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Exploring demographic influences on L2 learners' comprehension of conversational implicatures

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Maintaining effective communication is more than articulating words—it is pivotal to understanding beyond what is explicitly said. While pragmatic competence is widely recognized as a fundamental aspect of language learning and also communicative competence, limited research has been conducted to determine whether L2 learners' ability to comprehend conversational implicatures varies based on demographic factors. In this case, this study is grounded to examine whether EFL learners' comprehension of conversational implicatures differs with respect to gender, culture of origin, and academic majors. The study employed a quantitative research design and was conducted with 122 first-year university students from various academic majors at a private university in Northern Cyprus. Data were collected via a Multiple-Choice Discourse Completion Test (MCDCT), and the collected numerical data were analyzed via T-Test. The findings reveal notable differences in participants' comprehension of conversational implicatures based on culture of origin and academic majors. Specifically, students from Iran and Nigeria performed higher than those from other cultural groups, while students from the Faculty of Law achieved the highest mean score compared to other majors. By contrast, no significant difference was found between male and female learners. These results emphasize the need for developing L2 learners' comprehension of conversational implicatures in foreign language education by considering learners' demographic factors. Future studies should focus on effective instructional strategies tailored to diverse learner backgrounds to foster comprehension of conversational implicatures and maintain effective communication.

KEYWORDS

comprehension of conversational implicatures, demographic factors, MCDCT, EFL learner, pragmatic competence

1 Introduction

Globalization has made English an essential tool for effective communication across nations and cultures. As a key medium for exchanging ideas and building relationships, English plays a crucial role in enabling individuals to participate effectively in communication (Atasheva, 2024; Bondarchuk et al., 2024; Seidlhofer, 2011). Therefore, the strong demand for the ability to use English for communicative purposes has necessitated conducting various studies to promote language learning. Various investigations have been carried out to ascertain what characteristics of learners may ameliorate their language

learning (Akdemir and Takkaç, 2016; Çiftlikli, 2018; Fakeye, 2010; Pawlak et al., 2025; Takkac and Akdemir, 2015; Üstünbaş, 2017). However, as teaching and learning are two interrelated areas, language teachers should integrate various language activities concerning demographic factors to promote their language competence in English.

Although there are numerous studies on the importance of CCI (Comprehension of Conversational Implicatures)—defined as the ability to understand implied meanings in conversation that are not explicitly stated, relying on contextual cues and shared knowledge (Grice, 1975; Yule, 1996), it still needs further investigation to eliminate the scarcities and bring enlightenment to this undiscovered area. A general problem is that while pragmatic competence is widely recognized as crucial for effective communication, little is known about whether learners' demographic characteristics—such as gender, cultural background, and academic major—affect their ability to comprehend conversational implicatures. Without addressing this problem, our understanding of how diverse learners interpret implied meaning remains incomplete.

Previous studies mainly focused on the relationship between language proficiency and comprehension of conversational implicatures (e.g., Abdelhafez, 2016; Carrell, 1984; Eslami and Eslami-Rasekh, 2008; Garcia, 2004a,b; Holtgraves, 2007; Kasper, 1984; Taguchi, 2005, 2007; Tai and Chen, 2021; Takahashi and Roitblat, 1994). Therefore, in light of the limited research exploring the role of demographic factors in the CCI, this study formulated the following research questions to examine whether gender, culture of origin and academic major play a role in L2 learners' comprehension of eight distinct types of devices used to convey implied meaning.

1. Does EFL learners' comprehension of conversational implicatures differ with respect to gender?
2. Does EFL learners' comprehension of conversational implicatures differ with respect to culture of origin?
3. Does EFL learners' comprehension of conversational implicatures differ with respect to academic majors?

2 Theoretical framework

2.1 Understanding conversational implicatures in pragmatic competence

At the heart of comprehending conversational implicatures lies pragmatic competence—the ability to comprehend not just what is said, but also what is meant. Conversational implicatures play a vital role in maintaining effective communication, as failing to comprehend the relationship between what is said and why it is said can cause interlocutors to miss key points or misunderstand the intended message. Thus, it is crucial to accomplish a communicative goal and correctly interpret the literal meaning of the utterances. In this context, Yule (1996) defines pragmatics as the study of speaker meaning, language choices based on context (taking into account social or physical proximity and shared information with the addressee), and the addressee's interpretation of what is communicated. Consequently, much more

is conveyed than what is said or written, making it necessary to consider “visible and invisible meanings” to understand what is said and why it is said. “Visible” meaning is what is communicated literally, whereas “invisible” meaning is the interlocutors' intended meaning (Yule, 1996). Therefore, understanding an interlocutor's intended meaning requires understanding of how language use is influenced by the social context. These ideas help guide the study's focus on how second language learners make sense of what is meant but not directly said in social situations.

2.2 Review of relevant literature

2.2.1 Linguistic proficiency and implicature comprehension

For many years, the concept of learning a foreign language was explained in terms of the grammatical and structural characteristics of a language. In contrast, recent perspectives in L2 learning emphasize the importance of pragmatic competence, particularly L2 learners' ability to comprehend intended implied meanings and contextual cues. In this case, using L2 requires individuals to comprehend why it is stated via what is stated. Comprehending implicatures has become central to L2 proficiency research due to the shift in focus from linguistic form to communicative function.

Numerous studies evaluate various facets of implicatures within the scope of pragmatic competence, including the factors influencing learners' ability to understand implicatures and the relation between pragmatic competence and language competence (Anggrarini and Rosdiana, 2020; Carrell, 1984; Feng et al., 2017; Garcia, 2004a,b; Holtgraves, 2007; Kasper, 1984; Levinson, 1983; Taguchi, 2005, 2007; Takahashi and Roitblat, 1994; Yang, 2022). These studies consistently highlight the role of linguistic proficiency and pragmatic inferencing in implicature comprehension. However, these studies predominantly emphasize linguistic and cognitive aspects, and they give little attention to other learner factors that might affect how implicatures are understood.

2.2.2 Cultural influences on implicature comprehension

According to Bouton (1992), exposure to language is one of the key elements in the development of implicature understanding. His earlier study (1988) demonstrated that a community's cultural and linguistic norms frequently appear to define the way inferred meaning is communicated. As a result, when there are cross-cultural communication exchanges, communicating implicitly can be problematic. His study was one of the earliest studies on how individuals from various cultural backgrounds interpret implicatures. The results demonstrated that native and non-native speakers of English comprehend implicatures differently due to their cultural differences.

According to Murray (2011), second language learners' cultural characteristics can influence their comprehension of conversational implicatures (CCI), and the ability to understand these implicatures may significantly enhance L2 learning. While both Bouton (1988) and Murray (2011) underscore the impact of cultural background

on implicature comprehension, their research is primarily situated within broad intercultural communication contexts. Accordingly, they do not directly address educational settings where other demographic factors—such as academic major or gender—may also play a significant role.

Kecskes (2000) emphasizes that L2 learners' comprehension and production of situation-specific utterances are strongly influenced by their cultural backgrounds. This finding further supports the need to consider demographic variables in pragmatic research. By integrating theoretical perspectives on implicature with previous research on language proficiency, the present study reveals the underexplored impact of demographic factors on L2 learners' interpretation of implied meaning.

Based on Nassar's (2021) study, the main reason why participants found it difficult to understand implicatures was that the implied information was not provided explicitly. The results also showed that the primary cause of misunderstandings between Arabic and English was sociocultural disparities, indicating that cultural background plays a critical role in learners' inability to understand conversational implicatures.

These findings highlight the importance of cultural exposure but leave unexplored how additional demographic factors may play a role on L2 learners' comprehension of conversational implicatures. This gap justifies further inquiry into the intersection of sociocultural identity and L2 pragmatic competence. By integrating theoretical perspectives on implicature with previous research on language proficiency, the present study highlights the underexplored role of demographic factors on L2 learners' ability to comprehend implied meanings in communication.

2.2.3 The role of gender on implicature comprehension

Several studies have investigated whether gender plays a significant role in learners' comprehension of conversational implicatures. While some research suggests that male and female learners may differ in their interpretation or production of certain implicature types, the majority of findings indicate that gender does not exert a statistically significant effect on overall implicature comprehension. To illustrate, the following studies examine gender-related variation in L2 learners' ability to comprehend conversational implicatures.

Tannen (1991) conducted a study to analyze whether gender plays a prominent role in L2 learners' comprehension of implicatures. Her study proved that L2 learners' gender affects their speech production and comprehension of implicatures. Tannen (1991) studied twenty-four dialogues that comprised implied meanings. The study was conducted via an online test with 24 questions. The participants were asked to select the most appropriate interpretation for each dialogue. After completing the test, the participants were classified regarding two nominal variables: their self-reported proficiency level and gender. Then, the findings were inspected with the chi-square test of independence. The null hypothesis cannot be discarded because the majority of the p -values were higher than the critical value of 0.05. Consequently, no difference has been

observed between males and females' comprehension level of conversational implicatures.

Similarly, Rizaoglu and Yavuz (2017) conducted research to determine the rate of implicature production and comprehension among L2 learners of English. Ninety first-year students were asked to voluntarily complete a multiple-choice test and respond to situations in a discourse completion task (DCT). Despite the fact that gender has no impact on implicature comprehension levels, some statistical variations exist for particular implicature kinds. While it appeared that female participants performed better than male participants in comprehending the Quantity implicatures of understated negative criticism, male participants performed better in understanding the Relevance implicatures. According to these results, it is possible that women are more context-dependent and holistic in their pragmatic reasoning, whereas men may be more detail-oriented.

In addition to the findings of Rizaoglu and Yavuz (2017), Mohammadzadeh et al. (2019) investigated whether there is a gender difference in comprehending implicatures. Although a comparison of the means of the two groups revealed that male participants ($M = 22.79$, $SD = 9.46$) had a slightly higher mean score than female participants' ($M = 20.85$, $SD = 8.35$), no significant differences were observed between the groups with respect to gender.

Namdari and Bonyadi's (2024) study explored the role of gender in comprehending conversational implicatures among 60 EFL learners at the Jahad Daneshgahi Department of Foreign Languages in West Azerbaijan, Urmia. Using a Multiple-Choice Discourse Completion Test (MCDCT) within a correlational design, the results proved that although male learners showed slightly stronger correlations, the overall results revealed no statistically significant difference between male and female learners in their comprehension of conversational implicatures. These findings indicate that gender is not a determining factor in pragmatic competence.

2.2.4 Demographic influences on implicature comprehension

In recent years, pragmatic research has increasingly emphasized the importance of examining demographic factors that may have roles on the comprehension of conversational implicatures (CCI). Despite this emerging interest, research remains limited, leaving important questions about the extent to which demographic factors influence CCI largely unanswered. Because conversational implicatures are a central component of pragmatic competence, bridging this gap requires drawing on insights from pragmatic research. Therefore, pragmatic research should be applied to formal educational settings where learners' pragmatic development may be influenced by their demographic factors. In accordance with the numerous studies on the topic of conversational implicatures, interlocutors' levels of English proficiency have a substantial impact on their capacity to comprehend the implicit meaning (Abdelhafez, 2016; Carrell, 1984; Eslami and Eslami-Rasekh, 2008; Garcia, 2004a,b; Holtgraves, 2007; Kasper, 1984; Taguchi, 2005, 2007; Takahashi and Roitblat, 1994; Yang, 2022). In social conversations, speakers frequently prefer indirect language to

convey their ideas. As a result, the meaning of what is being said often goes beyond the words used in each situation. Accordingly, understanding implicatures effectively facilitates deriving the meaning of inferential reasoning.

In conclusion, the main concern of this study is to investigate the extent to which students' comprehension of conversational implicatures varies according to demographic factors: gender, culture and academic majors. While numerous studies were conducted to examine the influence of language proficiency on pragmatic competence (Abdelhafez, 2016; Carrell, 1984; Eslami and Eslami-Rasekh, 2008; Garcia, 2004a,b; Holtgraves, 2007; Kasper, 1984; Taguchi, 2005, 2007; Takahashi and Roitblat, 1994), particularly in relation to implicature comprehension, there remains a notable gap concerning the role of demographic factors in this domain. By investigating the scarcity in literature, the present study aims to provide a contribution to a more nuanced understanding of the factors that may have a role in L2 learners' ability to comprehend implied meanings in communication.

3 Research methodology

3.1 Research design

The present study utilized a quantitative research methodology, and the collected quantitative data were analyzed via *t*-test. This method was selected to investigate statistically significant differences in EFL learners' comprehension of conversational implicatures across demographic factors.

3.2 Participants

First-year students from several disciplines at a private university in Northern Cyprus were surveyed to collect data. Cluster random sampling was utilized in the selection of participants, and therefore the faculties were identified as clusters from which the students were chosen. A total of 122 participants were recruited from diverse academic majors, including the Faculties of Pharmacy (31), Engineering (29), Law (23), School of Health Sciences (20), Faculty of Fine Art, Design and Architecture (9), Faculty of Communication (7), and Faculty of Arts and Sciences (3) (see Table 1 below). During the investigation, it was crucial to comply to all ethical guidelines. In consequence, the university's Ethic Committee approved ethical permission for the study, and all of the participants provided informed consent before the study began.

The participants were selected via cluster random sampling, and they all volunteered to take part in the current study. All of the participants had passed the university's B2 level English proficiency exam, which was prepared using the CEFR standards. The participants were made up of 58 first-year male students and 64 female students (see Table 2 below). Their age ranged from 18 to 22 with mean age of 19.68.

Table 3 below shows that while most of the participants were from Nigeria ($n = 40$), twenty-three participants were from Türkiye, seventeen from Iraq, fourteen from Iran, ten from Palestine, nine from Syria and three from Jordan.

TABLE 1 Distribution of participants by academic majors ($n = 122$).

Academic majors	<i>n</i>
Faculty of Pharmacy	31
Faculty of Engineering	29
Faculty of Law	23
School of Health Sciences	20
Faculty of Fine Art, Design and Architecture	9
Faculty of Communication	7
Faculty of Arts and Sciences	3
<i>Total</i>	122

TABLE 2 Gender-related demographic information ($n = 122$).

Gender	<i>n</i>
Male	58
Female	64
<i>Total</i>	122

TABLE 3 Participants' country-specific demographic information ($n = 22$).

Country	<i>n</i>
Africa	40
Jordan	3
Iran	14
Iraq	17
Cyprus	6
Türkiye	23
Syria	9
Palestina	10
<i>Total</i>	122

Of the overall population, 53 participants were from Asia, 40 participants from Nigeria, and 29 participants from Europe. During their first semester, these individuals were obliged to take ENGL141 (Academic Reading and Writing Skills I) as a compulsory subject by attending four lecture hours.

3.3 Data collection instruments and procedures

After reviewing of the relevant literature, the Multiple-Choice Discourse Completion Test (MCDCT) developed by Çetinavci and Öztürk (2017) was administered to 122 first-year university students. It was designed in the multiple-choice format as the marking procedure must be quite objective. The test, developed by Çetinavci and Öztürk (2017) and used with prior permission, was designed in a multiple-choice format to ensure objective scoring. Its primary aim is to examine how conversational implicatures are interpreted in English. The test comprises thirty-three scenarios,

TABLE 4 Gender based *t*-test analysis about EFL learners' CCI.

Measure	Gender	<i>n</i>	Mean	Std. deviation	Std. error mean
MCDCT	Female	64	75.61	15.47	1.93
	Male	58	79.07	12.41	1.63

each representing one of eight types of conversational implicatures (see Table 4). Each scenario provides contextual information followed by a dialogue containing an utterance with an implied meaning, which is highlighted in bold. Four response options are provided for each scenario, each reflecting a different interpretation of the target utterance. Only the correct response is scored one point, while distractors receive zero. Therefore, for each scenario, the participants must select the most appropriate response from the four provided possibilities.

With respect to the statistical analysis, the Cronbach's Alpha reliability coefficient was found to be 0.78, which implies the instrument is adequate for use (George and Mallery, 2003). However, its consistency was re-examined, and it was rigorously piloted with 132 distinct comparison groups. The results indicated a significant correlation between the test takers' scores on the pre-test and the scores on the post-test [$r_{(130)} = 0.756, p < 0.01$].

The following list shows devices used to convey implied meaning except fillers because of reflecting basic and direct interpretation. The filler items divert test-takers' attention away from the goal of the test, which is to assess how well test-takers understand the devices for communicating implied meaning. Therefore, they were excluded from the analyses.

- X1: Pope Question (Item 5, Item 10, Item 14, Item 19, Item 22)
- X2: Indirect Criticism (Item 3, Item 15, Item 25, Item 32)
- X3: Topic Change (Item 8, Item 11, Item 18, Item 26)
- X4: Indirect Advice (Item 4, Item 12, Item 20, Item 28)
- X5: Verbal Irony (Item 2, Item 16, Item 21)
- X6: Indirect Refusals (Item 6, Item 27, Item 33)
- X7: Disclosure (Item 17, Item 24, Item 30)
- X8: Indirect Requests (Item 9, Item 29)
- X9: Fillers (Item 1, Item 7, Item 13, Item 23, Item 31)

An exemplary item from the MCDCT:

(Type of Implicit Criticism Used in Conversation: Indirect Advice)

Roger is thinking of taking his car to a repair shop in the city center. His friend Melanie knows that the shop is known for doing careless work.

Melanie: **I don't usually take my car there. It has a really bad reputation.**

What does Melanie probably mean?

- a. Roger should take his car there for only small repairs.
- b. She advises Roger not to take his car to that repair shop.
- c. The reputation of a place is important.
- d. Roger can take his car there.

In the dialogue shown above, Melanie's comment seems to be a personal statement but actually it conveys a warning. In this case, the implied meaning is an indirect suggestion that Roger

should avoid the shop. The listener must infer Melanie's true intent from her wording and the context. Comprehension of such conversational implicatures depends not only on vocabulary and grammar, but also on pragmatic awareness. A lack of linguistic knowledge may hinder the recognition of these indirect meanings (Hossain, 2024; Kaivanpanah and Alavi, 2008; Ren, 2022; Taguchi, 2005).

4 Results

This section provides analysis of the research findings, focusing on the statistical evaluation of first-year university students' comprehension of conversational implicatures. It also explores the influence of demographic factors—gender, culture and academic major—on participants' performance.

Research Question 1: Does EFL learners' comprehension of conversational implicatures differ with respect to gender?

Table 4 displays the difference between male and female students' CCI. Gender based comparison of implicature comprehension reveals that although male students have a slightly higher mean value ($M = 79.07, SD = 12.41$) compared to the mean value of female students ($M = 75.61, SD = 15.47$), the Independent Samples *T*-test is required to run to assess whether the depicted difference is statistically significant. Although there is a difference between two groups in favor of male students, this difference between two groups is not statistically significant.

As shown in Table 5, an independent-sample *t*-test has been undertaken to determine whether there is a statistically significant difference between the two groups in terms of the generalization of conversational implicatures. Levene's Test for Equality of Variance determines that the two groups' variability is nearly the same. The variances are quite similar to one another, and the standard *t*-test $t_{(120)} = -1.35, p = 0.18$, and the *t*-test for unequal variances, $t_{(118.31)} = -1.37, p = 0.17$, yield comparable results. Therefore, the independent-samples *t*-test shows that male and female students' CCI is similar, as equal variances are assumed. Therefore, gender cannot play a significant role in influencing the L2 learners' comprehension level of conversational implicatures. Therefore, the results of the study support the null hypothesis concerning the CCI and gender.

In short, the first objective of the present study was to examine whether gender influences learners' comprehension of conversational implicatures. The independent-samples *t*-test revealed no statistically significant difference between male and female learners. Although male participants displayed slightly higher mean scores than female participants, the difference was not significant. This finding indicates that gender is not a decisive factor in learners' ability to comprehend conversational implicatures.

Research Question 2: Does EFL learners' comprehension of conversational implicatures differ with respect to culture of origin?

As indicated in Table 6, the students from Jordan ($M = 95.00, SD = 6.25$) got the highest mean value. Students from Iran had the second-highest mean value ($M = 88.21, SD = 7.67$). Accordingly, the lowest value belongs to the students from Iraq ($M = 64.47, SD = 13.21$). However, the results of the Jordanian students were excluded from the analysis due to the insufficient number of participants, as only three students were

TABLE 5 Independent samples *t*-test for gender-based comparison on EFL learners' CCI.

Measure	Assumption	<i>F</i>	Sig. (Levene's)	<i>t</i>	df	Sig. (2-tailed)	Mean diff.	SE diff.
MCDCT	Equal variances assumed	2.73	0.101	−1.35	120	0.18	−3.46	2.55
	Equal variances not assumed			−1.37	118.31	0.17	−3.46	2.52

TABLE 6 Descriptive information about EFL learners' CCI in terms of their cultures.

Country	<i>M</i> (mean)	<i>SD</i> (std. deviation)	<i>n</i>
Nigeria	82.98	9.83	40
Jordan	95.00	6.25	3
Iran	88.21	7.67	14
Iraq	64.47	13.21	17
Cyprus	74.33	9.77	6
Türkiye	69.26	10.74	23
Syria	80.00	8.22	9
Palestine	66.10	19.54	10
Total	76.68	14.05	122

from that country. Jordanian students' comprehension scores of conversational implicatures have yet to be taken into account not to affect the study's power to draw conclusions. Consequently, the research demonstrates that although the mean scores of various nations are comparable, they are not equivalent. In this regard, further variance analysis is required to determine whether each group has a significant difference.

A one-way analysis of variance has been undertaken to examine whether differences exist among the students' CCI in accordance with their countries. The independent variable, culture of origin, includes seven different variables, Nigeria, Iran, Iraq, Cyprus, Türkiye, Syria and Palestine. The dependent variable is the students' scores of MCDCT, which aims to test their CCI. The ANOVA is significant at the 0.05 level, $F_{(6,111)} = 10.38$, $p = 0.000$. Table 7 shows that conversational implicatures' comprehension significantly differs in terms of different countries. The Levene test proves the homogeneity of variances, and the MCDCT scores show a significant difference between the variances of different countries. Consequently, the findings show that variances of groups are not homogenous, and *post-hoc* analysis has been carried out for unequal variances situations. Further *post-hoc* analysis has been performed with Dunnett's T3 Test since variances are not homogeneous.

Post-hoc analysis was conducted using Dunnett's T3 Test since variances were not equal. Five significant statistical differences were identified (see Table 8 above). Significant differences were found between Nigeria ($M = 82.98$, $SD = 9.83$) and Iraq ($M = 64.47$, $SD = 13.20$), Nigeria and Türkiye ($M = 69.26$, $SD = 10.73$), Iran ($M = 88.21$, $SD = 7.66$) and Iraq, Iran and Türkiye, and Iraq and Syria ($M = 80$, $SD = 8.21$). The mean value of Nigeria was significantly higher than the mean values of Iraq and Türkiye, while the mean value of Iran was significantly higher than those of Iraq and Türkiye. However, a comparison of implicature comprehension

levels based on countries revealed that although students from Iran had a slightly higher mean value ($M = 88.21$, $SD = 7.66$) than Nigerian students ($M = 82.98$, $SD = 9.83$), this difference was not considered statistically significant.

To test the hypothesis and determine whether or not students from Iran have significantly higher comprehension levels on conversational implicatures than students from Nigeria, a *t*-test with independent samples was carried out, as shown in Table 9. The test is significant, $t_{(52)} = 0.08$, $p = 0.06$. The confidence interval for the difference in means at 95% has a large margin of error, ranging from −11.06 to 0.02. The results of Levene's Test prove that equal variances are assumed, and it is delineated that Iranian students' comprehension level of conversational implicatures is not statistically better than Nigerian students.

In brief, the second research question was grounded on exploring whether learners' culture of origin affects their comprehension of conversational implicatures. The analysis demonstrated significant differences across cultural groups. In particular, Iranian and Nigerian students consistently outperformed other cultural groups, with higher mean scores in comprehending conversational implicatures. Although Iranian students' comprehension level was not statistically higher than Nigerian students, both groups demonstrated significantly higher performance compared to other population groups. This suggests that cultural background plays a decisive role in CCI.

Research Question 3: Does EFL learners' comprehension of conversational implicatures differ with respect to academic majors?

Table 10 above shows that the study comprises the participants from different academic majors. The students from the Faculty of Law ($M = 86.17$, $SD = 6.87$) got the highest mean value compared to other academic majors. The second highest mean value belongs to the students of the Faculty of Communication ($M = 84.57$, $SD = 8.90$), and the lowest mean value belongs to the students from the faculty of Fine Arts and Sciences ($M = 67$, $SD = 5.20$). Therefore, the analysis proves that although the mean scores of different faculties are similar, further variance analysis is necessary to assess whether or not there is a significant difference between groups.

A one-way analysis of variance has been conducted to test the hypothesis that aims to determine whether there are significant differences among the students' CCI in terms of considering their academic majors. According to the findings, as shown in Table 11, there are statistically significant disparities between the levels of implicature comprehension across the diverse academic majors. Levene test has also been applied to check the homogeneity of variances, and the findings show that there are statistically significant variations among the various academic majors. The ANOVA is significant at the 0.05 level, $F_{(6,115)} = 5.54$, $p = 0.001$. Consequently, the findings reveal that variances of groups are not similar, and *post-hoc* analysis has been taken into consideration for unequal variances. Further *post-hoc* analysis has been performed with Dunnett's T3 Test.

TABLE 7 Analysis of variance (ANOVA) for CCI in terms of culture of origin.

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial η^2
Corrected model	8,319.79	6	1,386.63	10.38	0.00	0.35
Intercept	477,832.70	1	477,832.70	3,577.41	0.00	0.97
Culture of origin	8,319.79	6	1,386.63	10.38	0.00	0.35
Error	14,826.18	111	133.56			
Total	706,387.00	118				
Corrected total	23,145.97	117				

$R^2 = 0.35$ (adjusted $R^2 = 0.32$).

All the participants' comprehension of conversational implicatures scores have been compared considering seven different academic majors. The table above indicates that there are meaningful statistical differences between the three pairs of majors. The first significant difference takes place between the Faculty of Law ($M = 86.17$, $SD = 2.66$) and the Faculty of Fine Arts, Design and Architecture ($M = 72$, $SD = 4.26$). The second depicted difference exists between the Faculty of Law ($M = 86.17$, $SD = 2.66$) and the School of Health Sciences ($M = 68.15$, $SD = 2.85$), and the third significant difference exists between the Faculty of Law ($M = 86.17$, $SD = 2.66$) and Faculty of Pharmacy ($M = 73.35$, $SD = 2.29$). A comparison of participants' comprehension of conversational implicatures based on academic major, as shown in Table 12, reveals that students from the Faculty of Law outperformed those from the Faculty of Fine Arts, Design and Architecture, the School of Health Sciences, and the Faculty of Pharmacy. This suggests that students in the Faculty of Law demonstrate significantly higher levels of competence in interpreting conversational implicatures.

To sum up, the third research question was to determine whether learners' academic majors influence their comprehension of conversational implicatures. A one-way ANOVA revealed significant differences across faculties ($p < 0.05$). The Faculty of Law students obtained the highest mean scores, outperforming students from other academic majors. These findings indicate that the type of academic education learners receive contributes to their pragmatic competence, particularly in comprehending implicatures.

5 Discussion

5.1 Gender differences in comprehension of conversational implicatures

Concerning the first research question, gender is not one of the prominent factors in affecting students' comprehension level of conversational implicatures, $p > 0.05$. This indicates that gender does not determine overall pragmatic comprehension. This result is in line with the outcomes of a number of studies (Mohammadzadeh et al., 2019; Namdari and Bonyadi, 2024; Rizaoglu and Yavuz, 2017; Tannen, 1991), which consistently report that gender is not a decisive factor in comprehending implicatures.

Regarding the results of the current study, there are no discernible differences in the degrees of implicature comprehension based on gender. On the other hand, some differences were

observed in specific implicature types concerning the role of gender. The findings showed that male participants performed better in some specific implicature types. This suggests that while gender overall does not predict pragmatic comprehension, certain pragmatic functions may be processed differently across genders. From a pragmatic perspective, this difference can be explained through Grice's Cooperative Principle. Male learners seemed more sensitive to the Maxim of Relation, which requires staying relevant, and to indirect requests that go beyond literal meaning (O'Neil et al., 1995; Nawaz et al., 2024). This suggests that interactional styles associated with gender may influence how learners notice and interpret certain pragmatic cues. For example, if an interlocutor does not like what he/she has just been said or asked, he/she can quickly leap into another topic. Moreover, male participants are better at understanding conventionally indirect requests and non-conventionally indirect requests, which are formed by using interrogative or declarative structures. These findings indicate that adapting instruction according to learners' gender is unnecessary for improving their overall implicature comprehension. However, awareness of gender-related differences in certain implicature types may still guide teachers to provide more effective support in developing learners' implicature comprehension. In line with previous studies, while the present results confirm that gender does not play a decisive role in CCI overall, this study adds nuance by highlighting that gender-related variation can emerge in specific implicature types.

As such, the results of the related previous studies demonstrate that a difference in CCI due to gender cannot be depicted as the results support the null hypothesis concerning the CCI and gender. As it is, the findings of this current study reveal that this study is a replication of previous studies.

5.2 Cultural differences in comprehension of conversational implicatures

Regarding the second research question, variances across cultural groups (Nigeria, Jordan, Iran, Iraq, Türkiye, Syria, and Palestine) were not homogenous, and *post-hoc* analysis was conducted for unequal variances situations. On the other hand, Jordanian students' comprehension scores of conversational implicatures have been excluded from the analysis of this research question due to the very small sample size. Not having a larger sampling size will provide less reliable results because they have more margins of error

TABLE 8 Dunnett's T3 pairwise comparisons among countries.

Dependent Variable: MCDCT						
(I) Countries of the participants	(J) Countries of the participants	Mean difference (I–J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Nigeria	Iran	–5.45	2.58	0.551	–13.96	3.07
	Iraq	18.30*	3.57	0.001	6.34	30.26
	Cyprus	8.44	6.14	0.928	–19.67	36.55
	Türkiye	13.51*	2.74	0	4.72	22.29
	Syria	2.77	3.16	1	–8.62	14.16
	Palestine	16.67	6.37	0.307	–7.75	41.09
Iran	Nigeria	5.45	2.58	0.551	–3.07	13.96
	Iraq	23.74*	3.8	0	11.11	36.37
	Cyprus	13.88	6.28	0.535	–13.94	41.7
	Türkiye	18.95*	3.03	0	9.08	28.83
	Syria	8.21	3.42	0.374	–3.8	20.23
	Palestine	22.11	6.5	0.091	–2.4	46.63
Iraq	Nigeria	–18.30*	3.57	0.001	–30.26	–6.34
	Iran	–23.74*	3.8	0	–36.37	–11.11
	Cyprus	–9.86	6.74	0.911	–37.26	17.53
	Türkiye	–4.79	3.9	0.989	–17.62	8.04
	Syria	–15.53*	4.21	0.024	–29.7	–1.36
	Palestine	–1.63	6.95	1	–26.69	23.43
Cyprus	Nigeria	–8.44	6.14	0.928	–36.55	19.67
	Iran	–13.88	6.28	0.535	–41.7	13.94
	Iraq	9.86	6.74	0.911	–17.53	37.26
	Türkiye	5.07	6.34	0.999	–22.61	32.76
	Syria	–5.67	6.53	0.999	–33.27	21.94
	Palestine	8.23	8.56	0.998	–22.94	39.4
Türkiye	Nigeria	–13.51*	2.74	0	–22.29	–4.72
	Iran	–18.95*	3.03	0	–28.83	–9.08
	Iraq	4.79	3.9	0.989	–8.04	17.62
	Cyprus	–5.07	6.34	0.999	–32.76	22.61
	Syria	–10.74	3.53	0.115	–22.9	1.42
	Palestine	3.16	6.57	1	–21.39	27.71
Syria	Nigeria	–2.77	3.16	1	–14.16	8.62
	Iran	–8.21	3.42	0.374	–20.23	3.8
	Iraq	15.53*	4.21	0.024	1.36	29.7
	Cyprus	5.67	6.53	0.999	–21.94	33.27
	Türkiye	10.74	3.53	0.115	–1.42	22.9
	Palestine	13.9	6.75	0.598	–10.97	38.77
Palestine	Nigeria	–16.67	6.37	0.307	–41.09	7.75
	Iran	–22.11	6.5	0.091	–46.63	2.4
	Iraq	1.63	6.95	1	–23.43	26.69

(Continued)

TABLE 8 (Continued)

Dependent Variable: MCDCT						
(I) Countries of the participants	(J) Countries of the participants	Mean difference (I–J)	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
	Cyprus	–8.23	8.56	0.998	–39.4	22.94
	Türkiye	–3.16	6.57	1	–27.71	21.39
	Syria	–13.9	6.75	0.598	–38.77	10.97

Based on observed means. The error term is Mean Square (Error) = 133.569.

*The mean difference is significant at the 0.05 level.

TABLE 9 Independent sample *t*-test for comparing Iranian and Nigerian learners' CCI scores.

Measure	Assumption	<i>F</i>	Sig. (Levene's)	<i>t</i>	df	Sig. (2-tailed)	Mean diff.	SE diff.	95% CI (lower, upper)
MCDCT	Equal variances assumed	2.05	0.15	–1.80	52	0.08	–5.23	2.89	–11.06, 0.58
	Equal variances not assumed			–2.03	29.05	0.05	–5.23	2.57	–10.49, 0.02

and higher standards of deviation compared to a larger sampling size. As it is, the second and third highest performing groups (Iran and Nigeria) were taken into account in the analysis to allow for meaningful comparisons among the remaining adequately represented groups.

It has been depicted that Iranian and Nigerian students' comprehension levels of conversational implicatures are significantly higher than other population groups. This demonstrates that CCI is not purely a matter of linguistic ability but is also shaped by sociocultural and educational contexts. This finding corroborates Kecskes (2000), who highlighted the role of learners' culture of origin on comprehending implicatures. At the same time, it extends his work by showing that not only culture of origin but also wider sociopolitical, historical, and educational contexts shape learners' pragmatic development. From a theoretical perspective, these findings align with sociopragmatic views, which argue that language learning is not just about grammar and vocabulary—it's also about learning how cultural values, norms, and ways of expressing meaning shape communication. Without intercultural understanding, learners may fail to comprehend intended meaning appropriately in real interactions (McConachy and Liddicoat, 2021). In addition, Relevance Theory suggests that learners' inferential strategies are shaped by their previous communicative experiences (Taguchi, 2002), which may explain why Iranian and Nigerian learners demonstrated higher levels of implicature comprehension compared to other cultural groups. Although the current study contributes to the existing body of research on the analysis of the relationship between CCI and achievement in comprehending written texts, investigating factors affecting second language learners' CCI in English is scarce as very little research has been done to investigate the factors that affect L2 learners' CCI in English. The results of this study demonstrate that a significant void still exists in the existing body of research.

In the research conducted by Kecskes (2000), the primary objective was to investigate the level of comprehension and production of situation-related utterances possessed by eighty-eight individuals learning English as a second language. The participants of the study were given three different written tasks to complete in order to evaluate their level of understanding with

TABLE 10 Descriptive information about EFL learners' CCI in terms of their academic majors.

Academic majors	M (mean)	SD (Std. deviation)	<i>n</i>
Faculty of Engineering	81.55	15.46	29
Faculty of Law	86.17	6.87	23
Faculty of Communication	84.57	8.90	7
Faculty of Fine Art, Design and Architecture	72.00	6.36	9
School of Health Sciences	68.15	12.62	20
Faculty of Arts and Sciences	67.00	5.20	3
Faculty of Pharmacy	73.35	15.47	31
Total	77.25	14.15	122

situation-related expressions: (1) a discourse completion task which required the students to produce appropriate situation-related utterances, (2) a dialogue comprehension task that examined the students' understanding of situation-related utterances, and (3) a problem-solving task in which students were required to produce an appropriate utterance regarding the given the situation. Results revealed that students had difficulty comprehending situation-related utterances and producing an appropriate response to the provided situation-related utterance. In addition, students who had been in the United States for a total of more than 2 years had difficulty selecting appropriate target forms. In this regard, Kecskes's study shows that spending time in the target nation does not inevitably increase native-like comprehension among students of the language and does not guarantee appropriate production of situation-related utterances. In this case, the current study aligns with Kecskes' study, which reveals that CCI significantly differs in terms of different countries.

This study supports that the English language, due to the reasons mentioned below, holds a crucial place in Nigeria; therefore, high performance in CCI was an expected outcome for Nigerian students. Conversely, such results were not initially anticipated from Iranian students. Consequently, it is essential

TABLE 11 Analysis of variance (ANOVA) for CCI in terms of EFL students' academic majors.

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial η^2
Corrected model	5,433.28	6	905.54	5.54	0.000	0.22
Intercept	379,759.22	1	379,759.22	2,324.49	0.000	0.95
Academic majors	5,433.28	6	905.54	5.54	0.000	0.22
Error	18,787.83	115	163.37			
Total	752,341.00	122				
Corrected total	24,221.12	121				

$R^2 = 0.22$ (Adjusted $R^2 = 0.18$).

to conduct an in-depth analysis to investigate the factors contributing to the high comprehension levels of conversational implicatures among these two cultural groups, Nigeria and Iran. The following section presents some possible contributing factors to the high comprehension levels of conversational implicatures among Nigerian and Iranian students.

According to the EF English Proficiency Index, Nigerians' proficiency level in English is ranked twenty-ninth globally. Nearly 350,000 Nigerian migrants reside in the United States, while others prefer to live in Europe, particularly in countries such as Italy and Canada. Moreover, migration—especially to Northern countries—for reasons such as employment, education, better income, or resettlement has become increasingly common. One of the key requirements for migration is passing an English proficiency test, with IELTS and TOEFL being the most widely accepted. Another significant factor contributing to the high level of English proficiency in Nigeria is its colonial history; for nearly eight decades, Nigeria was a British colony. As a result, English became the country's lingua franca and is now the official language of instruction in schools.

These factors collectively indicate that Nigeria's education system prioritizes English language proficiency by integrating English into most aspects of academic and professional life. The findings of this study support this view, as Nigerian students demonstrated a significantly higher comprehension level of conversational implicatures compared to other population groups.

On the other hand, while Nigerian students' strong performance is possible due to early and widespread exposure to English, Iranian students likely achieved similar comprehension levels through different means. Although their scores were not statistically higher than Nigerian students' mean scores, the historical and educational context in Iran may result in achieving high performance. English has held a complex yet steadily increasing role in Iran due to modernization efforts, international education, and industrial ties, particularly from the Qajar era onward (Riazi, 2005; Borjian, 2013; Sadeghi and Richards, 2015). Despite political shifts, English has remained a key language in private education and professional advancement. These long-standing sociopolitical and institutional factors likely provided contribution to the Iranian students' strong implicature comprehension in this study. The historical and sociopolitical development of English in Iran reflects a complex yet steadily increasing importance of the language. Early exposure through modernization efforts and international education programs, particularly during the Qajar era and post-World War II industrial partnerships, contributed to the integration of English into

Iranian society (Riazi, 2005; Sadeghi and Richards, 2015; Borjian, 2013). Private language institutes have played a significant role in promoting English proficiency, supported by government and societal emphasis on communicative methods and international materials (Borjian, 2015). Consequently, these historical and economic factors help explain the findings of the current study, which show that Iranian participants had among the highest levels of implicature comprehension. The long-standing presence of English in Iranian education and its perceived value in professional advancement likely contributed to these results. This shows that intercultural understanding is not an optional aspect of language learning but a core component, as it enables learners to interpret implied meanings when communicating across different cultural contexts (McConachy and Liddicoat, 2021).

5.3 Academic major differences in comprehension of conversational implicatures

The third research question examined whether EFL learners' comprehension of conversational implicatures differs across academic majors. Academic majors were included as a variable to determine whether the type of education learners receive influences their comprehension of conversational implicatures. Therefore, including academic majors as a variable enabled the study to determine whether students' educational backgrounds contribute to differences in pragmatic comprehension. This current study shows that faculty of law students were more capable of understanding the relationship between what is said and why it is said. This suggests that disciplinary training may foster greater sensitivity to pragmatic functions. From a theoretical perspective, these findings can be explained by socio-pragmatic theories, which suggest that learners transfer their cultural and disciplinary communication norms into second language use (Thomas, 1983). For instance, the faculty of law students are trained to analyze arguments and interpret subtle meanings, which may strengthen their ability to comprehend implied meanings in conversation. This aligns with Relevance Theory (Sperber and Wilson, 1995), which emphasizes that CCI relies on making inferences about the intended meaning beyond the literal words. Thus, law students' stronger performance in CCI likely reflects not only their language proficiency but also their academic skills developed through their academic training. However, as no other studies have been conducted on whether students' CCI differs across academic

TABLE 12 Dunnett's T3 pairwise comparisons among academic majors.

Multiple comparisons						
Dependent variable: MCDCT						
Academic major of the participants	Academic major of the participants	Mean difference	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Faculty of Engineering	Faculty of Law	−4.62	3.2	0.954	−14.95	5.7
	Faculty of Communication	−3.02	4.42	1	−18.59	12.55
	Faculty of Fine Art, Design and Architecture	9.55	3.56	0.198	−2.1	21.2
	School of Health Sciences	13.40*	4.02	0.035	0.54	26.27
	Faculty of Arts and Sciences	14.55	4.15	0.122	−3.17	32.27
	Faculty of Pharmacy	8.19	3.99	0.585	−4.43	20.82
Faculty of Law	Faculty of Engineering	4.62	3.2	0.954	−5.7	14.95
	Faculty of Communication	1.6	3.65	1	−13.16	16.37
	Faculty of Fine Art, Design and Architecture	14.17*	2.56	0.001	5.14	23.21
	School of Health Sciences	18.02*	3.16	0	7.58	28.47
	Faculty of Arts and Sciences	19.17	3.32	0.072	−2.81	41.16
	Faculty of Pharmacy	12.81*	3.12	0.004	2.81	22.83
Faculty of Communication	Faculty of Engineering	3.02	4.42	1	−12.55	18.59
	Faculty of Law	−1.6	3.65	1	−16.37	13.16
	Faculty of Fine Art, Design and Architecture	12.57	3.97	0.137	−2.57	27.72
	School of Health Sciences	16.42*	4.39	0.035	0.81	32.04
	Faculty of Arts and Sciences	17.57	4.5	0.08	−1.91	37.05
	Faculty of Pharmacy	11.21	4.36	0.291	−4.23	26.66
Faculty of Fine Art, Design and Architecture	Faculty of Engineering	−9.55	3.56	0.198	−21.2	2.1
	Faculty of Law	−14.17*	2.56	0.001	−23.21	−5.14
	Faculty of Communication	−12.57	3.97	0.137	−27.72	2.57
	School of Health Sciences	3.85	3.53	0.997	−7.87	15.57
	Faculty of Arts and Sciences	5	3.67	0.92	−14.39	24.39
	Faculty of Pharmacy	−1.35	3.49	1	−12.75	10.04
School of Health Sciences	Faculty of Engineering	−13.40*	4.02	0.035	−26.27	−0.54
	Faculty of Law	−18.02*	3.16	0	−28.47	−7.58
	Faculty of Communication	−16.42*	4.39	0.035	−32.04	−0.81
	Faculty of Fine Art, Design and Architecture	−3.85	3.53	0.997	−15.57	7.87
	Faculty of Arts and Sciences	1.15	4.11	1	−16.75	19.05
	Faculty of Pharmacy	−5.2	3.96	0.981	−17.85	7.44
Faculty of Arts and Sciences	Faculty of Engineering	−14.55	4.15	0.122	−32.27	3.17
	Faculty of Law	−19.17	3.32	0.072	−41.16	2.81
	Faculty of Communication	−17.57	4.5	0.08	−37.05	1.91
	Faculty of Fine Art, Design and Architecture	−5	3.67	0.92	−24.39	14.39
	School of Health Sciences	−1.15	4.11	1	−19.05	16.75
	Faculty of Pharmacy	−6.35	4.08	0.867	−24.11	11.4

(Continued)

TABLE 12 (Continued)

Multiple comparisons						
Dependent variable: MCDCT						
Academic major of the participants	Academic major of the participants	Mean difference	Std. error	Sig.	95% confidence interval	
					Lower bound	Upper bound
Faculty of Pharmacy	Faculty of Engineering	−8.19	3.99	0.585	−20.82	4.43
	Faculty of Law	−12.81*	3.12	0.004	−22.83	−2.81
	Faculty of Communication	−11.21	4.36	0.291	−26.66	4.23
	Faculty of Fine Art, Design and Architecture	1.35	3.49	1	−10.04	12.75
	School of Health Sciences	5.2	3.96	0.981	−7.44	17.85
	Faculty of Arts and Sciences	6.35	4.08	0.867	−11.4	24.11

*The mean difference is significant at the 0.05 level.

majors, the present study provides initial evidence but highlights the need for further research.

The ever-increasing desire for acquiring effective English communication skills has generated a substantial demand for English instruction worldwide. In other words, there is a significant demand for English instruction all over the world as a direct result of the continuously expanding necessity of improving one's ability to communicate in English. While English has a significant role in recreating the world, achieving competency in English should not be a fundamental topic for only the faculty of law students. It is fundamental that all teachers of languages assist their students in the development of their language competencies via a wide range of language-teaching resources, communicative situations and contexts. In this case, developing language competency in English is crucial for all language learners to maintain effective communication in the target language and to reduce misinterpretations. Being competent in English, however, is not a fundamental requirement that is placed solely on students enrolled in the faculties of law. It is also crucial for other professions.

As it is, further studies need to investigate how to promote all language learners' comprehension of conversational implicature in English to enable them to express themselves properly in different situations. Moreover, the findings of this research question have also shed light in the EFL context to investigate what factors most contribute to faculty of law students' CCI. In this case, to better understand what factors most contribute to the CCI, further research should deemphasize statistical analysis to focus on how to promote their CCI in English and to what extent it can be promoted. Qualitative methods like interviews, classroom observations, or discourse analysis could be used to better investigate how faculty of law students' educational backgrounds influence their ability to comprehend implied meanings in communication.

6 Conclusion

In conclusion, the demand to develop communicative competence in L2 as well as the rising emphasis placed on the relevance of the English language can be ascribed to the fast

transformation that has occurred in the teaching of English around the world. Since the early 1970s, communicative competence has been one of the key theoretical concepts which enrich language learners in such a way that to learn how to use language in social contexts. There has been much research done to increase L2 learners' competency in the target language (Anggrarini and Rosdiana, 2020; Birjandi and Derakhshan, 2014; Carrell, 1984; Farahian et al., 2012; Feng et al., 2017; Holtgraves, 2007; Kasper, 1984; Taguchi, 2005, 2007; Takahashi and Roitblat, 1994; Timpe-Laughlin and Youn, 2020). These studies aim to assist L2 learners in maintaining effective communication by helping them comprehend what is said and why it is said. However, if what is not said is so critical to maintaining effective communication, promoting L2 learners' comprehension of conversational implicatures must be addressed in language teaching.

A strength of this study is that it examines demographic factors (gender, culture of origin and academic major) in relation to CCI, thereby extending pragmatic research beyond the typical focus on language proficiency and providing a better understanding of how learners' diverse backgrounds shape their ability to comprehend conversational implicatures. Significantly, the higher performance of Iranian and Nigerian students emphasizes the role of cultural origin in influencing pragmatic awareness, showing that culture of origin can influence learners' ability to comprehend implied meanings. Furthermore, the results of this study highlight the role of academic majors on how well they comprehend conversational implicatures. The findings suggest that different academic majors can influence the comprehension of conversational implicatures, as law students performed better than other academic major groups. Although there was no statistically significant effect of gender, participants from specific academic and cultural backgrounds consistently performed better than the others. These variations indicate that learners' comprehension of implied meaning is influenced by a wider range of cultural and educational experiences.

Nevertheless, this study has certain limitations. First, the relatively small sample size, particularly the exclusion of Jordanian participants due to insufficient numbers, reduced the cultural scope of the analysis. Second, the findings are based on a single institutional sample, which may limit generalizability to broader L2 populations. Third, the study relied solely on comprehension tasks and did not examine learners' production of

implicatures, which could have provided a more holistic picture of pragmatic competence.

Suggestions for future research emerged from the limitations identified in the present study. Future studies should recruit larger and more balanced samples from multiple institutions to increase representativeness and generalizability. Since collecting data from a more diverse range of institutions would have strengthened the representativeness of the findings and improved their generalizability. Future studies should also explore both comprehension and production of implicatures to provide a more comprehensive understanding of conversational implicatures. Moreover, investigating production together with comprehension would provide a more holistic understanding of pragmatic competence. In addition, further research is needed to investigate in depth why law students outperform compared to other academic majors. Similarly, future studies could investigate how cultural backgrounds, as reflected in the strong performance of Iranian and Nigerian L2 learners in comprehending conversational implicatures, influence pragmatic awareness and whether similar effects are found in other cultural groups. Future research should therefore include larger and more balanced samples, consider both comprehension and production tasks, and explore why the faculty of law students outperform compared to other academic majors, to present a clearer picture of L2 learners' pragmatic development.

Effective language education must therefore consider these demographic factors and provide more focused and context-sensitive methods for enhancing learners' pragmatic abilities. In light of the findings, explicit instructions on conversational implicatures should be integrated into EFL curricula through pragmatic awareness tasks. Such tasks can provide contributions to L2 learners better comprehend and use the target language in diverse social contexts by enabling them to identify and interpret speakers' intended meanings and cultural aspects. To support this, curriculum designers should develop language materials that reflect a range of sociocultural contexts and communicative norms. In addition, language education policymakers should ensure that national curricula include clear objectives related to pragmatic competence and allocate resources for developing teacher training in this area. Additionally, EFL teachers should be encouraged to conduct needs analyses based on learners' academic backgrounds, language exposure, and national origin to more effectively align instruction for pragmatic comprehension.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

References

Abdelhafez, A. M. (2016). The effect of conversational implicature instruction on developing TEFL students' pragmatic competence and language proficiency. *US China Educ. Rev. A* 6, 451–465. doi: 10.17265/2161-623X/2016.08.001

Ethics statement

The studies involving humans were approved by the Ethics Committee of Cyprus International University. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

SC: Writing – review & editing, Formal analysis, Writing – original draft, Methodology, Validation.

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- Anggrarini, N., and Rosdiana, D. D. (2020). The analysis of cooperative principle in corbuzier podcast of siti fadilah, sebuah konspirasi—saya dikorbankan episode. *Gema Wiralodra* 11, 292–310. doi: 10.31943/gemawiralodra.v1i12.122
- Atasheva, G. (2024). The importance of English language in the formation of cross-cultural relations. *Am. J. Philol. Sci.* 4, 58–62. doi: 10.37547/ajps/Volume04Issue02-11
- Birjandi, P., and Derakhshan, A. (2014). The impact of consciousness-raising video-driven vignettes on the pragmatic development of apology, request, and refusal. *Appl. Res. Eng. Lan.* 3, 67–85. doi: 10.22108/are.2014.15479
- Bondarchuk, J., Dvorianchykova, S., Yuhan, N., and Holovenko, K. (2024). Strategic approaches: practical applications of English communication skills in various real-life scenarios. *Multidiscip. Sci. J.* doi: 10.31893/multiscience.2025100
- Borjian, M. (2013). *English in Post-Revolutionary Iran: From Indigenization to Internationalization* (Vol. 29). Bristol: Multilingual Matters.
- Borjian, M. (2015). *Issues and Challenges in Constructing Identity in an Adopted Home: Being an Iranian Professor in America. Crossing Boundaries and Weaving Intercultural Work, Life, and Scholarship in Globalizing Universities* (New York, NY; London: Routledge), 105–117.
- Bouton, L. F. (1988). A cross-cultural study of ability to interpret implicatures in English. *World Engl.* 7, 183–196. doi: 10.1111/j.1467971X.1988.tb00230.x
- Bouton, L. F. (1992). The interpretation of implicature in English by NNS: does it come automatically without being explicitly taught? *Pragmat. Lang. Learn.* 3, 53–65.
- Carrell, P. L. (1984). Inferencing in ESL: presuppositions and implications of factual and implicative predicates. *Lang. Learn.* 34, 1–19. doi: 10.1111/j.1467-1770.1984.tb00993.x
- Çetinavci, U. R., and Öztürk, I. (2017). The development of an online test to measure the interpretation of implied meanings as a major constituent of pragmatic competence. *Turk. Online J. Educ. Technol.* 2017 (December Special issue), 184–222. doi: 10.13140/RG.2.2.33994.06084
- Çiftlikli, S. (2018). The relationship between perceptual learning styles and language learners' success in reading tests. *Folklor/Edebiyat* 24, 173–190. doi: 10.22559/folklor.310
- Eslami, Z. R., and Eslami-Rasekh, A. (2008). Enhancing the pragmatic competence of non-native English-speaking teacher candidates (NNESTCs) in an EFL context. *Investig. Pragmat. For. Lang. Learn. Teach. Test.* 30, 178–197. doi: 10.2307/jj.27195521.13
- Fakeye, D. (2010). Students' personal variables as correlates of academic achievement in English as a second language in Nigeria. *J. Soc. Sci.* 22, 205–211. doi: 10.1080/09718923.2010.11892803
- Farahian, M., Rezaee, M., and Gholami, A. (2012). Does direct instruction develop pragmatic competence? Teaching refusals to EFL learners of English. *J. Lang. Teach. Res.* 3, 814–821. doi: 10.4304/jltr.3.4.814-821
- Feng, W., Wu, Y., Jan, C., Yu, H., Jiang, X., and Zhou, X. (2017). Effects of contextual relevance on pragmatic inference during conversation: an fMRI study. *Brain Lang.* 171, 52–61. doi: 10.1016/j.bandl.2017.04.005
- Garcia, P. (2004a). Developmental differences in speech act recognition: a pragmatic awareness study. *Lang. Aware.* 13, 96–115. doi: 10.1080/09658410408667089
- Garcia, P. (2004b). Pragmatic comprehension of high and low level language learners. *Tesl-Ej* 8:n2
- George, D., and Mallery, P. (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference*, 4th ed. Boston, MA: Allyn and Bacon.
- Grice, H. P. (1975). "Logic and conversation," in *Syntax and Semantics*, ed P. Cole (New York, NY: Academic Press), 411–458.
- Holtgraves, T. (2007). Second language learners and speech act comprehension. *Lang. Learn.* 57, 595–610. doi: 10.1111/j.1467-9922.2007.00429.x
- Hossain, K. I. (2024). Reviewing the role of culture in English language learning: challenges and opportunities for educators. *Soc. Sci. Human. Open* 9:100781. doi: 10.1016/j.ssaho.2023.100781
- Kaivanpanah, S., and Alavi, S. M. (2008). The role of linguistic knowledge in word-meaning inferring. *System* 36, 172–195. doi: 10.1016/j.system.2007.10.006
- Kasper, G. (1984). Pragmatic comprehension in learner-native speaker discourse. *Lang. Learn.* 34, 1–20. doi: 10.1111/j.1467-1770.1984.tb00349.x
- Kecskes, I. (2000). A cognitive-pragmatic approach to situation-bound utterances. *J. Pragmat.* 32, 605–625. doi: 10.1016/S0378-2166(99)00063-6
- Levinson, S. C. (1983). *Pragmatics*. Cambridge: Cambridge University Press.
- McConachy, T., and Liddicoat, A. J. (Eds.). (2021). *Teaching and Learning Second Language Pragmatics for Intercultural Understanding*. London and New York, NY: Routledge, 1.
- Mohammadzadeh, B., Razi, Ö., and Yavuz, M. A. (2019). Comprehension of conversational implicatures by students of the ELT department. *Folklor/Edebiyat* 25, 347–354. doi: 10.22559/folklor.948
- Murray, J. C. (2011). Do bears fly? Revisiting conversational implicature in instructional pragmatics. *Tesl-Ej* 15:n2.
- Namdari, A., and Bonyadi, A. (2024). The relationship between EFL students' implicature competence and their English academic success across gender. *J. Pragmat. Res.* 6, 38–51. doi: 10.18326/jopr.v6i1.38-51
- Nassar, H. (2021). Reasons behind mis/understanding English conversational implicatures by university learners in Yemen. *Stud. Pragmat. Discour. Anal.* 2, 40–55. doi: 10.48185/spda.v2i1.291
- Nawaz, M., Hayat, M. H., Mir, S. H., and Hameed, R. (2024). Examining how gender influences language styles and communication patterns in various social contexts. *J. Policy Res.* 10, 280–289. doi: 10.61506/02.00344
- O'Neil, J. M., Good, G. E., and Holmes, S. (1995). "Fifteen years of theory and research on men's gender role conflict: New paradigms for empirical research," in *Parts of this Chapter Were Presented at the 102nd Annual Convention of the American Psychological Association* (Los Angeles, CA: Basic Books/Hachette Book Group).
- Pawlak, M., Csizer, K., Kruk, M., and Zawodniak, J. (2025). Investigating grit in second language learning: The role of individual difference factors and background variables. *Lang. Teach. Res.* 29, 2093–2118. doi: 10.1177/13621688221105775
- Ren, W. (2022). *Second Language Pragmatics*. Cambridge: Cambridge University Press.
- Riazi, A. (2005). *The Four Language Stages in the History of Iran. Decolonisation, Globalisation: Language-in-Education Policy and Practice*. Bristol: Multilingual Matters, 100–116.
- Rizaoglu, F., and Yavuz, M. A. (2017). English Language Learners' Comprehension and Production of Implicatures. *HU J. Educ.* 32, 817–837. doi: 10.16986/HUJE.2017027932
- Sadeghi, K., and Richards, J. C. (2015). Teaching spoken English in Iran's private language schools: Issues and options. *Eng. Teach.* 14, 210–234. doi: 10.1108/ETPC-03-2015-0019
- Seidlhofer, B. (2011). "Conceptualizing "English" for a multilingual Europe," in *English in Europe Today: Sociocultural and Educational Perspectives*, eds. A. de Houwer and A. Wilton (John Benjamins Publishing Company), 133–146.
- Sperber, D., and Wilson, D. (1995). *Relevance, 2nd ed.* Cambridge, MA: Harvard University Press.
- Taguchi, N. (2002). An application of relevance theory to the analysis of L2 interpretation processes: the comprehension of indirect replies. *IRAL* 40, 151–176. doi: 10.1515/iral.2002.006
- Taguchi, N. (2005). Comprehending implied meaning in English as a second language. *Mod. Lang. J.* 89, 543–562. doi: 10.1111/j.1540-4781.2005.00329.x
- Taguchi, N. (2007). Development of speed and accuracy in pragmatic comprehension in English as a foreign language. *TESOL Q.* 42, 313–338. doi: 10.1002/j.1545-7249.2007.tb00061.x
- Tai, H. Y., and Chen, Y. S. (2021). The effects of L2 proficiency on pragmatic comprehension and learner strategies. *Educ. Sci.* 11:174. doi: 10.3390/educsci11040174
- Takahashi, S., and Roitblat, H. L. (1994). Comprehension process of second language indirect requests. *Appl. Psycholinguist.* 15, 475–506. doi: 10.1017/S0142716400006883
- Takkac, M., and Akdemir, A. S. (2015). Defining listeners in second language (L2) listening: investigating the characteristics of language learners as listeners. *Int. J. New Trends Educ. Impl.* 6, 116–141.
- Tannen, D. (1991). *You Just Don't Understand: Women and Men in Conversation*. London: Virago.
- Thomas, J. (1983). Cross-cultural pragmatic failure. *Appl. Ling.* 4, 91–112. doi: 10.1093/applin/4.2.91
- Timpe-Laughlin, V., and Youn, S. J. (2020). "Measuring L2 pragmatics," in *The Routledge Handbook of Second Language Acquisition and Language Testing*, eds. P. Winke and T. Brunfaut (Routledge), 254–264.
- Üstünbaş, Ü. (2017). Ideal L2 self: a source of motivation for language learners. *Karaelmas Egitim Bilimleri Dergisi* 5, 375–382.
- Yang, H. (2022). Second language learners' competence of and beliefs about pragmatic comprehension: insights from the Chinese EFL context. *Front. Psychol.* 12:801315. doi: 10.3389/fpsyg.2021.801315
- Yule, G. (1996). *Pragmatics*. 1st ed. Oxford: Oxford University Press.