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Multiple Intelligences as Predictors of Foreign Language Pragmatic Knowledge: The Case of Five Frequent English Speech Acts

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Abstract

Because of the important role of multiple intelligences (MIs) in learning a second/foreign language (L2) as supported by the existing second language acquisition (SLA) literature, some pragmatic scholars have asked for studying their contribution to pragmatic competence (e.g., Taguchi & Roever, 2017). Accordingly, the present investigation has attempted to examine the relationship between L2 learners' multiple intelligences and their speech-act pragmatic performance. A sample of 124 EFL students who were selected from an initial sample of 206 learners at two Iranian state universities based on their scores on the Michigan Test of English Language Proficiency (MTELP) took part in this study. The data collection procedure was done in two subsequent phases. First, McKenzie's (1999) multiple intelligences (MI) survey including 90 items was filled out by the participants. Then, a validated 50-item multiple-choice discourse completion test (MDCT) including five frequent English speech acts (requests, apologies, refusals, complaints, and compliments/compliment responses) was administered. Data analysis using multiple regression revealed that four of the intelligence including logical, interpersonal, verbal, and intrapersonal intelligences were significant predictors of L2 learners' speech-act pragmatic knowledge. Among these four intelligences, verbal intelligence was the strongest followed by interpersonal, intrapersonal, and logical intelligences. However, five other intelligences (i.e., naturalistic, musical, existential, visual, & kinesthetic intelligences were not significant predictors of L2 pragmatic performance). These findings can have some pedagogical implications for EFL teachers in helping their learners develop their speech-act pragmatic knowledge based on their MIs.

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1. Introduction

Since its inception, pragmatic competence has always been an integral part of the communicative competence over the past half-century and it has been represented in various models of communicative competence including Bachman (1990), Bachman and Palmer (1996, 2010), and Celce-Murcia, Dörnyei and Thurrell's (1995) models. According to Kasper and Rose (2002), L2 pragmatic competence encompasses both the linguistic knowledge needed to comprehend and produce appropriate sentences with regard to grammar and vocabulary and the sociocultural knowledge needed to comprehend or produce sentences that are accepted based on the socio-cultural norms of the L2 society. In Kasper and Rose's (2002) term, pragmatic competence includes the knowledge of both pragmalinguistic forms and sociopragmatic norms.

Taguchi (2017) defined pragmatic competence as the ability to produce or interpret the relationship between the form-function-context mappings and the sociocultural appropriacy. Pragmatic competence has also been defined as the L2 learners' capability in receiving, comprehending, and interpreting the native speakers (NSs) and competent nonnative speakers' (NNSs) use of the target language in authentic interactions with each other. Pragmatic competence also comprises the NNS's ability to articulate their intended meanings and purposes in a way that is linguistically and socially comprehensible and acceptable by the NSs or other competent L2 interlocutors (Mey, 2001).

A walk-through of the studies from 1980s to 2019 reveals that although a considerable amount of research has been conducted on the relationship between individual differences (IDs) including language proficiency, motivation, personality traits, learning styles and strategies, and other personal traits (Taguchi & Roever, 2017), still far rigorous research is needed

to shed light on such intricate relationships between IDs and various domains of L2 pragmatic competence as claimed by Taguhci (2017) and Taguchi and Roever (2017).

Intelligence, in general, has been instigated in a lot of other studies in SLA research but it is somehow under-researched in L2 pragmatics. Multiple intelligences as put forward by Gardner (1983, 1993, 1999) have shown their significant relationship with second language learning and proved their contribution to different skills of the L2. The general understanding based on the existing literature is that multiple intelligences highly correlate with L2 development (Brown, 2014; Ellis, 2008). Although pragmatic competence has been also examined from various aspects both in Iranian (e.g. Fazilatfar & Cheraghi, 2013; Félix-Brasdefer, 2007; Mirzaei, Rahimi Domakani, & Seyyed Rezaei, 2014; Tajeddin & Bagherkazemi, 2014; Tajeddin & Pirhoseinloo, 2012) and other EFL contexts (e.g., Bella, 2012; Taguchi, 2019; Taguchi & Roever, 2017), unfortunately, there is a paucity of research on the relationship between multiple intelligences and L2 pragmatic competence and to date, no outstanding research can be referred to in this regard. Accordingly, the present study has attempted to examine the relationship between various multiple intelligences and L2 speech-act knowledge as the main building blocks of L2 pragmatic competence in a pioneering study.

2. Literature Review

2.1 ILP Competence and Individual Differences

One of the important domains of the mainstream SLA research in general (Dörnyei, 2005; Dörnyei & Skehan, 2003; Ellis, 2005) and in L2 pragmatic research in particular (e.g. Taguchi, 2017; Taguchi & Roever, 2017) is the relationship between IDs and L2 abilities including pragmatic competence. According to Dörnyei (2005), individual differences are "dimensions of

enduring personal characteristics that are assumed to apply to everybody and on which people differ by degree" (p. 4). These individual differences occupy a crucial place in language learning because they determine the process and speed of linguistic and pragmatic attainments for a special learner that is particular for him or her. Kasper and Rose (2002) mentioned that IDs exert even a more important influence on the pace and pattern of interlanguage pragmatic competence compared with other L2 components.

As mentioned by some outstanding researchers (e.g. Bardovi-Harlig, 2013a, 2013b; Barron, 2003; Félix-Brasdefer, 2007; Roever, Wang, & Brophy, 2014; Taguchi, 2019), IDs also play profoundly crucial roles in enhancing various components of the interlanguage pragmatic competence containing speech acts such as requests (Bella, 2012; Roever, 2005; Rose, 2009; Taguchi, 2006), apologies (Maeshiba et al., 1996; Rose, 2000; Shardakova, 2005; Roever, 2005), and refusals (Bella, 2014; Félix-Brasdefer, 2004; Taguchi, 2007). Bella (2012), for example, reported that motivation and language proficiency positively correlated with the comprehension of L2 request and refusals; however, they were less related to the production of these speech acts since their productions needed more lexical and grammatical knowledge beyond the pragmatic information.

Furthermore, the relationship between various individual differences such as language proficiency, motivation, willingness to communicate and personality traits on one hand and L2 learners' production and comprehension of implicatures have been investigated by some researchers (e.g., Garcia, 2004; Roever, 2006, 2013; Taguchi, 2008, 2009; Taguchi & Yamaguchi, 2019), mostly indicating high significant relationships for the comprehension of both conventional and nonconventional implicatures. As mentioned for the role of L2 proficiency in the production of speech acts, Roever's (2013) study

revealed that awareness of the sociopragmatic norms cannot lead to effective use of the pragmalinguistic forms in a specific dynamic sociocultural context.

The relationship between individual differences and other pragmatic issues has also been scrutinised in some studies though this branch of research is more limited in the scope compared with their studies done on the role of individual differences in the development of the speech acts and locators. Some studies have looked into the role of IDs in comprehending and producing L2 conversational routines, extended discourse, and take-turning patterns (e.g., Bardovi-Harlig & Bastos, 2011; Roever, 2012). For instance, Verhoeven and Vermeer (2002) examined the relationship between various components of L2 communicative competence including pragmatic and personality types based on the Big Five model and showed that extraversion correlated more with knowledge of conversational routines than introversion. For other personality traits, they found mixed results and they asked for further research in this regard. For example, neuroticism and intuitiveness interacted with other personality variables such as age, gender, language proficiency, and motivation in the development of both comprehension and production of conversational gambits and routine formula.

2.2 Multiple Intelligences and L2 Learning

Multiple intelligences (MI) refer to a psychological approach toward different individuals' idiosyncratic talents and cognitive predispositions that permits them learn differently from other people. The MI theory proposed in a series of works by Gardner (1983, 1993, 2006), was a criticism levelled against the conventional IQ (intelligence quotient) perspective about the human intelligence as a unitary, stable, and inborn cognitive ability. The famous Stanford-Binet IQ tests that dominated the cognitive psychology for over a century were the offspring of such an orientation toward human intelligence. Gardner (1993) argued that such a unitary attitude toward intelligence as

including the logic and language abilities is narrow, perfunctory, and simplistic since the brain has other important types of intelligences. Expanding the types of intelligence beyond linguistic and logical-mathematical abilities, Gardner (1993) first proposed a list of eight types of intelligences as follows:

1. **Linguistic:** the capability to employ language creatively and idiosyncratically, the ability mostly seen among lawyers, authors, lecturers, etc.;
2. **Logical/mathematical:** the capability to think reasonably and orderly, something observed among engineers, entrepreneurs, and scholars;
3. **Visual/spatial:** the capacity to figure out mental designs and models, mainly found with architects and designers;
4. **Musical:** possessing a talent for music as witnessed in musicians and singers;
5. **Bodily/kinesthetic:** having physical strength and body agility as indicated by sportsmen;
6. **Interpersonal:** the ability to build relations with others something politicians and teachers are strong in;
7. **Intrapersonal:** the capacity to activate your own talents and to fulfil your potential abilities;
8. **Naturalistic:** the talent to see, understand, and imitate the natural regularities and phenomena.

Gardner (1993) maintained that all individuals possess these various types of intelligences; nonetheless, they differ in the degree of the aforementioned intelligences. Furthermore, Gardner (1999, 2006) argued that these intelligences can be enhanced and fostered through instruction and repeated rehearsal. Later, he added *existential intelligence* as the ninth intelligence. According to Palmberg (2011), this intelligence refers to the ability to interpret the relation of one's life and being with the whole universe and one's larger perspective about life and main human concerns.

Gardner (2006) argued that his model of intelligence was culture-free and more realistic than the traditional views of intelligence such as IQ model.

Later on, MI attracted more attention from scholars in psychology and was subsequently used in applied linguistics. In addition, since 1983 various scales have been developed to provide an estimation of the degree of each intelligence among people the most significant of which is McKenzie's (1999) scale. As outlined by Richards and Rogers (2014), a teaching method has also been put forward for the use of multiple intelligences in language teaching. According to Christison (1998), MIs proved to be a robust teaching method in SLA in helping L2 learners acquire the target language by knowing about their own unique capabilities and how to activate and take advantage of the best teaching tasks that are in line with those special intelligences.

According to Christison (2005), all individuals possess all of the intelligences and that people have rare intelligences which are highly actualised or partially developed with a handful of them that may be underdeveloped. However, the composite of multiple intelligences and how various types of intelligences are interrelated with each other is rather complex, something that should be noted by educators and language practitioners. As maintained by Richards and Rogers (2014), "all learners are believed to have personal intelligence profiles – so-called MRI profiles – that consist of combinations of different intelligent types and for some intelligences to be more highly developed than others, hence favouring a particular approach to learning" (p. 231).

As mentioned by Richards and Rogers (2014), the MIs method somehow follows the linguistic and learning theories of the communicative approach by focusing on how various MIs can cooperate with each other in learning an L2 communicatively. Although some earlier attempts have been made to link MIs method to specific linguistic and learning theories (e.g., Armstrong, 2009; Christison, 1998; Reid, 1997), no unique theory can be mentioned for

this method and its implementation in SLA. Moreover, no clear-cut set of goals, organised syllabus, instructional materials, and teacher and learners' roles. The content of its syllabus and types of learning and teaching activities follow one main direction: to activate the potential of different types of intelligences for language learning and to design a pool of effective tasks and activities that can promote the efficacy of the related intelligences in L2 acquisition. For example, for activating the spatial intelligence for SLA, "charts, maps, diagrams, videos, slides, movies, and all the pictures, imaginative storytelling, graphic organisers, ... and other visual awareness activities" (Richards & Rogers, 2014, p. 236) can be utilized.

The role of various intelligences in L2 development has been emphasized in the mainstream SLA literature. Ellis (2008) reviewed some of the studies that have examined the relationship between multiple intelligences and L2 development, concluding that different intelligences correlate with different aspects of L2 development. The positive relationship between multiple intelligences and L2 reading comprehension, writing, speaking have been supported by the earlier research. However, to date, the relationship between multiple intelligences and L2 pragmatic development has not been adequately examined and few studies can be mentioned in this regard (e.g., Ahmadi & Ghafar Samar, 2014). Ahmadi and Ghafar Samar investigated the interaction effects of dictoglosses (DIGs) and consciousness raising (CR) tasks on the relationship between EFL learners' multiple intelligences on the growth of requestive downgraders. The researchers reported that the two aforementioned tasks could significantly interacted with learners' linguistic and interpersonal intelligences in the development of English requestive downgraders. Due to the scarcity of research on the relationship between MIs and pragmatic competence, the present study has sought to investigate the

relationship between multiple intelligences and L2 speech-act knowledge as the bedrock of pragmatic competence among Iranian EFL learners.

3. Research Questions

Specifically, this study is guided by the two research questions in its effort to investigate the relationship between multiple intelligences and L2 speech act knowledge:

- 1) How well do the multiple intelligences (naturalistic, musical, logical, existential, interpersonal, kinesthetic, verbal, intrapersonal, and visual intelligences) predict Iranian EFL learners' pragmatic knowledge? How much variance in L2 pragmatic scores can be explained by scores on the MI survey?
- 2) Which types of MIs are significantly better predictors of Iranian EFL learners' pragmatic knowledge?

4. Methodology

This study used an ex post facto correlational design to scrutinize the relationship between L2 learners' speech-act pragmatic performance and multiple intelligences. The details of the adopted methodology are given in the succeeding sections.

4.1 Participants

The sample comprised 124 EFL students (83 females & 41 males) and was selected from two state universities. Seventy-three of them were majoring English Language Translation and English Language Teaching at Imam Khomeini International University (IKIU), Qazvin and the rest 53 were storing English language translation at *the University of Sistan and Baluchestan, Zahedan*. The ages of the respondents ranged from 18 to 26 ($M=20.9$, $SD=2.9$). The participants consisted of sophomores (15%), juniors (35 %) and seniors (50 %). They had previously studied English at the university level from one to three-and-half years. Their mother tongue was mostly Persian and some cases Baluchi, Turkish and Kurdish and they were

from different social strata and geographical locations of Iran. Based on their GPA (Consultation with English Language Department) most of the participants could be considered as upper-intermediate and advanced EFL learners. These 124 learners were selected for this study based on their scores on a Michigan Test of English Language Proficiency that was administered to an initial sample of 209 EFL learners.

4.2 Instruments

Three types of data collocation instruments will be used in the current study: The Michigan Test of English Language Proficiency (MTELP) as a homogeneity test, McKenzie's (1999) multiple intelligences (MI) survey, and a multiple-choice discourse completion test (MDCT). The details of each of these instruments will be outlined as follows:

4.2.1 Michigan Test of English Language Proficiency (MTELP)

The Michigan Test of English Language Proficiency (MTELP) was employed to select a homogeneous group of participants with regard to their general language proficiency. The used test consisted of 100 multiple-choice items and had three sections including grammar (40 items), vocabulary (40 items), and reading comprehension (20 items based on four reading passages). The test has shown its high reliability and validity in many studies conducted in various EFL and ESL contexts based on the reports released from the publisher in 2016 and its reliability turned out to be .82 in the current investigation.

4.2.2 Multiple Intelligences (MI) Survey

This multiple intelligences survey has been developed by McKenzie (1999) including 90 statements in nine sections. It includes all nine different intelligences proposed by Gardner. Each section has 10 statements which participants should complete by placing a 1 next to each statement they feel accurately describes themselves. If they do not identify with a statement, they

should leave the space provided blank or put a zero. Then, the answers will be added for each part. According to McKenzie (1999), the total score is multiplied by 10 to get the score for each section of the MI survey.

The reliability of this multiple intelligences survey was reported to be .87 for the whole question as reported by its developer, McKenzie (1999). The Cronbach's alpha reliability indices for the nine sections of the survey were .81, .76, .78, .89, .75, .84, .82, .80, and .81, respectively. The reliability of this multiple intelligence survey turned out to be .79 for the whole questioner in the current investigation and its different sections showed reliability is from .73 to .80. In order to have a better picture of the data collection and raw data treatment the results for one a participant's performance is presented in Table 1.

Table 1

Scores of Multiple Intelligences (MI) Survey for one of the Participants

Section	Raw Score for the Statements	Total Score
1. naturalist intelligence	4	40
2. musical intelligence	5	50
3. logical intelligence	9	90
4. existential intelligence	4	40
5. interpersonal intelligence	8	80
6. kinesthetic intelligence	4	40
7. verbal intelligence	9	90
8. intrapersonal intelligence	9	90
9. visual intelligence	5	50

Therefore, for each of the participants, a table like the above was obtained including 9 scores. In each case, the raw score is the number of chose (yes responses) that then was multiplied by 10 to yield the total final score for that type of intelligence.

4.2.3 Multiple-Choice Discourse Completion Test (MDCTs)

In order to gather the required data about the participants' pragmatic knowledge of common English speech acts, a previously validated

interlanguage pragmatic developed by the Tajeddin and Malmir (2015) was used. This interlanguage pragmatic test has an acceptable reliability index (indices beyond .80) based on the previous pilot studies by the test developers. This test includes 50 items. Each item consists of a context in which a conversation is taking place, a two to six-line conversation between the interactants, and three choices listed at the end. One of these alternatives is the most appropriate option considering all the lexico-grammatical and socio-pragmatic dimensions of the situational context and the given alternatives. The given contexts range from very informal ones to the really formal situations including requests, apologies, refusals, complaints, and compliments/compliment responses. The vocabulary, grammar, and the needed socio-pragmatic knowledge are suitable for upper-intermediate to advanced level EFL participants. The sentences in the referred interlanguage pragmatic test were originally produced by native speakers of American English and few modifications have been made by the test developers.

This test has been validated by 60 native speakers from the U.S. in a period of 8 months. The test indicated a reliability index of .90 and several times was modified in order to make it more reliable and valid. In order to complete the test no time limit was set but generally, it lasted between 30 to 50 minutes to answer all the questions. According to the test developers, developing an ILP test containing all speech acts was a difficult job because there isn't any unanimous agreement on the number of speech acts and there were different categorizations in this regard. On the other hand, including all the speech acts made the test lengthy for the subjects to complete. Therefore, the five most frequent speech acts of requests, apologies, refusals, complaints, and complements (as mentioned by the existing literature on L2 pragmatics) were selected for the pragmatic test. The characteristics of the pragmatic test can be seen in Table 2:

Table 2

Features of the whole Multiple-Choice Discourse Completion Test (MDCT)

Parts	Speech Act	Number of Items	Numbers in the Test
Part I	Request	10	1-10
Part II	Apology	10	11-20
Part III	Refusal	10	21-30
Part IV	Complaint	10	31-40
Part V	Complement	10	41-50

This general interlanguage pragmatic test of common English speech acts has tried to contain the five most frequent speech acts with their different types and manifestations considering pragmatic issues such as formality, distance, power, social relations, politeness, and directness/ indirectness. This MDCT test aimed at determining the interlanguage pragmatic performance of Iranian EFL to a rather comprehensive extent.

4.3 Data Collection Procedure

The Michigan Test of English Language Proficiency (MTELP) was given to 209 the Iranian EFL learners studying English language translation and Teaching at two state universities and those 124 participants who could be considered as upper-intermediate and advanced level learners based on their performances on the MTELP were selected for the purposes of the current study (60 and beyond out of 100). After that, McKenzie's (1999) multiple intelligences survey was filled out by the participants in the study. It took from 10 to 25 minutes for the participants to answer all their statements using 1 and zero numbers or checkmark (✓) or ✗ symbols for their *yes* and *no* responses, respectively. Next, the multiple-choice discourse completion test developed and validated by Tajeddin and Malmir (2015) was administered to the participants as an interlanguage pragmatic test to measure their knowledge regarding five common English speech acts. It took from 30 to 50 minutes for the participants to complete this MCDT. Data collocation

procedure was completed in two subsequent sessions in two weeks in the first semester at the Iranian educational year in fall 2019.

5. Results

5.1 Descriptive Statistics and Checking the Assumptions

After the raw data was gathered, participants' speech-act pragmatic scores and their multiple intelligences (MI) total scores were fed into the SPSS program (version 24) for data analysis. The results of the participants' performances on the pragmatic test have been given in Table 3:

Table 3

Descriptive Statistics for the Participants' Pragmatic Scores

	N	Mean	SD	Minimum	Maximum
Total	124	37.80	5.48	25	48

The participants' mean score on the pragmatic test turned out to be 37.80 with the standard deviation of 5.48 and scores ranged from a minimum of 25 to a maximum of 48 out of 50. The descriptive statistics for the multiple intelligences (MI) survey have been depicted in Table 4:

Table 4

Descriptive Statistics for Participants' Pragmatic Scores on the MI Survey

Section	N	Mean	SD	Minimum	Maximum
Section 1: Naturalistic (N)	124	41.66	10.27	30	60
Section 2: Musical (M)	124	52.16	14.39	30	80
Section 3: Logical (L)	124	68.66	14.66	30	90
Section 4: Existential (E)	124	53.16	13.71	20	70
Section 5: Interpersonal (Inter.)	124	80.16	15.34	30	100
Section 6: Kinesthetic (K)	124	40.50	11.99	20	60
Section 7: Verbal (Ver.)	124	84.16	13.25	69	100
Section 8: Intrapersonal (Intra.)	124	71.16	16.57	30	90
Section 9: Visual (Vis.)	124	49.00	9.33	40	70

As witnessed from Table 4, the highest scores on the multiple intelligence questionnaire belonged to verbal (M=84.16, SD=13.25), interpersonal (M=80.16, SD=15.34), intrapersonal (M=71.16, SD=16.75), and logical (M=68.66, SD=14.66) intelligences, respectively. Existential (M=53.16, SD=13.71), musical (M=52.16, SD=14.39), and visual (M=49.00, SD=9.33) intelligences received and moderate mean scores; however, the lowest mean

scores belonged to naturalistic ($M=41.66$, $SD=10.27$) and kinesthetic ($M=40.50$, $SD=11.99$) intelligences.

Prior to the application of multiple regression, its essential assumptions including multicollinearity, outlier presence, normality, linearity, homoscedasticity, and the independence of residuals were inspected and no violation was observed as will be reported in the next parts.

First, the application of the Kolmogorov-Smirnov and Shapiro-Wilk tests revealed that the distributions of learners' pragmatic and MI scores were normal ($p>.05$). Moreover, all of the skewness and kurtosis ratios fell within the range of -1.96 and $+1.96$, further supporting the normality of the distributions for the predicted variable (pragmatic scores) and the predictor variables.

Another employed technique for checking normality in a regression analysis is inspecting the Normal Probability Plot (P-P). Here, it is expected that the points lie in a reasonably straight diagonal line from the bottom left to the top right. Figure 1 presents the Normal P-P Plot of regression standardized residuals.

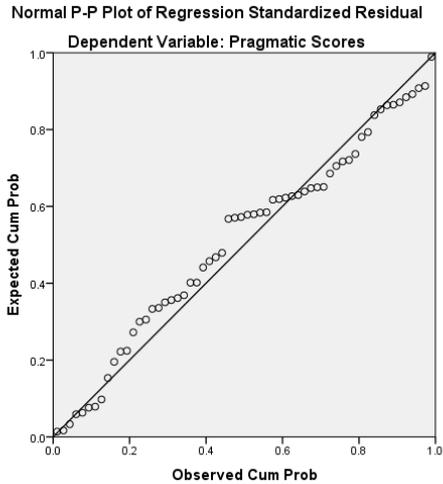


Figure 1. The normal P-P plot of regression standardized residual for the used model

The inspection of Figure 1 suggests no deviation from normality. Furthermore, the scatterplot of standardized residuals (Figure 2) showed the distribution of the residuals of the data.

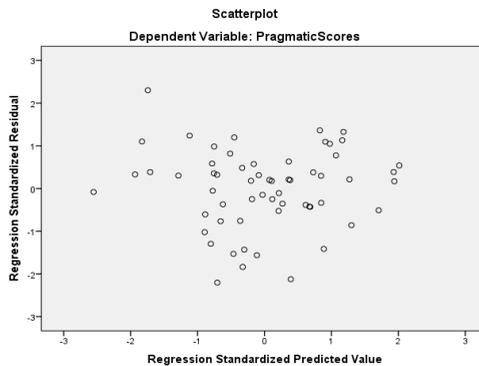


Figure 2. The scatterplot of the standardized residuals for the used model

As observed in Figure 2, there was no clear or systematic pattern to the residuals. Putting the above-mentioned analyses together, the researcher decided that the assumption of normality was met. The presence of outliers was detected from the scatter plot of standardized residuals (Figure 2). According to Tabachnick and Fidell (2007), outliers are cases that have a standardized residual of more than 3.3 or less than -3.3. The inspection of Figure 2 suggested that there were no cases that exhibit the characteristics of outliers. In addition to the method stated above, the researcher inspected the Mahalanobis distance in order to notice the existence of outliers (Table 5).

Table 5
Residuals Statistics for the Regression Model

	Minimum	Maximum	Mean	Std. Deviation	N
Mahal. Distance	2.302	23.73	8.850	3.91	124
Cook's Distance	.000	.144	.022	.035	124

According to Tabachnick and Fidell (2007), when there are 9 levels of the same independent variable (or nine independent variables) in the model, the critical value for the Mahalanobis value is 28.88. This means that if the Mahalanobis value for a variable is larger than 28.88, that case is an outlier. Table 5 reported that the highest Mahalanobis value in this sample is 23.73, which is below the critical level. As a result, the researcher could argue that the assumption pertinent to the outliers was met.

Furthermore, the obtained Tolerance values for each level of the independent variable ranged from .42 to .87 which are all larger than .10; and the calculated VIF values were between 1.14 and 2.35 which are well below the 10 set as the cut-off score on according to statisticians (e.g., Tabachnick & Fidell, 2007), indicating that multicollinearity was not violated. Based on the results of the preliminary analyses reported above, it was then legitimate to run a multiple regression to answer the two research questions.

5.2 Inferential Statistics and Answering the Questions

Multiple regression was used to find the correlations between learners' various types of intelligences and their performances on the pragmatic test. The correlations obtained from the multiple regression are presented in Table 6.

Table 6

Correlations between Different MIs and L2 Pragmatic Scores

		Pragmatic	N	M	L	E	Inter.	K	Ver.	Intra.	Vis.
		Score									
Pearson Correlation	ILP Score	1.00	.163	.212	.135	.179	.398	.124	.450	.115	.179
	Naturalistic	.363	1.00	.227	.221	.335	.120	.667	.195	.101	.335
	Musical	.212	.227	1.00	.158	.025	.183	.170	.048	.004	.025
	Logical	.435	.221	.158	1.00	.290	.340	.093	.113	.048	.290
	Existential	.279	.335	.025	.290	1.00	.107	.268	.010	.039	1.00
	Interpersonal	.598	.120	.183	.340	.107	1.00	.000	.650	.007	.107
	Kinesthetic	.224	.667	.170	.093	.268	.000	1.00	.023	.037	.268
	Verbal	.650	.195	.048	.113	.010	.650	.023	1.00	.045	.343
	Intrapersonal	.485	.101	.004	.048	.039	.007	.137	.035	1.00	.056
Visual	.213	.237	1.03	.168	.025	.184	.170	.048	.004	1.00	
Sig. (1-tailed)	ILP Score	.	.016	.022	.396	.012	.001	.027	.000	.032	.012
	Naturalistic	.316	.	.040	.045	.004	.181	.000	.068	.221	.235
	Musical	.052	.040	.	.113	.426	.081	.097	.358	.489	.015
	Logical	.036	.045	.113	.	.012	.004	.241	.196	.357	.290
	Existential	.273	.004	.426	.012	.	.207	.019	.470	.384	.022
	Interpersonal	.001	.181	.081	.004	.207	.	.499	.000	.478	.207
	Kinesthetic	.427	.000	.097	.241	.019	.499	.	.430	.389	.268
	Verbal	.000	.068	.358	.196	.470	.000	.430	.	.365	.079
	Intrapersonal	.042	.221	.489	.357	.384	.478	.389	.365	.	.211
Visual	.279	.335	.025	.290	1.00	.107	.268	.010	.039	.	

As summarized in Table 6, there were significant correlations between verbal ($r = .650$, $p = .000 < .05$), interpersonal ($r = .598$, $p = .001 < .05$), intrapersonal ($r = .485$, $p = .042 < .05$), and logical intelligences ($r = .435$,

$p=.036 < .05$), and L2 speech-act pragmatic performance; however, no significant correlations were spotted between learners' other intelligences and their pragmatic performance. The summary of the model used based on the standard multiple regression (using the Enter method) can be seen in Table 7:

Table 7

Model Summary for the Current Study Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767 ^a	.521	.514	7.85394

As seen in Table 7, R came out to be .767 and R^2 was .521, suggesting that the model (including nine types of intelligences) could explain 51.4% of the variance in the pragmatic scores of the learners. To check the overall significance of the obtained model, the results of the ANOVA table should be referred to.

Table 8

The Results of ANOVA for the Constructed Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1529.505	9	169.945	15.038	.000
	Residual	1390.099	123	11.301		
	Total	2919.604	124			

Based on Table 8, the first research question is answered and it can be concluded that the obtained model could significantly predict learners' pragmatic knowledge ($F(9, 123) = 15.038, p = .000, .05$) and that learners' MIs can account for 51.4% of the variance in their L2 speech act knowledge. In order to answer the second research question, the significant and unique contributions of various intelligences should be determined. Table 9 demonstrates the Standardized Beta Coefficients which signify the degree to which each predictor variable contributes to the prediction of the predicted variable.

Table 9
Coefficients for the Relationship between MI and ILP Performances of Learners

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	16.206	7.152		4.266	.028
	Naturalistic	.163	.091	.306	1.798	.078
	Musical	.056	.047	.147	1.192	.239
	Logical	.032	.049	.487	3.058	.034
	Existential	.054	.051	.135	1.061	.294
	Interpersonal	.060	.059	.567	4.009	.018
	Kinesthetic	.096	.072	.211	1.343	.185
	Verbal	.158	.064	.695	5.483	.006
	Intrapersonal	.040	.038	.520	3.035	.025
	Visual	.052	.037	.247	1.100	.229

The assessment of β values indicated that verbal intelligence had the largest β coefficient ($\beta = .695$, $t = 5.483$, $p = 0.006$) suggestive of a strong and significant statistically unique contribution to explaining L2 speech-act pragmatic knowledge. Interpersonal intelligence was ranked as the second significant predictor of L2 pragmatic performance ($\beta = .567$, $t = 4.009$, $p = 0.018$). Intrapersonal ($\beta = .520$, $t = 3.035$, $p = 0.025$) and logical ($\beta = .487$, $t = 3.058$, $p = 0.034$) intelligences were the third and fourth significant predictors of EFL learners' pragmatic knowledge of the five common English speech acts based on the used regression model.

6. Discussion

This study revealed that some components of the multiple intelligences (MIs) are more related to the interlanguage pragmatic performance of L2 learners. Data analysis using standard multiple regression revealed that four of the intelligence i.e., verbal, interpersonal, intrapersonal, and logical intelligences were significant predictors of L2 learners' pragmatic performance. But five other intelligences, namely, naturalistic, musical, existential, visual, and

kinesthetic intelligences were not significant contributors to L2 pragmatic performances. Moreover, this study found that among the four intelligences that could significantly predict EFL learners' pragmatic knowledge of the common English speech acts, verbal intelligence was the strongest followed by interpersonal intelligence. Intrapersonal and logical intelligences turned out to be the third and fourth significant contributors to L2 learners' pragmatic knowledge.

An argument that can be put forward to justify this first finding of the study is that the four predictive variables are somehow salient in developing L2 communicative (e.g., Christison, 1998, 1999a, 1999b; Ellis, 2008; Sternberg, 2000) that also includes pragmatic competence as a subcomponent. Based on Gardner's theory (1983, 1993), verbal (linguistic) intelligence involves sensitivity to spoken and written language, the ability to learn languages, and the capacity to use language to accomplish certain goals. This intelligence includes the ability to effectively use language to express oneself rhetorically or poetically; and language as a means to remember information (Gardner, 1999). Writers, poets, lawyers, and speakers are among those that Gardner (1999) sees as having high linguistic intelligence. It seems that verbal intelligence is directly related to having more exposure in L2 and accordingly is related to more opportunities for interaction with peers, teacher, and other people knowing the language all of which as mentioned by Kasper and Rose (2002) and Taguchi and Roever (2017) set the stage for acquiring pragmatic knowledge. Access to more input and exposure is one of the salient conditions which promote interlanguage pragmatic development in language learners according to the recent pragmatic research (e.g. Bardovi-Harlig, 2005; Barron, 2003; Schauer, 2009; Taguchi, 2011, 2017, 2019).

Furthermore, more verbal ability and higher motivation for talking are claimed to lead to more output in L2 (Brown, 2014). As maintained by Swain

(2005), the output hypothesis claims that L2 learners will notice gaps in their linguistic knowledge and try to acquire the needed knowledge by testing hypotheses about the forms and functions of the language, interacting more, and asking for more input. All of these conditions have been considered by interlinkage pragmatic scholars (e.g., Bardovi-Harlig, 2013a; Kasper & Roever, 2005; Taguchi, 2015, 2019) as necessary for L2 interlanguage pragmatic development. Therefore, verbal (linguistic) intelligence seems to have the most predictability power for pragmatic performance in comparison with other intelligences.

As far as the second significant predictor namely interpersonal intelligence is concerned, it can be said that the name itself indicates the use and interaction between interactants. Gardner (2006) asserted that interpersonal intelligence is concerned with the capacity to understand the intentions, motivations, and desires of other people. It allows people to work effectively with others. Educators, salespeople, religious and political leaders, and counsellors all need a well-developed interpersonal intelligence (Christison, 1999b). Therefore, it seems that this intelligence encompasses both the sociolinguistic and pragmalinguistic knowledge as two prominent building blocks of pragmatic competence and is even more directly related to the interlanguage pragmatic development than other intelligences including the verbal intelligence discussed above. Generally speaking, as Cohen and Olshtain (1993) appropriately pointed out, being good at interpersonal relations means having a comprehensive knowledge of the speech acts and language functions as the make-up of the interlanguage pragmatic competence and finding this intelligence as the second predictor seems quite justifiable in this investigation.

The third predictor intelligence for explaining the variation in L2 learners' speech-act performance obtained in this study turned out to be intrapersonal

intelligence. Gardner (1999) stated that the intrapersonal intelligence entails the capacity to understand oneself, to appreciate one's feelings, fears and motivations. In Howard Gardner's view, it involves having an effective working model of ourselves, and to be able to use such information to regulate our lives. This reality may be related to the self-regulation function of the language and inner speech which fosters L2 learning and hence speech acts in particular. Taguchi and Roever (2017) have argued that inner speech and self-regulation of the discourse can exert a tremendous impact on the way L2 speakers monitor their own pragmatic knowledge and how they assess and judge other interactants' utterances all of which can help L2 learners acquire and prune their pragmatic knowledge.

The fourth predictor variable was the logical intelligence. Logical-mathematical intelligence consists of the capacity to analyse problems logically, to carry out mathematical operations, and to investigate issues scientifically. In Gardner's (1993) words, it entails the ability to detect patterns, reason deductively and think logically. This intelligence is most often associated with scientific and mathematical thinking and the appropriate use of language for reasoning and contemplation (Brown, 2014). It seems that logical intelligence is related to the logic of language used for intended purposes which conjures up the pragmatic use of language based on the specific contexts in which it is used. Therefore, it can be associated with the proper use of different speech acts, their propositional meaning, and their illocutionary force in real-world and authentic conversations. Therefore, it appears that this intelligence can somehow lead to better interlanguage pragmatic development among L2 learners.

Though other five intelligences were not significant contributors to L2 pragmatic performance on a test of common English speech acts, this study suggests that they are also important ones for the whole language learning

process and the four main language skills as reported in the existing literature (e.g., Arnold & Fonceca, 2004; Christison, 1999b; Gardner, 2006). As a sound judgment, when naturalistic, musical, existential, visual, and kinesthetic intelligences have some connections with language learning and its skills, they can indirectly play a part in L2 pragmatic performance. Of course, for finding more evidence about their role in L2 pragmatic growth and performance, far rigorous research through theoretically sound and effective designs is required.

Unfortunately, no previous study to date has investigated the relationship among all or some of the multiple intelligences and L2 pragmatic competence with which the findings reported by the current study can be compared and contrasted. The researchers of the current study made a tremendous effort to find similar studies published in international or local journals but none was found.

7. Conclusion and Implications

This study came to some important conclusions. First, the verbal, interpersonal, intrapersonal and logical, intelligences turned out to be significant predictors of L2 learners' speech-act pragmatic knowledge; however, other intelligences including naturalistic, musical, existential, visual, and kinesthetic intelligences were not significant predictors of EFL learners' pragmatic performance. Second, among these four aforementioned significant intelligences, verbal intelligence was the strongest predictor, followed by interpersonal, and intrapersonal intelligences. The logical intelligence was a rather moderate predictor compared with the other three intelligences.

This study has some pedagogical implications for language learners and language teachers. Its findings suggest that instructors should try to promote the students' pragmatic knowledge and pragmatic awareness through

knowing about their multiple intelligences. MI theory offers English language teachers a richly diversified way of understanding and categorizing human cognitive abilities, and combinations of abilities, heightening teachers' awareness of what makes learning possible and effective for individual students. There are several ways that may facilitate the implementation of MI-inspired teaching in the EFL classroom.

Teachers can examine L2 learners' intelligence profiles and tailor their teaching practices for enhancing learners' L2 pragmatic knowledge. Teachers and language practitioners should consider specific teaching methods and techniques that appeal to particular intelligences or combinations of intelligences in general and for special purposes such as interlanguage pragmatic development. Teachers can provide students with different learning strategies necessary for mastering speech acts as the make-ups of interlanguage pragmatic competence.

This study had some limitations. The first limitation was the limited number of EFL learners who participated in the study. Better-Designed research with a larger sample is needed to increase the internal validity and generalizability of the findings of this study. Because of the manageability of the study proficiency levels were not considered and it is one of the shortcomings of the study. Moreover, the age, gender, personality traits and some other individual differences that exert profound influences over the MIs were not controlled.

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