The Impact of Implicit vs. Explicit Grammar Teaching through Scaffolding on Iranian Learners' Speaking Motivation and Self-Efficacy: ESP Students in Focus

Ali Akbar Moeen[1], Daryoush Nejadansari[2*], Azizolla Dabaghi[3]

1- PHD student, Department of Foreign Languages, University of Isfahan, Isfahan, Iran

2- Assistant Professor, Department of Foreign Languages, University of Isfahan, Isfahan, Iran

3- Associate Professor, Department of Foreign Languages, University of Isfahan, Isfahan, Iran

* Corresponding author's Email: D.nejadansari@fgn.ui.ac.ir

Abstract: The present study was conducted to investigate the role of implicit vs explicit grammar teaching through teacher scaffolding in the improvement of speaking motivation and self-efficacy among Iranian pre-intermediate EFL learners. To this end, In line with the objectives of the present study, a quasi-experimental pre-test post-test control group design was used. 90 ESP students of architecture and art studying in Azad University of Yazd participated in this study through available sampling. These participants were divided into three groups (explicit, implicit, and control groups). The research instruments employed to collect data for this study were Oxford Placement Test, Hogan and Pressely's (1997) Guidelines for Teacher Scaffolding, Gardner's Attitude/Motivation Test Battery, and General Self-efficacy Scale. The obtained data were analyzed through one-way analysis of variance (ANOVA) using SPSS software. The obtained results indicated that using scaffolding techniques accompanied by explicit/implicit grammar instruction had a significant effect on self-efficacy and motivation of Iranian pre-intermediate EFL learners. Moreover, it was indicated that that using scaffolding techniques accompanied by explicit grammar instruction and implicit grammar instruction were equally effective on self-efficacy and motivation of Iranian pre-intermediate EFL learners. This confirmed that scaffolding techniques have significantly affected self-efficacy and motivation of learners. This study has some implications for teachers and students involved in EFL context.

Keywords: Explicit Grammar, Implicit Grammar, Motivation, Scaffolding, Self-Efficacy

Introduction

Speaking is considered to be one of the most complex of four language skills usually taught in second language learning environment. This productive skill of language is often used as a tool to make students involved in lessons (Harmer, 2011). Besides macro skills which are in relation with speaking, micro skills should be considered while talking about speaking and speaking instruction. One of the most crucial micro skills in every language is grammar. This study dealt with teaching speaking skill and that is why it has been introduced and analyzed more or less separately from other skills.

In line with the speaking skill and facilitation of its learning, the notion of scaffolding can be noted. Scaffolding refers to the particular kind of help, assistance, and support that enables a learner to do a task which s/he cannot manage individually and it can make the learner more competent enabling him to carry out other similar tasks independently in the future (Maybin, Mercer, & Stierer, 1992). Mercer (1995) described scaffolding as the particular sensitive and active support provided by teachers during the process of learning. Generally speaking, it is a supportive style of teaching that assists students in achieving a task with gradually less intervention from the teacher.

It has been noticed that teaching speaking skill has attracted the attention of many researchers and course designers. The problems with which foreign language learners encounter urged the researcher to investigate the impact of teacher scaffolding and different supports during speaking classes to enhance the ability of the learners in their speaking ability. In this regard, one problem noted by the present researcher was that regular practices in speaking classes have been used for long time in Iranian EFL classes; however, not much useful outcomes can be seen among the EFL graduates in terms of their speaking ability. Operationalizing teacher scaffolding guidelines provides a two-fold positive effect for the learners: first the learners make use of the knowledge and experience of the instructor and second the students will be more motivated to get engaged in class activities. This is due to the fact that a wide variety of techniques and practices can be applied in speaking classes and the class will be inspiring and motivating for the participants.

Accordingly, when EFL learners get actively engaged in learning activities on the part of teachers, they would become better learners. The atmosphere of speaking classes at Iranian institutes and universities, however sometimes get boring and demotivating for Iranian EFL learners. Thus providing a warm and desirable climate in classrooms can enhance learning, especially in speaking classes. Planting teacher scaffolding techniques in language classes would motivate learners to become more engaged in learning process. So, this study was aimed to try to shed more light on the concept of scaffolding as a teaching practice and investigated if applying scaffolding techniques in classes can lead to better outcomes. As the existing body of research shows and to the knowledge of the researcher, there is not enough research in this regard in the Iranian context.

Additionally, the notion of whether explicit or implicit instruction was more efficient pursued by this study. Considering the fact that, the majority of researchers have found that explicit grammatical instruction is better than implicit ones on difficult rules (Bowles & Montrule, 2008; Ellis, 2008). Hulstijn & Graaff's (1994) debated that explicit instruction was more efficient on complex rules than simple ones, this argument was because simple rules were easier to input in learners' consciousness without the assistant of explicit instruction (Paradis, 2004; Ellis, 2005, 2009).

Some studies have also been conducted in this regard. For example, Alawiyah and Dan Pengajaran (2018) studied the correlation between students' self-efficacy and their speaking achievement. Ninety-six English students participated in the mentioned study. A questionnaire was applied in order to measure students' self-efficacy; besides, a speaking test was used to measure speaking achievement of the intended participants. The findings showed that there was a significant positive correlation between self-efficacy and speaking achievement of the students. In addition, this study also illustrated that students' self-efficacy could affect their speaking achievement. In a more recent work, Valencia-Vallejo, López-Vargas, and Sanabria-Rodríguez (2019) studied the effects of metacognitive scaffolding on self-efficacy and learning achievement of Field Dependent and field independent students learning math content in an e-learning context. Sixty-seven students were divided into two groups and they were exposed to pre-tests and post-tests. One of the groups participated in an e-learning context, which contained a metacognitive scaffolding structure. On the other hand, the participants in the other group

interacted within a context without scaffolding. The obtained results revealed that scaffolding could significantly improve self-efficacy and learning achievement of the students. Moreover, the findings showed that Field Dependent and field independent students had achieved similar learning outcomes. Therefore, this study was conducted in order to shed light on some dark points in this research area. Moreover, self-efficacy of the students seems to be determining factor in various aspects of language learning (Denning, 2007); however, the relationship between this variable and self-efficacy is not that much highlighted in recent studies. It is also worth noting that the role of motivation in different aspects of language learning in general and speaking in particular is not ignorable (Walqui, 2006), and there is a need to take this variable into account. Therefore, the present study sought to investigate the effect of explicit instruction as opposed to implicit instruction of grammar in scaffold classes on motivation and self-efficacy of the involved students. Based on the above-mentioned objectives, the following research questions were proposed:

1. Does using scaffolding techniques accompanied by explicit/implicit grammar instruction have a significant effect on self-efficacy of Iranian pre-intermediate EFL learners?

2. Does using scaffolding techniques accompanied by explicit/implicit grammar instruction have a significant effect on motivation of Iranian pre-intermediate EFL learners?

3. Which method (i.e., scaffolding techniques accompanied by explicit grammar instruction or scaffolding techniques accompanied by implicit grammar instruction) is more effective on self-efficacy of Iranian pre-intermediate EFL learners?

4. Which method (i.e., scaffolding techniques accompanied by explicit grammar instruction or scaffolding techniques accompanied by implicit grammar instruction) is more effective on motivation of Iranian pre-intermediate EFL learners?

Material and Methods

Design: In line with the objectives of the present study, a quasi-experimental pre-test post-test control group design was used. It was quasi-experimental in the sense that no random sampling was present in the study.

Participants: A group of 98 ESP students of architecture and art who were doing their BA program in winter 2018 in Azad University of Yazd participated in this study through available sampling. In terms of the ethics of research, the participants' consent for participation in the study was taken at the beginning of the study. Moreover, anonymity and confidentiality of their personal information were observed. The participants were homogenized using Oxford Placement Test (OPT). As a result of running OPT, 8 participants were excluded from the study. The homogenized participants were divided into three groups namely, explicit, implicit and control groups. It is worth mentioning that the selected participants were aged from 18 to 33. Considering gender, there were both male and female participants performing in each group; however, the majority of the participants were female. Moreover, the participants were surveyed regarding their linguistic background such as their L1, prior studies in English, and residence in English speaking countries. Through the investigation, the homogeneity of the

participants was proved. In fact, all the participants in both groups considered Persian to be their mother tongue. Besides the instructions provided to them in high school, the majority of the participants had not studied English in language institutes before starting their higher educations. In addition, none of the selected participants had lived in any of the English speaking countries.

Instruments

The research instruments employed to collect data for this study were Oxford Placement Test (OPT), Hogan and Pressely's (1997) Guidelines for Teacher Scaffolding, Gardner's Attitude/Motivation Test Battery, and General Self-efficacy Scale. Each instrument is described, precisely, below:

Oxford Placement Test (OPT): In order to assure the homogeneity of the participants and decide on the proficiency level of those participating in the study, the Oxford Placement Test (Allen, 2004) was administered. The test contained 200 items and two main parts. The first part dealt with the listening test including 100 items. The second part which contained 100 items of grammar was divided into two fifty-item subsections in which the participants needed to choose one of the three options provided in each sentence. For the purpose of this study, the Cronbach's Alpha reliability of the test was calculated as .80. Moreover, it was validated by expert judgment.

Hogan and Pressely's (1997) Guidelines for Teacher Scaffolding: Hogan and Pressley (1997) summarized the literature to identify eight essential elements of scaffolding instruction that teachers could use as general guidelines. These guidelines were utilized to gather the needed data. They included: 1) pre-engagement with the student and the curriculum, 2) establish a shared goal, 3) actively diagnose student needs and understandings, 4) provide tailored assistance, 5) maintain pursuit of the goal (The teacher can ask questions and request clarification as well as offer praise and encouragement to help students remain focused on their goals), 6) give feedback, 7) control for frustration and risk, and 8) Assist internalization, independence, and generalization to other contexts (This means that the teacher helps the students to be less dependent on the teacher's extrinsic signals to begin or complete a task and also provides the opportunity to practice the task in a variety of contexts). These guidelines were taken into account during the course of study.

Gardner's Attitude/Motivation Test Battery (1985): Gardner (1985) designed a test battery known as the Attitude and Motivation Test Battery (AMTB). It included items measuring all factors that affect attitude and motivation. In AMTB, the concept of attitude has been incorporated in motivation meaning that positive attitudes increase motivation. This questionnaire is a Likert-type one. Validity of this questionnaire has been checked by Lalonde and Gardner (1985) who tested and reported high internal consistency of this questionnaire. Moreover, they reported the reliability of the scale as high. In the present study, a Cronbach's Alpha reliability of .89 was obtained for the scale. Additionally, its validity was confirmed by expert judgment.

General Self-efficacy Scale (GSE): This scale which was developed and validated by Schwarzer, and Jerusalem (1995) is a self-report measure of self-efficacy. The scale has been developed to assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events. It was used in the present study to

gather the needed data on the self-efficacy of the participants. Reliability of this questionnaire has been calculated to be .76 to .90. For the GSE, the total score ranges between 10 and 40, with a higher score indicating more self-efficacy. Regarding validity of this questionnaire for the present study, a team of ELT experts confirmed the appropriateness of the scale for the purpose of the present study. Furthermore, its Cronbach's alpha reliability was found to be .74.

Procedures

In the first stage of the study, in order to check the homogeneity of the intended participants, the Oxford Quick Placement Task was administered. The participants were assigned into pre-intermediate level in terms of their obtained scores. The selected participants were categorized into 3 groups including 2 experimental groups (i.e., implicit and explicit groups) and 1 control group. The reason for such classification lies in the nature of the research in hand and refers back to the two approaches of grammar instruction. The first group was named as implicit group in which grammar was taught implicitly; the second group was named explicit group which received explicit instruction of grammar; and, to the last group, grammar was taught traditionally using deductive method.

Before the start of treatment period, all the three groups were asked to fill Gardner's Attitude/Motivation Test Battery (1985) and General Self-efficacy Scale (GSE) as the pre-test in two separate days. Then, the three groups participated in 12 educational sessions were held twice a week in 45 minutes. During the treatment, English grammar including tense and prepositions were taught the three groups by the researcher. More specifically, in the explicit group, the grammar was taught explicitly, using Hogan and Pressely's (1997) Guidelines for Teacher Scaffolding. The implicit group was taught implicitly, taking advantage of Hogan and Pressely's (1997) Guidelines for Teacher Scaffolding. However, the control group was not exposed to any scaffolding techniques. To this group, grammar was taught traditionally using deductive method. After the end of the treatment period, Gardner's Attitude/Motivation Test Battery (1985) and General Self-efficacy Scale (GSE) were filled by the three groups as the post-test in two separate days.

Results

As mentioned before, the first research question in this study was concerned with the effect of scaffolding techniques accompanied by explicit/implicit grammar instruction on self-efficacy of the participants. In order to find plausible answer for this question, a one-way ANOVA was conducted. First, descriptive statistics was run on the performance of the participants in self-efficacy post-test. Table 1 shows the results.

Table 1. Descriptive Results on the Performance of Three Groups in Self-Efficacy Post-Test

Variable	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
implicit	30	73.6333	12.52166	2.28613	68.9577	78.3090	53.00	89.00
explicit	30	71.9667	11.84813	2.16316	67.5425	76.3908	53.00	89.00
control	30	51.1000	15.22328	2.77938	45.4155	56.7845	25.00	80.00
Total	90	65.5667	16.69222	1.75951	62.0705	69.0628	25.00	89.00

The statistics represented in Table 1 show the performance of implicit ($M = 73.63, SD = 12.52$), explicit ($M = 71.96, SD = 11.84$), and control ($M = 51.10, SD = 15.22$) groups in self-efficacy post-test. However, the above-mentioned table does not represent the significance of the difference among the mean scores of three groups in post-test. Therefore, Table 2 deals with the results of one-way ANOVA run to investigate this issue.

Table 2. Between Group Comparison of the Performance of Three Groups in Self-Efficacy Post-Test

Source	Sum of Squares	DF	Mean Square	F	p.
Between Groups	9459.467	2	4729.733	26.827	.000
Within Groups	15338.633	87	176.306		
Total	24798.100	89			

As it is illustrated in Table 2, there is a significant difference between the performance of implicit ($M = 73.63, SD = 12.52$), explicit ($M = 71.96, SD = 11.84$), and control ($M = 51.10, SD = 15.22$) groups ($F(2, 87) = 26.82, p < .05$). In order to have a two-by-two comparison of self-efficacy post-test, a post-hoc Scheffé test was also conducted. Table 3 shows the significance of the difference between these three groups.

Table 3. Post-Hoc Scheffe test of the Comparison of the Performance of Three Groups in Self-Efficacy Post-Test

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
implicit	explicit	1.66667	3.42837	.878	-6.5082	9.8416
	control	22.53333*	3.42837	.000	14.3584	30.7082
explicit	implicit	-1.66667	3.42837	.878	-9.8416	6.5082
	control	20.86667*	3.42837	.000	12.6918	29.0416
control	implicit	-22.53333*	3.42837	.000	-30.7082	-14.3584
	explicit	-20.86667*	3.42837	.000	-29.0416	-12.6918

According to the findings of Table 3, there was no significant difference between the performance of experimental groups (p> .05). However, the participants of these two experimental groups significantly outperformed the ones in control group (p < .05). This result gives a positive answer to the first research question Does using scaffolding techniques accompanied by explicit/implicit grammar instruction have a significant effect on self-efficacy of Iranian pre-intermediate EFL learners? Additionally, since it was shown that scaffolding techniques accompanied by implicit grammar instruction and scaffolding

techniques accompanied by explicit grammar instruction were equally effective on Iranian pre-intermediate EFL learners' self-efficacy, the answer to the third research question Which method (i.e., scaffolding techniques accompanied by explicit grammar instruction or scaffolding techniques accompanied by implicit grammar instruction) is more effective on self-efficacy of Iranian pre-intermediate EFL learners? is that no method is more effective on self-efficacy of Iranian pre-intermediate EFL learners.

Moreover, the second research question, in this study was concerned with the effect of scaffolding techniques accompanied by explicit/implicit grammar instruction on motivation of Iranian pre-intermediate EFL learners. Just like the analyses conducted for the previous research question, in order to find plausible answer for this question, a one-way ANOVA was run. Before running ANOVA, descriptive statistics was run on the performance of the participants in motivation questionnaire in post-test. The results are illustrated in Table 4.

Table 4. Descriptive Results on the Performance of Three Groups in Motivation Post-Test

Variable	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Min.	Max.
					Lower Bound	Upper Bound		
implicit	30	79.1333	7.08925	1.29431	76.4862	81.7805	63.00	89.00
explicit	30	71.9667	11.84813	2.16316	67.5425	76.3908	53.00	89.00
control	30	50.7000	5.59032	1.02065	48.6125	52.7875	43.00	65.00
Total	90	67.2667	14.82315	1.56250	64.1620	70.3713	43.00	89.00

The statistics represented in Table 4 show the performance of implicit (M = 79.13, SD = 7.08), explicit (M =71.96, SD = 11.84), and control (M =50.70, SD = 5.59) groups in motivation post-test. However, the above-mentioned table could not represent the significance of the difference between the mean scores of three groups in post-test. Therefore, a one-way ANOVA was run the results of which are indicated in Table 5.

Table 5. Between Group Comparison of the Performance of Three Groups in Motivation Post-Test

Source	Sum of Squares	DF	Mean Square	F	p
Between Groups	13120.867	2	6560.433	88.700	.000
Within Groups	6434.733	87	73.962		
Total	19555.600	89			

As it is illustrated in Table 5, there was a significant difference between the performance of implicit (M = 79.13, SD = 7.08), explicit (M =71.96, SD = 11.84), and control (M =50.70, SD = 5.59) groups (F (2, 87) = 88.70, $p < .05$). In order to have a two-by-two comparison of motivation post-test, a post-hoc Scheffe test was also conducted. Table 6 indicates the significance of the difference between these three groups.

Table 6. Post-Hoc Scheffe test of the Comparison of the Performance of Three Groups in Motivation Post-Test

(I) group	(J) group	Mean Difference (I-J)	Std. Error	p	95% Confidence Interval	
					Lower Bound	Upper Bound
implicit	explicit	7.16667*	2.22055	.006	1.8718	12.4615
	control	28.43333*	2.22055	.000	23.1385	33.7282
explicit	implicit	-7.16667*	2.22055	.006	-12.4615	-1.8718
	control	21.26667*	2.22055	.000	15.9718	26.5615
control	implicit	-28.43333*	2.22055	.000	-33.7282	-23.1385
	explicit	-21.26667*	2.22055	.000	-26.5615	-15.9718

The findings of Table 6 show that there was a significant difference between the performance of experimental groups and control group (*p* < .05). However, there was no significant difference between the two experimental groups in terms of their motivation (*p*> .05). Based on this result, the answer to the second research question *Does using scaffolding techniques accompanied by explicit/implicit grammar instruction have a significant effect on motivation of Iranian pre-intermediate EFL learners?* is yes. Moreover, since it was revealed that scaffolding techniques accompanied by implicit grammar instruction and scaffolding techniques accompanied by explicit grammar instruction were equally effective on Iranian pre-intermediate EFL learners' motivation, the answer to the fourth research question Which method (i.e., scaffolding techniques accompanied by explicit grammar instruction or scaffolding techniques accompanied by implicit grammar instruction) is more effective on motivation of Iranian pre-intermediate EFL learners? is that no method is more effective on motivation of Iranian pre-intermediate EFL learners.

Discussion

The present study was conducted to the role of scaffolding techniques accompanied by explicit/implicit grammar instruction in the improvement of speaking motivation and self-efficacy among Iranian pre-intermediate EFL learners. The obtained findings revealed that scaffolding techniques accompanied by explicit/implicit grammar instruction significantly impacted self-efficacy of Iranian pre-intermediate EFL learners. In addition, it was shown that scaffolding techniques accompanied by explicit/implicit grammar instruction significantly affected motivation of Iranian pre-intermediate EFL learners. Moreover, it was shown that scaffolding techniques accompanied by implicit grammar instruction and scaffolding techniques accompanied by explicit grammar instruction were equally effective on Iranian pre-intermediate EFL learners' self-efficacy and motivation. This quality in the effectiveness of implicit and explicit instruction reaches us to the conclusion that scaffolding has differentially affected motivation and self-efficacy of the participants in a significant way.

The findings are consistent with the findings of the studies by Alawiyah and Dan Pengajaran (2018), Bowles and Montrule (2008) Valencia-Vallejo, López-Vargas, and Sanabria-Rodríguez (2019). In justifying the findings, it can be argued that scaffolding-based instruction enhances learning through participation in social experiences with a more knowledgeable adult (Poehner, 2009). This learning enhancement may in turn lead to improvements in learner motivation and self-efficacy. Additionally,

this argument can be put forth that scaffolding is associated with negotiation between student and teacher (Poehner, 2008) which can lead to higher motivation and self-efficacy among students. Furthermore, another line of argument which can be referred to in justifying the obtained results is that scaffolding makes students feel more responsible and self-regulated for their own learning (Lantolf, 2000). This increased self-regulation can also contribute significantly to higher sense of self-efficacy and motivation in students. Also, the findings can be attributed, at least partially, to the argument which says as a result of scaffolding provided by the teacher, the students can show a better performance and reveal a full picture of their abilities, and the teacher can simultaneously support the students' development through scaffolding (Lantolf & Poehner, 2004).

Therefore, it can be concluded from this research that the application of scaffolding techniques can significantly affect some personal affective variables effective in language learning such as motivation and self-efficacy. It is recommended that ELT teachers apply this technique in their EFL classes in order to improve learners' motivation and self-efficacy as important affective factors in English achievement.

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