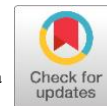# A digital pragmatics inquiry: Academic performance and transformative awareness in Saudi EFL online environments

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[a, b] English language and Translation Department, Saudi Electronic University, Abi Bakr As Siddiq Rd, Ar Rabi, Riyadh 13316, Saudi Arabia
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ABSTRACT

Pragmatic competence is essential for communicative competence, yet under-researched in Saudi EFL contexts, particularly within the post-pandemic shift to digital instruction. This study investigates online learning as a transformative site for pragmatic development, examining Saudi EFL undergraduates' pragmatic awareness within this digital context and the influence of gender, age, and GPA. A quantitative design utilized an online questionnaire with authentic scenarios. Data from 138 students, analyzed via t-tests and ANOVA, revealed that most students perceived the online environment as beneficial for developing pragmatic awareness. Participants demonstrated notable competence in specific digital interactions. While no significant differences were found based on gender or age, GPA emerged as a key factor. This study contributes to digital pragmatics research by empirically positioning the post-pandemic online classroom as a viable space for metapragmatic development, not merely a compensatory tool. It challenges demographic assumptions, highlighting academic profile as a primary differentiator in this new learning ecology. Pedagogically, it argues for intentionally leveraging online platforms to design targeted, authentic pragmatic practice for diverse learners.

1. Introduction

The importance of pragmatic competence in an English as a foreign language (EFL) context has been widely addressed in theoretical and empirical research in recent decades (Han & Tanriover, 2015; Al-Qahtani, 2020; Wang et al., 2024). Pragmatic competence can be defined as the ability of EFL learners to make language choices and comprehend and produce socioculturally appropriate speech acts (Hamdani, 2019). Pragmatic understanding is not acquired from dictionaries or textbooks but mainly from the conventions and norms of society (Takkac Tulgar, 2016). Hence, specific resources and materials should be designed to help EFL students connect the meanings of words to these norms and conventions. Delving deeper, to acquire this particular competence, EFL learners need knowledge of a pragmatic system that consists of different sociocultural rules and norms and knowledge of the use of this system (Ariani et al., 2021; Bachelor, 2022; Taguchi, 2014) in online learning sessions.

Against this background, comparative studies between different teaching approaches and pragmatics instruction methods have been conducted (Taguchi, 2015; Taguchi & Roever, 2017; Taguchi, 2023; Qin, 2023). While these studies generally support the benefits of instruction in developing pragmatic awareness, they also reveal that the extent of learner gains varies depending on

the type and intensity of instruction. For instance, Taguchi (2015) observed that explicit instruction leads to rapid improvements in pragmatic recognition. However, long-term gains appear more sustainable in contextualized, implicitly guided interactions, as evidenced by Taguchi and Roever (2017).

Given that traditional language teaching with the use of textbooks is not particularly effective in developing students' pragmatic knowledge (Ogeyik et al., 2015; Ren & Han , 2016; Almegren, 2022; Kim et al., 2023), online sessions with authentic materials may be a better way to increase students' pragmatic awareness, especially taking into account the changing demands of EFL learners (Al-Hozali, 2023; Yusupalieva, 2024). Some prior literature (e.g., Almehmadi, 2024; Azlan et al., 2019; Culbertson et al., 2017; Gonulal, 2019; Indrastana & Rinda, 2021; Shirkhani, 2014) emphasizes the use of recent technological advances such as social networking and digital gaming to provide EFL learners with enough exposure to activities with pragmatic input. By undertaking these activities, EFL learners might be aware of what is socially acceptable in a target language and learn how to express themselves in appropriate manners in digital learning. Thus, the global shift toward digital learning, accelerated by the pandemic, presents a critical juncture to re-examine this challenge. This study, therefore, aims to investigate Saudi EFL undergraduate students' awareness of pragmatic competence in online learning sessions and to determine if significant differences exist in this awareness based on gender, age and GPA. To ground this investigation, it is important to consider Taguchi's (2019) framework of L2 pragmatic competence as the guiding theoretical foundation. Taguchi's model emphasizes the interdependence of linguistic knowledge, sociocultural context, and cognitive processing in the development of second language pragmatic ability. This framework is particularly relevant to the present study, as it provides a comprehensive basis for analyzing how learners acquire and apply pragmatic awareness in authentic communicative contexts. While it is acknowledged that pragmatic competence plays a vital role in achieving appropriate and effective communication (Al Zoubi et al., 2025; Crystal, 1997; Huang, 2023; Ou, 2020), the assumption that it does not develop alongside linguistic competence in EFL contexts (Shirkhani, 2014) may not fully reflect the progress and evolving nature of language instruction and learning. Recent research demonstrates that pragmatic and linguistic competences are interrelated and can develop simultaneously when learners are provided with communicative, contextualized, and interaction-based instruction. For instance, studies by Taguchi (2019) and Ishihara and Cohen (2014) have shown that EFL learners exposed to authentic communicative input, intercultural exchanges and pragmatic-focused feedback exhibit noticeable improvement in both pragmatic awareness and linguistic accuracy. This indicates that pragmatic competence is not necessarily dependent on full linguistic mastery but rather can co-evolve through experiential and communicative learning.

Furthermore, In EFL contexts, the groundwork for understanding the significance of pragmatic competence for EFL learners is laid in the Speech Act Theory. This theory brings to the forefront the idea that the primary unit of communication is not an utterance, but the performance of what Austin (1962) called speech acts. What ensues from this idea is performance through words, and this performance, according to Austin (1962), simultaneously involves three acts: locutionary, illocutionary, and perlocutionary. All three acts are necessary to ensure successful communication between speakers. While the locutionary act refers to the literal meaning of an utterance, the illocutionary and perlocutionary acts relate to speakers' intentions and speech perception. In light of this, an utterance is expressed by a speaker not only with the aim of conveying a message but also with the aim of fulfilling a definite function or achieving a definite purpose during speech. By equating an utterance to an action, the Speech Act Theory posits that an utterance has a great effect on the recipients (Mukhroji et al., 2019). However, subsequent research has expanded speech act theory by incorporating the role of context and culture in interpreting meaning (Ishihara & Cohen, 2014). This shift from structural to contextual understanding of speech acts underscores that pragmatic competence is not universal but culturally mediated.

According to Takkac Tulgar (2016), an effective approach to shaping EFL students' understanding of how to appropriately use the target language is to increase their pragmatic awareness. While this approach does not guarantee that EFL students will acquire deep pragmatic knowledge, it gives them some insight into the differences between the native language and the target language. Without pragmatic competence, miscommunication between speakers may occur because of the inability of speakers to interpret the intended meaning in specific language contexts or to use a variety of speech act structures and realizations (Shirkhani, 2014; Fareh et al., 2023). Recent studies (Alqahtani, 2020;

Altameemy et al., 2024) reveal that many EFL students possess strong grammatical knowledge but struggle with pragmatic appropriateness, particularly in online or cross-cultural settings. These findings suggest that pragmatic development necessitates opportunities for meaning negotiation and authentic social interaction rather than relying solely on textbook input.

Over the past two decades, global scholarship investigating technology-mediated second language (L2) pragmatics has expanded rapidly (Bouftira et al., 2022; Rafiq & Yavuz, 2024; Qin, 2023). More recent research further demonstrates a growing interest in how digital technologies support the development of pragmatic competence across instructional and interactional contexts (Sykes & González-Lloret, 2020; Taguchi, 2023). This body of work has employed a wide range of technological tools, including computer-mediated communication (CMC), computer-assisted language learning (CALL), mobile-assisted language learning (MALL), and, more recently, artificial intelligence (AI), to facilitate learners' engagement with authentic pragmatic input and socioculturally appropriate language use (Shadiev et al., 2020; González-Lloret, 2021; Lee & Cook, 2024; Rafiq & Yavuz, 2024). In response to this expanding body of research, a number of peer-reviewed studies have been conducted to synthesize the role of technology in fostering L2 pragmatic competence (Tang, 2019; Sykes & González-Lloret, 2020; González-Lloret, 2022; Qi & Chen, 2025). These syntheses have subsequently stimulated further empirical investigations characterized by more robust research designs and innovative pedagogical tasks. Although these reviews provide significant insights and promote the continued integration of technology into pragmatic development, certain gaps in the research persist.

Thus, the present research empirically brings to light new evidence on the issue of EFL students' pragmatic awareness, with a particular focus on the Saudi Arabian context. This research will add to the knowledge base by obtaining empirical data and providing suggestions into how online learning sessions can be effectively organized to enhance Saudi EFL learners' pragmatic awareness. The Saudi context was selected due to the relatively limited emphasis on pragmatic instruction in EFL classrooms (Al Seghayer, 2024; Almehaidly, 2024). For example, Al-Hozali (2023) asserts that Saudi EFL teachers mainly focus on developing students' vocabulary and grammar skills. As a result, many Saudi EFL students experience difficulties in communicating effectively in English even after completing formal EFL courses (Ghazzoul, 2019; Al-Hozali, 2023).

The present research will also pay special attention to the differences in students' awareness of pragmatic competence in terms of gender, age and grade point average (GPA). These variables were selected based on previous empirical studies (e.g., Zanini et al., 2005; Allensworth & Clark, 2020; Almegren, 2022) that have demonstrated their potential influence on second language learning outcomes and pragmatic competence development. Thus, all these aspects are crucial, as they provide insight into whether online learning sessions are suitable for different EFL learners. Specifically, the inclusion of GPA as an independent variable in this study is theoretically justified by its established validity as a robust, cumulative indicator of general academic competence and engagement. Research in educational outcomes demonstrates that GPA is a significant predictor of broader learning achievements, including college completion (Allensworth & Clark, 2020). Extending this rationale to the domain of second language acquisition, it is posited that the analytical skills, sustained cognitive effort, and metalinguistic awareness associated with higher academic achievement may also facilitate the development of pragmatic awareness. Therefore, GPA is employed not as a direct measure of pragmatic ability, but as a contextual and enabling variable that may systematically correlate with learners' capacity to recognize and analyze sociopragmatic norms in a target language.

To this end, little research has been done on how language competency affects EFL/ESL learners' speech act adoption and pragmatic realization. Furthermore, Saudi students' pragmatic competence has not been thoroughly examined; it has inadequate attention as well, particularly in the Saudi EFL settings (AlTameemy et al., 2024; Alshraah et al., 2024). Consequently, this paper aims to investigate Saudi EFL undergraduate students' awareness of pragmatic competence in online learning sessions and to determine if significant differences exist in this awareness based on gender, age and GPA.

In brief, this study aims to answer the following research questions:

1. What is the level of Saudi EFL undergraduate students' awareness of pragmatic competence in online learning sessions?

2. Are there significant differences in Saudi EFL undergraduate students' awareness of pragmatic competence in online learning sessions based on gender, age and GPA?

2. Method

For the sake of statistical purposes to gain numeric data, this study employs a quantitative descriptive design to investigate Saudi EFL students' awareness of pragmatic competence in online environment.

2.1. Participants

The study involves a sample of 138 male and female third-year undergraduate students majoring in English Language and Translation at Saudi Electronic University (SEU). These participants are selected through purposive sampling, as they possess key characteristics that align with the research objectives, making them a suitable sample for investigating pragmatic competence among Saudi EFL learners. The choice of third and fourth - year students is deliberate, as they are expected to have developed a foundational understanding of linguistic and pragmatic rules. Furthermore, their enrollment in advanced undergraduate courses also indicates a sufficient level of language proficiency, allowing for meaningful assessment of pragmatic decision-making in contextually appropriate responses. Table 1 highlights the demographic information of the participants.

Table 1. Demographic Features of the Study Participants

Item	Frequency	Percentage
Age		
18-24	99	71.7%
25-34	18	13.0%
35-44	18	13.0%
More than 44	3	2.3%
GPA		
Excellent	60	43.5%
Very good	45	32.6%
Good	30	21.7%
Pass	3	2.2%
Gender		
Male	52	37.7%
Female	86	62.3%
Nationality		
Saudi	131	94.9%
Non-Saudi	7	5.1%
Total	138	100%

From Table 1, The sample of the current study displayed balanced demographic characteristics across all measured variables. Age distribution was nearly even, with participants aged 18-24 (71.7%), 25-34 (13.0%), 35-44 (13.0%), and over 44 (2.3%) each representing comparable proportions. Academic performance followed a similar pattern: 43.5% of respondents reported an Excellent GPA, 32.6% Very Good, 21.7% Good, and 2.2% Pass. Gender distribution approached perfect parity, with males (37.7%) and females (62.3%) represented almost equally. Nationality data showed a predominantly Saudi cohort (94.9%), with non-Saudi participants comprising 5.1% of the sample.

2.2. Instrumentation

An online structured questionnaire is used as a data collection tool, featuring situational discourse completion tasks that present brief scenarios followed by multiple-choice responses. Participants are required to select the most pragmatically appropriate answer for each context, allowing the researcher to measure their level in pragmatic awareness in English. The questionnaire adopted from Jungheim (2011) is carefully designed to include common speech acts such as requests, apologies, refusals, and suggestions, ensuring that the responses reflect real-world communicative competence. Thus, the

questionnaire consisted of carefully designed scenarios requiring participants to select appropriate speech acts, including requests, suggestions, refusals, and apologies. These adopted scenarios were adapted from real-life communicative situations to enhance authenticity and ensure that the collected data reflected genuine pragmatic competence. To evaluate the students' responses, a scoring system was implemented, where correct answers aligning with linguistically appropriate speech acts were assigned points. This method allowed for a systematic assessment of participants' ability to produce contextually suitable responses in line with the targeted pragmatic functions. While the instrument— an online questionnaire featuring adapted situational discourse completion tasks—provides a controlled and efficient snapshot of pragmatic awareness across speech acts like requests, apologies, refusals, and suggestions, it cannot capture the developmental trajectory of this competence or establish causal relationships. The design prioritizes breadth and systematic assessment at a single point in time, a necessary trade-off that limits claims about longitudinal growth. Interestingly, the participants completed the survey within approximately 15 minutes, during which they identified and selected contextually appropriate speech act responses (including requests, apologies, refusals, and suggestions) for each presented scenario.

2.3. Data Collection

The data collection is conducted through an online questionnaire, ensuring ease of administration and participant accessibility. To ensure content validity, the instrument undergoes expert validation by applied linguistics specialists who are experts in the field. Ethical considerations, such as informed consent and participant anonymity, are strictly maintained throughout the process. It is worth mentioning that the Scientific Ethical Committee of the Saudi Electronic University has granted approval for this study (Ref. No. SEUREC-4639).

2.4. Data Analysis

For data analysis, descriptive statistics (frequencies, percentages, and mean scores) are used to determine overall pragmatic awareness levels and identify respondents' correct answers. Following data collection, the questionnaire responses were systematically coded and analyzed using IBM SPSS Statistics (Version 26). To examine potential gender-based differences in pragmatic awareness, an independent samples t-test was conducted. For comparisons across age groups and academic performance (GPA) levels, one-way ANOVA tests were employed. These statistical analyses were selected to ensure robust examination of variance and significance within the dataset, thereby validating the reliability of the findings.

3. Findings and Discussion

3.1. Finding

With reference to the first research question entitled "What is the level of Saudi EFL undergraduate students' awareness of pragmatic competence in online learning sessions?", Table 2 presents data on pragmatic competence in speech acts, analyzing how respondents answer situational questions based on their awareness of pragmatic competence.

Table 2. Survey Results on EFL Learners' Awareness of Pragmatic Competence

Items	Options / Frequency of Responses out of 138 & Percentages	
Do online learning sessions facilitate my awareness of pragmatic competence?	a. Yes	a. 105 (76.1%)
	b. No	b. 33 (23.9%)
Scenarios and Situations:		
1. Visiting a new place: You are visiting a new place, and you meet an old friend who you have not seen for ages. Your old friend greets you at that place. He said: "Hey! It's been a long time. How're you doing?" Your response will be:	a. I'm not interested.	a. 0
	b. Great. How about you?	b. 129 (93.5%)
	c. Never mind.	c. 0
	d. Thank you.	d. 9 (6.5%)

2. At the company: You are a clerk who knocks over a new employee's electric stapler while walking past in the corridor. What will you say to him/her when he looks at you?	a. Sorry! I'm very sorry. I didn't mean that. I didn't mean it. b. This is the last time. c. Never mind. d. I don't care.	a. 84 (60.9%) b. 18 (13%) c. 21 (15.2%) d. 15 (10.9%)
Situation 2 expresses one of the following speech acts:	a. Apology b. Responding to a comment c. Request for help d. Suggestion e. Refusal	a. 99 (71.7%) b. 15 (10.9) c. 3 (2.2%) d. 21 (15.2%) e. 0
3. A trip: You have just come back from a trip abroad, and your English friend says something about the jumper that you bought there. Your friend said "Hi. Welcome back. Did you get that jumper on your trip? I really like it." What will you say to him/her?	a. Thank you. b. Never mind. c. It's ok. d. Looks terrible!	a. 117 (84.8%) b. 3 (2.2%) c. 12 (8.7%) d. 6 (4.3%)
Situation 3 expresses one of the following speech acts:	a. Apology b. Responding to a comment c. Request for help d. Suggestion e. Refusal	a. 12 (8.7%) b.111 (80.4%) c. 6 (4.3%) d. 3 (2.2%) e. 6 (4.3%)
4. At the instructor's office: You are an undergraduate student who visits your instructor's office because you need more instructions to do your assignment. The instructor said, "How can I do for you?" What will you say to him/her?	a. I want you to check my assignment. b. Give me some advice. c. I would like you to tell me how to write this assignment. d. Um, I'm having a bit of trouble with this assignment, and I wonder, if you have time, you could give me a hand.	a. 12 (8.7%) b. 12 (8.7%) c. 12 (8.7%) d. 102 (73.9%)
Situation 4 expresses one of the following speech acts:	a. Apology b. Responding to a comment c. Request for help d. Suggestion e. Refusal	a. 0 b.3 (2.2%) c.129 (93.5%) d. 6 (4.3%) e.0
5. Airplane ticket: Your friend wants to take a trip to Dammam and would like to buy a cheap airplane ticket since you are working at a tourism and travel office. Your friend said "I want to go to Dammam. Do you know how to get a cheap ticket? What will you say to him/her?	a. I think you should buy it via the internet. You can find a cheap ticket. b. Um, I'm sorry I don't know quite pretty sure. c. Ah, sorry. I don't know in detail, so please ask station staff. d. Ah ok. I'll search for tourism and travel offices in the neighborhood. I'll try it.	a. 63 (45.7%) b. 9 (6.5%) c. 9 (6.5%) d. 57 (41.3%)
Situation 5 expresses one of the following speech acts:	a. Apology b. Responding to a comment c. Request for help d. Suggestion e. Refusal	a. 6 (4.3%) b.12 (8.7%) c. 33 (23.9%) d. 84 (60.9%) e. 3 (2.2%)
6. Part-time job: Another instructor wants you to come to his/her office to help you with your research assignment, but you have no time today due to your part-time job. This instructor said, "Why don't you come and talk with me if you're having trouble with that research assignment?" What will you say to him/her?	a. I don't agree since I am busy. May be later. b. Thanks for your help but I have a part-time job today. Do you have time maybe, perhaps tomorrow? c. I'm sorry, I can't. Thank you. d. Today I don't have time because of my part-time job.	a.0 b.129 (93.5%) c. 6 (4.3%) d. 3 (2.2%)
Situation 6 expresses one of the following speech acts:	a. Apology b. Responding to a comment c. Request for help d. Suggestion e. Refusal	a.21 (15.2%) b. 24 (17.4%) c. 18 (13%) d. 24 (17.4%) e.51 (37%)

From Table 2, the first section shows that 76.1% of participants believe online learning enhances their pragmatic awareness, while 23.9% disagree. This suggests a generally positive perception of digital platforms in fostering communicative competence. The bulk of the table examines real-life scenarios where respondents must choose appropriate speech acts. In Situation 1 (meeting an old friend while visiting a new place), an overwhelming 93.5% correctly selected a friendly response, demonstrating strong pragmatic awareness in informal social interactions. Situation 2 (At the company) reveals that 60.9% chose a polite apology, while the remaining responses indicate some participants struggle with workplace etiquette. The follow-up question confirms that 71.7% correctly identified the speech act as an apology, reinforcing that most recognize this social convention. Situation 3 (compliment on clothing) shows 84.8% appropriately responding with gratitude, while 80.4% accurately identified the speech act as responding to a comment. This high success rate suggests that accepting compliments is a well-understood pragmatic function. In Situation 4 (requesting academic help), 73.9% used indirect and polite phrasing, and an impressive 93.5% recognized the speech act as a request for help, indicating powerful pragmatic competence in formal academic settings. Situation 5 (advising on travel tickets) had only 45.7% providing a helpful suggestion, with 60.9% later identifying the correct speech act as a suggestion. The lower score here may reflect uncertainty in giving advice. Finally, Situation 6 (politely declining help due to work commitments) saw 93.5% choosing a courteous refusal, but only 37% correctly labeled the speech act as refusal, indicating a possible gap in meta-pragmatic awareness despite practical competence.

However, the data reveals that Scenario 5 (Airplane Ticket) and Situation 6 (Part-time Job) posed challenges for respondents, indicating confusion or lack of familiarity with the expected pragmatic responses. In Scenario 5, where a friend asks for advice on finding a cheap airplane ticket, only 45.7% of participants chose the most appropriate response (suggesting online purchase). The relatively low percentage suggests that many respondents were unsure how to provide helpful advice in this context. However, in the follow-up question, 60.9% correctly identified the speech act as a suggestion, which means some recognized the intended function even if they struggled to produce the right response. This discrepancy implies that while students may understand the theory of speech acts (recognizing suggestions), they may lack confidence or experience in practically applying them in real-life advice-giving situations.

As for Situation 6 (Part-time Job), it shows an even more striking contrast. While 93.5% of respondents gave a polite and appropriate refusal when declining an instructor's help due to a part-time job, only 37% correctly labeled the speech act as a refusal. This suggests that students are capable of formulating socially acceptable responses (e.g., "Thanks for your help, but I have a part-time job today. Maybe tomorrow?") but struggle to explicitly categorize such interactions as refusals. This could be due to cultural factors in which some learners may associate "refusal" with rudeness, leading them to avoid labeling polite rejections as such. This could be also due to lack of explicit instruction; if pragmatics teaching focuses more on production (how to respond) rather than analysis (identifying speech acts), students may perform well in practice but struggle with meta-awareness.

Regarding the second research question, it investigates potential differences in pragmatic competence awareness among EFL undergraduates' responses in online learning, considering gender, GPA, and age as variables. To address the second research question, independent t-tests were used to compare gender differences, while one-way ANOVA was applied to examine variations based on age and GPA. As presented in Table 3, an independent samples t-test assessed the impact of gender on responses of EFL undergraduates' awareness of pragmatic competence in online learning. The analysis showed no statistically significant disparity between male and female students ($p = .52$), indicating that gender did not significantly influence their responses.

Table 3. Independent Sample T-Test for undergraduates' awareness of pragmatic competence in terms of gender

Situations on Speech Acts	Gender	N	Mean	SD	T	P
Responses of EFL undergraduates' awareness of pragmatic competence in online learning setting	Male	52	28.33	2.84	0.63	.52
	Female	86	28.01	2.83		

As for the age variable, Table 4 presents the results of a one-way ANOVA analyzing the responses of EFL undergraduates' awareness of pragmatic competence in online learning. The analysis revealed no statistically significant differences across age groups (p = 0.49), indicating that age did not significantly influence students' pragmatic competence awareness.

Table 4. ANOVA for EFL undergraduates' awareness of pragmatic competence and their age group

Situations on Speech Acts	Age	N	Mean	SD	F	P
Responses of EFL undergraduates' awareness of pragmatic competence in online learning setting	18-24	99	28.27	3.15	.81	0.49
	25-34	18	27.67	1.74		
	35-44	18	28.17	1.72		
	More than 44	3	26.00	0.00		
	Total	138	28.13	2.82		

Finally, Table 5 displays the one-way ANOVA results for GPA differences in EFL undergraduates' awareness of pragmatic competence in online learning. The analysis statistically showed significant variations across GPA levels (p = 0.001), suggesting that GPA significantly affected undergraduate students' pragmatic awareness.

Table 5. ANOVA for EFL undergraduates' awareness of pragmatic competence and their GPA

Situations on Speech Acts	GPA	N	Mean	SD	F	P
Responses of EFL undergraduates' awareness of pragmatic competence in online learning setting	Excellent	60	27.70	2.65	5.81	0.001
	Very good	45	28.33	2.55		
	Good	30	29.20	3.04		
	Pass	3	23.00	0.00		
	Total	138	28.13	2.82		

All in all, the statistical analyses revealed that none of the examined variables – gender (p = .52) and age (p = 0.49) – showed significant effects on Saudi EFL undergraduates' awareness of pragmatic competence in online learning environments. The independent t-test for gender differences and one-way ANOVA tests for age categories all yielded p-values well above the .05 threshold, indicating no statistically meaningful variations in students' pragmatic awareness across these variables. These consistent non-significant findings suggest that, within this study's context, learners' recognition of pragmatic competence operates independently of their gender and age categories. However, GPA showed a significant effect (p = .001) on Saudi EFL undergraduates' awareness of pragmatic competence in online learning settings. This indicates that students with higher GPAs tend to have much better awareness compared to those having lower GPAs.

3.2. Discussion

The results of the first research question of the current study provide a nuanced portrait of pragmatic awareness among EFL undergraduates, moving beyond a linear confirmatory narrative to reveal meaningful patterns in both significant and non-significant results. A majority of participants (76.1%) perceived online learning as beneficial for developing pragmatic competence, aligning with research highlighting the potential of digital platforms for authentic language exposure (Sari et al., 2025). However, the substantial minority (23.9%) who disagreed should not be overlooked. This divergence suggests that the effectiveness of technology is not automatic but is mediated by instructional design—specifically, the degree to which digital environments offer immersive, context-rich interactions that facilitate pragmatic noticing and practice. This finding encourages a shift from asking whether technology is used to how it is implemented to support socio-pragmatic development.

Analysis of performance across specific speech acts further reveals the variable and componential nature of pragmatic awareness. For instance, in social interaction scenarios, participants demonstrated strong pragmatic awareness in certain contexts but showed inconsistencies in others. For instance, when responding to an old friend's greeting, an overwhelming 93.5% of students chose the appropriate reciprocal response ("Great. How about you?"), reflecting an understanding of polite conversational norms. However, a small percentage (6.5%) responded with "Thank you," which may indicate a misinterpretation of the greeting as a compliment rather than a social exchange. Similarly, in a

scenario requiring an apology for accidentally knocking over a colleague's stapler, 60.9% of participants provided an appropriate and explicit apology ("Sorry! I'm very sorry..."), yet a notable portion (13%–15.2%) selected less suitable responses ("This is the last time" or "Never mind"). This suggests that while many students recognize the need for apologies in such situations, some may struggle with the appropriate phrasing or level of politeness required. This result goes in line with the study conducted by Alfghe and Mohammadzadeh (2021).

The findings also reveal variations in how students handle compliments and requests. When responding to a compliment about a purchased jumper, 84.8% of participants appropriately said, "Thank you," aligning with English pragmatic norms. However, a few (4.3%) responded negatively ("Looks terrible!"), possibly due to L1 transfer or a misunderstanding of expected polite responses. In academic settings, when requesting help from an instructor, most students (73.9%) used an indirect and polite formulation ("I wonder if you could give me a hand"), demonstrating awareness of formal academic discourse. However, a small percentage (8.7%) opted for more direct demands ("I want you to check my assignment"), which could be perceived as impolite. These discrepancies suggest that while many EFL undergraduates possess a strong grasp of polite language use, some may require further instruction in adjusting their tone based on formality and context. This finding is consistent with the research conducted by Alfghe and Mohammadzadeh (2021).

The recognition of speech acts further underscores these patterns. Participants accurately identified speech acts in most scenarios, such as correctly labeling an apology (71.7%), responding to a comment (80.4%), and requesting help (93.5%). Supported by Alerwi and Alzahrani's (2020) study and Alfghe and Mohammadzadeh's (2021) study, however, only 60.9% recognized a suggestion when advising a friend on purchasing a cheap ticket, and just 37% correctly identified a refusal in a scenario where they had to decline an instructor's request due to prior commitment. This indicates that while students are adept at recognizing straightforward speech acts, more nuanced or indirect communicative functions (e.g., polite refusals) may pose challenges. This result that underscores the need for pedagogical attention to be directed strategically toward these more complex pragmatic domains does not go in line with Alerwi and Alzahrani's (2020) study.

As for the result of the second research question, the findings reveal no statistically significant differences in pragmatic competence awareness among EFL undergraduates based on gender and age, suggesting that these factors do not play a substantial role in shaping learners' awareness of pragmatic competence in online learning environments. Nevertheless, the results also reveal statistically significant differences in pragmatic competence awareness among EFL undergraduates based on their GPA. The independent samples t-test comparing male and female students yielded a non-significant result ($p = .52$), indicating that gender does not influence pragmatic awareness in this context. This finding aligns with research conducted by Smith (2009) that found no statistically significant gender differences in speech act production among non-native speakers, suggesting that gender may not be a reliable predictor of pragmatic strategy selection in L2 contexts. In contrast, recent studies by Tajeddin and Malmir (2024) and Alfghe and Mohammadzadeh's (2021). The latter reported significant gender-based variation in suggestion strategies, with male learners tending to employ more direct approaches while female learners preferred indirect formulations. Similarly, the non-significant effect of age ($p = 0.49$) in the one-way ANOVA analysis suggests that pragmatic awareness does not vary meaningfully across different age groups among undergraduate learners. This result is inconsistent with the study authored by Zanini et al. (2005). In contrast, the significant relationship between pragmatic awareness and GPA ($p = .001$) emerges as a pivotal finding, reinforcing the theoretical premise that general academic achievement serves as a proxy for analytical ability, sustained engagement, and metalinguistic awareness—competencies that facilitate the conscious analysis of pragmatic norms (Allensworth & Clark, 2020). This result redirects focus from immutable demographic categories toward malleable academic behaviors and cognitive dispositions that can be nurtured instructionally.

Collectively, these findings argue for a multifactorial model of pragmatic development, shaped by the confluence of instructional, cultural, and learner-internal variables. Pragmatic awareness in EFL settings appears to be influenced not by a single determinant but by the interaction of technological implementation quality, the inherent linguistic complexity of specific speech acts, and the learner's broader academic proficiencies. To foster robust pragmatic competence, instruction should therefore prioritize explicit teaching of high-difficulty, indirect speech acts; intentionally design technology-mediated tasks that simulate authentic interactional dilemmas; and support the development of the general analytical and engagement skills reflected in academic achievement.

4. Conclusion

This research aimed to explore Saudi EFL undergraduate students' pragmatic competence awareness within online learning environments and to determine whether significant variations in this awareness exist with respect to gender, age and GPA. Key findings indicate that participants generally believe online learning enhances their pragmatic awareness and perceive digital platforms positively for fostering communicative competence. Furthermore, the participants demonstrated notable pragmatic awareness when responding to different situational questions. However, they also displayed some inconsistency in their pragmatic awareness across diverse contexts, such as in recognising suggestions or refusals. Another major finding indicates that the participants' demographic attributes (gender and age) do not appear to influence their pragmatic competence awareness, whereas academic factor (GPA) affects theirs in online learning settings. This study provides one of the first empirical insights into Saudi EFL meta-pragmatic awareness in digital classrooms. By documenting students' perceptions of their pragmatic competence development in online settings, it contributes novel evidence to the expanding field of digital pragmatics. This research extends prior work that has primarily focused on face-to-face instruction, making it particularly relevant in light of the rapid digital transformation of Saudi higher education.

The findings yield clear pedagogical implications. The positive reception of online platforms suggests that technology can be strategically leveraged to create immersive, context-rich environments for pragmatic practice. To translate awareness into active competence, instructors should move beyond incidental exposure and intentionally design tasks that target identified areas of difficulty. This can be achieved by integrating role-plays, digital simulations, and telecollaborative projects that require students to negotiate meaning and employ politeness strategies in authentic scenarios. Curriculum developers should embed pragmatic-focused modules into learning management systems, and institutions should offer professional development to equip EFL instructors with the skills to teach pragmatics effectively in digital spaces.

Theoretically, this study contributes to a more nuanced understanding of the factors shaping L2 pragmatic development in digital contexts. It challenges the assumption that demographic variables uniformly influence pragmatic learning, suggesting instead that within a homogeneous instructional setting, shared educational experiences and cognitive-academic traits may be more salient. The significant role of GPA supports the concept of pragmatic learning as facilitated by broader academic competencies, such as analytical skills and metalinguistic awareness, thereby linking general academic proficiency to domain-specific pragmatic acquisition. This reinforces a componential view of pragmatic competence, where mastery develops unevenly across different speech acts and is influenced by an interplay of instructional design, task complexity, and learner preparedness.

Regarding future research, the current study's cross-sectional design highlights the need for more dynamic and in-depth investigations. To build on these findings, a specific agenda is proposed. First, mixed-methods studies that combine quantitative surveys with qualitative instruments—such as stimulated recall interviews, discourse analysis of online interactions, or digital ethnography—would provide richer insights into the cognitive and social processes underlying pragmatic choices. Second, longitudinal research is essential to trace the developmental trajectory of pragmatic awareness and to assess the sustained impact of structured digital interventions over time. Furthermore, experimental studies could investigate causal relationships by manipulating key variables, such as the type of technology used or the explicitness of pragmatic instruction. Finally, expanding the scope of inquiry to include variables such as learners' intercultural contact, motivation, and teachers' pedagogical knowledge would offer a more comprehensive model of the ecosystem influencing online pragmatic development.

In summary, this study underscores that pragmatic competence is a dynamic, socially situated process that can be effectively nurtured through thoughtfully designed technology-mediated instruction. By delineating clear pedagogical applications, theoretical contributions, and specific research pathways, it highlights both the promise and the complexity of fostering pragmatic awareness in the evolving landscape of Saudi EFL education.

Declarations

Author contribution	:	Authors 1 and 2 collaboratively conducted the research, including proposing the topic, drafting the proposal, applying research methodologies, performing analysis, and presenting the data and discussion. Author 1 and 2 took the lead in the article's publication process and both contributed to the publication. Both authors approved the final manuscript.
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Ethics Declaration	:	We as authors acknowledge that this work has been written based on ethical research that conforms with the regulations of our university and that we have obtained the permission from the relevant institute when collecting data.
		We support ELTEJ in maintaining high standards of personal conduct, practicing honesty in all our professional practices and endeavors.
Additional information: Declaration of AI-assisted technologies	:	During the preparation of this work, the authors used GPT 5.0 in order to optimize the writing process, with a main focus of refining the manuscript's language. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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