Tarbiat Modares University

Impact of Dynamic Assessment Principles on Learning and Retention of Conditional Sentences among Iranian Intermediate EFL Learners

Sara Zohoor[1] * iD _& Zohreh R. Eslami[2]_ iD

Abstract
The major purpose of the present study was to uncover if the structural complexity of type I and type II conditionals can greatly be mitigated by applying the sandwich format of Dynamic Assessment (DA). More specifically, this study aimed at investigating the contributory role of DA in improving intermediate EFL learners' acquisition of conditional structures. To this end, a quasi-experimental pretest- posttest design was utilized. From the target population of students studying English at one of the language institutes in Isfahan, two intact classes were selected based on a convenient sampling method. The age of the participants was between 19 and 24. Subsequently, they were randomly assigned to two equal groups receiving their instruction through the present, practice, produce (PPP) method, and the treatment group members were exposed to the sandwich format of DA. The findings revealed that the students in the experimental group significantly outperformed those in the control group on the immediate and delayed post-test. The results indicated that interaction, mediation, and feedback were important factors helping EFL students overcome the challenging task of learning conditionals. Notably, the findings may have important implications for EFL, learners, teachers, and materials developers.

Keywords: conditional structures, dynamic assessment, mediation, sandwich format DA

1. Corresponding author: PhD Student in Bilingual/ESL Education, College of Education and Human Development, Texas A&M University; _E-mail: sara.zoohoor@gmail.com_
ORCID ID: https://orcid.org/0000-0002-8245-1483
2. Professor, Department of Educational Psychology, College of Education and Human Development, Texas A&M University; _E-mail: zeslami@ tamu.edu;_
ORCID ID: https://orcid.org/0000-0003-2969-5056

1. Introduction

It is often admitted that grammar is essential for learning, comprehending, and producing a language. Among language structures, comprehending complex conditional sentences plays a pivotal role in understanding different aspects of language learning in EFL classrooms, particularly when the teachers need to explain various assumptions and alternatives to convince their respective audience (Badger & Mellanby, 2017; Devescovi & Marchione, 2006).

Conditional structures are used to express a condition on which something else depends; they are hypothetical, use the connective 'if', and can potentially be used for talking about past, present, and future consequences. In the conditional clause and the main (result) clause, the verb may typically change its form in either one or both clauses, increasing the rate of complexity. Therefore, conditionals have been identified as one of the most difficult aspects of English grammar to masters, especially for second language learners and as an essential element required for complete comprehension and production of the language (Evans et al,, 2008).

There are many variations of conditional sentences and each one has its own specific name. The first type known as type I real conditionals refers to the future and the modal "will" is commonly used in it. However, type II and type III conditionals are considered to be quite complex. Type two conditional uses the conditional clause 'if + 'past tense' and the main clause 'would + infinitive', for example, "if you tried harder, you would succeed". On the other hand, 'type III', which uses the 'if + past perfect tense' and the main clause 'would have + past participle', for example, if you had saved enough money, would have bought your dream house ". Apparently, this statement is counterfactual in that the first clause, the antecedent, is known or believed not to have been realized. Type III is the least frequently used of the conditional sentence types; therefore, exposure to it is generally less (Cowan, 2008; Leech, 2004).

Therefore, of all basic grammatical points, conditional structures play a pivotal role in language learning and teaching processes simply because by mastering them, learners can improve their English performance effectively. The main problem is that English conditionals require coordination of verb forms in both the

if and the result clauses and the fact that verb forms often do not retain their normal temporal meaning complicates the situation even further (Hwang, 1979).

A common area of confusion for EFL learners is the distinction between conditional types I and II. Apart from their completely distinct forms, conditional types I and II cannot be used interchangeably. While both can be used for either the present or future, conditional type II is used where the probability is not equal. To illustrate the point, if you find it less likely to find a job, you would use type II: "If I got a job, I would stay.", whereas if you find it equally likely to find a job, you would say" If I get a job, I will stay."

As such, Norris (2003) maintains that conditional sentences should be regarded as a big obstacle facing ESL/EFL teachers and students. This complexity is due to two basic reasons underlying the use of conditional constructions. One possible source of complexity lies in the dependence of one circumstance on the occurrence of another. Another reason justifying the complexity of conditionals is that they involve various sources of meaning such as areas of cognitive reasoning, logical argument, psychological intent and desirability, as well as semantic nuances associated with real, counterfactual or hypothetical events contingent on, inferred from, or caused by one or more of these sources.

Acknowledging the existence of difficulties and problems when teaching or learning conditional sentences in English, Norris (2003) also offers two fundamental reasons justifying the complexity. Firstly, conditional clauses involve two different but interdependent circumstances so that the occurrence of one depends on the other. Secondly, conditional represent a variety of possible meanings involving different areas of interwoven processes like cognitive reasoning, logical argumentation, psychological intent and desirability, which are under the influence of semantic nuances associated with real, counterfactual or hypothetical events.

Similarly, Celce-Murcia and Larsen-Freeman (1999) suggest several reasons describing the complexity associated with the production and comprehension of conditionals. For one thing, they admit that ESL/EFL textbooks and reference grammars typically provide highly oversimplified information describing the use of conditional constructions. Another thing is that EFL students have problems with

using the verb tense of conditional clauses appropriately. For instance, they easily become confused with clauses like "If *I had the money, I would buy the car."* Since they cannot decide whether the event occurs in the present or in the past. As such, Covitt (1976) claims that conditional sentences rank fifth in terms of complexity after articles, prepositions, phrasal verbs, and verb phrases (Declerck & Reed, 2001).

Largely because Type I and Type II conditional structures have an important part in English grammar and play a functionally vital role in EFL classes, this study sought to examine the pedagogical efficacy of an intervention-based instruction for teaching conditional sentences through the application of dynamic assessment is very important. Certainly, the adoption of a proper methodology could be a cost-effective instructional decision by which EFL learners' problems for learning conditional structures may be controlled.

Research Questions

Q 1. Does applying DA principles with a sandwich format have any significant impact on the learning of type I and type II conditional sentences by intermediate Iranian EFL learners?

Q 2. Does the use of DA principles with a sandwich format enhance the retention of the knowledge of type I and type II conditionals by intermediate Iranian EFL learners long after the immediate posttest?

2. Literature Review

In recent years, there has been an increasing amount of literature on the effect of dynamic assessment on the grammar achievement of EFL learners. These studies integrate assessment and instruction to provide language learners with mediation-based interactions helping learner development and independence.

Clearly, standardized testing as a reliable procedure in finding the language abilities of learners has long been practiced in different academic circles. However, this kind of testing was questioned by Vygotsky (1978) for its underestimation of the abilities of the learners and ignoring their developmental differences. As a result, Dynamic Assessment (DA) was suggested by Vygotsky

554

whose main aim was to modify the cognitive functioning of test instruments. In fact, DA provides teachers with a coordinated approach to both instruction and assessment and focuses on the interaction between teachers and learners. In DA, learner abilities are transformed through dialogic collaboration between the learner and the teacher acting as an assessor or tutor.

More specifically, DA as an important educational concept has come to describe a particular style of testing that is largely associated with an alternative way of thinking about assessment. Most succinctly, dynamic assessment involves embedding interaction within the assessment and observing and recording the learner's response and ability to profit from this interaction. There are numerous models of dynamic assessment that vary in terms of the degree of structure and the timing of the intervention, as well as the content of the intervention procedure.

The greatest distinction between DA and conventional testing or what is frequently referred to in the literature as static assessment, can be seen in the shift from a product to a process orientation regarding testing. This distinction has numerous implications not only with regard to the actual assessment techniques but also with respect to the types of questions asked and solutions formulated with regard to low cognitive functioning and/or poor academic performance (Feuerstein et al., 1979; Nazari & Mansouri, 2014).

DA has been categorized into two types: static and dynamic. While in static assessment, which is the traditional way of assessment, the focus of attention is on the results of teaching and learning, in dynamic assessment, the focus is on the process of learning. Clearly, the static assessment does not involve any mediation or assistance during the assessment process and concentrates on the abilities of the learners without providing any intervention. As Sternberg and Grigorenko (2002) maintain, this kind of assessment can be regarded as an approach whereby the items are provided to the learners as a whole and all at once and the learners are not allowed to receive any kind of feedback until their scores are announced after the exam. By contrast, dynamic assessment is based mainly on Social Constructivism and Sociocultural Theory of Learning.

As a dominant paradigm in educational contexts, social constructivism drawing

on the sociocultural theory of Vygotsky, has had a great influence on some of the approaches to language teaching. In fact, such rethinking and reconceptualization of teaching practices have started new trends in action-based research and effective language teaching. In fact, the constructivist notions tend to focus on the issues addressing learner diversity and the need for active involvement of the learners in interaction-based language teaching (Harvey & Allard, 2015; Richards & Schmidt, 2014).

DA approach was suggested based on the principles of sociocultural theory of learning. According to Poehner (2008), the origins of dynamic assessment are rooted in the Vygotsky's concept of the Zone of Proximal Development (ZPD) and the Sociocultural Theory of Mind (SCTM). Its principal objective is to use human abilities to improve potential capabilities. These theoretical concepts postulate that supportive interactions can release the full capacity of the cognitive functions possessed by individual learners. Such an improvement, which appears as a result of the learners' reactions to the support presented to them, sheds light on the roles of ZPD and SCT. Additionally, appropriate mediation stimulates further development and enables individuals to improve their performance (Vygotsky, 1986, 1998).

The vygotskian notion of the ZPD is certainly one of the fundamental factors in the dynamic assessment. ZPD is defined as the difference between what learners can achieve unassisted and what they can accomplish in cooperation with others in various learning situations involving instruction and assessment (Kozulin & Garb, 2002). Notably, the zone in ZPD refers to the distance between what learners are able to do without receiving any help from others and what they can achieve in collaboration with someone having more knowledge and experience (Daniels, 2001).

Arguing about the significant role of social interactions in language learning programs, Bekka (2010) states that ZPD may provide considerable insights into the aims and practices of language assessment. He further adds that the interaction between teachers and learners in language classrooms involving DA invariably leads to the creation of ZPD where the learners' learning potentials are activated.

In other words, to assess a given learner's learning potential, it is necessary for the teacher to create his or her ZPD through such social dialogic interaction. As Poehner (2008) asserts, the notion of ZPD is considered a means of capturing both the development and developing abilities of the learners.

Hence, it is essential to make a distinction between the DA approaches and the traditional approaches to testing because static assessment (SA) and DA do not refer to the type of assessment, but rather to the way in which an assessment is administered. Therefore, as Tzuriel (2001, p. 1) argues, the term "static test" refers to a test where "the assessor presents items to the child and records his or her response without any attempt to intervene in order to change, guide or improve the child's performance".

Consequently, dissatisfaction with product-oriented and static forms of assessment led to the emergence of process-oriented testing or dynamic assessment. Poehner and Lantolf (2007) assert that SA differs from DA in two basic ways. First, the focus in the former is on the product of the learners' past development while the latter looks up to the learners' future, upcoming progress. Second, DA integrates assessment with instruction, whereas such integration is absent in SA.

Zhang and van Compernolle (2016) conducted a study evaluating the effect of DA approach to enhancing second language grammatical learning potential through dynamic assessment. Four intermediate-level and two elementary-level university learners participated in a three-phase experiment. The results revealed that sandwich format dynamic assessment involving mediation was successful in activating learners' learning potential and promoting L2 achievement.

In a different study, Yakışıki and Çakır (2017) followed the pre-test—treatment—post-test procedure and quantitative and qualitative data analyses to investigate the students' responses to their ZPD. It was proved that the students in the experiment group were able to maintain their success and seemed to be affected by the power of interactions in the students' Zone of proximal development.

In their study investigating the effect of DA on the acquisition of Type II conditional constructions, Kamali et al. (2018), working with 23 students in two

intact classes, found out that the experimental group significantly outperformed the control group (p < 0.05) on both immediate and delayed posttests on type II conditionals.

Daneshfar et al. (2018) also studied the effect of dynamic assessment (DA) on EFL learners' grammar Knowledge. Focusing on 86 male and female participants in segregated groups, it was discovered that the learners exposed to DA principles showed drastic changes after a period of six mediated sessions. The results proved that dynamic assessment had a significant impact on participants' grammar achievement.

Estaji and Ameri (2020) utilized DA is an implicit kind of assessment investigating the learners' change of behavior in terms of their proficiency levels. In fact, they tried to examine the effect of the interventionist approach to DA on Iranian EFL learners' grammar achievement at two proficiency levels: pre-intermediate and upper-intermediate. To this end, 58 learners, in four intact groups; namely, pre-intermediate (31 students) and upper-intermediate (27 students), were selected and randomly assigned to two quasi-experimental and two control groups. The data collected through pretests, posttests, and semi-structured interviews were analyzed. Notably, the participants in the quasi-experimental groups received mediation.

Although a considerable body of research has been conducted on the applicability of DA in language classroom settings (Derakhshan & Shakki, 2016), there has been little discussion about the utility of DA principles on the teaching and learning of type I and type II conditional clauses. As such, teachers' familiarity with various formats of DA and integrating instruction with assessment should be considered an important component of language teaching.

3. Methodology

3.1. Research Design

Essentially, the sandwich format of the DA approach involving a three-phase cycle may best be operationalized by adopting a kind of quasi-experimental

design utilizing a pretest and a posttest as well as a control group serving as the baseline for making comparisons. Initially, in phase one, the knowledge of both groups on conditionals type I and type II were specified using a forty-item multiple-choice grammar test comprising 20 real (type I) and 20 hypothetical (type II) target structures.

The main objective of the pretest was to identify the participants' knowledge of conditional constructions in both groups. Subsequently, phase two started with the instruction of all learners using two different approaches. While the control group received their instruction based on the present, practice, produce (i.e., PPP) method, the experimental sample was taught by the interventionist DA approach. At the end of the treatment period, lasting for six consecutive sessions, an alternate form of the pretest was administered as the initial posttest.

3.2. Participants

A convenience sampling method was employed for selecting the participants in the present study, who were 50 female intermediate EFL students learning English at one of the major language institutes in the city of Isfahan. Their age range varied between 19 and 24 and spoke Persian as their first language. All students in these two intact classes, 25 each, enjoyed a similar sociocultural background and had finished the elementary courses which were a prerequisite to the beginning of the intermediate level. Notably, the gender variable was controlled in this study because the researcher only had access to female language learners.

3.3. Materials

The materials used for the instruction of conditional clauses (type I & type II) were Chapter Twenty of English Grammar describing English conditionals and three reading passages extracted from an electronic website that provides supplementary resources for ESL teachers and learners. These passages provided a high-frequency input on the use of conditionals, which were used for the students in the experimental sample.

3.4. Instruments

Four instruments were used to provide appropriate responses to the research questions: (a) Oxford Quick Placement Test (O.Q.P.T) to distinguish the participants' language proficiency level, (b) the Pretest, an alternate form of the pretest was used in which the items were reshuffled so that learners' familiarity with the pretest did not confound with the effect of treatment. Without evaluating the pretest sensitization effect in an appropriate way, the use of pretests can result in misinterpretation of test results. (c) The Posttest to eliminate any possibility of pretest sensitization effects or pretest effects, in short, an alternate form of the pre-test was used in which the items were reshuffled so that learners' familiarity with the pre-test did not confound with the effect of treatment. Without evaluating the pretest sensitization effect in an appropriate way, the use of pretests can result in misinterpretation of test results, and (d) the Delayed Posttest is the main objective of using a delayed posttest after the initial, immediate posttest was to estimate the retention knowledge or retention learning. In fact, two or more weeks after the immediate posttest, delayed retention tests serving as research instruments were administered to study the retention of learning due to the treatment which is applied right after the treatment.

A word of caution deems to be mentioned here: The validity of the instruments used in the study was established based on specialists' opinion, while the reliability was measured through pilot testing. The Cronbach's alpha coefficient values for the pretest, the posttest and the delayed-posttest were 0.83, 0.86 and 0.87 respectively. Furthermore, the reliability and validity of the OQPT had already been established by Oxford University Press and University of Cambridge Local Examinations Syndicate- UCLES 2001.

3.5. Procedures

This section explains how the independent variable- that is, interventionist DA with sandwich format was actually operationalized and how the data on the dependent variable (type I & Type II conditionals) were collected. It should be noted that the instruction for both experimental and control groups was delivered in six sessions,

two sessions each week on Monday and Thursday. The time interval for each session was 90 minutes. The instruction for the experimental sample was based on the principles of interventionist DA with a sandwich format. It was previously described that Sternberg and Grigorenko (2002) have introduced two models of DA procedures; namely, cake format and sandwich format. Only the sandwich format was utilized in this study. This format involves three stages including pretest, mediation, and posttest. Notably, both the pre-test and post-tests have a static nature in the sandwich format since the learners' performance on these tests is compared in order to find out the efficiency of the teacher's intervention. The researcher also acted as the teacher of both control and experimental samples carefully following the stages defined by the sandwich format.

First, the 40-item multiple-choice pretest was used to determine the entry behavior of the participants before applying the actual treatment. Second, in the instruction phase, the teacher tried to create a dialogic interaction between herself as the mediator and the participants. Using the passages on the use of type I and Type II conditionals treating each in two consecutive sessions, the mediator provided the participants with different levels of intervention ranging from the most implicit to the most explicit in order to help them internalize the grammar of the targeted conditionals. Consequently, when the learners failed to understand the structures through implicit hints, the teacher provided them with explicit mediations helping them to produce accurate sentences with the target structure. In other words, by adopting a deductive approach, the teacher first explains the grammar rule and then provides the learners with enough examples enabling them to consolidate their knowledge of the target structure.

Here, a DA regulatory scale of DA Mediations was used for L2 Grammar Instruction of Conditional structures (type I & type II). Based on specific criteria defined by the scale, the mediator decides on the use of implicit/ explicit intervention. These criteria are as follows:

a) Presence of mistakes in learner's comprehension or production of target structures,

b) Exact specification of the type of mistake,

c) Asking the learners if they are talking about something that can happen now or something whose occurrence is impossible,

d) Contextualization of the target structure using relevant examples, and

e) Providing the correct structure.

Finally, at the end of the treatment, the post-test was administered to see how successfully the grammar rules under scrutiny were properly internalized. This test was then followed by a delayed posttest administered after three weeks. Therefore, by following such a tripartite arrangement, the teacher could actualize the sandwich format DA principles in teaching grammatical points under study.

For the control group the researcher used Chapter Twenty of the Teaching English coursebook on conditionals named *English Grammar* adopting a popular behaviorist teaching practice known as PPP. The approach utilizes a classic deductive approach with grammar being explicitly introduced in the Presentation stage by the teacher in the beginning of the class, where the target teaching materials are presented. This allows the learners to focus on target language structures without experiencing any distractions.

Richards and Renandya (2002) suggest that many traditional approaches to language teaching are based on a focus on a given grammatical form and a subsequent cycle of activities involving the presentation of a new language item, practice of the item under controlled conditions, and a production phase whereby the students strive for using the form in various related contexts.

As Willis and Willis (1996, cited in Richards & Rodgers, 2001) maintain, a PPP based lesson plan unfolds going through three phases. In the Presentation stage, the teacher tries to provide several models concerning the grammar rule that the situation calls for. The Presentation stage may consist of model sentences, or short dialogues illustrating target structures. In the Practice stage, the students start practicing the new language under the guidance of the teacher. They drill sentences or dialogues by repeating after the teacher or the tape, in chorus and individually, until they can say them correctly. Finally, in the Production stage, the learners are encouraged to use the new language in different linguistic

contexts provided by the teacher. Clearly, unlike instruction for the experimental group, the control group was taught the target structure conventionally, and in case learners encountered problems in producing accurate sentences with the target structure, the teacher did not offer any mediations and provided the correct sentence instead. Like the experimental sample, the control group was also exposed to the immediate and delayed posttests under identical testing conditions.

4. Results

4.1. Results for the First Research Question

The first research question of the study was: Does applying DA principles with a sandwich format have any significant impact on the learning of type I and type II conditional sentences by intermediate Iranian EFL learners? In order to get answer this question descriptive statistic were applied to estimate the mean and standard deviation values attained by the control and experimental groups on the pretest. Table 1. demonstrates the average performance profile of the participants on the pretest.

Table 1
Performance Profile of Participants on Pretest

	Group	N	Mean	Std. Deviation
Pretest	Control	25	14.6000	2.36291
	Experimental	25	14.2400	2.66583

Notably, it is observed that both control and experimental, intermediate EFL samples had almost similar mean and SD values proving that they had the same knowledge on conditional structures prior to the application of the treatment. Subsequently, Levene's test for equality of variances related to the pretest was used. The results of the test are displayed in Table 2.

Table 2

Levene's Test for Equality of Variances on the Pretest

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	df
Pretest	Equal variances assumed	1.024	.317	.505	48
	Equal variances not assumed			.505	47.31

It is observed that the observed t- value is larger than the critical value at the *df* of 48 and it can be concluded that the null hypothesis stands and that the variances between control and experimental samples are equal on the pretest. To further determine if the two sample means attained by control and experimental groups on the pretest are really equal, t-test for the equality of means was also executed considering both the upper and lower levels of confidence. Table 3 below indicates the equality of means:

Table 3
Independent Samples Test for the Pretest Means

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower
Pretest	Equal variances assumed	.616	.36000	.71246	-1.07250
	Equal variances not assumed	.616	.36000	.71246	-1.07303

Equal variances assumed, it is seen that the Sig. (2-Tailed) value in our case is 0.616. Obviously, this value is higher than 0.05 confidence level, and it is safe to

conclude that there is not a statistically significant difference between the mean values of the participants in both control and experimental groups regarding the pretest. Afterwards, the statistical technique named tests for between subjects' effects was run on the pretest Table 4 indicates the results of the statistics on the pretest.

Table 4
Tests of Between-Subjects Effects for the Pretest

Dependent Variable: Posttest					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	240.309[a]	3	80.103	77.785	.000
Intercept	35.266	1	35.266	34.246	.000
Group	3.928	1	3.928	3.815	.057
Pretest	176.379	1	176.379	171.274	.000
Group * Pretest	.252	1	.252	.245	.623
Error	47.371	46	1.030		
Total	13216.000	50			
Corrected Total	287.680	49			

a.R Squared = .835 (Adjusted R Squared = .825)

Table 5
Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
.484	1	48	.490

Therefore, it can confidently be inferred that the control and experimental groups were alike in terms of their knowledge of type I and type II conditional structures.

Table 6
Condescriptive Task Statistics on Posttest Scores

Group	Mean	Std. Deviation	N
Control	14.9600	2.15019	25
Experimental	17.2000	2.17945	25
Total	16.0800	2.42302	50

As can be seen, the results provided by running a Condescriptive Task showed while the mean value for the control group on the posttest was 14.96, that of the participants in the treatment group was 17.2 respectively. The difference provides evidence that the interventionist, mediation-based nature of DA has been effective in promoting learning of the conditionals in the treatment group. To make sure that the difference was statistically significant, a test of between-subject effects was applied. Table 7 represents the data on the results revealed by this test:

Table 7
Test of between-Subjects Effects on Posttest

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	240.057[a]	2	120.029	118.458	.000	.834
Intercept	36.673	1	36.673	36.193	.000	.435
Pretest	177.337	1	177.337	175.017	.000	.788
Group	78.628	1	78.628	77.600	.000	.623
Error	47.623	47	1.013			
Total	13216.000	50				
Corrected Total	287.680	49				

a. R Squared = .834 (Adjusted R Squared = .827)

It is clearly observed that the value of the alpha level is equal to 0.000 which is lower than the 0.05 confidence level justifying the presence of a meaningful difference between the treatment and non-treatment samples. This indicates that the treatment – that is, the application of sandwich format DA has effectively resulted in the better Performance of the participants in the experimental group on the posttest addressing the target conditionals.

4.2. Results for the Second Research Question

The penultimate research question of the study asked: Does the use of DA principles with a sandwich format enhance the retention of the knowledge of type I and type II conditionals by intermediate Iranian EFL learners long after the initial post-test? To this end, applying paired samples statistics for both experimental and control groups were required in order to specify to what extent their performance on the targeted immediate and delayed posttests are statistically significant. Clearly, the difference between the mean values belonging to the treatment group's performance on the immediate and delayed posttests are very close indicating that learning retention due to sandwich format DA is considerably high. Such a conclusion can also be substantiated by applying a *paired samples t-test*:

Table 8
Results of the Paired Samples t-test

		Mean	N	Std. Deviation
Pair 1	Posttest	17.2000	25	2.17945
	Delayed posttest	16.8800	25	2.08806

It is quite evident from Table 8 that the participants exposed to sandwich format DA had attained larger gains on both the immediate and delayed posttests. The mean Values 17.2 and 16.88 were numerically very close and were considerably higher than that of the pretest, which was equal to 14.24. To see whether the differences related to immediate and delayed post tests are significant,

the application of a paired samples t -test was necessary. Table 9 demonstrates the results presented the running of this test:

Table 9
Results *of Paired Samples T-test on Immediate and Delayed Posttests*

		Paired Differences					**t**	**df**	**Sig. (2-tailed)**
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			24	.119
					Lower	Upper			
Pair 1	Posttest – Delayed .posttest	.32000	.98826	.19765	-.08794	.72794	1.619		

Table 9 reveals that the experimental sample's performance on the two tests was almost equal further supporting the positive impact of DA on achievement of type I and type II conditional structures and their retention in the long-term memory by the EFL Learners, largely because the alpha level is equal to 0.119, which is way above 0.05 confidence level. The same statistical procedures were implemented to investigate the likely effects of PPP approach on retention learning. First, a paired samples statistic was used to check the average performance profile of the participants who received their instruction based on PPP. Table 10 indicates the data on control groups' performance on the immediate and delayed posttests respectively:

Table 10

Paired Samples Statistics on the Immediate and Delayed Posttests

		Mean	N	Std. Deviation
Pair 1	Posttest	14.9600	25	2.15019
	Delayed posttest	14.8800	25	1.83303

Notably, exposure to the non-interventionist PPP approach creates a type of instruction which is not integrated with assessment and lack of mediation has seemingly not led to the improvement of the participants' grammatical achievement and learning retention compared to those in the treatment sample. Surprisingly, the mean values (i.e., 14.9 for immediate posttest and 14. 88 for the delayed posttest) were mathematically much lower than those belonging to the experimental sample treated by sandwich format DA. Second, a *paired samples test* was also implemented for the control group and their performance on the posttests. Table 11 and Table 12 reflect the data on the tests considering the lower and upper limits of the confidential level:

Table 11

Paired Samples Test on Posttests at Lower Level

		Paired Differences			
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference
					Lower
Pair 1	Posttest – Delayed posttest	.08000	1.11505	.22301	-.38027

Table 12
Paired Samples Test at Upper Level

		Paired Differences	t	df	Sig. (2-tailed)
		95% Confidence Interval of the Difference Upper			
Pair 1	Posttest – Delayed posttest	.54027	.359	24	.723

It is observed that the PPP approach lacked the essential built-in mechanisms responsible for activating the satisfactory attainment of the course outcomes and creating a more appreciable long-term memory retention. In this case, the significant, two-tailed value (shown in Table 12) at df 24 is 0.723, which stands well above 0.05 confidence interval demonstrating that the participants in the control group did not show a considerable improvement in grammatical achievement on the one hand and retention learning on the other hand.

Clearly, PPP did not contribute to the achievement of type I and type II conditionals and was not so promising as the interventionist DA approach. The mean values related to the immediate posttest and the delayed posttests (i.e., 14.96 & 14.88) were quite low compared to those belonging to the participants in the treatment group.

5. Discussion

This study was in fact an attempt to shed light on the point of the impact of dynamic assessment principles on learning and retention of conditional sentences among Iranian intermediate EFL learners. The quantitative analyses of the data reflected by the posttest for the study groups demonstrated that the application of DA mechanisms in the treatment sample compared to the traditional, non-treatment group was statistically significant. Characteristically, providing DA instructional techniques creates higher levels of involvement and learner cooperation which consolidate meaningful learning through enhancing student participation and sustaining learners' level of attention throughout the teaching session.

The second research question aimed at investigating the extent to which the application of DA principles leads to retention learning. To test the prediction, a delayed posttest was utilized to gather the required data. Once again, the quantitative analyses of the data based on proper statistical techniques revealed that exposure to DA principles integrating instruction with assessment results in higher long-term memory retention of conditional structures.

It is interesting to note that the findings of the study revealed that sandwich format DA was effective in enhancing intermediate EFL learners' achievement of the prespecified curricular goals particularly defined for type I and type II conditional structures. Clearly, the research topic focused on how the use of DA principles in a language context could be managed by language teachers and how EFL learners did actually benefit from the inherent characteristics of such a methodological intervention.

Overall, the findings of the study were in conformity with the majority of the previous studies (e.g., Anton, 2009; Estaji & Ameri, 2020; Poehner, 2008; Wang, 2015). In other words, the results attained in this study corroborated those reported by other practitioners interested in the same issue. The reports demonstrated that the sandwich format DA approach is a rewarding methodology that provides a solid bridge between the learners' grammatical learning needs and teachers' timely interventions in the process of learning. By applying instructional activities and teaching resources proactively, teachers are able to address various students' needs effectively and increase the learning opportunities required to help EFL learners in the language learning contexts.

Compared to the control group, who received their instruction through traditional PPP language teaching activities, the treatment samples revealed a superior performance on both the immediate and delayed posttests. One possible explanation justifying such differential performance between control and experimental groups can be the one described by Vergara et al. (2019) who asserts that by applying DA techniques learners become actively engaged in the learning process because they have access to carefully engineered meditation tactics for managing their learning more efficiently.

Similarly, the findings of a study on DA involving 30 participants by Andujar (2020) indicated that DA and dialogic mediation helped students reflect on their language performance, gradually requiring less explicit feedback and metalinguistic explanations. Surprisingly, the results obtained from the application of sandwich format DA show a very high level of consistency across various related studies, all supporting the effectiveness of such an approach for enhancing the language learning achievement of learners. However, the implementation of DA techniques produces positive results. First, professional support for language teachers is central to the success of instruction through DA. Second, it is essential for teachers to have a strong background in the subject matter and a thorough understanding of the range of potential assessment activities appropriate to the targeted learners. Finally, the introduction of a change in instruction, classroom organization, pedagogy, and expectations needs to be systematically introduced into the curriculum over time (Vandergrift & Goh, 2012).

The findings also support the ideas of Estaji and Farahnia (2019) who investigated the effect of two major approaches of Dynamic Assessment, namely, interventionist and interactionist approaches, on learners' oral narrative performance 34 Iranian EFL learners and assigning them to an Interactionist Group (In A.G) and Interventionist Group (In V.G), they found that Interventionist DA is by far superior to interactionist DA because mediation during instruction improves retention learning considerably.

6. Conclusion

The primary objective of the present study was to investigate how the use of DA principles in English grammar contexts can improve the learners' achievement of grammatical patterns as meaningfully as possible. DA integrates instruction with assessment creating a unified platform that contributes to students' final development (Lantolf & Poehner, 2004). Unlike traditional, Non-Dynamic Assessment (NDA) approaches, DA has a great bearing on EFL teachers since they do not have a neutral role and should create a positive, dialogic relationship with the language learners. Such a relationship may be triggered by the principles

underlying the sociocultural theory of learning, which suggests that adults and peers may influence individual learning by drawing on cultural beliefs and tendencies which affect teaching and learning processes.

Likewise, the findings signaled important implications regarding retention learning. Poor cognitive retention may result in underdeveloped student skills in different areas of language learning such as vocabulary development, grammar, writing, thinking, and logic. Van de Bogart (2009), in his study of second language acquisition, found out that the inability to retain key language patterns and concepts caused the students' inability to reason or express their ideas accurately. Clearly, educators must find alternative methods for the commonly used traditional methods in order to address retention issues.

More ambitiously, the findings of this study, have a clear message for EFL teachers: The traditional, one size fits all methodological standards fail to observe many of the facts about language learning. By offering the operational merits of DA, the findings proved that interaction and mediation can help teachers to play their roles as professional mentors. Given the immediate need for implementing DA instruction in language classrooms, future studies should explore the issue more rigorously to find better ways for teachers' utilization of DA techniques and its benefits for EFL learners.

573

References

Andujar, A. (2020). Mobile-mediated dynamic assessment: A new perspective for second language development. *ReCALL, 32*(2), 178–194.

Antón, M. (2009). Dynamic assessment of advanced language learners. *Foreign Language Annals, 42*(3), 576–598. http://dx.doi.org/10.1111/j.1944-9720.2009.01030.x

Badger, J. R. & Mellanby, J. (2017). Revealing hidden talents: The development, use, and benefit of VESPARCH. *British Journal of Educational Psychology*, *8*(3), 380–395. https://doi.org/10.1111/bjep.12189,

Bekka, K.G. (2010). Dynamic assessment for learning potential: A shift in the focus and practice of evaluating Japanese oral proficiency. *Japanese Journal of Education*, *10*, 53–66.

Vergara, L., Caraballo, J., Castellon, D., Vásquez, C, y Becker, E. (2019). Dynamic Assessment Approach in Language Teaching: A Review. *Zona Proxima, 30*, 82–99. https://doi.org/10.14482/zp.30.371.3

Celce-Murcia, M., & Larsen-Freeman, D. (1999). *The grammar book: An ESL/EFL teacher's course (2nd Edition)*. Heinle & Heinle.

Covitt, R.I. (1976). *Some problematic grammar areas for ESL teachers*. [Unpublished M.A. Thesis]. The University of California.

Cowan, N. (2008). What are the differences between long-term, short-term, and working memory? *Program Brain Research, 169*, 323–338. https://doi.org/10.1016/S0079-6123(07)00020-9

Daneshfar, S., Aliasin, S. H., & Hashemi, A. (2018). The effect of dynamic assessment on grammar achievement of Iranian third-grade secondary school EFL learners. *Theory and Practice in Language Studies, 8*(3), 295–305.

Daniels, H. (2001). *Vygotsky and pedagogy*. Taylor & Francis.

Declerck, R. & Reed, S. (2001). *Conditionals: A comprehensive analysis*. de Gruyter Mouton.

Derakhshan, A., & Shakki, F. (2016). The effect of dynamic assessment on elementary EFL learners" listening comprehension through mediational strategies. *International Journal of English Language & Translation Studies*, *4*(2), 29-45.

Devescovi, A. & Marchione, D. (2006). *The development of grammar*. In D. Riva, I. Rapin and G. Zardini (Eds.). *Language: Normal and pathological development* (pp. 32–45), John Libbey Eurotext.

Estaji, M., & Ameri, A.F. (2020) Dynamic assessment and its impact on pre-intermediate and high-intermediate EFL learners' grammar achievement. *Cogent Education*, *7* (1), 1–18. https://doi.org/10.1080/2331186X.2020.1740040

Estaji, M. & Farahnia, M. (2019). The immediate and delayed effect of dynamic assessment approaches on EFL learners' oral narrative performance and anxiety. *Educational Assessment*, *24*(2), 135–154. https://doi.org/10.1080/ 10627197.2019.1578169

Evans, J. S. B. T., Handley, S. J., Neilens, H., & Over, D. (2008). Understanding causal conditionals: A study of individual differences. *The Quarterly Journal of Experimental Psychology*, *61*(9), 1291–1297. https://doi.org/10.1080/17470210802027961

Feuerstein, R., Rand, Y., & Hoffman, M. B. (1979). *The Dynamic assessment of retarded performers: The learning potential assessment device, theory, instruments, and techniques*. University Park Press.

Harvey, C. P., & Allard, M. (2015). *Understanding and managing diversity: Readings, cases, and exercises*. Pearson.

Hwang, M. (1979). *A semantic and syntactic analysis of "if" conditionals*. [Unpublished MA thesis]. The University of California.

Kamali, M., Abbasi, M., Sadighi, F. (2018) The effect of dynamic assessment on L2 grammar acquisition by Iranian EFL learners. *International Journal of Education and Literacy Studies, 6* (1), 72–78.

Kozulin, A., & Garb, E. (2002). Dynamic assessment of EFL text comprehension.

School   Psychology   International,   23(1),   112–127. https://doi.org/10.1177/0143034302 023001733

Lantolf, J. P., & Poehner, M. E. (2004). Dynamic assessment of L2 development: Bringing the past into the future. *Journal of Applied Linguistics*, *1*(1), 49–72.

Leech, G. N. (2004): *Meaning and the English Verb*. 3rd Edition. Longman.

Nazari, B., & Mansouri, S. (2014). Dynamic assessment versus static assessment: A study of reading comprehension ability in Iranian EFL. *Journal of Language and Linguistic Studies*, *10*(2), 134–156.

Norris, R.W. (2003). *How Do We Overcome the Difficulties of Teaching Conditionals*? *Bullentin of Funkuoka International University,* 9, 39–50.

Poehner, M. E. (2008). *Dynamic assessment: A Vygotskian approach to understanding and promoting l2 development*. Springer.

Lantolf, J. P., & Poehner, M. E. (2007). Dynamic assessment of L2 development:

Bringing the past into the future. *Journal of Applied Linguistics and Professional Practice*, *1*(1), 49–72.

Richard, J. C., & Rodgers, S.T. (2001). *Approaches and methods in language teaching.* Cambridge University Press.

Richards, J. C., & Renandya, W. A. (Eds.) (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge University Press.

Richards, J. C., & Schmidt, R. (2014). *Language and communication.* Pearson Education Limited.

Sternberg, R.J. & Grigorenko, E.L. (2002). *Dynamic testing. The nature and measurement of learning potential*. Cambridge University Press.

Tzuriel, D. (2001). *Dynamic assessment of young children*. Kluwer Academic/Plenum Publishers.

Van De Bogart, W.G. (2009). *Active learning pedagogy, a new teaching methodology for a new generation of teachers.* Nakon Sawan Rajabhat University.

Vandergrift, L. & Goh, C. (2012). *Teaching and learning second language listening*. Routledge.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Vygotsky, L. S. (1986). *Thought and language*. MIT Press.

Vygotsky, L. S. (1998). *The collected works of L. S. Vygotsky. Volume 5. Child psychology*. Plenum.

Wang, P. (2015). The effect of dynamic assessment on the listening skills of lower-intermediate EFL learners in Chinese technical college: A pilot study. *Journal of Language Teaching and research*, *6*(6), 1269–1279. https://doi.org/10.17507/ jltr.0606.14

Yakışıki, B., Y. & Çakır, A. (2017). Dynamic assessment of English prospective teachers' speaking skills. *European Journal of English Language Teaching. 2*(1), 22–53.

Zhang, H., & Compernolle, R., V. (2016) Learning potential and the dynamic assessment of L2 Chinese grammar through elicited imitation language and sociocultural theory. *Language and Sociocultural Theory*, *3*(1), 99–120. https://doi.org/10.1558/lst.v3i1.27549

About the Authors

Sara Zohoor is a PhD student at Texas A&M University in Bilingual/ESL Education. Her areas of interest include bilingual education and dynamic assessment.

Dr. Zohreh R. Eslami is a Professor of Bilingual/ESL Education in Educational Psychology department at Texas A&M University in College Station. She has published more than 130 articles and book chapters related to Instructional and Intercultural Pragmatics, Linguistically and Culturally Diverse Students and their academic and social needs, Diversity in English language users and Teacher Education, L2 content literacy development, and Language teacher education.