The Impact of Group Dynamic Assessment (GDA) vs. Computerized Dynamic Assessment (C-DA) on Iranian EFL Learners' Pragmatic Comprehension

Ali Malmir* (Corresponding Author)
Assistant Professor of Applied Linguistics, Department of English Language, Faculty of Humanities, Imam Khomeini International University (IKIU), Qazvin, Iran
E-mail: malmir@hum.ikiu.ac.ir; a.malmir1@gmail.com

Parisa Mazloom
MA Student of English Language Teaching, Imam Khomeini International University (IKIU), Qazvin, Iran
E-mail: parisa.mazloom@yahoo.com

Abstract

Most foreign language (L2) learners suffer from dire deficiencies in their pragmatic comprehension partly due to the less explicit instruction they receive and the complexities and multi-layeredness inherent in L2 pragmatic comprehension. Accordingly, this study sought to scrutinize the effect of two dynamic assessment (DA) models on L2 pragmatic comprehension accuracy and speed. A convenience sample of 52 upper-intermediate female EFL learners that were randomly assigned into a dynamic assessment experimental group (GDA), a computerised dynamic assessment (C-DA), and a Non-DA control group took part in the study. A 26-item researcher-made pragmatic listening comprehension test including requests, apologies, greetings, and refusals was used as pre- and posttests, and the treatments using the aforementioned DA and non-DA conventional models were completed in 14 sessions. Data analysis using ANCOVA showed that C-DA and G-DA could significantly increase pragmatic comprehension accuracy than the conventional non-DA instruction with C-DA being significantly better than G-DA. However, only C-DA could significantly decrease learners' pragmatic comprehension speed than G-DA and Non-DA instruction. The findings of this study suggest that implementing C-DA by teachers can promote pragmatic comprehension accuracy and speed among L2 learners.

Keywords: Dynamic Assessment, Pragmatic Accuracy, Pragmatic Comprehension, Pragmatic Speed, Speech Act

Introduction

Because of its momentous significance, pragmatic competence, since its inception, has always been directly with this name or indirectly with other labels an inseparable part of communicative competence models (e.g. Bachman & Palmer, 1996, 2010; Canale, 1983; Canale & Swain, 1980; Celce-Murcia, 2007; Celce-Murcia, Dörnyei, & Thurrell, 1995). According to Taguchi (2017), pragmatic competence is the knowledge to appropriately use linguistic forms to achieve communicative goals through optimal social functioning. Pragmatic competence is the L2 learners' ability to perceive, comprehend, and produce the intended meanings in interactions with native speakers or other competent non-native L2 learners (Crystal, 1997). Taguchi (2019) defined pragmatic competence as the capability of L2 learners to comprehend and produce form-function-context mappings that are pragmalinguisticly and sociopragmaticly appropriate. As deciphered from the aforementioned definitions, pragmatic competence can be de-compartmentalised into two parts: pragmatic production and pragmatic comprehension. Most pragmaticians have accepted this dichotomous classification (e.g. Kapser & Rose, 2002; Schauer, 2009; Taguchi & Roever, 2017). Pragmatic comprehension refers to understanding the intended meanings of L2 speakers behind the uttered pragmalinguistic forms based on the dynamism of the macro and micro contexts (Taguchi, 2008b).

A walk-through of the studies on L2 pragmatics in the last three decades clearly indicates that pragmatic production has been extensively studied in EFL and ESL contexts in terms of the production of the speech acts, implicatures, instruction of pragmatic features, and other dimensions of the L2 learners' individual differences (IDs) in producing pragmatic knowledge; however, comparatively less research has targeted pragmatic comprehension and how to improve it. As mentioned by Taguchi (2013), pragmatic comprehension is an under-researched domain that requires further investigation particularly in terms of instructional studies that can enhance L2 learners' pragmatic comprehension accuracy and speed. Although pragmatic comprehension and production are somewhat interwoven into each other, L2 learners' pragmatic comprehension always lags behind their pragmatic production mostly due to a rampant misconception that pragmatic comprehension does not require explicit instruction and it will improve implicitly over time (Kasper & Rose, 2013). As discussed by Taguchi (2014), this misconception needs to be demystified by launching well-designed instructional studies to improve and upgrade L2 learners' pragmatic comprehension accuracy and to reduce their pragmatic comprehension time. Although some works have been conducted in this regard (e.g. Birjandi & Derakhshan, 2013; Garcia, 2004; Malmir & Derakhshan, 2020a, 2020b; Panzeri, Giustolisi, & Zampini, 2020; Taguchi, 2007, 2008a, 2011), pragmatic comprehension is still disproportionately underexplored.

Dynamic assessment models can be employed for improving pragmatic comprehension as proffered by the proponents of the implementation of DA to L2 instruction such as Belz (2007) and Davin (2013). Dynamic assessment, as a new method, has sought to blur the boundary between evaluating and teaching through combining teaching, learning, and appraising L2 learners' progress. Lantolf and

Poehner (2013) maintained that the purpose of dynamic assessment is not only to evaluate and discover what an L2 learner already knows but to create learning-oriented and development-provoking challenges for him. Through scaffolding within the learner's zone of proximal development (ZPD), teacher's mediation, extensive interaction, and mindful involvement of the learners, DA strives to help L2 learners acquire the target foreign language more effectively (Kozulin & Garb, 2002). Even though various DA models have indicated their efficiency for enhancing L2 proficiency in various language skills and sub-skills, their implementation for teaching pragmatic features is limited and only a few studies can be referred to in this regard. Moreover, among this handful of studies, most of them have examined the effectiveness of DA in its generality on the production of speech acts (e.g. Moradian, Asadi, & Azadbakht, 2019; Tajeddin & Tayebipour, 2012) and rarely on the comprehension of various speech acts or implicatures (e.g. Malmir, 2020) in Iranian EFL context. Given that little research has been done on pragmatic comprehension in EFL contexts, this study aims to investigate the effects of group dynamic assessment (G-DA), computerised dynamic assessment (C-DA), and the conventional Non-DA instruction on Iranian EFL learners' accuracy and speed of pragmatic comprehension.

Literature Review

Dynamic Assessment (DA)

Dynamic assessment emerged out of Vygotsky's (1978) Sociocultural Theory (SCT) and is based on the combination of assessment and teaching through interaction and mediation (Poehner, 2008). Through interaction between the learners and the environment, learners utilize language and construct knowledge that mediates their own environment and others' environments (Kozulin & Garb, 2002). However, DA does not exclusively focus on the amount of individual and environmental developments, rather it considerers the individual and environment as one unit which cannot be understood separately (Poehner & Lantolf, 2005). Kozulin and Garb (2002) proposed three features for DA based on Vygotsky's SCT: triggering interaction, developing functions, and comparing mediated and independent performances for obtaining the final educational achievements. According to Williams and Burden (1997), dynamic assessment can be defined as the "process-oriented approach in which assessment and learning are seen as inextricably linked and not separate" (p. 99). DA applies both quantitative and qualitative diagnostic information for each student to improve his or her learning by getting assistance from more knowledgeable ones (MKOs) (Baek & Kim, 2003). Baek and Kim (2003) also mentioned that DA uses a wide range of assessment methods and techniques that hinge more on the learning processes and to a lesser degree on the product as well. As opposed to traditional methods of teaching, DA is considered as process-concerned, future-oriented, interactive, and ZPD-sensitive instruction (Poehner, 2008).

Dynamic assessment improves the gained information regarding learners' understanding and their ability which leads to better interpretation and use of marks

or other evaluative judgments (Poehner, 2008). Additionally, DA is concerned about both teacher and learners by providing information about students' feelings and abilities, reasons for low scores and hence it contributes to the learners' development (Poehner, 2008). Haywood and Lidz (2007) stated the main features of DA including interactions, guidance, encouragement, and feedback all of which support deeper learning. Of course, the applicability and plausibility of the use of dynamic assessment models in second or foreign language acquisition and teaching as different from general education because of some cognitive complexities, internal learner variables, external factors, and the facets of the educational environment. Therefore, the previously made claims about the efficiency of dynamic assessment models for education should not be directly extrapolated to language teaching without being critically dissected and scrutinised.

In sociocultural theory, Zone of Proximal Development (ZPD), scaffolding, and mediation are the core concepts that underline DA. According to Vygotsky (1978), the ZPD is "the distance between the actual developmental levels as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers" (p. 86). Vygotsky claims that there are three developmental zones: the first zone contains information the learners have already mastered; the second zone contains information the learners can understand with MKOs' assistance, and the third zone consists of the information outside of students' current level of understanding, even with assistance. According to Vygotsky (1978), students learn when they are in their appropriate zone of proximal development. If we look critically at the existing literature about the ZPD, its conceptual reality and nature, and its mechanism of action in learning, it can be said that the zone of proximal development sometimes is vague to define. Therefore, an estimation of the extent of the zone of proximal development is more subjective rather than objective, jeopardising most of the earlier claims about its applicability and efficient role in enhancing general learning and language learning.

Scaffolding refers to the assistance given to the learners in performing various tasks that learners cannot perform on their own; this assistance is provided until the learners, themselves, can be able to perform the task autonomously (Poehner & Lantolf, 2005). Scaffolding relegates the task difficulty and increases attention toward tasks and therefore helps learners until they can successfully complete the tasks (Poehner & Infante, 2017). From this perspective, Poehner (2007) expressed that assessment and instruction are not detached, rather they are intricately integrated and the examiner assists the learner to solve problems with the goal of the learner's educational progress. Contrary to the suggested claims about the scaffolding, its typology, its mechanisms of action, and its operationalization definitions in the educational and SLA studies, the concept of scaffolding is elusive to be clearly understood and put into practice at the educational level specifically by inexperienced teachers and demotivated students who are not familiar with the processes of scaffolding and how they should take advantage of the scaffolded assistance provided by the teachers or their peers.

Another key concept in DA and SCT is mediation. According to Aljaafreh and Lantolf (1994), there are three conditions for mediation. First, students should be gradually assisted implying that initially, implicit aid should be given, and then explicit help should be provided whenever students need it. Second, explicit help should be offered when implicit help was effective. Finally, assistance should be in the form of the conversation utilizing interaction between teacher and learner that constructs the meanings. Lantolf and Poehner (2004) stated that mediation can emerge in different forms including clues, questions, recommendations, and explanations during the exchange based on the DA models. Despite many crucial advantages mentioned for this three-step mediation process by the proponents of dynamic assessment models, the implementation of this mediation process faces many challenges, irregularities, and misapprehensions on behalf of both teachers and learners specifically when teaching and learning a foreign or second language is concerned.

According to Poehner (2008), the emergence of different approaches and educational orientations based on Vygotsky's SCT resulted in the development of different models of DA including Budoff's (1974) Test-Train-Test Assessment, Feuerstein's (1979) Learning Potential Assessment Device, Carlson and Wiedl's (1978) Testing-the-Limits Assessment, Group Dynamic Assessment (GDA), Vygotsky's (1978) Graduated Prompting Assessment, and a Continuum of Assessment Model-Mediated and Graduated Prompting (Bransford et al., 1987) and Computerised Dynamic Assessment (Poehner & Lantolf, 2013). The aforementioned models have also been categorised into interventionist versus interactionist DA models based on another classification presented by Caffrey, et. al. (2008). Defining and describing all of these models and classifications is beyond the scope of the current study; therefore, only group dynamic assessment (G-DA) and computerised dynamic assessment (C-DA) which have been used in this study will be briefly touched upon here. Some of these models can be criticised that they have not been updated by new conceptualisations and operational frameworks.

According to Poehner (2009), difficulty in the implementation of DA in one-to-one interactions leads to the use of group dynamic assessment (G-DA) which follows the principles used in individualized interaction, i.e. G-DA, focusing on the whole class. In fact, group-based and one-to-one DA approaches are concerned about the same principles of ZPD, the only difference is the procedures used for the implementation. Furthermore, GDA was differentiated from one-to-one DA in terms of consideration group administration of ZPD through that the teacher should provide interaction and mediation not only for individuals but also for the whole class (Poehner, 2009). However, the types of interactions among the teachers and learners in the aforementioned models of dynamic assessment have a considerable amount of overlap, and drawing clear-cut boundaries between DA models that are particular to each of one seems to be unexpectedly difficult.

Computerised dynamic assessment (C-DA) was first developed by Guthke and Beckmann (2000). This model attempts to assess various abilities, the incorrect answer offers a tutorial program that re-evaluates the same concepts through

employing the advantages of computer technology. In fact, C-DA was born out of computerised testing that tried to compensate for the shortcomings of the traditional paper-and-pencil testing and to maximize L2 learners' cooperation with test-takers through constructing a non-threatening and learning-oriented context. In C-DA, the learning of assessment items, in the related designed tutorials, show learners' ability, ZPD, and zone of actual development (Poehner & Lantolf, 2013) which in turn, helps the teachers tailor better instructions in the future. Due to the lack of adequate empirical studies on the impacts of computerised dynamic assessment and group dynamic assessment models on learners' educational attainment in general and EFL learners' language improvement in particular, it is significant to launch empirical studies that will help fill this research and increase our theoretical understanding in this regard and alleviate L2 learners' pragmatic comprehension difficulties as well.

Pragmatic Comprehension

Pragmatic comprehension is the capacity to comprehend a message or utterance by using contextual factors in L2 interactions (Gacrcia, 2004). Taguchi (2013) conceptualized pragmatic comprehension as an interpretation of the pragmalinguistic forms using both contextual clues and sociopragmatic norms. Contextual clues can be both external factors such as the context and internal factors like background knowledge and experience. Internal, external, and cognitive factors can influence the pragmatic comprehension in a complex chain of mental processes. Additionally, "differential amounts, quality, and intensity of language contact might exhibit different patterns in their pragmatic comprehension development" (Taguchi, 2008a, p. 39). A framework for pragmatic comprehension was introduced by van Dijk (2008) that consisted of two analyses namely context and utterance analysis; the former involved the use of context, background knowledge, and experience in comprehending the meaning, while the latter gained the meaning by the use of semantic knowledge, syntax, lexicon, phonology, and paralinguistic abilities.

Pragmatic comprehension differs from linguistic comprehension because pragmatic comprehension employed both linguistic (syntax and lexicon) and non-linguistic information (like context and types of speech acts) to get the meaning (Ross & Kasper, 2013). In essence, pragmatic comprehension used not only linguistic but also used sociolinguistic and contextual factors (Garcia, 2004). Pragmatic comprehension has been investigated for various speech acts, implicatures, routines, indirect sentences, and intended meaning of speakers in some earlier studies (Birjandi & Derakhshan, 2013; Garcia, 2004; Taguchi, 2007, 2008a, 2008b, 2011). Unfortunately, the majority of these studies have not provided adequate operational definitions for pragmatic comprehension capabilities and they have only started a handful of speech acts or implicatures. Moreover, sometimes what these studies have estimated and operationalised is the productive ability of the L2 learners rather than comprehension capabilities in deciphering pragmatic knowledge.

According to Thomas (1995), meaning consists of two levels: utterance meaning that refers to the derived meaning from sentence or utterance, and the force

that refers to the intended meaning of speakers beyond the words. Taguchi (2013) asserted that pragmatic comprehension employs both levels. Basically, the L2 learners need to know not only the meanings of words and sentences but also the intended meanings of the speakers. Consequently, the intended meaning, as meaning beyond the words, is considered as a vital facet of pragmatic comprehension (Verschuren, 1999). As Taguchi (2011) noted, comprehension of the intended meanings is attainable by using conversation maxims which contributed to finding the pragmalinguistic load of the utterances. Nonetheless, contrary to what has been mentioned by Taguchi (2011) and other pragmatics scholars and researchers, comprehension of the intended meanings and various forms of implicatures is not only dependent on the violation of conversational maxims partly due to the socio-culture orientation of these vaccines that favour Western cultures rather than Eastern or African cultures.

According to Taguchi (2011), accuracy and speed are two different levels of pragmatic comprehension. Accuracy refers to the knowledge of interpretation of the speakers' intended meaning in the target context and speed or knowledge of processing refers to the speed of accessing and analysing pragmatic information. Taguchi (2011) held that accuracy and speed are two complementary aspects of pragmatic comprehension. She also stated that Anderson's (1993) Adaptive Control of Thought (ACT) model, which is a cognitive model of skill acquisition, contributes to distinguishing between accuracy and speed of pragmatic comprehension. According to this model, skill acquisition or learning needs a change from declarative knowledge to procedural knowledge. The former focuses on the knowledge of "what", and the latter focuses on knowledge of "how". Panzeri, Giustolisi, and Zampini (2020) asserted that the comprehension of ironic criticisms and ironic compliments is an arduous process that suggests sepia challenges for language learners.

Pragmatic comprehension is concerned about the processing at these two levels (multi-levels). Taguchi (2008b) explained that lower-level processing involves assigning meanings to aural responses. She considered lexical processing of speed as lower-level processing in pragmatic comprehension. Taguchi (2007) found a significant relationship between the speed of lexical processing and the speed of response in pragmatic comprehension and also between proficiency level and accuracy of pragmatic comprehension. Unlike, lexical processing, comprehension speed did not significantly correlate with accuracy and proficiency level. She concluded that the variables that influence the accuracy and speed of pragmatic comprehension are different. Garcia (2004) compared the linguistic and pragmatic comprehension of high- and low-ability level learners on the listening comprehension tasks. The finding of this study revealed that a significant difference was observed in linguistic and pragmatic comprehension between high and low-level learners; high-level learners received higher scores in all comprehension tasks.

Taguchi (2007) explored the accuracy and speed of the pragmatic comprehension on a pragmatic listening task. The results of this study indicated that both pragmatic accuracy and speed improved significantly after seven weeks, but

this improvement was higher for comprehension accuracy in comparison to speed. Additionally, this study intended to explore the correlations among proficiency, speed of lexical judgment, and pragmatic comprehension. The results indicated a significant difference between proficiency and accuracy, lexical analysis speed, and comprehension speed. Taguchi's (2007) research found significant differences in pragmatic comprehension speed. She pointed out that pragmatic comprehension processing speed "is comprised of a set of skills that are acquired through repeated practice" (p. 24). She also commented that practice improves procedural knowledge which leads to learners' development of higher pragmatic comprehension speed. Highlighting the centrality of pragmatic comprehension accuracy and speech for better L2 interactions and the scarcity of instructional and longitudinal studies, Taguchi (2019) has strongly urged the researchers to conduct extensive research in this regard. This study, therefore, has attempted to help in filling this huge research gap, particularly in an EFL context.

Previous Studies

A large number of recent studies have reported the effectiveness of the dynamic assessment models for enhancing L2 proficiency and its components including reading comprehension (e.g. Kozulin & Garb, 2002), speaking (Davin, 2013), grammar (e.g. van Compernolle & Zhang, 2014), vocabulary (e.g. van der Veen, Dobber, & Oers, 2016). Most of these studies have used the general framework of dynamic assessment, group DA, or interactionist vs. interventionist models; nonetheless, fewer studies have examined the impact of computerised DA on L2 components such as reading and listening comprehension (e.g. Poehner & Lantolf, 2013).

Compared to the extensive research done on the implementation of various dynamic assessment models for enhancing language skills, less research has targeted their use in L2 pragmatics research. Most of these studies, nevertheless, have investigated the impact of various dynamic assessment models on the production of various types of pragmatic knowledge (e.g. Moradian, et al., 2019; Tajeddin & Tayebipour, 2012). For example, Tajeddin and Tayebipour (2012) conducted a study to explore the impact of DA and Non-DA on low and high proficiency learners' acquisition of the request and apology speech acts. The results of this study indicated that DA groups had better performances in comparison with the Non-DA group. The findings revealed that these differences were due to the teaching approaches rather than proficiency levels. Moradian, et al.'s (2019) study used concurrent group DA for teaching requests and refusals and reported more significant speech-act knowledge gains for the experimental group in comparison with the control group that did not receive the DA treatment. Unfortunately, these two studies have their own shortcomings and disadvantages. First, they have only a study pragmatic production and overlook pragmatic comprehension. Second, the treatments given as dynamic assessment procedures do not completely follow the principle suggested by various dynamic models in the existing literature. Finally, they have investigated mostly requests and apologies without including other types of common speech acts,

implicatures, and conversational routines; therefore, their generalisability should be approached with caution.

One of the rare studies that have employed interactionist versus interventionist dynamic assessment models for enhancing L2 learners' comprehension of speech acts and implicatures was conducted by Malmir (2020). Findings of this study demonstrated that the two aforementioned types of DA were significantly better than the conventional non-DA instruction for fostering Iranian EFL learners' pragmatic comprehension accuracy and shortening the comprehension speed on a posttest of request, offer, suggestion, and correction speech acts as well as conversational and conventional implicatures. Moreover, the interventionist DA was significantly better than its interactionist counterpart in enhancing pragmatic comprehension accuracy but not in curtailing the speed of pragmatic comprehension.

To the best knowledge of the researchers, dynamic assessment models in general and group dynamic assessment and computerised dynamic assessment models, in particular, have not been employed for teaching pragmatic comprehension thus far. On the other hand, most EFL learners' pragmatic comprehension is lagging far behind their pragmatic production abilities and L2 teachers do not have access to effective methodologies and activities for enhancing their learners' pragmatic comprehension partly due to their lack of knowledge and familiarity with new instructional models such as dynamic assessment models. Therefore, to investigate the impact of G-DA and C-DA on L2 pragmatic comprehension accuracy and speed and because of the paucity of research in this regard, the current empirical study was launched. Specifically, this study sought to answer the two following research questions:

1. Are there any significant differences among the effects of group dynamic assessment (GDA), computerised dynamic assessment (C-DA), and non-dynamic assessment (N-DA) on intermediate EFL learners' pragmatic comprehension accuracy of English speech acts?

2. Are there any significant differences among the effects of group dynamic assessment (GDA), computerised dynamic assessment (C-DA), and non-dynamic assessment (N-DA) on intermediate EFL learners' pragmatic comprehension speed of English speech acts?

Methodology

Research Design

In this study, there were both experimental and control groups and special DA and Non-DA treatments. However, these groups were not initially selected based on randomization. In the two experimental groups, learners received the treatment in the form of G-DA and C-DA, respectively; however, the control group received pragmatic instruction in the form of conventional communicative language teaching.

There was a pragmatic comprehension test used as a pretest and a posttest. Therefore, this study had the features of a quasi-experimental design.

Participants

The participants of this study were initially 81 so-called intermediate Iranian EFL learners who were selected through convenience sampling from six intact classes. The gender of these learners was exclusively female in Ilia Language Institute in Islamshahr, Tehran. Their age varied from 13 to 18 ($M = 15.3$, $SD = 2.4$) years old. To homogenize the students concerning their language proficiency, an Oxford Placement Test (OPT) was administered and 24 students were removed based on their performances on this test. In fact, 57 students remained to participate in the study. Their mother tongue was mostly Persian and their educational levels and study majors varied. The participants were randomly labeled as two experimental and one control group, each consisting of 19 students. However, five of the students left their courses and 52 participatory EFL learners ended up the assigned treatments: 16 students in the first experimental group (GDA), and 18 in the second experimental group (C-DA), and 18 in the control group (N-DA).

Instruments and Materials

This study used two data collection instruments including an Oxford Placement Test (OPT) and a pragmatic comprehension listening test which are briefly explained in the following sections.

Oxford Quick Placement Test (OPT)

To homogenize the study participants regarding their general English language proficiency, the Oxford Quick Placement Test (OPT) was given to the 81 learners who were initially selected through convenience sampling and based on availability from seven intact classes. The OPT had 60 items designed to measure English proficiency in grammar (20 items), vocabulary (20 items), and cloze test (20 items). Based on the rubrics given by the test developer, the proficiency level of those who score at or beyond 40 equals B1 and C1 to the Common European Framework of Reference for Languages (CEFR), and can be considered as upper-intermediate to advanced EFL learners. The allotted time for completing this section was 50 minutes. The test has shown reliability indices more than .75 in some earlier studies (e.g. De La Colina & Mayo, 2009; Lemhöfer & Broersma, 2012), and, in the current study, its reliability was .83.

Pragmatic Comprehension Test

Pragmatic comprehension accuracy and speed were operationally defined and measured based on the definitions and models given by Taguchi (2007, 2008a, 2011). This 26 item multiple-choice pragmatic comprehension test was developed by the researchers and was composed of three kinds of items: 8 requests, 7 refusals, 7 apologies, and 4 greetings. The test was developed based on conversations in the

Touchstone Series that teach American English and initially it had 40 items, 10 for each of the studied speech acts. The stem of any item included a dialogue between a female and a male native speaker of American English in a special pragmatic situation. After the pragmatic stem, there were four choices, one of which was the best option regarding all the socio-pragmatic and pragmalinguistic features. The validity of this pragmatic comprehension test was evaluated through content validity by two university professors who were pragmatics experts with publications in the local scientific journals and international journals with impact factors beyond 1. Moreover, a native speaker of American English who was a university professor also commented on the developed test. Some modifications were added based on their comments. Later, the newly developed test was piloted among 20 upper-intermediate and advanced Iranian EFL learners who were comparable to the participants of the main study. The reliability of this pragmatic test was .83 in this pilot study. After checking test features such as the whole test reliability, individual item reliability, choice distribution, item discrimination, and all the required features, some further modifications were made to the developed pragmatic comprehension test and 14 items were totally deleted.

Materials

The teaching materials used for developing the pragmatic comprehension test and designing the DA and Non-DA instruction in the present study were taken from Touchstone Conversation Series (mostly books 2 & 3) written by McCarthy, McCarten, and Sandiford (2014) published by Cambridge University Press. Each session, four conversations including requests, apologies, greetings, and refusal speech acts were taught. Additionally, the teacher used supplementary materials including short conversations and formative tests each session. These supplementary materials were based on the speech acts that were taught in the class to practice them more.

Data Collection Procedure

A convenience sample of 81 Iranian female EFL learners was selected to participate in this study based on their own volition. To compensate for the non-randomised selection of the initial sample, an Oxford Placement Test was administered and 24 of the students whose English scorers was below 40 on this test was excluded from the data analysis though they were present in the classrooms due to the regulations of the language institute where this study was carried out. These selected learners were randomly divided into three groups of 19 and were randomly labelled as two experimental and one control group. The division of the study groups into G-DA, C-DA, and Non-DA groups was also done randomly. One of the researchers was the instructor of the two DA classes and a knowledgeable colleague was the instructor in the control Non-DA group. This instructor was completely briefed about the treatments and the goals of the study and she was in contact and total collaboration with the researchers from the beginning of the study to the data analysis phase. Then, the pragmatic listening test was given at the beginning of the study through computers. The pragmatic item appeared on the screen and the learner could answer

it by ticking the appropriate option and whenever he wanted, he could go to the items. Learners could not linger beyond two minutes for each item. Afterwards, 14-session treatments began. It should be noted that about half of the classroom time that is about 45 minutes was allotted to the study treatments because the teachers needed to follow the syllabus suggested by the institute for the particular conversation courses.

In the first experimental group, i.e., the group dynamic assessment class, requests, apologies, greetings, and refusals were taught using the principles of G-DA as recommended by Poehner (2009) as follows. In this group, the main tasks and tools that the teacher used during this method were interaction, formative tests, feedback, scaffolding, cooperation, collaboration, and meditation explained briefly in the following paragraphs. The teacher taught speech acts through four conversations two of which were taken from the book and the two others the teacher brought into class. The teacher also wanted the students to make conversations based on the given topics through collaboration with each other and the teacher provided corrective feedback, assistant, and lexical and grammatical scaffolding to the whole members of one group. It should be mentioned that there were equal-sized groups or in the DA classes. At the end of each session, a formative test was given to students; it was evaluated in the class. They were given feedback either directly or indirectly based on their performances on the test. The students were allowed to cooperate and collaborate when they faced difficulty. Students of the G-DA group frequently received cooperation and collaboration from the teacher or other students during the process. Sometimes, the teacher asked students to correct and help each other to improve their performance. The students were given some attempts to repeat correctly the statement they have heard. Their attempt showed their independent performance. If the learner was not successful in telling the sentence correctly, mediation was introduced. The mediation was in terms of implicit and explicit feedback and cooperation and collaboration from implicit to explicit support was provided by both teacher and students.

The second experimental group received computerised dynamic assessment based on the guidelines provided by Poehner and Lantolf (2013) as will be depicted here. Virtually all of the aforementioned instructional activities such as division of the students into equal size groups, mediation, cooperation and interaction among learners and sometimes between the learners and the teacher, provision of scaffolding and required assistance within learners' ZPD, and collaboration to produce conversations involving requests, apologies, greetings, and refusals was employed in this classroom. However, the classroom was carried out in the most equipped drum of the language institute with computers for all the students. Of course, some of the students use their own laptops whenever there were problems with the Institute computers. The instructor developed some virtual conversations to assess learners' progress in exchanging requests, apologies, greetings, and refusals in their authentic conversations with some online or offline CMC softwares such Rosettastone, Lingua, Wufun, and so forth. The teacher held the students overcome the digital literacy deficiencies whenever it was required and sometimes there were outside class extra sessions for some of the students to get familiar with using

various computer software. The difficulty in this classroom was the tremendous effort on behalf of the instructor to develop the instructional materials including the studied speech acts and overcoming the technical difficulties before the classroom and during the sessions.

Learners in the control group received the conventional non-dynamic assessment instruction for introducing the speech acts. To follow the quality of instruction and considering the ethical principles, the instructor in the third class followed communicative language teaching methodology. Accordingly, the whole range of activities and instructional practices proposed by CLT were followed. There were group discussions, opinion tasks, jigsaw tasks, pair group conversations, and so on. Moreover, the teacher played the roles of facilitator, communicator, supervisor, and of course the tester. However, the principles of dynamic assessment were not followed in this class although inevitably there are some overlaps between the techniques and strategies proposed by CLT and DA models.

The aforementioned treatments were given for 14 sessions over two months. After the treatments, the same listening pragmatic comprehension test was again given (as the posttest) to students to check their pragmatic comprehension development. One of the limitations of this study was that even into two dynamic assessment groups, the listening pragmatic comprehension test administered as the pretest and posttest was done traditionally to follow the same norm for determining L2 learners' pragmatic comprehension accuracy and speed. It should also be mentioned that their speed of pragmatic comprehension was gauged through recording the time each student answered the pragmatic test items as delivered by computers. The average response time was calculated by obtaining the mean score for the time spent on answering the items correctly.

Data Analysis

To analyze the gathered data, the SPSS program (version 22) was employed. Both descriptive and inferential statistics were used. To compare the learners' differences in the pragmatic comprehension accuracy and speed, a one-way analysis of covariance (ANCOVA) was employed. The reason for the use of ANCOVA was the small size of the sample and the existence of a covariate. Two separate ANCOVAs were employed to check if DA had any significant effect on pragmatic comprehension accuracy and speed for the three groups.

Results

After gathering the data, reliability indices were provided for the pretest and posttest administrations of the pragmatic comprehension test. Cronbach's alpha values of .84 and .87 for the pre- and post-tests showed the high dependability of the developed pragmatic comprehension test. To check normality as the basic requirement of all parametric tests, two types of measures were utilized: 1) skewness and kurtosis values and 2) Kolmogorov- Smirnov test was used. Skewness and kurtosis values were between -3 and +3 which indicates normality according to Field (2018). The

results of the Kolmogorov-Smirnov test are showed a non-significant p value for the pretest (Z = .82, p = .499 > .05) and the posttest (Z = .79, p = .533 > .05), indicating that the distributions of both pre-test and post-test scores enjoyed normality. The related graphs, box plots, and ratios of skewness and kurtosis further supported the normality of the distributions.

First Research Question

The first research question of the present study aimed to explore the impact of the group dynamic assessment (G-DA), computerised dynamic assessment (C-DA), and non-dynamic assessment (Non-DA) on Iranian intermediate EFL learners' pragmatic accuracy for the comprehension of requests, apologies, greetings, and refusals. Descriptive statistics for the learners' test scores for GDA, C-DA, and Non-DA groups are presented in Table 1. The students' scores ranged from 8 to 26 on the pretest and from 11 to 34 on the posttest.

Table 1. Descriptive Statistics for Three Groups' Scores on Pragmatic Comprehension Accuracy Pre- and Posttests

		Pretest		*Posttest*	
Groups	*N*	*Mean*	*SD*	*Mean*	*SD*
GDA (Experimental 1)	16	16.25	4.21	21.63	3.20
C-DA(Experimental 2)	18	16.61	3.36	22.56	2.85
Non-DA (Control)	18	16.00	2.82	18.83	2.79
Total	52	16.29	3.42	20.98	3.31

According to Table 1, the three study groups had rather similar mean scores and standard deviations on the pretest; however, the mean score of the C-DA group was more than the mean score of the other dynamic assessment group (GDA) and the Non-DA control group on the post-test. Furthermore, the mean scores of both groups increased from the pre-test to the post-test.

To answer the first research question, a one-way analysis of covariance (one-way ANCOVA) was used. Before using ANCOVA, its required assumptions including measurement of the covariate, reliability of the covariate, homogeneity of variance, linearity, and homogeneity of regression slopes (Field, 2018) were all checked. Measurement of the covariate assumption was met since before the treatment the covariate (pretest scores) was measured (Field, 2018). The reliability of the covariate assumption was computed using Cronbach alpha which turned out to be .84, indicating a highly dependable covariate. The assumption of linearity aims at checking the linear relationship between the dependent variable (post-test) and the covariate (pre-test). As Figure 1 shows, there is a linear relationship between pre-test and post-test scores for each group and therefore, this assumption is not violated.
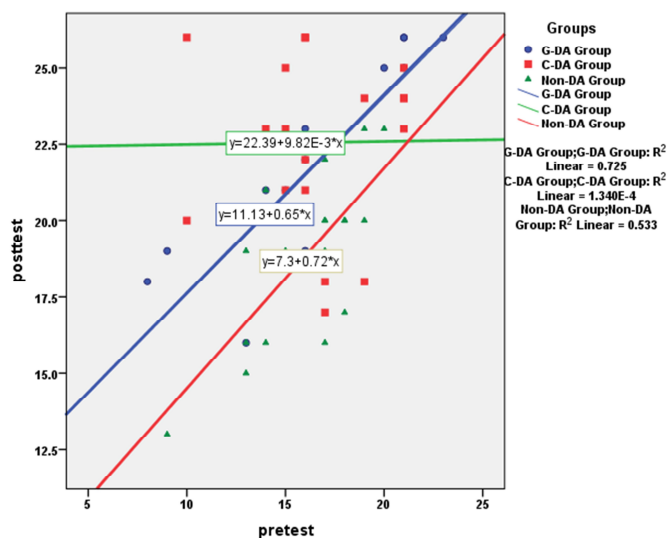
Figure 1. Relationship Between the Covariate and Dependent Variable for Study Groups

Moreover, Levene's test indicated that the homogeneity of variances was kept (F (2, 49) = 1.576, p = .217 > .05). Furthermore, the non-significant interaction between the pretest scores (covariate) and the three treatment conditions (independent/group variable) confirmed that the homogeneity of the regression slopes was available (F (2, 46) = 1.224, p = .192 > .05, ηp^2 = .041). (The related tables have not been included due to the word limits set by the journal). Given all the assumptions were met, one-way ANCOVA was assuredly used the results of which are summarized in the next table:

Table 2. Results of ANCOVA for the GDA, C-DA, and Non-DA Groups' Pragmatic Comprehension Accuracy

| Source	SS	df	MS	F	p	Partial η^2
Pretest	124.640	1	124.640	19.939	.000	.293
Groups	116.224	2	58.112	9.296	.000	.279
Error	300.054	48	6.251			
Total	23449.000	52				

Results of the ANCOVA revealed that the study groups significantly differed in their pragmatic compression accuracy of the speech acts (F (1, 48) = 9.296, p =.000, ηp^2 = .279, representing a large effect size). According to Cohen's (1988) guideline for interpreting the strength of effect size, Partial η^2 valued more than .14 are considered large. The pretest scores (covariate) could significantly affect learners' posttest scores (F (1, 48) = 19.939, p = .000, ηp^2 = .293),

demonstrating that 29.3 percent of the variance in the posttest scores could be explained by learners' pretest scores. Before checking the exact locations of the differences, the study groups estimated mean scores after deleting the effects of the pretest scores (covariate).

Table 3. Estimated Marginal Means for the Study Groups' Comprehension Accuracy

			95% Confidence Interval	
Group	*Mean*	*Std. Error*	*Lower Bound*	*Upper Bound*
GDA	21.64	.62	20.38	22.89
C-DA	22.40	.59	21.22	23.59
Non-DA	18.96	.59	17.77	20.15

After detaching the effect of the covariate, the computerised DA group had the highest mean score ($M = 22.40$) followed by the G-DA group ($M = 21.64$), and the lowest estimated marginal mean was that of the control Non-DA group ($M = 18.96$). Figure 1 depicts such differences in estimated marginal means:
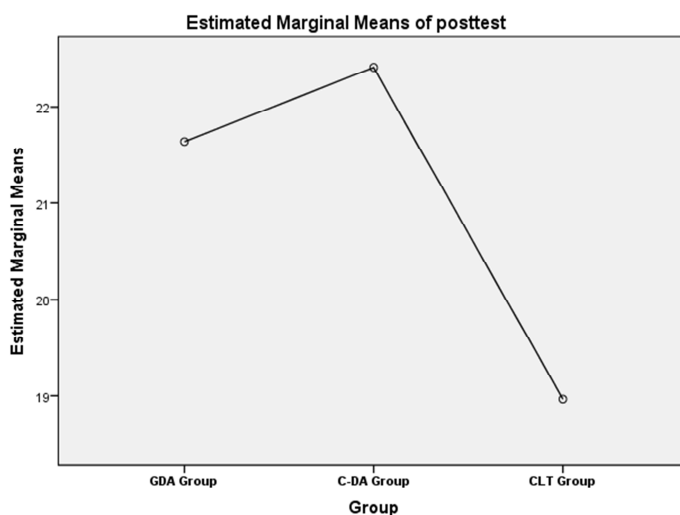
Figure 2. Estimated Marginal Means for the Study Groups' Performances on the Posttest

Tukey test as a robust Post-hoc test was employed to provide the pair group comparisons to pinpoint the locations of the exact differences among the three group's estimated marginal means.

Table 4. Pairwise Comparisons for the Study Groups' Performances on the Posttest

(I) Groups	*(J) Groups*	*MD*	*Std. Error*	*95% CI*	*p*
G-DA	C-DA	-.765	.860	[-2.494, .964]	.378
	Non-DA	2.677*	.859	[.949, 4.405]	.000
C-DA	Non-DA	3.443*	.836	[5.123, 1.762]	.000

Based on the pairwise comparisons provided in Table 4, the two DA groups, i.e., the G-DA (*MD* = 2.67, *p* < .05) and C-DA (*MD* = 3.44, *p* < .05) groups significantly outperformed the control Non-DA group. However, there was not any significant difference between the performances of the two DA groups on the posttest though the computerised DA group had a higher mean than the G-DA group.

**Investigation of the Second Research Question**

The second question of this study aimed at finding out the effects of group dynamic assessment (GDA), computerised dynamic assessment (C-DA), and non-dynamic assessment (N-DA) on Iranian intermediate EFL learners' pragmatic speed in comprehending English speech acts (average time for answering listening test items). The time span for pragmatic comprehension was from 15 to 45 seconds on the pretest that was lowered to 15 to 40 seconds on the posttest by the study participants. Descriptive statistics for the time durations to accurately comprehend L2 requests, apologies, greetings, and refusals by the study groups have been summarized in the next table:

Table 5. Response Times for Groups' Accurate Performances on the Pre-test and Post-test

		Pretest		*Posttest*	
Groups	*N*	*Mean*	*SD*	*Mean*	*SD*
GDA (Experimental 1)	16	22.06	3.750	18.25	3.022
C-DA(Experimental 2)	18	22.11	3.724	18.00	2.808
Non-DA (Control)	18	21.67	1.970	19.83	2.407
Total	52	21.94	3.177	18.71	2.817

Generally speaking, the response time related to the pre-test in three groups was rather the same, while the response time for answering the post-test in all groups decreased. As for the first research question, preliminary analyses were carried out to safeguard that there was no violation of the assumptions of homogeneity of variances, linearity, homogeneity of regression slopes, and reliable measurement of the covariate. In addition to the normality assumption that was checked previously, the covariate was measured before the introduction of the specific treatments and it showed its own reliability as mentioned earlier. The homogeneity of variances was

verified by Levene's (F (2, 49) = 1.076, p = .349 > .05) and homogeneity of the regression slopes was proved statistically (F (2, 46) = .220, p = .803 > .05, ηp^2 = .009) (The related tables were not added because of the journal word restrictions). The linearity assumption was confirmed by producing the related figure. As illustrated in Figure 4, a linear relationship was spotted for each group's average time for accurately comprehending English speech acts:
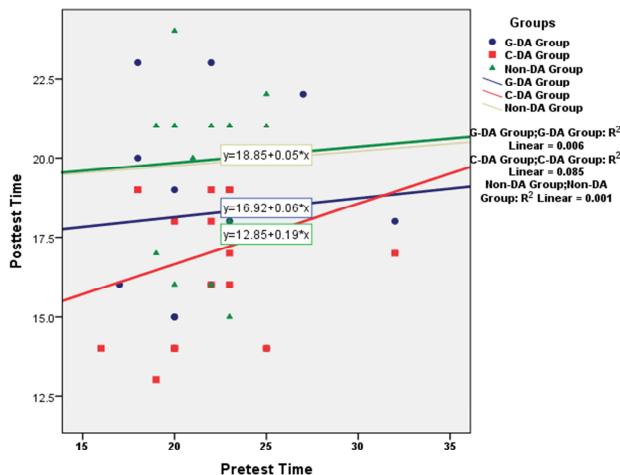
Figure 4. Relationship Between the Covariate and Comprehension Speed for Study Groups

The availability of the one-way ANCOVA requirements permitted its rightful use. Since the sig value is greater than .05, it was concluded that the assumption of homogeneity of regression slopes was not violated. The results of the applied one-way ANCOVA are displayed in the next table.

Table 6. Results of ANCOVA for the GDA, C-DA, and Non-DA Groups' Comprehension Speed of English Speech Acts

Source	SS	df	MS	F	p	Partial η^2
Pretest	7.172	1	7.172	1.045	.312	.021
Groups	72.342	2	36.171	5.273	.009	.180
Error	329.273	48	6.860			
Total	17982.000	52				

According to Table 6, the group factor, i.e., could significantly reduce Iranian EFL learners' pragmatic comprehension speed (F (1, 48) = 5.273, p = .109 < .05, ηp^2 = .180, representing a moderate effect size). Nonetheless, the covariate

(average pragmatic comprehension speed before the treatments) could not significantly influence learners' pragmatic comprehension speed after the DA and CLT treatments (F (1, 48) = 1.045, p = .312 > .05, ηp^2 = .021). Due to the insignificant contribution of the covariate to participants' comprehension speed on the posttest of speech acts, estimated means were very similar to the means provided in Table 5 above. Finally, multiple comparisons were made using the Tukey post hoc test to find the exact place of the differences between the groups' comprehension speed on the posttest.

Table 7. Pairwise Comparisons for the Study Groups' Compression Speed on the Posttest

(I) Groups	(J) Groups	MD	Std. Error	95% CI	p
G-DA	C-DA	1.200	.900	[-.609, 3.010]	.189
	Non-DA	-1.630	.901	[-3.442, .189]	.077
C-DA	Non-DA	-2.830*	.875	[-4.589, 1.072]	.002

As depicted in Table 6 above, there was not any significant difference between the two dynamic assessment groups' comprehension speed on the posttest of English speech acts (MD = 1.200, p = .189 > .05). The only significant difference was located between the computerised-dynamic assessment group's response time and the control non-dynamic assessment group (MD = 2.830, p = .002 < .05) in favor of the C-DA group. Moreover, the G-DA group did not significantly differ from the Non-DA group in its response time on comprehending English requests, apologies, greetings, and refusals on the posttest (MD = 1.630, p = .077 > .05).

Discussion

The present study set out to explore the effect of two types of dynamic assessment namely group dynamic assessment and computerised dynamic assessment vis-à-vis the traditional non-dynamic assessment that was carried out based on the principles of communicative language teaching on the EFL learners' pragmatic comprehension accuracy and speed of four common English speech acts. Data analysis revealed some important findings. First, the two dynamic assessment groups significantly showed more accurate pragmatic comprehension compared with the non-dynamic assessment group; however, the two dynamic groups' pragmatic comprehension accuracy did not significantly differ though the computerised dynamic assessment group scored a higher mean. Second, concerning the speed of pragmatic comprehension measured in average seconds, it was found that only the computerised dynamic assessment group could significantly comprehend English speech acts quicker than the non-dynamic assessment or control group; but there were not any other significant differences among the pragmatic comprehension speed of the two DA groups or the G-DA and the N-DA groups.

The first finding of the current investigation indicates the superiority of dynamic assessment in promoting pragmatic comprehension accuracy of L2 speech

acts. This robustness of dynamic assessment models including G-DA and C-DA can be attributed to the peculiar features that are inherent in the dynamic assessment models. As deliberated by Lantolf and Poehner (2004), the most important feature of all dynamic models is the use of intensive interaction between the intervener and the learner which puts the learner at the centre of all instructional experiences. The ample use of interaction in DA classes with the central focus on the learning potential of the students helps the students activate their current knowledge and attempt to achieve higher stages through receiving scaffolding and assistance of the teacher or other more knowledgeable ones (Murphy, 2011; Poehner, 2009; Poehner & Lantolf, 2013). In the current study, the researcher who was the instructor in the two DA classes supported extensive interaction based on a preplanned orientation whereas in the control group interaction was used as a kind of classroom activity, not as a process through which all types of learning can be induced, maintained, and improved in a nonthreatening atmosphere through the mediation which set the stage for radical positive changes in the cognitive and linguistic functioning of the L2 learners. As cited by many pragmatics scholars (e.g. Kasper & Rose, 2013; Kecskes, 2015; Schauer, 2009; Taguchi, 2018) and in line with the empirically verified claims of interaction hypothesis, more interaction among learners specifically when the teacher orchestrates the classroom activities, has an undeniable rapprochement with pragmatic development in general and L2 speech act improvements in particular (Taguchi & Roever, 2017).

Moreover, as pointed out by Poehner and Lantolf (2013), the efficiency of DA can be attributed to receiving more target language input and listening practice by students in dynamic assessment oriented courses. According to Kasper and Rose (2002), there is a direct relationship between the amounts of language contact and pragmatic learning. Also, as pointedly articulated by Poehner (2009), any type of interaction (the first or the second interactant) based on DA allowed the learners to prune their cognitive functioning and socio-cultural engagement. Tajeddin and Tayebipour (2012) noted that ZPD-sensitive interactions can justify the superiority of dynamic assessment in comparison with non-dynamic assessment models, arguing that affordable interactions within the learner's zone of proximal development provide a rich environment for the mastery of speech-act pragmatic knowledge.

This heavy reliance on interaction in DA means more exposure to the target language, more input, and consequently more intake all of which contribute to a stronger pragmatic competence that influences the accurate comprehension of the speech acts such as requests, apologies, refusals, and so forth. Furthermore, interaction is a bilateral or a co-lateral process that provokes learners' output which based on Swain's (2005) output hypothesis is conducive to more pragmatic exchange encompassing the speech acts and other forms of pragmatic knowledge. As asserted by Taguchi and Roever (2017), more input and output in the target language are greatly helpful for the development of L2 pragmatic knowledge specifically concerning the speech acts which are the building blocks of interactions in classroom conversations.

Concerning the second finding of the present study, the more significant impact of computerised dynamic assessment in reducing the time spent for accurate comprehension of English speech acts than the conventional non-dynamic assessment can be explained by both the aforementioned peculiar features of dynamic assessment and interest-provoking (González-Lloret, 2018) and motivating attributes of computer-based pragmatic teaching (Taguchi, 2019). Such a significant difference, however, was not located for the comparison of group dynamic assessment and the non-dynamic conventional instruction. According to González-Lloret (2008), computer-mediated communication (CMC) can enhance pragmatic knowledge by motivating L2 learners, triggering their creativity and curiosity, providing a less threatening environment for pragmatic interchanges without the pressure of conventional classrooms, and combining inside and outside classroom learning. The effectiveness of computer-based pragmatic instruction has been strongly supported by a great deal of pragmatic research (e.g. Bardovi-Harlig, Mossman, & Su, 2017; Belz, 2007; González-Lloret, 2008, 2018; Sykes, 2018). Concerning the results of this study, this rationale can be put forward that integration of useful features of dynamic assessment and CMC instruction assisted the learners to expand their pragmatic comprehension accuracy and to reduce their response time because of more control over the flow of conversation and pragmatic exchanges.

The larger effect sizes for the impact of group and computerised dynamic assessment models on pragmatic comprehension accuracy than the effect of C-DA on pragmatic comprehension speed can be related to the complexities of cognitive processes that are responsible for neurological responses of the brain. Pragmatic comprehension accuracy can be more directly traced through learner's performances; however, pragmatic comprehension speed is the result of a chain of neurological mental processes that cannot be influenced easily through an experiment in a short time (Taguchi, 2013). As asserted by Taguchi (2007, 2008a, 2008b), oversimplification of a complex phenomenon such as pragmatic comprehension speed can be deceptive for L2 pragmatics researchers and should not be condoned. Furthermore, pragmatic comprehension has some neurological difficulties that we are not aware of them and far regressive research is required to elucidate the multifaceted nature of pragmatic comprehension with regard to the speed L2 learners can receive, process, interpret, and understand the meanings expressed through the speech acts and other types of pragmatic knowledge.

Unfortunately, no previous study to date has examined the impacts of group dynamic assessment and computerised dynamic assessment on L2 pragmatic production or comprehension to the best knowledge of the researchers of this study; consequently, findings of this study cannot be directly compared and contrasted with other similar studies to pinpoint its strengths and shortcomings. Nonetheless, the results of this study corroborate with those group of studies that have reported the effectiveness of other models of dynamic assessment on either the production or comprehension of the speech acts or implications (Malmir, 2020; Moradian, et al., 2019; Tajeddin & Tayebipour, 2012). All of these studies confirmed the efficacy and applicability of other DA models in comparison with non-dynamic assessment (Non-DA) on the productive knowledge of various speech acts. Of course, the

generalisation of the findings of these studies to other EFL and ESL contexts should be done cautiously due to the peculiar features inherent in the Iranian EFL context on one hand and the intricacies and idiosyncratic features of pragmatic comprehension in a specific sociocultural context.

Moradian, et al.'s (2019) study, for example, demonstrated that the concurrent group dynamic assessment could significantly help Iranian EFL learners to do better on a test of requests and refusals. Tajeddin and Tayebipour (2012) found that DA groups outperformed Non-DA counterparts in producing requests and apologies. These two reported studies investigated the impact of dynamic assessment and concurrent group dynamic assessment on L2 learners' performance on the knowledge test of requests, refusals, and apologies; nonetheless, Malmir's (2020) study is rarer research that has explored the impact of two models of dynamic assessment on the accuracy and speed of comprehension of the speech acts and implications. Malmir's (2020) study revealed that both interactionist and interventionist models of dynamic assessment could significantly increase the Iranian EFL learners' pragmatic comprehension accuracy compared with non-dynamic assessment instruction. Moreover, this study reported that interventionist dynamic assessment was significantly superior to the interventionist DA model in augmenting pragmatic comprehension accuracy of request, offer, suggestion, and correction speech acts as well as conversational and can conventional implicatures. Accordingly, the findings reported for the effectiveness of dynamic assessment for enhancing pragmatic accuracy of the speech acts in the current study are consistent with Malmir's (2020) findings, irrespective of the used DA models. Furthermore, Malmir's (2020) research demonstrated that dynamic assessment models could quicken pragmatic comprehension significantly better than the conventional non-dynamic instruction without any significant difference between the two models. The current study results about the impact of G-DA and C-DA in reducing pragmatic comprehension, accordingly, are partially in line with Malmir' (2020) results.

Conclusion and Implications

The current investigation came to some important conclusions. First, group dynamic assessment and computerised dynamic assessment models could help learners expand their pragmatic comprehension accuracy concerning English requests, apologies, greetings, and refusals better than the conventional non-dynamic assessment instruction. This general conclusion about the significant role of dynamic assessment demonstrates the beneficial characteristics of all dynamic assessment models in general and computerised dynamic assessment models in particular as suggested by Malmir (2020). Second, only the computerised dynamic assessment could help L2 learners comprehend requests and refusals with more speed than the group dynamic assessment and conventional instruction. In fact, developing pragmatic comprehension speed takes longer than the ability to comprehend accurately and it seems that the development of pragmatic comprehension accuracy is a prerequisite for pragmatic comprehension speed as cited by Taguchi (2019). This drawn conclusion is consistent with the impact of computerised dynamic assessment models all other DA models on educational attainment and language

improvement as proffered by the scholars. To put it in a nutshell, the present investigation can contribute to our theoretical knowledge and insights into the use of dynamic assessment models for enhancing L2 pragmatic comprehension accuracy and foreshortening the comprehension time. This contribution is momentous given the perplexingly difficult nature of pragmatic comprehension.

The significant contribution of the current study is not only limited to the theoretical dimensions, rather it offers some practical teaching solutions to the betterment of pragmatic comprehension ability which has not been adequately dealt with in the existing empirical literature. The pedagogical implication of the current study is the use of computerised dynamic assessment for enhancing and quickening L2 pragmatic comprehension of speech acts such as requests, apologies, and refusals by language teachers. Furthermore, group dynamic assessment can also be employed for fostering pragmatic comprehension accuracy to a lesser degree compared with C-DA. Of course, teachers who are going to embark upon implementing C-DA and the learners are going to receive C-DA should have adequate digital literacy and be familiar with the principles of dynamic assessment. It should be noted that because the current study was conducted in the Iranian EFL context, the generalisability of the results and conclusions to other EFL or ESL contexts, should be done cautiously.

Every study in Applied Linguistics suffers from some unwanted limitations. The present study is no exception to this suffering and results of this research should be interpreted in light of several limitations such as unbridled role of gender and age, non-random section of the sample, use of the same pragmatic listening test as the pre-test and post-test, and a rather short treatment period. Future studies can be conducted on the joint impact of the interaction between the aforementioned learner variables and C-DA on different aspects of L2 pragmatic comprehension including more speech acts, various types of implicatures, and conversational routines. The concerted collaboration between L2 teachers and learners during using G-DA, C-DA, or other DA models needs further investigation and the relentless pursuit of better DA practices for promoting L2 pragmatic comprehension should not be stopped.

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Authors' Biographies

Ali Malmir is an Assistant Professor of Applied Linguistics at Imam Khomeini International University (IKIU), Qazvin, Iran. He has received his Ph.D. and M.A. degrees from Allameh Tabataba'i University, Tehran. His research interests include Discourse Analysis (DA), Interlanguage Pragmatics, and EFL Vocabulary. He has published some papers and books about the aforementioned research areas.He can be reached via his email address: malmir@hun.ikiu.ac.ir

Parisa Mazloom is an EFL teacher at English language institutes, Islamshahr Tehran, Iran. Currently, she is an MA student of Applied Linguistics at Imam Khomeini International University, Qazvin. She is interested in Pragmatics and Discourse Analysis.