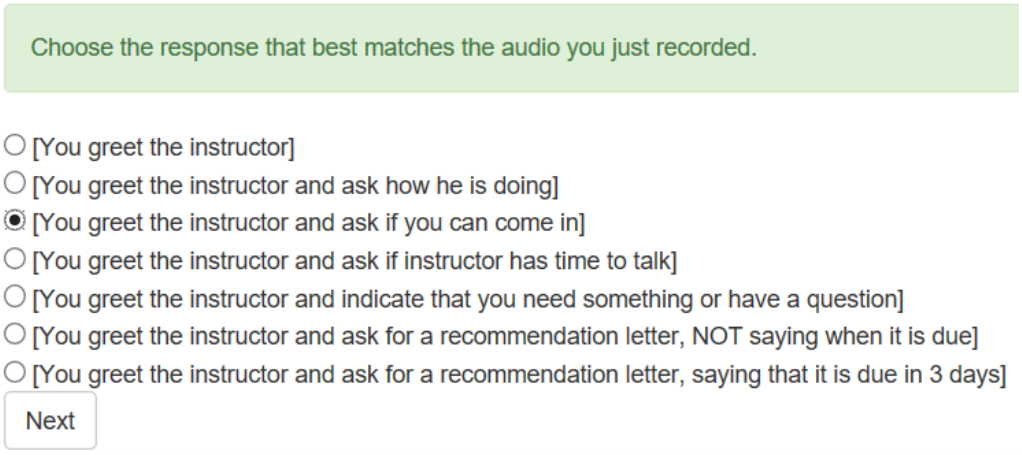

Figure 2. Screenshot of the response options after video 1.

Additionally, computer simulations 3 and 4 provided model input. In these simulations, participants acted as instructors in the same two aforementioned situations, this time watching videos of native speaking students whose input served as models of pragmatically appropriate communication[4]. Such model input could have served the function of somewhat delayed implicit feedback on learners' prior output if learners engaged with the model input in this way.

We designed our scenarios to provide extended discourse practice. Studies of instructional pragmatics often focus on specific aspects of speech act performance, like syntactic downgraders. On the other hand, extended sequences (i.e., discourse that may include a greeting, a pre-request, a request proper, a follow-up request, and a leave-taking statement) are less frequently examined (Cunningham, 2016; Roever, 2011; Taguchi & Roever, 2017). Additionally, some studies have shown that native speakers do not necessarily notice all aspects of request modifications made by language learners (e.g., Hendriks, 2010); instead, they may orient to the whole extended sequence as opposed to only the request proper (e.g., Sydorenko, Maynard, & Guntly, 2014). Such findings highlight the value of helping learners develop their competence with extended discourse.

Role-plays as Input (II Group Only)

Additionally, the II group was provided with model input via two video-recorded role-plays. The role-plays were unscripted but the performers were given specific instructor and student situations to enact, and they played the roles that they were familiar with in real life. Role-play 1 was a low imposition request (asking an instructor a clarification question on a homework assignment) and provided a model of appropriate communication, while role-play 2, a high imposition request for an extension on an assignment, provided an example of inappropriate communication due to inadequate strategies used. The two contrasts in the degree of imposition and appropriateness were employed in order to attract learners' attention to implicit input.

Explicit Instruction and Generalized Feedback via Screencasts (IE Group Only)

Explicit instruction and generalized feedback were provided to the IE group through two screencasts (i.e., narrated videos of presentation slides) with accompanying guided worksheets. Participants were asked to pause the screencasts at certain points and complete brief exercises (on paper) to solidify the explicit information presented during the screencasts. Screencast 1 served as instruction through explicit metapragmatic awareness raising of both sociopragmatics and pragmalinguistics regarding request making with instructors. Input enhancement techniques (i.e., bold font) were used to focus participants' attention on certain pragmalinguistic expressions (e.g., *I was wondering if*). Thus, this screencast was designed similarly to other explicit instruction materials in previous studies (see Alcón-Soler, 2007; Takimoto, 2006).

Screencast 2 expanded on information in screencast 1 and provided more examples and practice opportunities via a worksheet. This screencast was framed as "common errors students make" and thus pointed out a variety of pragmatic choices that may be inappropriate for a particular situation. Although screencast 2 may be viewed as additional awareness-raising via further details, it primarily served the function of explicit feedback because it was provided after learners produced output on the immediate posttest (see Bardovi-Harlig, 2017, for variations on feedback placement in pragmatics instruction). We view this feedback as generalized rather than individualized because each participant received the same metalinguistic information on common "errors" that students have made in the past with such scenarios (generalized feedback was also used in Alcón-Soler, 2005).

As Bardovi-Harlig (2017) reminds us, pragmatics is about choices each individual makes, thus information in the screencasts was framed as considerations rather than rules to follow.

Noticing Activities (Both Groups)

Both groups were also asked to engage in guided self-reflection throughout the study (see Table 2 for sequencing). Following Takahashi (2015), students were asked to compare their oral performance to implicit input (and explicit information in the IE group) and to state what knowledge they obtained from

instruction at each phase of the study. We call such self-reflections guided because students were asked to answer specific questions (e.g., "What polite strategies have you noticed that you can use next time you talk to an instructor?"). Such activities are deemed to increase noticing and learning in both the cognitive and the sociocultural traditions (for example, see Van Compernolle, 2014, on the use of verbalized reflections in pragmatics instruction). We view these activities as serving the function of implicit awareness raising.

Analysis

Coding of Changes

We followed Bardovi-Harlig's (2017) and Cunningham's (2016) recommendation to analyze minute changes in learner discourse production because ratings of pragmatic appropriateness alone may not reveal growth in learners' knowledge or performance over a short period of time. Specifically, following Liddicoat and Crozet (2001), Sydorenko and Tuason (2016), and Sydorenko et al. (2018), we coded changes in 1.) semantic formulas (or pragmatic strategies), 2.) content, and 3.) form. Pragmatic strategy categories were primarily adapted from Blum-Kulka, House, and Kasper (1989). As in Sydorenko et al. (2014), we added other strategies to the coding scheme, such as appreciation, to account for requests in extended discourse. Content changes were coded in the following way: When learners adopted a strategy like a grounder (i.e., reason for the request) from the model input, we examined whether they gave the same reason as in the model (model content) or a different one (personal content). We also examined if learners used the same forms as in the model (model form) or their own (personal form). (Coding categories, explanations, and examples are provided in Appendix A).

Due to technical difficulties in audio recording, analysis of the Three Day Simulation data consisted of ten learners in the II group and nine learners in the IE group. As a result of data loss, recordings from the One Week Simulation included 12 learners in the II group and seven in the IE group. Because meaningful comparisons of descriptive statistics are difficult to achieve when sample sizes are different, we excluded the One Week Simulation from quantitative analysis but included it in the qualitative analysis.

Noticing

Nguyen (2017) argues that, coupled with performance data, introspective data can also provide valuable information about learners' thought processes and their pragmatic knowledge. Because learners can become aware of some pragmatic features but might not be able to use them in demanding tasks (like production under time pressure, see House, 1996), additional measures examining learners' noticing can help assess the development of pragmatic awareness. For this reason, learners were asked to write what they noticed as part of the guided self-reflections. Following Nguyen et al. (2015), Sydorenko and Tuason (2016), and Takahashi (2015), we examined learners' self-reflections and categorized the pragmatic features that learners claimed they paid attention to. We began with the three categories from Nguyen et al. (2015) (pragmalinguistic awareness, sociopragmatic awareness, and awareness of pragmalinguistic-sociopragmatic connections); however, for descriptive and comparative purposes, we became interested in more detailed categorizations; our final list of coding categories is described in Appendix B.

Like in Nguyen (2017), retrospective interviews were also used to gather noticing data in order to understand learners' decision-making processes, which aspects of pragmatics they think they paid attention to, and to triangulate the production data (see Cohen, 2013). Given our participants' availability, we chose to conduct the interviews after the delayed posttest to obtain participants' perceptions of their experience as a whole. We did so because we also included self-reflections as evidence of noticing throughout the study (i.e., in both workshop part 1 and part 2). Since thought processes are best examined immediately after the task is completed (Cohen, 2013), we primarily report on self-reflection data when discussing noticing and supplement it with information from the interviews.

Results and Discussion

Research Question 1: Changes in Oral Performance

Quantitative analysis

The descriptive statistics (Table 3) for the Three Day Simulation reveal the subtly different outcomes between the II and IE groups.

This paragraph focuses on model changes, while the next one addresses personal changes. In terms of strategies, while the II group used slightly more model strategies with model content, the IE group used slightly more model strategies with personal content. That is, the II group was slightly better at emulating not only the pragmatic strategies presented in model input, but also their content. On the other hand, the IE group appears to have utilized the metapragmatic information on strategies (e.g., pre-requests) provided during the screencasts, but added their own personal content to them. With regard to form, the IE group made more changes on model strategy with model form (essentially, pragmalinguistic expressions such as *I was wondering if you could*) as compared to the II group. Thus, it is possible that as the IE group participants were paying more attention to pragmalinguistic forms, they had fewer cognitive resources available in order to emulate the model content of the strategies they adopted. The II group, however, made more changes than the IE group on non-pragmatic forms (generally, vocabulary items such as *relevant*, *unfortunately*, etc.), suggesting that they were paying attention to form, but without explicit instruction it was more difficult to appropriate pragmalinguistic forms in particular. Of value is the finding that without explicit instruction, the II group was nevertheless able to affectively analyze and utilize input with regard to pragmatic strategies and some forms (also see Cohen, 2005, for support).

Looking at personal changes (i.e., not resembling models): Both groups made a fairly large number of changes on strategies (between 14.3% and 21.4%), but there were very few changes within the personal forms category. Most of the changes on personal strategies were positive (i.e. not resembling the models but nevertheless pragmatically appropriate), with only one negative change for the II group and two negative changes for the IE group on each of the posttests. (To illustrate a negative change in this category: one participant used a conventionally indirect and appropriate request strategy "Can you write…?" on a pretest but a direct request strategy "I want you to write…" on a posttest. "I want you to write…" is a personal strategy as it did not appear in the input.) Proportionally, however, the majority of learners' changes emulated the models in strategy, content, form, or a combination of these (between 75% and 83%).

Notwithstanding some differences between groups, a clear commonality is that the majority of the changes occurred on strategies and content; fewer changes were seen with model form and personal form (see Table 3).This aligns with previous research illustrating that when tasks are about conveying meaning, learners tend to focus minimally on form (e.g., Lyster, 2007; Sydorenko, et al., 2018; VanPatten, 2004).

We were somewhat surprised that the II group not only maintained developmental gains up until the delayed test, but also made slightly more model changes on the delayed than on the immediate posttest. It is possible that the II group's exposure to a repeat of the model input simulations after the immediate posttest (see Table 2) helped solidify their noticing and allowed them to perform better on the delayed posttest. In contrast, the IE group instead received generalized feedback after the immediate posttest; however, this does not appear to have increased their performance on the delayed posttest. Because the context of the model input simulations was the same as on posttests, this input may have helped the II group perform better on the delayed test. In fact, participant II 008 mentioned in their interview that the delayed posttest might be "better because we already know the situation and we also have practiced it before." It remains to be seen if there would be similar differences between the II and the IE groups if the delayed test included different request contexts, an issue we intend to explore in future research.

Table 3. *Descriptive Statistics on Changes in the Three Day Simulation*

Category of Changes	Immediate Posttest					Delayed Posttest				
	II (N = 10)		IE (N = 9)			II (N = 10)		IE (N = 9)		
	Model Changes									
	No	%	No	%	**% diff**	No	%	No	%	**% diff**
Model Strategy + Model Content	28	49.1%	25	41.6%	7.5%	35	50%	22	39.3%	10.7%
Model Strategy + Personal Content	10	17.5%	14	23.3%	-5.8%	11	15.7%	11	19.6%	-3.9%
Model Strategy + Model Form	3	5.2%	7	11.6%	-6.4%	3	4.2%	5	9%	-4.8%
Model Form	5	8.7%	2	3.3%	5.4%	9	12.8%	4	7.1%	5.7%
Total model changes	46	80.7%	48	80%	0.7%	58	82.8%	42	75%	7.8%
	Personal Changes									
Personal Strategy[a]	11	19.3%	9	15%	4.3%	10	14.3%	12	21.4%	-7.1%
negative	1		2			1		2		
Personal Form	0		3	5%	-5%	2	2.8%	2	3.5%	-0.7%
Total changes	57		60			70		56		

Note. The Immediate Posttest columns for II and IE groups indicate the number and percentage of changes made per group between the pre-test and the immediate post-test. The Delayed Posttest columns for II and IE groups indicate the number and percentage of changes made per group between the pre-test and the delayed post-test. Both raw number of changes per category and percentage of changes per category (with total number of changes as the denominator) are provided. The minus (-) sign in the % difference column is used to show the direction of the difference between groups. The formula for calculating the % difference (i.e., II - IE) was arbitrary; that is, one could have used the reversed formula (IE - II) instead.

[a]*Unless otherwise indicated, the changes indicated are positive.*

Qualitative Analysis

To supplement the quantitative data, in this section we describe trends we observed when analyzing the data qualitatively (i.e., looking at individual differences), and how these align with the quantitative findings.

Trend 1: Pragmatic Development (or Evidence of it) May Take Time

The explanation for why the II group made slightly more model changes on the delayed than immediate posttest is possibly because repeating the model input simulations solidified participants' knowledge. However, several individuals in the IE group, where there was no repetition of model input simulations, also appropriated model input only on the delayed test. For example, the IE 006 participant made two model strategy with model content changes on the immediate test, but five such changes on the delayed test. One of these changes was an appealer of exactly the same content as in the model simulation, namely that the scholarship is very important because it can pay for tuition. Thus, it appears that this participant needed time to internalize the observed strategies and produce them later. A similar pattern was observed in data from participants IE 005 and IE 007.

Although arguably more difficult than remembering content, some participants were also able to use forms from simulations on the delayed test. For example, IE participant 005 used the model formulaic expression *came across* on the delayed posttest. Additionally, in the self-reflection, participant II 013 mentioned the aspect of automatization: That they had learned some strategies, but could not use them

"fluently" yet. Participant II 021 further commented that just the act of repeated practice was important for improvement and learning. Such comments suggest that practice is needed to proceduralize knowledge and automatize production, as is postulated in Skill Acquisition Theory (e.g., DeKeyser, 2007).

Our findings raise methodological questions: Can we study pragmatic development via immediate tests only? It appears that delayed tests provide vital information and ideally would be included in all studies on pragmatic development. We observed that in pragmatics studies, researchers typically examine whether learning gains are maintained on the delayed posttest (see Martínez-Flor, 2012, for a review). However, Nguyen et al. (2015) reported that learners in some conditions performed better on a delayed than on an immediate posttest, arguing that when learners had to work hard for the answers (as in the metalinguistic group in their study), improvement took some time to manifest. We argue that in our study, where at least part of instruction was implicit and learners were involved in extended discourse practice, learners had to engage in deep learning, which may have resulted in delayed learning effects.

Trend 2: Competition Between Cognitive Resources

We also observed that some learners regressed between their initial and subsequent performance, suggesting that their pragmatic knowledge is not yet proceduralized. Such regressions often coincided with improvements in other aspects, which may be indicative of a competition between cognitive resources. Example 1 illustrates how IE participant 007 changed their request from pretest to immediate posttest.

Example 1: IE 007

> *Pretest*: OK um, reason today I have a [pause] scholarship opportunity? But uh it requires a letter of recommendation as part of application, so [pause] could you give some, could you give me some help and uh, I still have one week to prepare it
>
> *Immediate posttest*: Well um, I was wondering if there is any chance that I could get a scholarship recommendation?

Example 1 illustrates that participant IE 007 initially utilized pre-request strategies (explanations or reasons for the request). On the posttest, this learner appears to be focusing on using the new pragmalinguistic expression *I was wondering if* at the expense of their initial pre-request strategies.

Similarly, participant IE 013 begins with excellent preparatory strategies on the pretest (see Example A in supplemental online-only file). On the immediate posttest, they use the *I was wondering if* expression which should contribute to politeness, but, like IE 007, they leave out all the preparatory strategies used on the pretest. On the delayed posttest, IE 013 again uses some preparatory strategies, though not as extensively as on the pretest, and does not use the *I was wondering if* expression. Thus, it appears that throughout the study, IE 013 is grappling with how to apply what they have learned about pragmalinguistic expressions and pragmatic strategies at the same time. In her interview, IE 013 mentioned this competition between resources:

"I think the second [immediate posttest] is more tricky in a way that you should remember your expressions and you want to do your best but at the same time, you didn't internalize all the expressions so it's hard to, so that's why there are pauses, that's why there are, trying to figure out the next, because it's memory…I think my brain doesn't function like that."

In a similar display of competition between resources, participant 005 in the II group focused on and improved their pragmatic strategies on the delayed posttest but made negative changes in pragmalinguistic expressions (*I was wondering if* on the pretest, but *I want you to* on delayed posttest). (For similar findings of regressions in pragmatic performance between pre and posttests, see Sydorenko et. al., 2018).[5]

Such competition among cognitive resources is a known phenomenon in SLA. For example, Skehan (1996) proposed a trade-off effect: Due to limited cognitive capacity, language learners, especially those with lower proficiency, tend to focus on some aspects of language production at the expense of others. Similarly, Dynamic Systems Theory postulates that resources are limited and interlinked, and for this reason, learners cannot attend to all aspects of language simultaneously (de Bot, Lowie, & Verspoor, 2007). In our study, many students discussed learning about greetings or common courtesies that occur at the beginning of a conversation with an instructor, while at the same time mentioning specific expressions and useful request strategies that they learned. Since learners paid attention to a variety of features of extended discourse, it is plausible that the complexity of extended discourse scenarios resulted in a high cognitive load and led to competition between resources.

Research Question 2: Self-Reported Noticing

Quantitative Analysis

Next, we examined what learners thought they noticed from the model input and from explicit instruction (Table 4). Learners' self-reported noticing aligns with the kinds of changes learners made. For example, the II group made fewer pragmalinguistic changes than the IE group; the II group also reported less noticing of pragmalinguistic expressions than the IE group. The IE group reported more noticing of pragmalinguistic expressions after the screencasts (i.e., explicit instruction) than after the (implicit) model input from simulations. Learners in both groups were nevertheless able to notice some pragmalinguistic expressions from implicit input. It is important to note, however, that a portion of this noticing was inaccurate (indicated as negative in Table 4); for example, some participants said they noticed *please* as a polite word used in input, but in fact *please* was not present in the input. Such inaccurate noticing was most prominent for pragmalinguistic forms, though it occasionally occurred in other categories. With regard to group differences, it is interesting that only participants in the II group stated they noticed "polite language" (see general language category in Table 4)—such general statements about language were not made in the IE group potentially because learners were provided with the metalanguage in the explicit instruction to talk about "polite language."

Both groups noticed a substantial number of sociopragmatic strategies (33% of total noticing in the II group; 25% in the IE group). These strategies were noticed generally in implicit input rather than after explicit instruction. Thus, at least when the posttests are on the same situations as model input, learners can talk about and emulate sociopragmatic strategies from model input in their subsequent production.

The next category is metapragmatic. In the IE group, the percentage of noticing metapragmatic information was higher: In addition to modals (which the II group also mentioned), they generally talked about using pre-requests, indirect requests, and use of *can* versus *could* (all of which were addressed in explicit instruction).

With regard to awareness of strategic aspects of communication (e.g., be polite even if request is not granted), culture (e.g., use office hours) and general etiquette (e.g., "be polite to instructors"), there were similar proportions of comments from both groups.

An interesting difference surfaced in the paralinguistic category: Participants in the II group mentioned six times that they noticed polite or impolite non-verbal behaviors in role-plays; however, there was only one mention of paralinguistic features (specifically, intonation) in the IE group. In the interviews, participants also mentioned that the movie-like input in role-plays stood out to them. II 006 said: "Just like watching a movie, you can see a lot of things and you can know the person's thinking." Paralinguistic features such as lack of smiling and eye-rolling (disagreement) and vertical head nodding (agreement) may have been what participants noticed. The two other categories (pragmalinguistic-sociopragmatic connection and other forms) were mentioned very rarely.

Table 4. *Learners' Self-Reported Noticing*

Category	II (*N* = 15)				IE (*N* = 11)					
	After Sim (Imp)	**After RP (Imp)**	**Total pos. noticing (No)**	**Total pos. noticing (%)**	**After Sim (Imp; No)**	**After Sim (Im; %)**	**After SC (Exp; No)**	**After SC (Exp; %)**	**Total pos. noticing (No)**	**Total pos. noticing (%)**
Pragmalinguistic forms	14	3	17	13.20%	15		22		37	33%
negative	6	1			9		3			
Other forms	1		1	0.70%						
General language		8	8	6.20%						
negative		1								
Sociopragmatics	36	7	43	33%	25		3		28	25%
negative		3								
Pragmalinguistic-sociopragmatic connection	2		2	1.50%						
Metapragmatics	1	2	3	2.30%			17		17	15.30%
Strategic aspects	13	6	19	14.70%	8		4		12	10.80%
Cultural aspects	18	1	19	14.70%	2		6		8	7.20%
General etiquette	7	4	11	8.50%	3		5		8	7.20%
Paralinguistic		6	6	4.60%			1		1	0.90%
Total	92	37	129		53		58		111	
negative	6	5			9		3			

Note. Sim= simulations. RP = role-play. Pos = positive. SC = screencast. Imp = implicit. Exp = explicit. "Negative" indicates incorrect noticing (e.g., stating that the student in the role-play used polite language when in fact it was the opposite). All instances of negative noticing are descriptively reported in the table but are not included in percentage calculations.

In summary, it appears that learners are able to notice a variety of pragmatic features on their own from implicit input. Their noticing was also mostly positive in that they made correct connections between form, function, and meaning. The occurrence of negative noticing was rather low, which suggests that, for the most part, it should not be detrimental to students to engage in implicit learning from input. However, because negative noticing was more prominent for pragmalinguistic forms, more targeted feedback on this aspect may be necessary. Additionally, the kind of input learners receive will likely matter. As described above, the movie-like input of role-play videos drew learners' attention to nonlinguistic features of communication.

Qualitative Analysis

To complement the quantitative analysis of reported noticing, we also examined how well individual participants' reports coincided with changes in their oral performance. In general, participants made changes on the aspects they reported noticing (e.g., providing more details, using pre-requests and certain (pragma)linguistic forms). However, for two participants there were clear mismatches. Participant II 018 believed that they did not learn anything new from the workshop and that they already communicated politely with instructors. However, this participant's oral data indicates that they made several sociopragmatic and some pragmalinguistic changes, including the use of the bi-clausal expression *I am*

wondering if, which is typically challenging (e.g., Taguchi, 2012). This example indicates that participants' reports of their awareness may not necessarily coincide with their actual noticing. According to Schmidt (2010), of the two levels of awareness, understanding corresponds to a deeper level of learning than noticing. Participant II 018 may have noticed the bi-clausal expression (since they subsequently used it), but might not have understood its significance. In this particular case, the learner may have benefited from explicit instruction which would likely confirm that the individual did gain useful pragmatic knowledge.

Similarly, participant IE 005 claimed they did not notice anything after the implicit input, yet they did begin using the model expression *I was wondering if* on the posttests. However, after explicit instruction, this participant gave lengthy explanations of what they noticed and how they now understand the value of pre-requests. This participant's experience indicates that some learners may be more receptive to explicit instruction. This learner was older than other learners in the IE group (32 compared to the mean age of 24), and in the interview explicitly stated that some students in their cohort are young and less mature. IE 005, on the other hand, felt that they have a particular goal in mind (entering a Master's program) and are well aware of what they need to learn to succeed. Such learner autonomy and agency may be another reason why IE 005 benefited from explicit explanations.

General Discussion and Conclusion

Though our study comes with certain limitations (small sample size, some data loss, exploratory design rather than tight variable control, short instructional period), our analyses suggest that the differences between the II and IE groups were relatively small. The fact that similar differences were observed in both the production and noticing data lends further support to our findings. It is evident that learners can extract useful pragmatic information from implicit instruction, albeit more so for strategies and content than for forms. However, qualitative analysis indicates that particular learners may need explicit instruction more than others.

Given our findings, we feel Takahashi's (2015) argument is a plausible one: That individual differences regarding how learners interpret implicit information may determine if they need explicit information or whether they can engage in the noticing and analysis of input on their own with similar benefits. Research suggests that participants' investment in the task is an important variable in how well they will be able to process pragmatic input (e.g., Taguchi, 2012; Takahashi, 2015). In Takahashi's (2015) study, participants "might not have considered their assigned tasks to reflect their own communicative needs, and as a result, their selective attention to pragmalinguistic features may have been inadequate, with their input processing being cursory and superficial" (p. 58). In our study, however, learners indicated in the interviews that they found our self-access pragmatics materials useful for their needs (e.g., communicating with professors, asking for recommendation letters) and for their development (i.e., they recognized a gap in their learning as in participant II 013's comment "I never learned about these things"). Participant 007 even asked if they could repeat the workshop. Such data suggest that our participants put in a great deal of effort and perhaps this is one reason for minimal differences between implicit and explicit conditions. The more salient implicit instruction used in our study (comparisons of own production to model input, contrasts between the two role-plays) may have also drawn learners' attention to input more than in other studies that utilized less-enhanced implicit input (see Taguchi & Roever, 2017).

On the basis of our findings, we argue that both implicit (but highly salient) and explicit instruction should be present in self-access pragmatics materials. However, it is likely that certain sequences (e.g., explicit, followed by implicit) might produce better results, or relatedly, that certain sequences work better for learners with specific individual differences profiles. We believe the field would benefit from additional studies that empirically test and subsequently make recommendations in these areas.

The low incidence of negative changes indicates that the evidence-designed generalized feedback worked well in our context as it was informed by learner errors in prior studies. Generalized feedback also helped lower students' language learning anxiety by not focusing on individual errors (e.g., II 008 did not want to

be criticized or judged but wanted to know what a "good" example was). The feedback could be further refined through a more extensive database of common learner errors (i.e., less appropriate choices) in given situations.

Our goal with this intervention was to emphasize that gaining pragmatic competence involves the "development of alternatives in that there could be several appropriate choices in a given situation" (Bardovi-Harlig, 2017, p. 230). To paraphrase Tomasello (2000), language learning is fundamentally a form of cultural learning that plays out in contingent ways in conventionalized forms of joint attentional activities. It is critically important that learners become aware of and subsequently use contingently appropriate pragmatic formulations that may be broadly distributed or bound to specific contexts. A significant caveat is that the self-access pragmatics simulations discussed above provided learners with only select models and choices, generally featuring negative politeness strategies (Brown & Levinson, 1987) that emphasized the avoidance of imposition on the hearer. In planned future research in this area, we intend to explore positive politeness strategies that appeal to the hearer's positive face and which could also be used in student-instructor as well as other types of interactions.

Our effort to extend pragmatic-discourse options for learners follows from Ishihara and Tarone's (2009) argument that in pragmatics instruction, the goal is to expand participants' repertoires of *subjectivity* potential, understood as jointly and interactionally enacted aspects of one's semiotically mediated and evolving social identity. Given the constraint of limited instructional contact hours in foreign and second language courses and the potential efficacy of extended discourse pragmatics simulations, we encourage the continued design and exploration of out-of-class self-access materials that will support language learners in their efforts to become more effective and powerful communicators. We began this article by referencing the social origin of language, the conventional nature of pragmatic norms, and the cultural organization of communicative actions. In our view, many instructed language learning settings overemphasize linguistic form over social-pragmatic function. And yes, pragmatics can be difficult to teach and assess in comparison to isolated linguistic elements such as lexis and grammatical structures. But on this theme, we conclude with Michael Tomasello' pithy assertion: "Without pragmatics and communicative intentions, it's all just noise" (2000, p. 411).

Notes

1. For example, past tense with present time reference, progressive aspect and embedded -if clause, as in "I was wondering if …"
2. Here we operate within Schmidt's (2001) noticing hypothesis, where attention plays an important role in second language (L2) learning. The premise of this hypothesis is that the stimuli that are noticed become intake; after this, intake becomes available for further processing and learning.
3. Student-instructor communication was chosen to be the focus of the study because, as former and current ESL teachers, we have observed that learners often find such communication difficult.
4. Participants' simulation performance in instructor roles was not assessed as the goal was to get them to use appropriate language as students.
5. Although another reasonable explanation to such regressions may be participants becoming more comfortable or desensitized with regard to politeness due to practice effects (i.e., same tasks on the pre and the post-test), we feel that because regressions on one aspect were simultaneous with improvements on another, practice effects are a less plausible explanation. Additionally, a comment from participant 013 illustrates that learners viewed the immediate posttest as difficult; with practice effects, this would be unlikely.

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Appendix A. Coding Categories for Changes

Coding Category	Definition	Example
Model Strategy + Model Content	Strategy and content were same as in models	Appealer: "The scholarship is very important to me because it can pay for my tuition."
Model Strategy + Personal Content	Strategy was same as in models, but content was not	Appealer: "This scholarship is a great opportunity for me."
Model Strategy + Model Form	Strategy and form were same as in models	Query preparatory strategy used verbatim: "I was wondering if you could"
Model Form	(Non-pragmalinguistic) form was same as in models	"relevant information"
Personal Strategy	Pragmatic strategy was not from models	Moralizer "I hope you can help me because I am a good student."
Personal Form	Form was not from models	"Do you help me?"

Appendix B. Coding of Noticing

Coding Category	Definition	Example
Pragmalinguistic forms	Mention of linguistic expressions employed in realizing a speech act	"We should use some polite words to talk about my professor: could, be willing to, would, wondering if."
Other forms	Mention of linguistic forms that do not contribute to the illocutionary force	"I learned the word *relevant*."
General language	No mention of specific expressions or strategies noticed	"They use polite words in the role-play."
Sociopragmatics	Mention of specific sociopragmatic strategies or factors	"Giving honest details about the request."
Pragmalinguistic-sociopragmatic connection	Awareness of how sociopragmatic factors influence pragmalinguistic choices	"If you don't know whether the instructor could help you or not [sociopragmatics], you could say if you can help me, I would be appreciate it [pragmalinguistics]."
Metapragmatics	Mention of pragmatics terminology, like "direct" or "command"	"Before I made request in direct way, now I realize it's a command like 'give me, write for me' "
Strategic aspects	Strategizing beyond the given scenario, such as planning to be a "good" student in advance of one's request	"Do well in class in order to get what you are asking for."

Cultural aspects	Mention of cultural expectations	"Make an appointment with instructor." [Making an appointment with an instructor is expected in many US academic contexts, while that is not the case in many other cultures.]
General etiquette	Mention of expected behavior in general terms, such as "be polite"	"Be polite to instructors."
Paralinguistic features	Comments on body language or vocal gestures observed in videos	"Student looked angry."

For more examples and the complete coded dataset, see supplemental online-only file.

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