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RESEARCH REPORT

# Pedagogic Principles in Digital Pragmatics Learning Materials: Learner Experiences and Perceptions

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This study reports on the development and evaluation of a prototype for an interactive, self-access computer application titled Words at Work that was developed by the authors. Words at Work aims to raise adult English language learners' (ELLs') pragmatic awareness in the English-medium workplace. The study focuses in particular on the pedagogic principles of second-language (L2) instruction underlying the design of the computer-based learning environment and seeks to explore the perceived usefulness of computer-assisted language learning (CALL)–mediated L2 pragmatic instruction, responding to this overarching research question: To what extent do learners feel that Words at Work successfully operationalizes the principles of teaching L2 pragmatics as proposed in the research literature? Accordingly, we first review teaching principles for L2 pragmatics instruction and present an overview of existing stand-alone materials for L2 pragmatics learning and teaching. Then, we outline the development and design features of Words at Work, before presenting the findings of a usability study that was conducted with 19 adult ELLs. We found evidence that users desired immersive learning environments that incorporate authentic audiovisual input, personalized and immediate feedback, and extensive opportunities for interaction and self-reflection. Implications for the design of computer-mediated L2 pragmatic learning tools and tasks will be discussed both for instruction and assessment.

**Keywords** pragmatics; pragmatic awareness; English as a second language learner; computer-assisted language learning; design principles; task design; learning materials; workplace English

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To acquire proficiency in a target language, learners need to learn how to use linguistic knowledge and skills (e.g., vocabulary, grammar, pronunciation) appropriately and effectively in different communicative contexts. Thus, speakers must not only know what to say but also how and when to say it, in relation to whom they are speaking. This ability to use language appropriately in a given sociocultural context is commonly described as pragmatic competence or pragmatic ability (e.g., Bardovi-Harlig, 2013; Kasper, 1997; Taguchi, 2012) and is a foundational feature of several models of communicative competence (e.g., Bachman & Palmer, 2010; Purpura, 2004).

Especially in the workplace, pragmatic competence has been identified as a crucial aspect of communicative language ability (e.g., Riddiford & Joe, 2010). Not only have pragmatic infelicities been reported as a major cause of communication breakdown in workplace environments (Clyne, 1994) but, more severely, pragmatic failure —unlike grammatical mistakes—has been shown to create negative impressions about the speaker (e.g., Taguchi & Sykes, 2013; Timpe, 2013). Yet the inclusion of pragmatics in instructional materials, especially for English in or for the workplace, is still very limited, which may leave English language learners (ELLs) either unaware of or ill prepared for pragmatic challenges in the English-medium workplace (see also Banerjee & Timpe-Laughlin, in press; Timpe-Laughlin, 2019).

A number of researchers and educators have repeatedly highlighted the dearth of learning materials that focus on second-language (L2) pragmatics (e.g., Cohen, 2005, 2008; Crandall & Basturkmen, 2004; Diepenbroek & Derwing, 2013; Limberg, 2015a, 2015b; Sykes & Cohen, 2008a; Vellenga, 2004). For example, Limberg (2015a) pointed out the shortage of L2 pragmatics phenomena in English as a foreign language (EFL) textbooks, arguing that it leaves instructors faced with the task to "offer extra input as well as set specific tasks . . . that help to understand how sociocultural constraints and situational factors influence pragmatic choices" (p. 16). Similarly, in the context of computer-assisted language learning (CALL), Sykes and Cohen (2008a) emphasized the limited number of digital L2 pragmatics learning tools, criticizing in particular the lack of content developed based on empirical data. Additionally, Sykes and Cohen (2008b)

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argued for a closer investigation of L2 pragmatics learning in CALL environments, with a specific focus on "what learners do when interacting with the online materials as well as how these materials are perceived by the learners themselves" (p. 144). Hence researchers and practitioners have highlighted the importance of a systematic, empirically substantiated development of pragmatics learning tools, emphasizing in particular the need to implement pedagogic principles of L2 pragmatics teaching in the design of curricula, lesson plans, and learning tools (Limberg, 2015b; Sykes & Cohen, 2008a; Timpe-Laughlin, 2016).

This study aims to respond to the call for more systematic investigations into the perceived usefulness of CALL-mediated L2 pragmatic instruction. In particular, it seeks to explore L2 learners' experiences with and perceptions of a prototype of a self-access digital pragmatics learning tool — Words at Work — developed by the authors of this report. This tool is aimed at raising adult ELLs' pragmatic awareness within the language use domain "workplace." The goal of this study is twofold: It aims to (a) introduce an innovative, theoretically grounded, empirically informed CALL tool for L2 English pragmatics learning and (b) investigate learners' perceptions of the usefulness of the tool with respect to its underlying design principles.

## Literature Review

Pragmatic competence involves "the ability to control the complex interplay of language, language users, and language use contexts" (Taguchi, 2008b, p. 204). Pragmatically competent language users have the linguistic resources to encode and decode meaning (pragmalinguistics) as well as knowledge of the rules and conventions of situationally, culturally, and socially appropriate and acceptable language use (sociopragmatics). Consequently, L2 instructors are faced with promoting in their learners accuracy and appropriateness of target language use, equipping them with "a set of internalized rules of how to use language in socioculturally appropriate ways, taking into account the participants in a communicative interaction and features of the context within which the interaction takes place" (Celce-Murcia & Olshtain, 2000, p. 19).

Moreover, recent research in interlanguage pragmatics has found the systematic inclusion of pragmatics in L2 instruction fundamental to both foreign and L2 learning environments. In foreign-language contexts, L2 learners may not be exposed to enough target language input and/or lack opportunities to interact in the L2 outside of classroom instruction to practice their L2 pragmatic abilities (Eslami, Mirzaei, & Dini, 2015). By contrast, L2 learners immersed in the target language context may very well develop L2 pragmatic ability (e.g., Polat, 2011). However, it is said to "take at least 10 years . . . to be able to use the language in a pragmatically nativelike manner" (Ishihara & Cohen, 2010, p. 76; see also Olshtain & Blum-Kulka, 1985). Thus, L2 learning environments may provide a wealth of input, but learners may lack constructive, meta-pragmatic feedback to develop pragmatic knowledge and the observational and strategic skills necessary to employ appropriate and accurate forms of language use in the L2 (Taguchi, 2012; Timpe-Laughlin, 2016).

### Pedagogic Principles of Second-Language Pragmatics Instruction

Researchers have identified several pedagogic principles that can inform the design of L2 learning environments aimed at fostering pragmatic development (see the Appendix). First, raising awareness for form–function mappings has been identified as a superordinate goal in L2 pragmatics instruction (e.g., Ishihara & Cohen, 2010; O'Keeffe, Clancy, & Adolphs, 2011; Timpe-Laughlin, Wain, & Schmidgall, 2015). Given the multitude of different language use contexts and the fact that pragmatic phenomena need to be applied appropriately within each context, Timpe-Laughlin et al. (2015) argued that "a systematic increase of sensitivity and orientation toward pragmatic components may result in more felicitous (intercultural) communication" (p. 20). Hence the general direction of L2 pragmatics instruction should be to increase learners' pragmatic-functional awareness (see also Sykes, 2006; Sykes & Cohen, 2008a, 2008b).

To support the achievement of this superordinate goal, researchers and practitioners have highlighted that L2 pragmatics instruction should (a) implement a specific focus or objective orientation; (b) provide learners with enhanced, authentic, and relevant input; (c) promote their observational and reflective skills; (d) provide learner-oriented opportunities for interaction and practice; and (e) offer feedback and assessment (e.g., Limberg, 2015a; Sykes & Cohen, 2008a; Timpe-Laughlin, 2016). Moreover, enhanced, relevant, and authentic target language input coupled with explicit teaching of meta-pragmatic knowledge, and opportunities for observation and reflection, have been identified as crucial for L2 pragmatic learning. For example, research has found more frequent noticings (Schmidt, 1995) and greater gains in L2 pragmatic development if learners were immersed in the target language and culture (e.g., Taguchi, 2008a). Thus,

rich input that features a variety of language users may provide opportunities for accidental noticings. However, as Timpe-Laughlin (2016) argued, "to notice pragmatic aspects, and eventually transfer the skills across language use situations, learners need to have the observational skills and attention sensitivity to discover them" (p. 36). Additionally, allowing learners to determine the pace of their interaction with the input and materials provided may further facilitate the intake of particular phenomena and optimize learning. Evidence suggests that learners acquire more when allowed to control and self-pace their own study time, which may result in better memory performance and learning of unfamiliar and more complex content (Kornell & Metcalfe, 2006; Tullis & Benjamin, 2011).

Although input and observational skills have been found particularly beneficial for receptive L2 pragmatic skills (Taguchi, 2012), learner-oriented opportunities for interaction and practice have been reported as essential for the development and automatization of productive L2 pragmatic skills (Bardovi-Harlig, 2009). Bardovi-Harlig and Bastos (2011), for instance, found that intensity of interaction showed significant influence on recognition and production of conventionalized routines. Providing students with explicit feedback through the use of formative assessment, and the opportunity to reflect upon new L2 pragmatic knowledge, is especially important for adult L2 learners (Holden & Sykes, 2013; Kasper & Rose, 2002). Adult L2 learners oftentimes have a substantial body of pragmatic knowledge in their L1, which can be challenging when attempting to integrate new sociopragmatic and pragmalinguistic knowledge in an L2. Therefore, relevant feedback and assessment are essential in highlighting pragmatic phenomena. However, although tendencies exist in terms of how members of a given speech community behave pragmatically, there is no fixed set of rules that determine pragmatic practices. Thus, Sykes and Cohen (2008a) argued that explicit and corrective feedback must not provide a "prescriptive ideal or native-speaker model" (p. 89) but should rather provide examples of pragmatic practices from the target community to allow learners to consider their own pragmatic-functional choices in relation to norms and conventions of the target speech community.

These pedagogic principles can provide a basis for designing tasks and interventions that aim to raise students' L2 pragmatic awareness and ability. Given that the principles are neither mutually exclusive nor to be followed in a systematic order, they can be translated into practical tasks and activities that that are meaningful, challenging, and realistic, thus allowing learners to be "actively engaged in the learning process" (Sykes & Cohen, 2008a, p. 90). Although pedagogic principles have been proposed for and investigated primarily in classroom-based instruction (Fox, 2002; Limberg, 2015a), little research has been carried out to explore them in the context of computer-mediated L2 learning and teaching.

## Computer-Assisted Language Learning Materials for Second-Language Pragmatics Learning and Teaching

Even when L2 pragmatics skills are a target of classroom instruction, it has been shown that the classroom context can provide a number of challenges in terms of fostering pragmatic awareness and engineering an environment that is conducive to L2 pragmatics learning. First, a hierarchical power difference between learners and teachers tends to exist in institutional settings, with instructors generally holding the authoritative position. This clear role distinction was found to generate a "limited range of discourse patterns" (O'Keeffe et al., 2011, p. 141) and, thus, very restricted L2 input and opportunities to practice (see also Ellis, 1990; Lörscher, 1986). Second, many textbooks have been accused of not providing the rich and adequately contextualized input needed to facilitate pragmatic learning (e.g., Alcón Soler & Safont Jorda, 2008; Bardovi-Harlig, 2013; Limberg, 2015b; Salazar Campillo, 2007; Vellenga, 2004). Finally, providing feedback and evaluation for learners' L2 pragmatic behavior may be more challenging. Timpe-Laughlin et al. (2015), for instance, have maintained that

> correcting pragmatic infelicities that stem from sociopragmatic miscalculation is much more delicate than correcting a grammar mistake because sociopragmatic decisions are social before they are linguistic. Although language learners are susceptive to being corrected with what they view as linguistic, they are much less amenable to being corrected in terms of their social judgment. (p. 31)

Given these challenges in face-to-face L2 teaching, computer-mediated learning materials may offer a means of providing or complementing L2 pragmatic instruction — whether in the form of independent self-study or blended learning. Potential advantages of utilizing computer-based learning materials include more opportunities for meaningful interaction and use of authentic learning materials, exposure to a greater diversity of pragmatic features and discourse, and

evidence of longitudinal pragmatic development as well as the effectiveness of L2 pragmatic instructional interventions (Eslami et al., 2015). Hence settings such as websites, virtual environments, and computer-mediated communication may afford a suitable context to implement the pedagogical principles identified in the literature and, thus, enhance and facilitate pragmatic instruction both in foreign-language and L2 learning settings.

Although researchers, such as Sykes and Cohen (2008a), have repeatedly pointed out that "CALL technologies play an increasingly important role in ensuring that pragmatics instruction is comprehensive in nature" (p. 99), very few technology-mediated pragmatics learning tools seem to exist, and even fewer have been investigated empirically (see Taguchi & Sykes, 2013, for a recent edited volume). Among the few empirically informed tools that were explicitly designed for L2 pragmatics instruction (exclusively for L2 Spanish and L2 Japanese learners) are Web sites such as Dancing with Words: Strategies for Learning Pragmatics in Spanish (see also Félix-Brasdefer, 2007; Ishihara, 2007; Sykes, 2006), a mobile game application called Mentira (Holden & Sykes, 2011), and virtual environments such as Croquelandia (Sykes, 2009, 2013). For instance, Dancing with Words: Strategies for Learning Pragmatics in Spanish was designed according to eight pedagogical principles driven by research into pragmatics pedagogy and CALL (Sykes, 2006): (a) goals and objectives are stated clearly; (b) video clips, tasks, and contexts are as authentic as possible; (c) tasks are learner oriented, varied, and amenable to different learning strategies; (d) content is empirically driven; (e) content will encourage individual pragmatic performance at different levels; (f) lessons will provide additional learning support; (g) feedback that is both learner directed and nonprescriptive will be provided; and (h) the Web site will be designed to optimize the learner's learning environment (Sykes, 2006). Although most of these resources have been investigated in terms of the affordances they provide for promoting pragmatic ability, no research exists to our knowledge that has investigated systematically the perceived effectiveness of a tool's underlying design principles.

## Words at Work: Development Process and Design Features

Words at Work was designed by the authors as a prototype for a self-access, computer-based, interactive learning platform that is intended to help adult ELLs increase their awareness of pragmatics in the U.S. workplace domain (for a detailed description of Words at Work, see also Banerjee & Timpe-Laughlin, in press). It is intended for intermediate-level EFL/English as a second language (ESL) professionals and aims at alignment with the short-term goals proposed by O'Keeffe et al. (2011) to (a) raise awareness, (b) develop students' noticing strategies, and (c) build receptive and productive pragmatic competence.

The design of Words at Work is intended to systematically integrate and operationalize the pedagogic principles of effective L2 pragmatic instruction. First, users are presented with a video explaining pragmatics and introducing the scenario-based structure of the tool to clearly orient the user to a learning goal. Users then progress through different learning modules that imitate the interrelated steps of a real-life career path at a company called "The Workplace" (i.e., job hunt, interview, the new job, and job routine; Figure 1). Biographies of characters with whom users will interact are provided to better contextualize the communicative situations and character interactions within each learning module (Figure 2). Embedded in this scenario structure are nine units, each with a specific focus on a particular pragmatic phenomenon or speech act important to successful communication in the workplace, including (a) implicatures, (b) greetings, (c) clarification requests, (d) thanks, (e) requests, (f) small talk, (g) offers, (h) apologies, and (i) suggestions. Although a systematic approach to completing the modules is preferable so as to more authentically simulate the job cycle, users are able to start with any unit they choose because this is intended as a self-learning tool.

The units were designed and sequenced adopting a constructivist perspective on L2 learning in combination with a task-based language teaching approach (Nunan, 2004, 2005) aimed at providing a learning experience that offers, to the largest extent possible, language and content through tasks designed to reflect common communication-oriented workplace situations. Therefore, units are structured around e-lectures that include variable input from a series of scripted video exchanges between native speakers with different regional accents and nonnative speakers with different L1s. Lectures were designed to provide explicit information and maximize noticing in learners and to increase their meta-pragmatic observational skills. Thus, they are broken down into segments with clear sociopragmatic and pragmalinguistic foci to more explicitly draw learners' attention to the interconnectedness of these pragmatic components (see Table 1 for a general outline of each unit and Figures 3 and 4). The e-lectures include visual content with L1 speaker narration, relevant video clips of simulated workplace exchanges, audio supports (e.g., audio recordings to highlight intonation), and animations (e.g., underlining key words) intended to highlight the focal concepts targeted in each lecture. The lectures are followed


**Figure 1** Words at Work main menu.


**Figure 2** Words at Work character biographies.

by relevant, targeted tasks and activities intended to be immersive and interactive, incorporating extensive audiovisual components to enhance contextualization.

In addition to contextualizing the items and providing more (simulated) authentic prompts and input from real-world language use, task types are designed to provide extensive learner-oriented opportunities for interaction and practice. As well as the more traditional task types that engage the lecture input, numerous interactive tasks are employed in which

**Table 1** Sample Outline of Each Learning Unit

| Outline | Purpose |
|---|---|
| Warm-up | Introduce general topic and establish narrative structure |
| E-lecture (sociopragmatic) | Introduce speech act and its relevance to workplace |
| Interactive tasks (receptive) | Identifying tasks (e.g., identifying the speech act in context) |
| E-lecture (sociopragmatic) | Introduce relevant contextual variables |
| Interactive tasks (receptive) | Evaluating contextual factors |
| E-lecture (pragmalinguistic) | Introduce language strategies (e.g., direct vs. indirect) to appropriately use speech acts |
| Interactive tasks (receptive) | Identifying language strategies |
| E-lecture (pragmalinguistic) | Specific language examples (e.g., routinized formulas) |
| Interactive tasks (productive) | Target e-lecture content and enhanced observational skills with spoken and/or written responses |

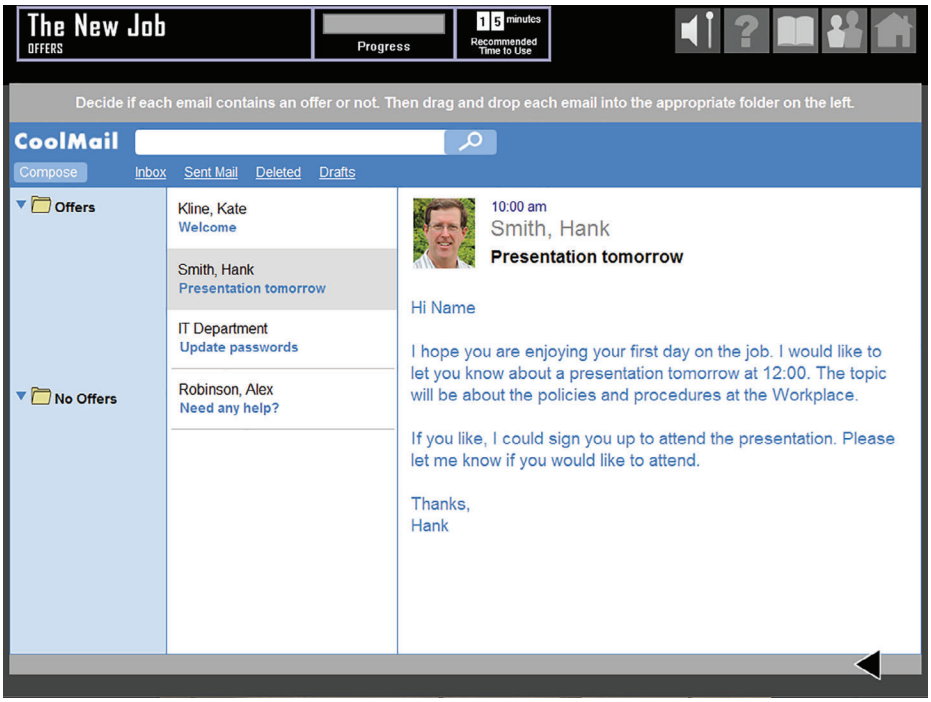


**Figure 3** Sample warm-up task in the offers unit with a focus on identifying workplace e-mails that contain offers.

the user must directly interact with different character constellations and power dynamics in varying contextual settings. To that effect, the following receptive and productive task types have been included throughout the learning modules: multiple choice, drag and drop, identifying tasks, evaluating context, oral response tasks, revising oral response tasks, rewriting tasks (e.g., productive tasks in which users are asked to rewrite language in a more formal or polite way), written discourse completion, and multiple-turn spoken dialogue tasks (see Figures 5–7 for examples of different task types).

Both across and within modules, the cognitive demands of tasks and activities are sequenced to increase in complexity in alignment with the predictions of Robinson (2001, 2005). Robinson (2005) hypothesized that sequencing tasks from simple to more cognitively complex promotes better accuracy and fluency in spoken responses and, for more complex tasks, a heightened awareness and "more 'noticing' of form" (p. 26). Within modules, tasks progress from receptive to productive skills to more accurately transition to "the full complexity of real-world target task demand" (Robinson & Gilabert, 2007, p. 162). Tasks explicitly focus on the lecture content and utilize different characters, communicative settings, and sociocontextual factors to maximize opportunities for interaction and practice as well as self-reflection. Task complexity was manipulated according to the resource-directing and resource-dispersing dimensions suggested by Robinson (2001, 2005). For instance, lectures and tasks progressed from focusing on a single element of a speech act (e.g., analyzing power distance or identifying language strategies) to a few elements at once (e.g., simultaneously evaluating the context and choosing which functional language strategies and routine formulas to use on a productive spoken response item).


**Figure 4** Sample pragmalinguistics-oriented e-lecture with a focus on wording suggestions.

Utilizing the affordances offered by computer-mediated learning platforms was a key design consideration. The scenario-based structure aimed to facilitate a more simulated immersive environment in which the user "personally" interacts with different character constellations. A variety of support options have also been implemented to provide feedback to learners and enhance their meta-pragmatic awareness. "Show Answer" features offer immediate support and feedback on the pragmatic appropriateness and accuracy of responses. "Hints" provide scaffolding and/or considerations to guide task completion, and the "Show Answer with Feedback" icon presents the learner with the correct answer and a rationale/cultural explanation for the correctness and/or appropriateness of a response. Finally, each unit is complemented by a pragmatics assessment module, designed as an end-of-unit (achievement) test (for a detailed review of the design of the end-of-unit assessment, see Banerjee & Timpe-Laughlin, in press).

## Research Question

To examine the usability of the pragmatics learning tool, the study collected user perceptions, comments, and suggestions concerning the major design elements to explore the following research questions:

RQ1. Do participating English language learners think the prototype tool helped them to communicate in more appropriate ways, and if so, why?

RQ2. To what extent do participant responses suggest that the pedagogic principles were implemented effectively in the design of Words at Work?

## Methodology

### Participants

A total of 19 respondents participated in the study, all of whom were adult professionals who were ESL learners with at least intermediate-level proficiency and some experience living in the United States. As shown in Table 2, 10 male and 9 female

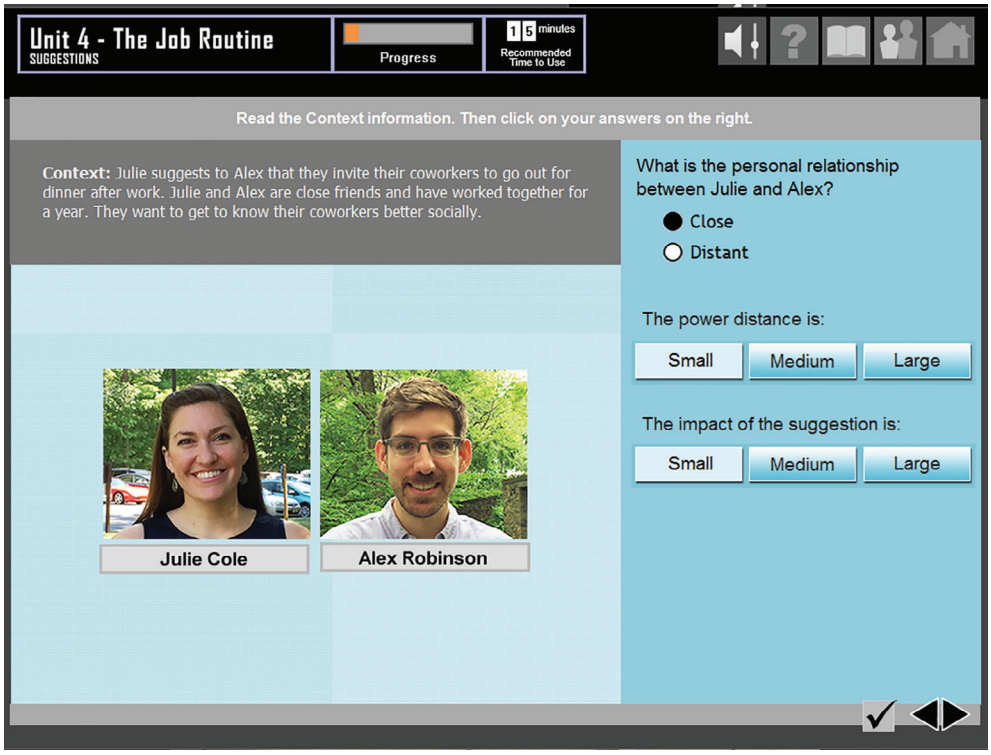


**Figure 5** Sample evaluating context task.


**Figure 6** Sample video-mediated multiple-choice task.


**Figure 7** Sample productive task.

ESL learners ($n = 19$) participated in the study. The learners had a number of different L1s, including Spanish ($n = 6$), Arabic ($n = 4$), Korean ($n = 3$), Chinese ($n = 3$), Italian ($n = 1$), French ($n = 1$), and Pashto ($n = 1$). Eight respondents were enrolled in graduate programs at U.S. universities and thus were on the verge of entering the job market, but the remaining participants were working professionals from a range of different fields, such as medicine, tourism, business, marketing, engineering, and education.

Participants appeared to have minimal background knowledge regarding pragmatics (e.g., none of them were able to accurately define the term *pragmatics* in a background survey that they completed prior to interaction with Words at Work).

## Instruments

In addition to the Words at Work learning tool, two data collection instruments were utilized. First, a background questionnaire was developed to procure general background and demographic information from participants, as well as their experience with learning English and using technology for language learning. Second, a detailed interview protocol was employed to standardize the one-on-one interviews between researchers and help target the observational notes recorded during participant interaction with the learning tool. The protocol also contained detailed retrospective questions designed to elicit feedback pertaining to the learners' perceptions of the tool, their engagement, the implementation of the pedagogic principles, and the comparability of the tool to other learning materials. The retrospective questions specifically targeting the learners' perceptions of the operationalization of the pedagogic principles are listed in Table 3.

## Procedure for Data Collection and Analysis

Each data collection session lasted 2 hours, consisting of approximately 1 hour in which the participant independently interacted with the learning tool while a researcher observed and took notes and 1 hour of a one-on-one interview. First, participants completed the background questionnaire, after which they were instructed to independently interact with the learning tool using the provided laptop. Participants were free to select which learning modules to complete and the order of completion. All participants completed either two or three learning modules (based on the time spent interacting with the tool). Then the interviewer asked targeted questions according to the interview protocol and the learners' observed use of the tool.

**Table 2** Participants' Background Information

| ID | Gender | Age (years) | Home country | L1 | Time in United States | Profession | Field |
|---|---|---|---|---|---|---|---|
| 1 | Female | 31 – 45 | China | Chinese | >3 years | acupuncturist | medicine |
| 2 | Male | 22 – 30 | Peru | Spanish | >3 years | student | medicine |
| 3 | Male | 22 – 30 | Saudi Arabia | Arabic | 1 – 2 years | student | health |
| 4 | Male | 22 – 30 | Saudi Arabia | Arabic | >3 years | student | TESOL |
| 5 | Male | 22 – 30 | Saudi Arabia | Arabic | >3 years | student | TESOL |
| 6 | Female | 22 – 30 | Saudi Arabia | Arabic | >3 years | student | TESOL |
| 7 | Female | 31 – 45 | Korea | Korean | >3 years | n.a. | n.a. |
| 8 | Male | 31 – 45 | China | Chinese | >3 years | tour guide | tourism |
| 9 | Female | 22 – 30 | Korea | Korean | >3 years | student | fine arts |
| 10 | Female | 31 – 45 | Italy | Italian | 1 – 2 years | travel agent | n.a |
| 11 | Male | 31 – 45 | Honduras | Spanish | 1 – 2 years | student | marketing |
| 12 | Female | 22 – 30 | Ecuador | Spanish | >3 years | student | n.a. |
| 13 | Male | 31 – 45 | Guatemala | Spanish | >3 years | tech support | IT |
| 14 | Female | 22 – 30 | South Korea | Korean | <6 months | translator | marketing |
| 15 | Male | 31 – 45 | Mauritania | French | >3 years | finance | finance |
| 16 | Female | ≥46 | Mexico | Spanish | >3 years | n.a. | n.a. |
| 17 | Male | ≥46 | Mexico | Spanish | >3 years | software | business |
| 18 | Male | ≥46 | China | Chinese | >3 years | civil engineer | engineering |
| 19 | Female | 22 – 30 | Pakistan | Pashto | 1 – 2 years | n.a. | n.a. |

*Note*. L1 = first language; IT = information technology; TESOL = teacher of English to speakers of other languages.

**Table 3** Interview Questions Aimed at Pedagogic Design Principles and Goals of the Learning Tool

| Pedagogic principle | Corresponding retrospective interview questions |
|---|---|
| Awareness raising (e.g., for form – function mappings) | Do you feel that you learned something about how to say and express certain speech acts? Why?<br>Learning about [insert speech act or focus of unit here], do you think that you will pay more attention to these aspects in everyday communication now? Why? |
| Feedback and explanations of cultural reasoning | Do you feel that you learned something about cultural norms of using English in U.S.-American workplaces? Why? |
| Self-paced learning | Did you feel that you could navigate the Web site at your own pace? Why? |
| Clear goal-oriented approach | In general, did you feel that the units had a clear goal or focus? Why? |
| Input enhancement (including authentic and variable input) | Did you find the lecture videos useful? Why? |
| Opportunities for simulated interaction and practice | Was it clear to you that you were the character going through the job cycle? Why?<br>Overall, did you feel the tasks gave you a good opportunity to practice what you learned in the videos? Why? |
| Opportunities for (self-)reflection | Do you feel that this task gives you the opportunity to think about your own language choices? Why? |

All interviews were audio-recorded for transcription and further analysis. Owing to the exploratory nature of the research and the focus on user perceptions of the tool, performance data were not collected. The interview data (i.e., the notes and audio recordings) were tabulated according to each of the research questions to identify the perceptions about whether and how the learning tool helped increase their pragmatic awareness and identify the extent to which participant responses suggest that the pedagogic principles were effectively implemented in the prototype tool.

## Findings

### Research Question 1

RQ1 asked, Do participating English language learners think the prototype tool helped them to communicate in more appropriate ways, and if so, why?

Overall, participant responses seem to suggest that the learning tool may be effective at *raising awareness* of pragmatic phenomena. First, all participants agreed that they learned something about how to express certain speech acts. As ID6 explained, "they give different ways of saying the same thing," for instance, "instead of being direct and firm using *could you please*?" (ID4). Participant ID1 remarked that she "didn't know 'hi' was formal," but ID5 mentioned that he learned a lot, particularly about clarification requests. ID16 originally believed that apologies are much more common in her home country of Mexico compared to US.-American culture, but she learned that apologies are more frequent in the United States than she initially thought. When asked if their interactions with Words at Work would promote an increased focus on pragmatics in everyday communication, all of the respondents were in agreement and said "definitely . . . because of the information provided" (ID4). ID16 recognized the value of an increased pragmatic awareness with her comment "I need to learn more about the American interactions because it gives you more value as an employee." Participant ID11 explained, "Sometimes English learners are too direct in questions so it's important to know and understand politeness and which type of people you'll find in workplaces." ID12 explained, "I have to pay attention!" ID13 responded, "Absolutely! I knew one way of asking things and now I know another way. It gets you excited about what comes next! It's going to stick in my mind." In sum, one comment provided by ID03 summarized the group's perceptions rather succinctly: "After seeing it here, when it happens in the streets, I will be more focused and more understanding of what's going on." (ID3).

Second, the participants indicated that the learning tool may effectively *provide feedback and explanations for cultural reasoning*. All of the respondents agreed that they learned something about the cultural norms of U.S.-American workplaces. Although the majority of the participants have lived in the United States for more than three years, responses still clearly suggest that participants learned something new through their interactions with Words at Work. For instance, ID3 explained that he "knew most of it already but some things were new . . . the e-mails, how to thank the person, how to be formal sometimes and not just joking, and the lines of the e-mail have to be in order sometimes." Several participants claimed they particularly learned something new regarding thank-you e-mails (ID3, ID6, ID8) and formal versus informal greetings (ID5 and ID8). For instance, ID8 noted that proper greetings and small talk were especially helpful for her since she had only worked in the United States for 7 months. She explained that she had always considered it inappropriate when her coworkers talked about the weather during working hours but now she understood that it was a normal part of workplace interactions. Participant ID10 also acknowledged the importance of learning about small talk in the United States when she explained, "Because I volunteer in a store and make small talk with customers but I don't always know how to answer so it's useful!" ID16 believed the tool was useful to learn something about U.S. cultural norms "because nobody teaches you—only if you are there working in the environment." Participants frequently remarked on the value and utility of such a tool as well as the general lack of learning materials targeting these skills. ID17 remarked,

> I wasn't expecting this. It was a nice surprise [to use this tool]. I thought it would focus more on English and it's really refreshing because there is no other tool like this that I have seen so far. I think this is always worth learning, no matter how long you have been in the USA, and I even think some coworkers could use it.

## Research Question 2

Research Question 2 asked: To what extent do participant responses suggest that the pedagogic principles were implemented effectively in the design of Words at Work?

Overall, participant responses suggest that the principles were perceived as effectively implemented in the design of the learning prototype. All participants ($n = 19$) agreed that they were able to navigate the learning tool at their own pace, indicating that the structure facilitated *self-paced learning*. Given that participants were able to choose which learning module they completed and to progress at their own pace, they could move forward and backward within learning modules and replay audiovisual content when necessary. Overall, users reacted very positively to this feature and felt it helped to facilitate learning. ID10 explained, "It's a good thing because you need to learn and understand English so you need to take your time to know what you're doing." Participant ID12 remarked that she "went slowly, especially for indirect and direct language. I was confused and now I learned!" Participants ID7 and ID8 noted that this design enabled them to replay the videos as necessary, but ID8 stated that this ability also allowed her to better understand the questions. ID11 explained, "It's very important because you can try again if you don't understand."

All but one of the participants ($n = 18$) agreed that the units had a *clear goal or focus*. Each unit focused on one pragmatic phenomenon (e.g., greetings, suggestions, offers), and all e-lectures and tasks within a unit targeted this particular aspect.

The units followed the same general outline and progressed from receptive to productive tasks and from a sociopragmatic to pragmalinguistic focus. Participant ID2 explained that the order and structure of the units were very clear. ID18 noted, "There were clear topics and a purpose so the learner can understand the part's purpose," and ID11 mentioned, "The idea is clear and explain clearly in video and then after video take a test. You can have an idea and choose the correct answer." One participant (ID17) felt that the focus of the units was not always clear and explained, commenting that "the purpose of units wasn't clear enough. Maybe an explanation at the beginning or reinforce this through the units to remind them of the goal of each unit." However, he then went on to say, "They said it in the beginning but I forgot the purpose as I went through the units which could be a good thing because I was so focused on what was coming next."

Moreover, all 19 participants considered the *lecture video input* useful and authentic. Lecture videos, approximately 3 – 5 minutes in length, included narration and visual content as well as videos of simulated workplace exchanges. Lectures targeting pragmalinguistic aspects for each speech act included sample language strategies as well as words and phrases that were highlighted on the screen (e.g., through underlining and use of color), and when relevant, users were encouraged to read aloud with the narrator to practice intonation. Participant ID10 said the videos were "clear and helpful," and ID4 explained that the lectures "helped him understand different situations, they were a good length, and they were interesting." Participant ID6 noted that she "liked the highlighting of text using colors and underlining," and ID8 cited favorably that she "could briefly know what the content was before the questions and liked being able to read the sentences on the screen and listen to them being spoken at the same time." Moreover, ID11 noted that the body language is very helpful in videos as it provides further contextualization. For example, he observed that in the small talk unit, in the video in which a woman asks a man if he is married, the man "clearly wasn't comfortable with the question" (ID11). This participant recognized that topics that may be appropriate for small talk in his country (e.g., age, personal relationships, salaries) might be inappropriate in the United States based on the lecture input and simulated workplace exchanges in the videos.

The interactive nature of the lectures, particularly the video examples using input from L1 speakers, was very positively perceived by participants. Observational data suggested that participants appeared engaged in their interaction, with all 19 participants indicating that the scenarios felt natural and realistic. Comments included "I found myself in this kind of situation" (ID2) and "these are things that happen in real life" (ID8). Other respondents described the video examples as "relatable" (ID6), "very realistic and funny," and "especially the interview . . . was great!" (ID5). Several participants noted, however, that it would be beneficial to include dialogue scripts for the exchanges featured in the videos. Additionally, participant ID7 observed that the lectures were occasionally too fast for her to be able to repeat highlighted routine formulas aloud, and ID5 suggested that a feature be implemented to control playback speed — points that will need to be considered in future development efforts.

The majority of participants ($n = 16$) reported that they felt they were the character going through the job cycle, suggesting that the learning tool provided *opportunities for interaction and immersion*. The introductory video explains that the user is the character following the stages of a job path, and the user's photo and name are used in the character biographies page and throughout numerous tasks. Interactive tasks are included in which the user must respond to or interact with the characters in the learning tool (e.g., recording a greeting or apology to a character, composing a thank-you e-mail after a job interview). Also, character shots or images were always taken from the perspective of the user (e.g., facing interlocutors directly). For instance, ID3 remarked, "With the images facing you like this, I felt like I was the one being interviewed. It was real, I felt it, I believed it, and I imagined myself in this situation." ID6 further explained that it was clear she was the character "because it said good luck and the narrator talked to you." ID10 noted, "You can imagine yourself in the context and better understand the situation."

Additionally, the productive spoken tasks in which users can record their voices to respond to a character in the learning tool were also favorably cited. ID11 mentioned, "You can participate directly in a conversation with a video by recording your own voice." ID14 noted that it was involving and engaging and very practical and relevant to her personally because she was looking for a job. One participant, however, did not agree that she felt as if she personally was going through the job cycle, explaining, "Just a little but not so much because in my mind I'm doing a test on a computer so I'm nervous" (ID19).

Regarding learners' perceptions of the *opportunities to practice* what they learned, all but one of the participants responded positively. ID4 noted, "The tasks were really based on the videos," and ID6 explained, "They give different tasks and cover all the sections." ID5 stated clearly that he was "applying what I learned," and participant ID2 even

suggested that "more tasks would be good." ID10 noted, "It gives a good description of the topic so the exercises are more understandable."

Participants were also asked about a specific task type to evaluate their perceptions of the *opportunities afforded for self-reflection* and to consider their language choices. This particular task type required users to audio-record a specific speech act to a familiar character at the beginning of a learning module and then revisit their responses after they had interacted with the materials and input throughout the learning module, thus giving them the opportunity to reflect upon their utterances. Although some participants expressed trepidation at recording their responses and possibly making a mistake,[1] this task was still very positively perceived and considered "helpful" (ID3). ID8 explained, "Because I can answer first without learning and then fix my answer after learning so I can double learn," and ID7 noted that she "liked this one particularly and would like even more tasks like this." Participant ID4 highlighted that this task "made him think about the appropriate word choice." Although the ability to evaluate and revise their responses was a positive feature, one participant (ID2) noted that "it would be good if we could implement feedback from real people," as the current prototype only includes hints for productive tasks to guide the learner's response and potential revision of the original utterance.

## Discussion

Findings from this study indicate that learners perceived the immersive, interactive nature of the computer-mediated tasks as useful for improving their pragmatic ability. Moreover, the L1 speaker examples, focused lecture input, targeted feedback, and cultural insights, as well as the self-paced nature of the tool, were positively identified by participants. The findings of this study suggest certain implications for the development of computer-mediated L2 pragmatics learning in general and the Words at Work prototype in particular.

### Audiovisual Input

An advantage of computer-mediated learning tools is the capability to incorporate extensive audiovisual support for learners, which was cited as a key beneficial feature of the learning tool by respondents. The participants remarked on the relatable and relevant nature of the video exchanges, which may help contribute to more active learning and engagement with the materials. It also exposes L2 learners to a more diverse range of communicative interactions and contexts, particularly for EFL learners with more limited input opportunities. As participant ID16 explained, "no one teaches you about this. English class is about grammar. No one teaches how to act in a meeting, workplace, or social situation. You only learn from interacting with natives." For instance, in one video identifying expressions of gratitude, the less colloquial expression *much obliged* was used. Nearly all of the participants replayed the video one or multiple times to better understand the term and its use.

Furthermore, as previously discussed, L2 pragmatics instruction can be challenging, as pragmatically appropriate language use is variable and context dependent. However, audiovisual examples of more conventionalized routine language use may help to focus learners' attention on certain pragmatic phenomena and provide them with increased opportunities to observe how they are linguistically realized, thus building pragmatic awareness. Moreover, the inclusion of spoken audio examples for task response options was positively perceived by participants and identified as helpful in improving pronunciation (ID8) as well as useful in terms of providing a focus on intonation to decode a speaker's intended meaning.

### Immediate, Adaptive, and Personalized Feedback

Interview data and observations clearly suggest that the incorporation of (formative) feedback was perceived positively by participants. The feedback features, including *show answer*, *hint*, and *show answer with feedback*, were extensively used by participants, all of whom agreed that the feedback was very useful to clearly and explicitly explain the accuracy and/or rationale behind a response. The immediacy of the feedback was particularly desirable to the respondents. However, participants expressed an interest in more personalized feedback specific to their individual spoken and written responses. Thus, future developments will need to capitalize on the potential of automated speech technology to provide adaptive and personalized feedback with regard to learners' pragmatic performance — an aspect that could greatly benefit L2 pragmatics learning and assessment (for a first study in that direction, see Timpe-Laughlin & Evanini, 2018).

### Use of an Immersive, Scenario-Based Environment

As previously discussed, an immersive Web-based environment could provide learners with a greater range of interlocutor constellations and communicative situations than traditional classroom-based settings. Despite the somewhat limited implementation of an immersive environment in this prototype, we were encouraged that learners were able to place themselves within the narrative and believe that enhancing this feature could be beneficial to raising pragmatic awareness. Such immersion can also provide learners with more formative opportunities to improve their productive pragmatic performance and lead to a more active learning process (Holden & Sykes, 2011). Although some participants stated feeling nervous when completing the oral response tasks, they also agreed these were useful and suggested including more spoken response tasks. As Bardovi-Harlig (2009) found, providing learners with more intense interactive opportunities can contribute to greater production and automatization of L2 pragmatic skills. To illustrate this, participant ID7 observed that the tool gave her "the opportunity to use a lot of ways to teach her the culture and the language, video clips and then lectures and let [her] speak and then assessment and then let me check if I am right . . . a lot of ways to interact. . . . I love it!" Participants frequently commented that such a learning environment provides rich opportunities to increase awareness and further their understanding of cultural norms. One participant explained, "This really makes you think. You can learn these things by socializing, but with whom?" (ID13).

### Self-Paced Navigation

Study findings indicated that users perceived the self-paced design of Words at Work as an important feature of the learning tool, and participants liked being able to move backward and forward within the modules based on their individual needs. Some users chose to replay the lectures and video exchanges to better understand and internalize input; however, others preferred to return to particular lectures to assist in completing the tasks. Independent navigation allows the learner to identify and address his or her individual needs, as highlighted by Sykes and Cohen (2008a, 2008b). Thus, if a learner has a job interview, for example, and wanted to practice relevant pragmatic skills, the learner would be able to focus on that particular module. Because this was designed as a low-stakes, self-access tool to promote awareness, a self-paced structure and feedback support allow learners to explore different response options and understand the potential consequences of pragmatically inappropriate linguistic choices.

### Opportunities to Develop Observational Skills and Self-Reflect

As suggested by the tool's underlying pedagogic principles, the findings support that learners should have the opportunity to develop their awareness and observations of pragmatic phenomena in an environment that provides explicit, metapragmatic feedback. Materials should be designed to explicitly draw attention to the interconnectedness between both the pragmalinguistic and sociopragmatic features of pragmatic competence so that learners may better understand and adapt their linguistic strategies. For instance, one participant (ID8) noted that she had always thought the greeting "morning" was more formal and would be appropriate when speaking with a person in a higher position whom she did not know well. The pragmalinguistic input she received explained that this greeting is more informal and therefore inappropriate when considering the sociopragmatic component; that is, speaking to a superior requires a more formal greeting. After seeing both a video example of this informal greeting and pragmalinguistic input on its level of formality, she indicated that she would need to adapt her usage of the term. Hence, a combined approach to pragmatic instruction that utilizes the affordances of CALL technology could help to improve observational skills in learners and self-evaluation.

## Conclusion

Although this study reports only on the prototype of a learning tool, it still represents an important step in addressing the call for research to inform future empirically based development for computer-mediated learning tools targeting L2 pragmatics. It focuses specifically on learners' perceptions relative to pedagogic principles for effective L2 pragmatic development in a digital environment (vs. a traditional classroom setting). Moreover, although previous studies have attempted to operationalize *some* of these pedagogic principles, this study is original in its attempt to systematically integrate *all* of the pedagogic principles within the prototype design, particularly those identified as crucial in previous research. Finally,

this study is the first to focus specifically on a CALL application dedicated to English-language pragmatics, as previous CALL pragmatics materials have been designed for Spanish and Japanese L2 learners.

Certain limitations may have impacted the findings of this study. To begin with, the Words at Work learning tool is still in the prototype stage. The sample size was also relatively small, making it difficult to generalize these findings to the larger ESL/EFL population. In addition, although participants were encouraged to navigate through the site as they liked, the presence of the interviewer may have had some impact on their usage. Nearly all of the participants adopted a systematic approach to completing the modules, with only one learner visiting multiple modules before attempting to complete one in its entirety. As this is intended as a self-learning tool, users' approaches may have varied had they been in a nonresearch environment. Furthermore, although the automated speech recognition software is currently being operationalized within this prototype, the accuracy of such technology is still being improved. Therefore, future research could focus on the impact automated speech recognition has on the development of productive pragmatic competence in both instruction and assessment. Another potential area for future research would be the longitudinal effects of using CALL tools like Words at Work on the development of learners' pragmatic awareness and competence. Although participants' performance data were not collected due to the exploratory nature of this study, such data are critical to investigating the effectiveness of the learning tool in terms of promoting pragmatic ability—an aspect that future studies should take into account. Finally, this study examined the perceptions of the learning tool for self-access; however, the integration of a computer-mediated tool designed to explicitly target pragmatics in classroom instruction could also merit future investigation.

## Note

1 This may have been influenced by the researcher observing their interaction.

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## Appendix

### Pedagogic Principles of Second-Language Pragmatic Instruction

| | Awareness raising (e.g., for form–function mappings) | Clear goal-oriented approach | Combining pragmalinguistics and sociopragmatics | Input enhancement (including authentic and variable input) | Observational skills | Opportunities for (self-) reflection | Opportunities for interaction and practice | Self-paced learning | Feedback and explanations of cultural reasoning | Drawing comparisons between L1 and L2 | Assessment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ishihara and Cohen (2010) | X | | | | | X | | | | | |
| Limberg (2015a) | X | | X | X | X | | X | | | X | |
| Sykes (2010)[a] | | X | | X | | | | | X | | X |
| Sykes and Cohen (2008a)[a] | X | X | | X | X | | X | X | X | | X |
| Timpe-Laughlin (2016) | X | X | X | X | X | X | X | X | X | | X |

[a] Publication features largely identical lists of pedagogic principles.

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