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ASSESSMENT BASED ON A SANDWICH
FORMAT

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ABSTRACT

The present study is an attempt to investigate the effect of the interactionist model of dynamic assessment on the learners' grammatical knowledge of English relative pronouns through a sandwich format. To this end, 60 learners from Navid Language Institute in Shiraz, Iran were randomly selected; and also were assigned into two homogeneous groups. In this study, 30 learners were from the teenager department and the rest were from the adult department. Then, the three aspects of a sandwich format through the interactionist model of dynamic assessment (DA) were conducted in both departments. The independent sample t-test was used to analyze the results obtained from both the teenagers and adults' groups. The findings of this study illustrated a significant difference between the pre-test and post-test scores of the grammatical English relative pronouns tests in both groups which shows the improvement of scores after mediation. Consequently, it is shown that the teenagers would benefit from the interactionist DA based on a sandwich format more than the adult learners. The results obtained from this study can have useful implications for English as a foreign language (EFL) learners and teachers. To this end, the results can be of crucial significance for EFL students in order to diagnose their weaknesses and strengths; and also mitigate their weaknesses in subsequent evaluations. In classroom setting, teachers can also make use of DA as a kind of strategic assessment which provides them useful information so that they can evaluate their students precisely.

KEYWORDS: Dynamic Assessment, Interactionist DA, Sandwich Format, Relative Pronouns

INTRODUCTION

The first decade of the twenty first century is marked with the changes in educational settings including language assessment and instruction. One of the most important reconsiderations came about in reaction to traditional psychometric views which support a disintegrated view of instruction and assessment. The novel approach known as dynamic assessment (DA) has established a profound integration between language testing and language instruction. Poehner (2008, p.2) posits that "active collaboration with individuals simultaneously reveals the full range of their abilities and promotes their development. In educational contexts, this means that assessment – understanding learners' abilities – and instruction – supporting learner development – are a dialectically integrated activity". This approach has come to be known as dynamic assessment. Dynamic assessment is primarily rooted in Vygotsky's zone of proximal development (ZPD). Vygotsky (1978, p.86) clearly defines ZPD as " the distance between the actual development level as determined through problem solving under adult guidance or in collaboration with more capable peers". As such, learners with a large ZPD are more responsive to the assistance, while the learners with a small ZPD are less responsive (Poehner, 2008). Dynamic assessment suggests a wealth of development in educational settings. It contends that mental abilities are socially mediated through interaction with others (Lantolf & Poehner, 2004).

While several studies have been devised (eg, Ableeva, 2008; Lantolf & Poehner; 2004; Sternberg & Grigorenko, 2002) to evaluate dynamic assessment in foreign language learning, no study has been carried out thus far to examine the effect of DA on learners' grammatical knowledge of English relative pronouns. However, the main objective of this study was to investigate the effects of the interactionist model of DA on the learners' grammatical English relative pronouns through a sandwich format.

Dynamic Assessment vs. Non-dynamic Assessment

According to Poehner (2008) dynamic testing and non-dynamic testing are not referred to as assessment instruments but to administration procedures. In dynamic assessment the learners are taught on how to perform certain tasks through mediated assistance (Kirschenbaum, 1998). Also, in dynamic assessment procedures, the emphasis is on the process rather than the products of learning. In other words, the dynamic nature of this theory is highly and primarily rooted in Vygotsky's observation that a body can envisage what it is only in movement (Lidz & Gindis, 2003). According to Lidz (1987, p. 4) DA is "an interaction between an examiner-as-intervener and a learner-as-active participant, which seeks to estimate the degree of modifiability of the learner and the means by which positive changes in cognitive functioning can be induced and maintained".

Non dynamic assessment is to make decision on static, one time scores exclusively (Wiedl, Guthke & Wingenfeld, 1995). According to Sternberg and Grigorenko (2002), in non-dynamic testing the questions are administered to test takers who are supposed to answer successively, without taking any kind of assistance. In contrast, dynamic assessment intends to provide learners with sufficient support in order to make amend their learning deficits and also assist them to reach their potential development.

Interactionist vs. Interventionist Dynamic Assessment

In this section attempt has been made to elaborate on the differences between the two significant approaches to DA – interventionist and interactionist. In the interventionist model, different types of mediations are systematized and standardized, thereby underscoring the psychometric and statistical properties of the assessment procedure (Poehner, 2008). In the interactionist model, "assistance emerges from the interaction between the examiner and the learner, and is therefore highly sensitive to the learner's ZPD" (Lantolf, 2007, p. 54). Interventionist DA "is concerned with quantifying, as an index of speed of learning" (Brown & Ferrara, 1985, p.300). In other words, Interventionist DA emphasizes on the amount of assistance or mediation indispensable for a learner to quickly reach a pre-determined end point. Interactionist DA, on the other hand, focuses on the development of an individual learner or even a group of learners, irrespective of the effort required and without concern for a pre-specified end point (Lantolf, 2007). Antón (2003) and Gibbons (2003) conducted empirical studies with respect to the interactionist model of DA. Antón (2003) supports an interactionist DA procedure used for placement purposes in a university advanced L2 Spanish program and demonstrates that the interactionist DA procedure indicated significant differences among candidates that may have otherwise remained hidden. Gibbons (2003) also demonstrates the importance of interactionist DA in an L2 content-based school setting.

Sandwich and Cake Formats of DA

DA procedures can be designed in accordance with what Sternberg and Grigorenko (2002) have described as sandwich and cake formats. The sandwich format is much more consistent with traditional experimental research designs in which mediation is administered following a pretest and a post-test (used to investigate the effectiveness of the mediation) (Sternberg & Grigorenko, 2002). In the sandwich format to DA, "a mediation phase is similarly sandwiched between pretest and posttest that are administered in a non-dynamic manner (Poehner, 2008, p.19)". The performance on the posttest can then be compared to that of pretest so as to determine how much promotion an individual made as a result of assistance (Poehner, 2008). Sternberg and Grigorenko (2002) also posit that these procedures can be administered in either an individual or group setting, and that in individualized procedures the assistance may also be individualized, while in group procedures the assistance tends to be equal for everyone. In the latter format namely the cake format assistance or mediation is offered during the administration of the assessment, whenever problems emerge. According to Poehner (2008) in interventionist approaches to DA, the assistance offered might be in the form of a set of graded standardized hints ranging from implicit to explicit. Then the mediator calculates the number of hints indispensable for the learner in order to respond appropriately to the particular item. Also, in an interactionist approaches to DA, any evaluation of variation in learners over time would have to include both the quality and quantity of assistance (Poehner, 2008). In the present study attempt was made to investigate the effect of the interactionist model of DA on the learners' grammatical English relative pronouns through a sandwich format.

Mediated Learning Experience (MLE)

Feuerstein et al. (1988) describe the mediated learning experience (MLE) as a procedure through which external stimuli do not influence directly on the organism but are adjusted through usually

an adult mediator, who frames order on the stimuli to make assure that the relations between specific stimuli will be experienced in a specific way. Sternberg and Grigorenko (2002) express that the mediator not only refines the stimuli or task but also influences the learner by provoking him or her to a higher level of curiosity and to a level at which structural cognitive changes can occur. While differences are apparent between Vygotsky's and Feuerstein's theories both researchers understand mediation and assistance as the psychological part of cultural transmission (Poehner, 2008). As Lantolf (2007) posit, the MLE comprises from several significant components, including feelings of competence, ability to self-regulate, and the internalization of general learning principles that guide the individual in 'learning how to learn. Furthermore, the mediator must carefully select culturally determined stimuli for presentation to the individual. This enables the learner to easily inculcate the cultural practice one is taking part in with the mediator. In order to further extend current abilities to prospective performances, the individual must extend what has been internalized by expecting outcomes which are probable to result from certain actions (Sternberg & Grigorenko, 2002).

Empirical Studies in Dynamic Assessment on the EFL Context

On the EFL context in Iran the following researchers have conducted their studies to assess the effect of DA on the Iranian EFL learners. Jafary et al. (2012) investigated the effect of dynamic assessment on learners' syntactic knowledge. The results showed that at a 0.05 level of significance the mean of experimental group was more than the mean of control group for different scores. Also, Pishghadam et al. (2011) investigated the effectiveness of using a computerized dynamic reading comprehension test (CDRT) on the Iranian EFL students. The results illustrated that providing mediation in the form of hints contributed significantly to the increase of students' scores, and consequently to the improvement of text comprehension. In another study conducted by Zoghi and Malmeer (2013) attempt was made to explore the effect of an interactionist model of DA on the Iranian EFL adult learners' intrinsic motivation. The results indicated a significant difference between the two groups namely experimental and control group in terms of their amount of intrinsic motivation. The experimental group showed a high intrinsic motivation due to the interactionist model of DA.

RESEARCH QUESTIONS

This study was designed to investigate the possible effect of interactionist dynamic assessment on students' grammatical English relative pronouns and the degree of the effect that DA can have with respect to the learners' age. Thus, the following research questions were proposed:

Q1: Is there any significant difference between teenagers and adults performance in grammatical English relative pronouns when a DA procedure is used?

Q2: Does the interactionist dynamic assessment based on a sandwich format promote the learners' grammatical English relative pronouns?

METHODOLOGY

Participants

In this study the three aspects of the sandwich format of dynamic assessment were used with 60 EFL students in Navid Language Institute in Shiraz, Iran. To this end, 30 learners were randomly selected from the adult department and the rest were from the teenager department. All the participants were basically studying the Top Notch series books for the purpose of learning English better and achieving higher degrees in their education.

Design of the Study

The design of the study was based on an experimental design accompanied with pre-test and post-test comparison groups. Also the three aspects of a sandwich format namely, pre-test, mediation, and post-test were used. As poehner (2008) clearly states, in sandwich format a mediation phase is sandwiched between pre-testing and post-testing. As such, in this study the researchers attempted to help the students in order to see the effect of the interactionist model of dynamic assessment. Also, attempt was made not to disclose the answers explicitly but to provide them with hints implicitly. Consequently, the performance on the post-test was compared to that of pre-test so as to see how much improvement in English relative pronouns emerged.

Corpus

For the purpose of data collection on the students' ability in relative pronouns the researchers used the exercises in Navid Language Institute students' books.

Instruments

In this study, 40 multiple choice items of relative pronouns were extracted from the standardized TOEFL[®] test to be implemented as the questions of the study. The researchers administered two different but equivalent grammatical English relative pronouns tests in the pre-testing and post-testing stage. To this end, 20 items were administered in the pre-testing stage and the rest were administered in the post-testing stage.

Procedures

Six classes in Navid Language Institute in Shiraz, Iran (three from the teenager's department and three from the adult's department) were randomly selected and attempt was made to equate the number of students in each class for the purpose of having an equal sample size in each department in order to be able to compare the mean scores of the groups. To this end, in each department 30 students were randomly selected as participants of the study. The researchers scheduled to implement the three stages of sandwich format through the interactionist DA. To this end, two tests on grammatical English relative pronouns were prepared to be implemented in pre-test and post-test stage. The three stages are as follow.

In the pre-test stage as the first stage the students in both groups were given some question in terms of grammatical English relative pronouns and were asked to answer them. The questions were all in multiple choice formats. Then the researchers carefully corrected learners' papers obtained from the students and tried to provide individual comments and explanations to the students for their errors of grammatical English relative pronouns.

In the second stage, the researchers, who adopt a mediator role gave feedback, explanation through interaction and provided hints to them from implicit to explicit.

Finally in the last stage a post-test was administered. In this stage the questions were equivalent but different to that of the pre-test stage so as to compare the learners' improvement in grammatical English relative pronouns in both teenagers and adults' group. Then, the data were submitted to Spss for two independent samples of t-test between the groups.

RESULTS AND DISSCUSSION

In order to delve into the research questions the three aspects of the sandwich format through interactionist DA was administered to the students in both groups. Then the descriptive statistic was used on both groups. The results of descriptive analysis are illustrated in Table 1. As can be seen from the result, in the pre-testing stage both groups were nearly homogeneous with respect to their knowledge of grammatical English relative pronouns. In addition, there was no significant difference between teenagers and adults in the pre-testing stage with regard to their mean scores. Moreover, as can be seen from Table 1, in the post-test stage the teenagers showed improvement in their grammatical knowledge of English relative pronouns in comparison to adults.

Table 1: Descriptive statistics: Results of pre-test post-test scores in both groups

Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-Test Teens	30	14.317	2.78456	.45432
Pre- Test Adults	30	14.325	3.42567	.32156
Post-Test Teens	30	17.750	2.65461	.45432
Post-Test Adults	30	16.525	3.31165	.37654

Table 2 illustrates the result of the pre-testing stage. Regarding the pre-testing stage the independent t-test between teenagers and adults was conducted. As can be seen from the results, both groups are nearly equal before mediation. Then, another t-test was conducted on both groups in the post-test stage in order to reveal the amount of improvement in learners' grammatical English relative pronouns. To this end, Table 3 indicates the results of independent sample t-test pertained to the post-test scores in both groups. Independent sample t-test illustrates a significant difference of .108, $t(60) = 1.575$, $p > .05$. Also, the eta square is .02 which is small.

Table 2: Inferential statistics (Results of independent-sample t-test for pre-test)

	Levene's Test For Equality of Variances								
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.423	.506	.000	60	1.000	.0006	.7776	-	1.2306
Equal variances not assumed			.000	66.875	1.000	.0006	.7770	.12306	1.2339

Table 3: Inferential statistics (Results of independent-sample t-test for post-test)

	Levene's Test For Equality of Variances								
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	2.423	.108	1.575	60	.107	1.024	.630567	-	2.23065
Equal variances not assumed			1.575	54.575	.108	1.024	.630567	.23065	2.23239

The findings of this study would be discussed with respect to two main objectives of the study that the researchers intended to investigate. At first, the effect of DA on learners' grammatical knowledge of English relative pronouns then the effect of DA on learners' age would be discussed. The results obtained from the comparison of the pre-testing and post-testing stage in terms of their mean scores revealed that both adults and teenagers improved their performances through the use of an interactionist model of DA based on a sandwich format. The results obtained from the present study are consistent with the other studies indicating the positive effect of DA on the EFL learners (eg. Ableeva, 2008; Jafary et al., 2012; Lantolf & Poehner, 2004; Pishghadam et al., 2011; Zoghi & Malmeer, 2013).

The current study also illustrated that learners in different age groups were not influenced by DA to the same degree. In this study, it was obvious that the teenagers would benefit more than the

adults when an interactionist model of dynamic assessment based on a sandwich format was conducted in order to evaluate learners' grammatical English relative pronouns. A very lucrative interaction which happened between the teenagers and the researchers led the teens to gain more from this procedure. One possible explanation might be regarded as the behavior that the teens have in the process of interacting with the examiners because they are more lenient in accepting their mistakes in comparison to the adults. In contrast, adults seem to benefit from the controlled standardized teaching hints and techniques. Furthermore, the findings could be explained from Piaget's view of intellectual learning. For Piaget, language development is the result of gradual promotion of general intellectual skills. As adults have more developed intellectual system it is probable that they would benefit cognitive processes including standardized strategies more when they are learning a language than teenagers that their intellectual capacity is not as developed as adults and are more susceptible to interact with others.

CONCLUSION

This study attempted to investigate the effect of an interactionist model of dynamic assessment on the EFL learners' grammatical English tenses. The study revealed that an interactionist dynamic assessment based on a sandwich format plays a major role on the improvement of learners' grammatical knowledge of English relative pronouns. In other words the findings of this study propose practical usages for classroom learning. The learners in the current study had positive attitudes toward learning English relative pronouns through the interactionist model of dynamic assessment as was clearly shown in their posttest scores. To this end, the use of dynamic assessment in classrooms can set the ground for better instruction and assessment which consequently promotes the quality of education. The current study is also implicated that through the incessant interaction of teachers and students, students can be informed of their own weaknesses and their strengths. Teachers can also help them for their breakdowns in the course of teaching. The results also revealed that the adult learners will not benefit DA to the extent that the teens do. The results gained from this study can be of paramount importance for both EFL teachers and students. EFL teachers should have access to the finding of this study to provide an appropriate and useful way of integrating teaching and testing; and also EFL learners required to be informed that instruction through assessment help them to become aware of their weaknesses and strengths. As such, learners have this opportunity to mitigate their weaknesses in subsequent evaluations.

Not surprisingly, DA even with all its practical restrictions has been regarded as relative solution to the drawbacks of traditional static tests. The results of this study suggest that further research on the effects of mediations in dynamic assessment whether interactionist or interventionist are warranted.

Conducting needs analysis during a course and having classes with a few number of learners help teachers implement the features of dynamic assessment and reach the potential development of their students as much as possible.

Limitations of the study

Although this study informed EFL teachers regarding the integration of instruction and assessment in the course of education, it suffers from some limitations. First, variables such as gender and personal variables were not taken into account so as to have a good picture of the obtained results. Second, the number of the participants in this study was comparatively small for the results to be generalized to the population of EFL learners in Iran. Third, this study was mainly focused on the interactionist model of DA and the interventionist model was not emphasized. Therefore, other researchers interested in DA can benefit from these issues to fill the gap emerged in the literature.

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