

The Collaborative Dimension of the Learner's Language Development: the Metaphor of Enrichment for EFL Learners' Oral Performance

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ABSTRACT

Feuerstein's Instrumental Enrichment Program (FIEP), presented by Feuerstein in 1950s, is a program designed as an attempt to improve the learners' cognitive functions. Professor Feuerstein and his colleagues' proposal was firstly developed in order to modify the deficiencies in children's thinking skills. The model, afterwards, has been applied in many different fields prospecting for the learners' development. Two major elements of Instrumental Enrichment Program, according to Feuerstein, Rand and Rynders (1988), are 1) a set of materials (the instruments) and 2) an elaborate teaching system based on mediated learning experience. This paper is the report of the researcher's attempt to diagnose the EFL learners' problems in oral story narration, in the first place; then, to design a program based on FIEP, to enhance the learners' oral ability in a short period of an academic semester. Reorienting teachers' roles as mediators and highlighting their roles in development of learners' independence and autonomy, the current study was an attempt to investigate the impact of enrichment program devised on the basis of Feuerstein's IE on EFL learners' speaking performance.

KEYWORDS: Feuerstein's instrumental enrichment; mediation; oral performance

INTRODUCTION

Speaking is considered a main language skill that students should improve; though, it has been widely noticed that they face many difficulties in speaking English (Hosni, 2014). In order to deal with the learners' problems, the first step by all means is diagnosing the problem. After the diagnosis, an appropriate program should be devised to resolve the difficulties. FIEP is largely based on Vygotsky's Zone of Proximal Development (ZPD) and the concept of scaffolding: "providing the child with a great deal of support during the early stages of learning and then diminishing support and having the child take on increasing responsibility as soon as she or he is able" (Slavin, p. 46, 2006). Vygotskyan approach to instruction emphasizes scaffolding, with students taking more and more responsibility for their own learning. Instrumental Enrichment (IE) program is, in fact, Feuerstein's education plan which serves as the basis for an individualized cognitive education designed to strengthen the development of the specific cognitive functions. This program, according to Poehner (2005), was designed to foster the development of the specific cognitive functions which are found to be the sources of difficulty.

Meir (1994) pinpoints that the significance of the FIE program largely originates from the mediational role of the trained teacher. He emphasizes that Feuerstein's theory of Structural Cognitive Modifiability elaborates on defective learning resulting from insufficient Mediated Learning Experiences (MLE) before school years. He contends that well trained teachers can amend the cognitive development deflection by providing mediated learning experiences applying specially designed. He maintains when the well-designed instruments' exercises appropriately used, the students are led and they develop the ability to utilize the learned principles when and where needed. Therefore, as a result of the IE the learner becomes an active student who is keen to master in academic tasks.

Feuerstein's programs were based on Piaget and Vygotsky's developmental theories as Todor (2013) pinpoints. Further, Todor maintains that Feuerstein's concern about analyzing the operation of intelligence and also his concern about intelligence as a human resource which is possible to be enriched and improved. Feuerstein's

psychological theory, in turn, is founded on three concepts of learning potential, cognitive modifiability and mediation as Todor pin points.

By learning potential Feuerstein and Falik (2013) refer to a sum of essential latent behaviors which can be manifested through special and suitable interventions. Cognitive modifiability attributes to humans ability to modify their own structures of cognitive functioning to fit to the situation which may arise in their lives. Modifiability, to Todor (2013), is a response to internal changes can be guided by someone (a mediator) from outside. Todor (2013) defines mediation as the intentional and active intervention provided by the teacher to the learner to develop the learner's ability and finally to reach, gradually, a level of autonomy. According to Feuerstein and Feuerstein (1999), a mediator is different from a teacher in that the mediator provides an appropriate stimulus and considering the response of the learners interacts with them. The interaction between the mediator and the learner continues until either of the learner or the mediator becomes contented. Feuerstein's research revealed that the key to meaningful instruction for all children is the mediated relationship. IE is one of professor Feuerstein's project for accomplishing his objectives.

Feuerstein's programs of IE and MLE have been supported and studied by so many practitioners and researchers in various fields (For example, Presseisen, & Kozulin 1992; Rand, Tannanbaum, & Feuerstein, 1979; Skuy, Gewer, Osrin, Khunou, Fridjhon, & Rushton, 2002; Tzuriel, & Kaufman, 1999). In ELT, his ideas have been also practiced (such as Burden, & Nichols, 2000; Burden, 1987; Montgomery, 2008).

The impetus for the current research stemmed from increasing attention researchers in the field of second language learning and teaching have been giving to the key role of scaffolding which is based on Vygotsky's mediational approaches and his sociocultural approach to psychology and psycholinguistics. The IE program designed by the researcher aimed at investigating the following research question:

Can instrumental enrichment program enhance the EFL learners' oral performance?

THE STUDY

The participants of the study included 10 EFL junior university students studying in the first academic semester in 2016. The study was carried out applying a quasi-experimental: pretest-mediation (IE program)-posttest design. In order to design and prepare the instruments to scaffold the learners' speaking performance, it is worth to refer to Burn (2012). She believes that it is valuable for teachers to be knowledgeable about what speaking competence involves and how different aspects of speaking competence relate to each other (p: 167). According to Burn, second language speaking competence encompasses knowledge of language and discourse, core speaking skills, and communication and discourse strategies. Burn maintains that knowledge of language and discourse includes knowledge of sound patterns, grammar and vocabulary and understanding the structure of connected speech. Core speaking skills holds the ability to process speech pace to enhance fluency. For communication strategies, the learners are required to be able to use cognitive strategies whenever their language knowledge is not sufficient to cope with the problem, metacognitive strategies as well as interaction strategies. Therefore, given the abovementioned components of the speaking competence, the mediational instrument for the current study was developed. Mediation was provided in three different phases of pronunciation, accuracy and fluency.

INSTRUMENTATION

In an attempt to investigate to answer the research question the following instruments were devised and used:

ASSESSING SPEAKING

Assessing speaking is demanding and difficult as there are a lot of factors affecting one to be able to speak a language (Buck, 2001). Something which is very important in assessing speaking, as Buck emphasizes, is that our test scores to be accurate and suitable for our purposes. Hymes (1972, as cited in Buck, 2001)'s SPEAKING framework was then considered. The acronym SPEAKING stands for Situation, Participants, Ends, Act sequence, Key, Instrumentalities, Norms, and Genre. According to Buck (2001), this will help the test developer to describe the test construct. Structured speaking (Buck, 2001, p. 48) task-based approach (Buck, 2001, p. 42) was applied for this study. The type of speaking task should be determined, firstly. The model selected and designed for the current study was based on Phone Pass tasks available in www.ordinate.com. Taking the format of Phone Pass tasks, two forms were developed and used as the pre and posttest.

DEVISING IE AND THE IMPLEMENTATION

Feuerstein's IE is a program through which his mediated learning theory is operationalized and cognitive functions are addressed (Todor, 2013). In other words, the participants in the program are encouraged to do exercises or tasks while overcoming difficulties. Feuerstein, Rand and Rynders (1988) maintain that the IE program is an intervention

program which is designed to remove low and deficient cognitive functions. The information needed to devise IE was provided based on Feuerstein's Learning Potential Assessment Device(LPAD) and MLE concepts. The goal of the Feuerstein's approach is to facilitate autonomous and independent learning. This goal can be achieved, according to Feuerstein, by using the three techniques illustrated in the triangle.

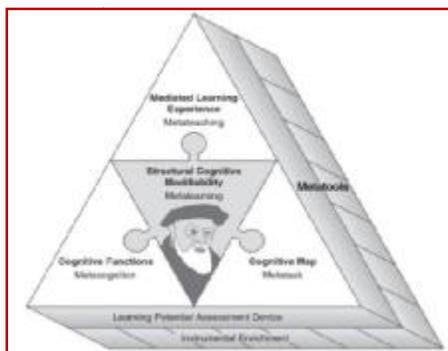


Figure 1. The operational techniques to ensure cognitive modifiability occur in learners (Mentis, Dunn-Bernstein, Mentis, & Skuy, 2009, p. xii)

Feuerstein believes that changing occurs in learners' cognitive function if the MLE's important criteria are appropriately used. Then, cognitive functions are possible to be modified if the tasks are adopted applying the cognitive map illustrated in Figure 1. Therefore, as Feuerstein clearly points out using the correct and appropriate task along with the correct and appropriate kind of interaction, it is possible to make change in learners' cognitive development.

Feuerstein's approach is then founded on the basis of the tree techniques (shown in the figure), which in its turn makes the basis for Feuerstein's two programs. The first program consists of one assessment package called LPAD. This is a kind of dynamic assessment focusing on individual learner's potential for leaning applying MLE. Feuerstein's thinking skills program of IE is the second program. Both first and second program are centered on structural cognitive modifiability which rely on MLE to cause a change applying the tasks in cognitive map. The first and second programs are connected to the Feuerstein's theory by utilizing appropriate tasks depicted in the figure. The current study was also founded on the Feuerstein's techniques and the IE was devised for three phases:

PHASE 1 (PRONUNCIATION)

In Phase 1, focusing on pronunciation, the following program was designed addressing cognitive modification in order to bridge learning through Feuerstein's thinking skills:

Taking Feuerstein's organization and comparison models of thinking skills, the pronunciation of vowels such as [ʊ/, /U/], [ʌ/, /ɑ /, [æ/, /ə/], consonants of [dʒ/, /g/], [ʃ/, /tʃ /], [k/, /s/], and diphthongs of [əʊ/, /aʊ /], [ɪə/, /eə/] were chosen to be mediated during IE Phase 1. There was an attempt to draw the learners' attention to the contrast and similarities in the pronunciations of the pairs.

PHASE 2 (ACCURACY)

In Phase 2, aiming at mediating the learners' accuracy in speaking, the analysis and synthesis, problem solving, relationships, instructions, and scaffolding models of Feuerstein's thinking skills were considered to apply for mediations. Comparing simple past and present perfect, English sentence word order, articles, relationships between tenses and their usage, and scaffolding some other grammatical problems diagnosed during the program. Phase 2 was administered in 3 sessions, 30-45 minutes each.

PHASE 3 (FLUENCY)

In Phase 3, in order to enrich the learners' fluency, the IE was centralized on the base of the Feuerstein's thinking skills of categorization, analysis and synthesis, problem solving, relationships, temporal concepts, instructions, and scaffolding and was then devised. One audio talk was taken from British Council (<https://learnenglishteens.britishcouncil.org/interactive-types/audio/term>) was selected.

2.2. Procedure

In order to diagnose the students' speaking performance, the pretest of speaking was administered at the outset. The students were tested in private sessions. The whole sessions' dialogues were recorded for grounded

analysis. The enrichment program was then carried out in three phases of pronunciation, fluency and accuracy. There was an attempt to take into account Feuerstein's signified mediational features of intentionality, reciprocity, and transcendence during the program. The mediation in IE program is shaped by the intention to mediate to the mediatee. The intention is shared by the mediatee, according to Feuerstein and Feuerstein (1999). The researcher tried to turn the implicit intention into explicit one by stating "I want you to...." (as it is recommended by Feuerstein and Feuerstein to implement intentionality and reciprocity during mediations). The mental, emotional and motivational state of mediation were also attempted to be transferred.

It is worthwhile to refer to Oxford (2011, p.27), "strategies can be learned through mediations or assistance". She emphasizes that language learning strategies are to be developed in learners as not all students are expertise in employing strategies. Oxford continues that IE program was devised to help mediating mental structures and teach strategies applying mediations by an expert instructor. Moreover, IE programs help learners draw out general rules and principles from tasks and then, as Oxford pinpoints, transfer the learner materials to other tasks.

IE PROGRAM

The enrichment program was implemented in individualized sessions in three phases of specifying the enrichment of learners' pronunciation, accuracy and fluency. In Phase 1 which took three sessions (30 mins each), the learners were provided with mediations regarding the pronunciations of some selected pairs of consonants, vowels and diphthongs. Given the participants' level, the Cambridge English preliminary vocabulary list was selected. The words including the selected sounds were chosen and listed and mediations were provided accordingly. In Session one, vowels of [/Ū/, /U:/; /Λ/, /ɑ /; /æ/, /ə/], in comparative forms were practiced; in other words, the learners' attention was drawn to focus and consider how differently each pairs are pronounced while practicing and producing the sounds. In the second session of the pronunciation phase, the consonants of [dʒ/, /g/; /ʃ/, /tʃ /; /k/, /s/; /sl/, /z/; /ju/, U:] which were selected, were focused. The learners' attention drawn to the difference each pairs have in pronunciations as well as variety of pronunciations they might have in different words. In the third session of pronunciation phase, scaffolding was focused on the selected diphthongs of [/əʊ/, /aʊ/; /iə/, /eə/].

In Phase 2, which took 3 sessions, the mediation was centered on scaffolding the learners' grammatical problems. In Feuerstein's instrument of numerical progressions, focusing on identifying rules that govern the repeated patterns occurring between events, tenses were taken into account for this phase: Simple past and present perfect. The learners' attentions were drawn on different usages of the tenses. They were encouraged to narrate some events. They were also assisted in correct grammatical usages of tenses. In the second session of Phase 2, the students were provided with mediations on word other of English sentences and how it is different from that of their native language. The third session of Phase 2, definite and indefinite articles were addressed. Given Feuerstein's instrument of illustrations (which involves identifying that something has gone wrong, analyzing why it has gone wrong, and finding solutions to make it right), the mediations were provided illustrating the problem(s) so that the learners were encouraged to identify their problems and they were assisted to solve cope with the problems.

In Feuerstein's instrument of instructions of thinking skills, two reciprocal processes of encoding (giving) and decoding (receiving) information were considered in order to devise the enrichment program to enrich the participants' fluency for Phase 3. Since the fluency of the participants was concerned, the program was implemented as follows:

The audio tape of "university and education" was selected and downloaded from British council. The 5 minute audio talk was divided into three sections. At first, the students listened to each section three times drawing their attention to the formulaic language units (chunks). Next, the learners at the automatization were encouraged to practice repeating the audiotape along with the transcript. The practice continued until the learners felt enough control over the speed, pausing, and lexis. After that, the learners attempted to say what they practiced while their voices were recorded. They were then asked to compare their recorded speech with that of the native speaker. The learners were also encouraged to talk on similar topics. The exchanges were also recorded and analyzed. Phase 3 was administered in 4 sessions 30-45 minutes each.

After the IE program which lasted 10 sessions for each participant during one academic semester (3 months), the learners' speaking was tested applying one parallel speaking test to the pretest. The tests were administered in private sessions and the dialogues were all audiotaped. The learners' scores were recorded by two raters and the average was taken and listed. The participants' speaking performance was quantified and scored based on Cambridge English Assessing Speaking Performance Level B1 available at: <http://www.cambridgeenglish.org/images/168618-assessing-speaking-performance-at-level-b1.pdf>.

RESULTS

Two very detailed checklists were devised to compare the participants' speaking performance before and after the IE program. All sections have been defined in details. Therefore, the quantifiable check lists were carefully designed for all six tasks included in the pretest as well as posttest. The learners' oral tests were audio taped and then were transcribed for evaluation as well as scoring. For Task 1, which was focused on pronunciation, the score sheet included three subsections of vowels, consonants, and diphthongs. Table 1 depicts the students' scores in pre and posttest in Task 1.

Table 1. Task 1: Pronunciation

Students	Pretest (Total scores for each section was 10)			Posttest (Total scores for each section was 10)		
	Vowel	Consonant	Diphthong	Vowel	Consonant	Diphthong
	1	4	4	3	8	8
2	2	3	1	5	6	5
3	6	7	6	8	9	9
4	6	5	4	8	8	9
5	7	9	7	9	10	10
6	4	5	4	8	8	7
7	3	3	3	6	7	7
8	6	7	6	8	10	9
9	2	3	2	4	6	6
10	6	9	6	8	10	9

In order to measure the tests to be comparable, 10 words including the selected vowels, 10 words including the selected consonants and 10 words including the selected diphthongs were chosen. The transcriptions of the pretest and posttest sessions, which were administered in private sessions, were used to score the pronunciation sections. As the results shown in Table 1 indicate, all of the students outperformed in the posttests. Statistically, the differences were also detected through SPSS utilizing Paired Sample TTest presented in Table 2.

Table 2. Statistical data analysis for Task 1

Variables	Mean	Std	Paired Sample Correlation	df	Sig.	Paired Sample Test (Sig.)
Pair 1 (Vowel Pre)	7.60	1.83	0.88	9	.001	0.000
Pair 2 (Vowel post)	7.20	1.62				
Pair 1 (Consonants Pre)	5.50	2.36				
Pair 2 (Consonants Post)	7.80	1.68	0.75		.012	0.001
Pair 1 (Diphthongs Pre)	4.20	1.98				
Pair 2 (Diphthongs Post)	7.90	1.59	0.91		0.000	0.000

According to the results shown in Table 2, the students' performance in posttest indicates significant improvement. The Sig value of .001, 0.12, and 0.000 indicate that the correlations are positive and meaningful concluding that the IE program positively affected the participants' pronunciation skill. For the second phase, the post test results are shown in Table 3.

Table 3. Task 2: Accuracy

Students	Pretest			Posttest		
	Tense/20	Word order/24	Article/20	Tense /20	Word order/24	Article/20
1	8	12	10	16	14	14
2	4	8	8	12	12	10
3	12	14	12	18	16	16
4	12	12	14	18	20	16
5	18	18	12	20	20	18
6	11	10	9	16	12	13
7	4	8	6	10	14	10
8	18	18	16	20	22	19
9	5	6	10	10	12	11
10	12	14	14	18	20	19

In Table, the results of the three sections of the task 2 focusing on tense, word order and article are presented. Twenty sentences including 20 verbs (in the past form), 24 sentences' word order and 20 article usage of the words were taken as the indicators of the participants' accuracy performance in the pre and posttests of speaking. The learners' audio recorders' transcriptions were applied to score their performance. The results apparently indicate the participants' performance improvement in the posttest. The data were statistically examined applying Paired Sample TTest and the results are shown in Table 4.

Table 4. Statistical data analysis for Task 2

Variables	Mean	Std	Paired Sample Sig. Correlation	df	Paired Sample Test (Sig.)
Pair 1 (Tense Pre)	10.40	5.16	0.93	9	0.000
Pair 2 (Tense Post)	15.80	3.82	0.000		
Pair 1 (Word order Pre)	12.00	4.10	0.85		0.000
Pair 2 (Word order Post)	16.20	3.93	0.002		
Pair 1 (Article Pre)	11.10	3.07	0.91		0.000
Pair 2 (Article Post)	14.50	3.59	0.000		

As the statistical data analyses results shown in Table 4 indicate, the participants' performance in the pretest improved significantly after the IE program. The Sig value of 0.000 for all sections (less than 0.05) indicates the significance of difference of the two means. The third phase of the IE program focused on the improvement of the participants' fluency. Therefore, the pretest and posttest were administered prior the IE program and after the program to investigate the effect. Two sections of the pretest and posttest (section 4 and 5) were considered to measure their fluency. The utterances were timed and based on the time lasted for each utterance to be produced, they were scored. The total score for each test was 25. The results are shown in Table 5. The statistical Data analyses are also shown in Table 6.

Table 5. Task 3: Fluency

Students	Pretest 25	Students 25
1	14	20
2	8	13
3	14	21
4	16	22
5	20	25
6	14	20
7	8	15
8	10	19
9	5	10
10	15	22

Table 6. Task 3 Fluency

Variables	Mean	Std	Paired Sample (Sig) Correlation	df	Paired Test (Sig.)	Sample
Pair 1	12.40	4.52	0.96		0.000	
Pair 2	18.70	4.62	0.000			

The results shown in Table 5 and 6 (Sig 0.000) indicate significant difference and improvement in participants' fluency score from pretest to posttest.

DISCUSSION AND CONCLUSION

For an IE to achieve positive effects, according to Sternberg (1983), three variables are absolutely essential: the number of instruments or hours involved in practicing, the teacher training or experiences, and the sufficient bridging. In the current study, the IE program included about 300-350 minutes for each participant. The dialogues were all audiotaped and transcribed for grounded analyses. Given the original objective of IE, as Burden (1987) pinpoints, each instrument was directed to one specific aspect of cognition which taken to be crucial for the process of learning to learn. Following Feuerstein's learning model, the instruments were broken down into the clusters of some smaller stages developed to guide the learners from a simple elementary level to complex higher-order thinking.

English language learners are also required to have direct exposure to learning stimuli, referring to Feuerstein (2003), to promote their capacity in learning. Therefore, in order to improve the EFL learners' speaking skill, as found to be in need of promotion, the participants were widely provided with ample stimulus during the IE program. In Phase 1, substantial stimuli addressing the learners' pronunciation of selected vowels ([/ʊ/, /U:/; /ʌ/, /ɑ /; /æ/, /ə/]), consonants [dʒ/, /g/, /ʃ/, /tʃ /; /k/, /s/, /z/, /ju/, /U:/] and diphthongs [əʊ/, /aʊ /], [/ɪə/, /eə/] were given. The list of the frequent words was taken from Cambridge English preliminary vocabulary list. The participants were also encouraged to study and practice the word list on their own as well.

According to Feuerstein, Rand and Rynders (1988) learners should be given learning opportunities in order to correct weaknesses and deficiencies in cognitive functions. They also emphasize that the basic concepts, vocabulary, operations, and relationships functioning as prerequisites for representational, relational and operational thinking should be taught. Accordingly, in Phase 2 of the IE program, in order to scaffold the participants' accuracy in speaking, the learners' attention was directed toward the relationships and the concepts of tenses and word order. Their dramatic improvement specified the role of intervention during the enrichment program. It can be concluded that general thinking skills, as Maxcy (1991) maintains, or strategies relevant to different tasks can be instructed through Feuerstein's IE. The results of the current study in line with the other studies found in literature (e.g. Plunkett & Allison, 2014) highlight the goals of FIE in providing teachers with mechanisms through which cognitive processes change can occur.

The third essential element of a successful and effective IE, to Sternberg (1983), is adequate bridging. Effective bridging make students figure out that a certain concept with which they are engaged during the intervention may be encountered in other situations or areas in their learning situations or out in their personal lives (Maxcy, 1991). The learners in the present study were provided with great opportunities to practice the learned strategies. It is worth to refer to Feuerstein who believes that the concept of transcendence emphasizes on the point that development extends well beyond any given task (Poehner, 2005). The transcendence (bridging) was tested in task 6 of the pretests and posttests in which the participants were asked to express their opinions on general topics. The change in their performance was obviously observed.

The teachers are then suggested to devise the appropriate instruments taking into account the learners' needs as the implementation of suitable enrichment programs can be a movement toward removing the learners' problems in their learning fields. In addition, the appropriate IE programs aiming at modifying the learners' thinking skills may be effective to produce reflective and insightful thought processes which can be in turn helpful in applying appropriate strategies to improve learning.

Conflict of interests

The authors declare no conflict of interest.

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