The Effect of Using EFL Learners' Mother Tongue on Their Grammatical Knowledge Improvement: Investigating Two Proficiency Levels

Sara Shafiee
Department of Foreign Languages
Shiraz Branch, Islamic Azad University
Shiraz Iran

Leila Akbarpour*
Department of Foreign Languages
Shiraz Branch, Islamic Azad University
Shiraz, Iran
Email: akbarpour@iaushiraz.ac.ir
E-mail: akbarpourleila@yahoo.com

Abstract. The present quasi-experimental study aimed at exploring whether using EFL learners' mother tongue has any influence on EFL learners' grammatical knowledge improvement at two proficiency levels, i.e., elementary and intermediate. It also aimed at investigating whether there were any differences between elementary and intermediate EFL learners' grammatical knowledge improvement as a result of using their L1 in the classroom. To achieve this goal, 30 elementary and 32 intermediate Iranian EFL learners aged between 16 and 32 were chosen from an English institute in Shiraz. The sampling procedure was of a non-probability convenience type. The participants were divided into two experimental and two control groups. First, Oxford Placement Test was used to homogenize the participants at each proficiency level. Moreover, to investigate the effectiveness of the treatment and also compare the two proficiency levels regarding the effectiveness of the treatment, two teacher-made multiple-choice grammar tests, one for the elementary level and another for the intermediate level participants, were employed. Each of these tests was used both as the pre- and the posttest. In order to answer the research questions, independent and paired

153

samples t-tests were run, and the effect sizes were estimated. The findings highlighted that the experimental groups at both proficiency levels significantly outperformed the control groups on their posttests. In addition, it was concluded that using L1 had a slightly greater effect on grammatical knowledge improvement of elementary than intermediate learners.

1. Introduction

Grammar, as an important aspect of language teaching/learning, has vastly been investigated and debated in the literature. Different teaching methods and approaches have been proposed to teach grammar and enhance language learners' grammatical competence. Many studies have discussed difficulties in learning grammatical rules by English language learners (see for example, Ammar, 2008; Lyster, 2004; White, 1998).

According to the literature regarding the role of using L1 in language teaching, it is debatable whether the use of mother tongue to teach English as a Foreign Language (EFL) can be effective or not in language classes and to what extent it can be used in teaching various skills and components. While some scholars believe in the use of mother tongue on the improvement of EFL/ESL learners, others argue against it. Since, as it was mentioned before, grammar is a debatable issue in the area of language teaching/learning, the present study aimed at exploring the effect of using EFL learners' mother tongue on their grammatical knowledge improvement.

According to Larsen-Freeman (2000) "the native language of the students is used in the classroom in order to enhance the security of the students, to provide a bridge from the familiar to the unfamiliar, and to make the meanings of the target language words clear" (pp. 101-102). Schweers (1999) reports that "starting with the L1 provides a sense of security and validates the learners' lived experiences, allowing them to express themselves. The learner is then willing to experiment and take risks with English." (p. 7). As noted by Bozorgian and Fallahpour (2015), "The students' L1 is an effective tool for improving and facilitating L2/EFL learning and teaching processes in the pre-intermediate

levels. L1 should be used in a way that students can rely on it to build up their L2/EFL knowledge." (p. 79)

Some researchers, on the other hand, seem to be reluctant to use L1 in the classroom. According to Krashen (1982), the frequent use of L1 in language classrooms can cause students to be less exposed to the target language. As noted by Atkinson (1987), if the L1 is used exaggeratedly in teaching languages, it will result in the translation of most language items into L1. Some investigators point out that there should be a balance between the use of L1 and L2.

Although a bulk of research has been done on grammar and different approaches to teach it, and in spite of the fact that there are some studies investigating the effect of using L1 on L2 improvement, few pieces of research have ever compared this effect at different proficiency levels. Moreover, the debate over the use/non-use of L1 still exists in the literature, and, therefore, this issue is in need of more pieces of research. In addition, since grammar is one of the most important components of language for many students and teachers, the results of this study may help to fill the gap which exists in the literature regarding the above-mentioned issues. More specifically, the present study aimed at answering the following research questions:

RQ1: Does using elementary EFL learners' mother tongue in the classroom have a significant impact on the improvement of their grammatical knowledge?

RQ2: Does using intermediate EFL learners' mother tongue in the classroom have a significant impact on the improvement of their grammatical knowledge?

RQ3: Is there any difference between elementary and intermediate EFL learners' grammatical knowledge improvement as a result of using their mother tongue in the classroom?

The research hypotheses of this study were stated as follows:

H1: Using elementary EFL learners' mother tongue in the classroom does not have a significant impact on the improvement of their grammatical knowledge.

H2: Using intermediate EFL learners' mother tongue in the classroom does not have a significant impact on the improvement of their grammatical knowledge.

H3: There is no difference between elementary and intermediate EFL learners, grammatical knowledge improvement as a result of using their mother tongue in the classroom.

2. Literature Review

2.1 Theoretical considerations

Nation (2003) believes that L1 use provides a quick way to the meaning and content of what should be taught to language learners. "It is foolish to arbitrarily exclude this proven and efficient means of communicating meaning" (Nation, 2003, p. 5). He believes that L1 is a useful tool in language learning which should not be overused. Since learners' need is of utmost importance in the process of learning, learners should be allowed to use L1, so that their L1 does not appear to them as inferior to their L2. Nation (2003), in fact, suggests a balance between L1 and L2 use in the classroom.

According to the findings of Stapa and Majid's (2006) study, the use of L1 for L2 writing is recommended because it is believed that it can trigger the learners' background knowledge. They also point out that "since writing involves complex cognitive skill, every effort to facilitate the learning of writing should be given to the students. The use of L1 to generate ideas in L2 writing will throw some light for classroom practitioners in teaching writing for students with low English language proficiency" (p. 11).

Meyer (2008) argues that in the process of teaching a language the teacher may use the learners' native language for the purpose of reducing the affective filters. It can be done through comprehension of the procedures that occur in the classroom. In fact, when the students become confused in the process of learning they may become upset and angry, and it causes learning to stop.

Grim (2010) points out that "the multilingual competence model has been used to rationalize L1 use while learning or speaking the L2

since being a multilingual speaker entails that two or more languages are part of one's cognitive system" (p. 194). Grim (2010) refers to the metalinguistic scaffolding role of L1 that can cause L2 to be understood better.

As noted by Dujmovi? (2014), students should be allowed to express themselves, and therefore, there should be no problem with using L1 in language classrooms. He further mentions that the English-only policy is going out of date, and because of that, many researchers advocate a more bilingual approach to L2 teaching. He also believes that hindering students from the use of L1 would have negative consequences for the process of language learning.

Paker and karaa?a (2015) further state that the use of L1 may help the language learning process in different situations. They believe, however, that L1 should not be used too frequently, since its overuse may result too much dependence on it for language learners. They also believe that "The use of L1 should not be exaggerated because the more the students are exposed to the target language, the better they will learn it" (p. 112). In fact, they mention that teachers are allowed to use L1 whenever it is really necessary and could be used appropriately; however, the focus should be on the use of L2 mostly.

As noted by Karimian and Mohammadi (2015), "From the turn of the twentieth century, many views on language teaching have been not to use the native language in the language learning process. While this belief has made many teachers feel ill at ease with L1 use, in recent studies, teachers believe in the helping role of the L1 in the language learning process" (p.69). Karimian and Mohammadi (2015) also believe that L1 should be consciously used when necessary. They believe that the mother tongue should be used more at the elementary levels, and its use should be reduced as the learners' proficiency level increases. As for the advantages of using L1 Karimian and Mohammadi (2015) mention that L1 use may help teachers remove the anxiety of the students, and save energy and time when quick translation is needed.

Shabir (2017) focuses on the point that early teaching practices included using L1, and therefore, it is impossible to teach a second language without using L1. He refers to methods such as Grammar Transla-

tion Method having a bilingual approach to teaching a second language.

According to Zulfikar (2018), the use of L1 does not hinder language learning and may facilitate the process of L2 acquisition. Zulfikar (2018) points out that,

Many confusions and communication breakdown in a monolingual language classroom occur due to a teacher's strict adherence to L2-only policy. For learners with limited L2 proficiency, this situation can be restraining since they are unable to express themselves very well. They may have difficulty understanding a concept, but fear of being reprimanded for using their L1 to show their confusion prevents them from speaking up. In this case, teachers themselves will find it difficult to determine whether learners have fully understood the introduced concepts. (p. 44)

2.2 Empirical research

In an experimental study by Stapa and Majid (2006), the effect of using the mother tongue in the process of generating ideas for second language writing among low proficiency ESL learners was investigated. Sixty students with low English language proficiency were selected randomly regardless of gender and race. Following the analyses of the data, it was suggested that, "generating ideas using L1 among students with low English language proficiency helps them to produce higher quantity of ideas compared to the use of L2 in generating ideas" (p. 10).

Nazary (2008) aimed to investigate Iranian university students' attitudes towards the role of L1 in L2 acquisition in his study. He also tried to examine the relationship between the learners' language proficiency level and their attitudes and degree of awareness of the benefits of L1 use. In this study, to explore the Iranian students' attitudes a questionnaire was used. Following the analyses of the data, Nazary (2008) concluded that Iranian university students were reluctant to use their mother tongue in English language situations and rejected it strongly for the sake of better exposure to L2. The majority of students from the three proficiency levels did not believe on the effectiveness and importance of L1 use. Moreover, the intermediate students in comparison with elementary and advance students showed fewer tendencies to use

their L1 in their classroom activities and did not expect their teachers to use L1 as well.

Timor (2012) selected 112 EFL teachers randomly to examine the English teachers' attitudes and ways of implementing the mother tongue in EFL teaching in elementary and secondary schools in Israel. They were native speakers of Hebrew. A questionnaire including three questions was the main instrument used in this study to collect data from teachers. Findings demonstrated that teachers' attitudes were positive, and most of them saw the benefit of using L1 in EFL teaching.

Dujmovi? (2014) investigated the use of the mother tongue in the Croatian context in his study. In Dujmovi?'s (2014) study, 100 first-year students at the intermediate or upper intermediate level were chosen from a university in Pula. The data was collected through a questionnaire distributed to 100 students to discover their attitudes toward using Croatian in the English classroom. The researcher concluded that "in general, students prefer greater or exclusive use of English in the classroom. In their view, Croatian should be used only when necessary to help them learn English better" (p. 42).

Bozorgian and Fallahpour (2015) conducted a study to examine the purpose of the teachers and students for L1 use and the extent to which they use it in EFL classrooms. The data was collected through video recording, and a quantitative approach was utilized. The result of this study showed that, L1 can be used and actually should be used as an aid by the teachers to convey meaning, manage the classroom, make a friendly environment, reduce the students, anxiety, facilitate communication, elaborate on the course objectives and clarify the ambiguous points in the pre-intermediate level.

Alshehri (2017) aimed to explore the frequency and functions of using L1 and the teachers' attitudes towards using learners' first language in EFL classes in his study. In this mixed-methods study, questionnaires and semi-structured interviews were employed to collect data from 104 female EFL teachers who were selected from different nationalities. The findings revealed that "teachers believe that English should be the main language used in the classroom. Teachers use L1 for some functions in EFL classes, such as explaining vocabulary and developing rapport with

students. Teachers also report that the majority of their students use L1 mainly for translating new vocabulary and preparing for tasks" (p. 31).

3. Method

3.1 Design of the study

This research was of a quantitative, quasi-experimental nature, with pre-and post-test design and control groups. Since two proficiency levels were investigated, there were two experimental and two control groups. An experimental and a control group were used for the elementary level, and an experimental and a control group were employed for the intermediate level.

3.2 Participants

The population of interest for this research was all elementary and intermediate Iranian EFL learners. The sampling procedure was a non-probability sampling of convenience type due to the problems regarding the availability of the participants. The participants were chosen from an English language institute in Shiraz, and their age ranged from 16 to 32. At the beginning of the study, the participants were 87 elementary and intermediate EFL learners in four intact classes (two elementary and two intermediate) at a language institute in Shiraz, Iran. However, due to COVID 19, and also homogenization procedures through Oxford Placement Test (OPT) and two pre-tests of grammar (one for the elementary and one for the intermediate group), participants were reduced to 62 (30 elementary and 32 intermediate EFL learners).

Through the homogenization procedure, participants whose scores on the OPT and the pre-test of grammar ranged between -1 and +1SD were selected to take part in the study, and the rest of the learners were excluded from the experiment without being informed. All participants were native speakers of Persian.

3.3 Instruments

The first instrument used in this piece of research was Oxford Placement Test (OPT) by means of which the researcher tried to make sure of the homogeneity of the four groups of the participants. This test was

administered to select those who scored only one Standard Deviation below and above the mean. Two multiple-choice tests of grammar, one for the elementary level learners and another for the intermediate level ones, which were designed and validated by the researcher, were also employed in the study. These tests were devised on the materials used during the semester. Each test included 18 multiple-choice items which were taken from the materials covered during the term. Since the materials for the two proficiency levels were different, two different tests of grammar with appropriate levels of difficulty were utilized. Each test, for each proficiency level, was used twice, once as a pre-test and once again as a post-test in order to investigate the effectiveness of the treatment and also compare the two proficiency levels regarding the treatment. The content validity of the tests and their difficulty level were examined by two PhD holder experts in language testing and design. The reliability of the tests was established through two pilot studies, each with 25 EFL learners. One of the pilot studies was conducted with intermediate students and the other with elementary learners. The test-retest method of estimating reliability was used in order to ensure the reliability of the two tests. The reliability coefficients for the elementary and intermediate tests of grammar were .87 and .89 respectively. Results of the correlational tests for estimating reliability are displayed in the following tables.

Table 1: Results of the Pearson correlation for estimating the reliability of the elementary test of grammar

		PilotElementary1	PilotElementary2
PilotElementary1	Pearson Correlation	1	.875**
	Sig. (2-tailed)		.000
	N	25	25
PilotElementary2	Pearson Correlation	.875**	1
	Sig. (2-tailed)	.000	
	N	25	25
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 2: Results of the Pearson correlation for estimating the
reliability of the intermediate test of grammar

		PilotIntermediate1	PilotIntermediate2
PilotIntermediate1	Pearson Correlation	1	.893[**]
	Sig. (2-tailed)		.000
	N	25	25
PilotIntermediate2	Pearson Correlation	.893[**]	1
	Sig. (2-tailed)	.000	
	N	25	25

**. Correlation is significant at the 0.01 level (2-tailed).

3.4 Data collection procedures

After the homogenization procedure by means of OPT, the participants
at each proficiency level, i.e., elementary and intermediate, were assigned
to control and experimental groups. The four groups were then given
a pre-test of grammatical knowledge as mentioned in the instrument
section. After the pre-test, the experiment began and continued for a full
semester (about 16 sessions for each proficiency level). The control and
experimental groups at each proficiency level were the same regarding
all educational aspects such as educational materials, teaching time, pre-
and post-tests, and even the teacher.

The only difference was in the way grammar was taught to the learn-
ers. In the experimental groups (both elementary and intermediate
learners) the target grammatical points were taught by means of the
English through Persian (ETP) approach (Rahimi & Ezadpanah, 2001).
In this approach, all the grammatical points are explained to learners in
Persian, and they are asked to transform Persian phrases and sentences
into English according to their proficiency level. Therefore, the mother
tongue plays a strong role here.

In the control groups, however, learners were taught grammatical
points in English. Transformation of phrases and sentences from Per-
sian into English was, therefore, not employed. After the treatment, all
groups took their post-tests in order for the researcher to investigate
whether the treatment was successful or not, and also whether there
were any differences between the two proficiency levels. 3.5 Data Anal-

ysis The data collected from the pre- and post-tests were analyzed using SPSS version 22. During the data analysis procedure, in addition to the Kolmogorov-Smirnov test of normality, two independent samples t-tests and two paired samples t-tests were also run, and the effect sizes were estimated.

4. Results

4.1 Results of the Normality Tests

Inferential statistics were used in order to answer the research questions, and reject/retain the null hypotheses. In order to do this, independent- and paired samples t-tests were employed. Before employing these tests, however, the normality of the distributions was explored using Kolmogorov-Smirnov test.

Table 3: Kolmogorov-Smirnov test of normality for the pretest of the elementary control group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PretestControlElementary	.159	16	.200[*]	.904	16	.094

According to Pallant (2013), in the Kolmogoro-Smirnov test of normality, "a non-significant result indicates normality" (p.66). Therefore, according to this table, since the significance value is more than 0.05, i.e. 0.200, one can claim that the distribution of the elementary control group learners' scores on their pretest is normal, and the data is ready for analysis.

Table 4: Kolmogorov-Smirnov test of normality for the pretest of the elementary experimental group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PretestExperimenatlElementary	.170	14	.200[*]	.930	14	.308

According to this table, since the significance value is 0.200, i.e. more than 0.05, one can claim that the distribution of the elementary experimental groups' scores on their pretest is normal.

Table 5: Kolmogorov-Smirnov test of normality for the pretest of the intermediate control group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PretestControlIntermediate	.178	17	.154	.962	17	.665

As this table indicates, since the significance value is 0.154, i.e. more than 0.05, one may claim that the distribution of the pretest scores of the intermediate control group is normal.

Table 6: Kolmogorov-Smirnov test of normality for the pretest of the intermediate experimental group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PretestExperimentalIntermediate	.161	15	.200[*]	.927	15	.243

According to the table, since the significance value is 0.200, i.e. more than 0.05, one can claim that the distribution of the pretest scores of the intermediate group is normal, and the data is ready for analysis.

Table 7: Kolmogorov-Smirnov test of normality for the posttest of the elementary control group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PosttestControlElementary	.188	16	.133	.883	16	.044

According to this table, since the significance value is more than 0.05, one can claim that the distribution of the elementary control groups' scores on their posttest is normal, and the data is ready for analysis.

Table 8: Kolmogorov-Smirnov test of normality for the posttest of the elementary experimental group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PosttestExperimenatlElementary	.170	14	.200[*]	.930	14	.308

According to this table, since the significance value is 0.200, i.e. more than 0.05, one can claim that the distribution of the elementary experimental group's scores on their posttest is normal.

Table 9: Kolmogorov-Smirnov test of normality for the posttest of the intermediate control group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PosttestControlIntermediate	.191	17	.101	.961	17	.655

As this table indicates, since the significance value is 0.101, i.e. more than 0.05, one may claim that the distribution of the posttest scores of the intermediate control group is normal.

Table 10: Kolmogorov-Smirnov test of normality for the posttest of the intermediate control group

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PosttestExperimentalIntermediate	.198	15	.117	.911	15	.139

According to the table, since the significance value is 0.117, i.e. more than 0.05, one can claim that the distribution of the posttest scores of the intermediate experimental group is normal, and the data is ready for analysis.

4.2 Results of t-tests and eta squared values (effect sizes)

During the data analysis procedure, in addition to the Kolmogrov-Smirnov test of normality, two independent samples t-tests and two paired samples t-tests were run, and the effect sizes were estimated. An independent samples t-test and a paired samples t-test were utilized in order to answer the first research question. Another independent samples t-test and a paired samples t-test were employed to answer the second research question. In order to answer the third research question, a comparison was made between the effect sizes as it will be explained.

Table 11: Results of independent samples t-test on the posttest of
control and experimental elementary groups

Levene's Test for Equality of Variances		t-test for Equality of Means		95% Confidence Interval
	df	Sig. (2-tailed)	Mean Difference	
PosttestControlEx primentalElementa ry	28	.006	-1.5178	

As Table 11 indicates, the significance value is less than 0.05 (p=.006), and therefore, the mean difference between the posttest scores of the elementary control and elementary experimental groups (i.e., -1.5178) is statistically significant. In other words, the table shows that there has been a statistically significant difference between the mean of the elementary control and experimental groups in their posttest. Since the mean of the control group was 11.6250, while the mean of the experimental group was 13.1429, one can conclude that the elementary experimental group outperformed the elementary control group on the posttest. The effect size value was calculated to be 0.243 using Eta squared formula for independent samples t-test, which is considered as a good effect size (Pallant, 2013). Thus, one may claim that the magnitude of the differences in the means was satisfactory.

Table 12: Results of independent samples t-test on the posttest of
intermediate control and experimental groups

Levene's Test for Equality of Variances		t-test for Equality of Means		95% Confidence Interval
	df	Sig. (2-tailed)	Mean Difference	
PosttestControlEx primentalIntermed iate	30	.012	-1.5921	

According to this table, the significance value is less than 0.05 (p=.012), and thus, the mean difference between the posttest scores of the intermediate control and experimental groups (i.e., -1.5921) is reported to be statistically significant. Therefore, according to the table, there is

a statistically significant difference between the mean of the intermediate control and experimental groups in their posttest. Since the mean of the control group was 11.9412, while the mean of the experimental group was 13.5333, it can be concluded that the intermediate experimental group has outperformed the control group on the posttest. The effect size value was calculated to be 0.203 using Eta squared formula for independent samples t-test, which is considered as a suitable effect size (Pallant, 2013). Therefore, it can be claimed that the magnitude of the differences in the means was satisfactory.

Table 13: Results of paired samples t-test on the pre- and post-tests of the elementary experimental group

		Paired Differences		t	df	Sig.
		Mean Difference	95% Confidence Interval			(2-tailed)
Pair 1	PretestExperimentalElementary - PosttestExperimentalElementary	-5.0714		-30.818	113	.000

As the table shows, with a mean difference of - 5.0714, the p value is less than 0.05 (p=.000). Therefore, it can be said that the difference between the mean scores of the pre- and post-tests of the elementary experimental group is statistically significant. The mean scores for the pre- and post-tests of the experimental group at school were 8.0714 and 11.6250, respectively. Therefore, it can be concluded that the elementary experimental group has a higher mean score in the posttest, and therefore, has improved by means of the treatment. In other words, there has been a statistically significant increase in the experimental group from the pre- to the post-test. The effect size value was calculated to be 0.986 using Eta squared formula for paired samples t-test, which is considered as a large effect size (Pallant, 2013). Therefore, it can be claimed that the magnitude of the differences in the means was quite satisfactory.

Table 14: Results of paired samples t-test on the pre- and post-tests
of the intermediate experimental group

		Paired Differences		t	df	Sig.
		Mean Difference	95% Confidence Interval			(2-tailed)
Pair 1	PretestExperimentalIntermediate - PosttestExperimentalIntermediate	-4.9333		-74.000	114	.000

A paired samples t-test was conducted to investigate any significant
differences between pre- and post-test scores of the intermediate experi-
mental group. As the table indicates with a mean difference of - 4.9333,
the p value is less than 0.05 (p=.000). As a result, it can be concluded
that the experimental group at the institute has a higher mean score in
the posttest. In other words, there has been a statistically significant
increase in the experimental group at school from the pre- to the post-
test. The effect size value was calculated to be 0.997 using Eta squared
formula for paired samples t-test, which is considered as a large effect
size (Pallant, 2013). Thus, it can be concluded that the magnitude of
the differences in the means was quite satisfactory.

5. Discussion

5.1 Answer to the first research question

In order to answer the first research question, which asked whether using
elementary EFL learners' mother tongue in the classroom has a signif-
icant impact on the improvement of their grammatical knowledge, an
independent samples t-test and a paired samples t-test were employed.

As Table 11 indicated, there was a statistically significant difference
between the post-test scores of the control and experimental groups
at the elementary level, and the experimental group outperformed the
control group in terms of collocational knowledge. The Eta squared
value was also satisfactory in this regard.

Besides, results of Table 13 indicated that there was a statistically
significant increase in the scores of the experimental group at the in-
termediate level from the pre- to the post-test, with an acceptable Eta

squared value. Therefore, the first research question is answered positively, and the first null hypothesis is rejected.

5.2 Answer to the Second Research Question

In order to answer the second research question, which asked whether using intermediate EFL learners' mother tongue in the classroom has a significant impact on the improvement of their grammatical knowledge, an independent samples t-test and a paired samples t-test were employed.

As Table 12 showed, there was a statistically significant difference between the post-test scores of the control and experimental groups at language institute, and the experimental group outperformed the control group in terms of collocational knowledge. The Eta squared value was also reported to be satisfactory in this regard.

Besides, results of Table 14 indicated that there was a statistically significant increase in the scores of the experimental group at the intermediate level from their pre- to their post-test, with an acceptable Eta squared value. Therefore, the second research question is answered positively, and the second null hypothesis is rejected.

5.3 Answer to the third research question

In order to answer the third research question, which asked whether there was any difference between elementary and intermediate EFL learners' grammatical knowledge improvement as a result of using their mother tongue in the classroom, the effect sizes which were estimated during and after the procedure of the two independent samples t-tests were compared.

The effect size for the first independent samples t-test, which aimed at examining whether there was a statistically significant difference between the post-test scores of the control and experimental groups at the elementary level, was compared to the effect size of the second independent samples t-test, which aimed at examining whether there was a statistically significant difference between the post-test scores of the control and experimental groups at the intermediate level.

The effect size for the first and second independent samples t-tests were 0.243 and 0.203 respectively. This difference shows that the mag-

nitude of the differences in the means was slightly more regarding the first independent samples t-test which was about the elementary level learners. Therefore, it may be concluded that the treatment has been more effective for elementary EFL learners.

Therefore, according to the effect size comparison, the third research question is answered positively, and the third null hypothesis is rejected. In other words, it can be concluded that in the present study, using mother tongue has had a slightly greater effect on grammatical knowledge improvement of elementary than intermediate learners.

According to the literature on the use of L1 in language classrooms, while there was a debate on the use/non-use of L1 in language classrooms, some of the studies had concluded that the use of first language should not be ignored; instead, it should consciously be used when it is necessary. In this respect, the results of the present study are in line with those in favor of using L1 in the classroom. For instance, in a study by Karimian and Mohammadi (2015), teachers believed that first language should be used as the end solution in learning process in the elementary level and be completely dropped as the learners' proficiency improves to a higher level. Nation (2003) also believes that L1 use provides a quick way to the meaning and content of what should be taught to language learners.

As noted by Dujmovi? (2014), students should be allowed to express themselves, and therefore, there should be no problem with using L1 in language classrooms. He further mentions that the English-only policy is going out of date, and because of that, many researchers advocate a more bilingual approach to L2 teaching. He also believes that hindering students from the use of L1 would have negative consequences for the process of language learning. The results of this study were also in line with Stapa and Majid's (2006) study in which the use of L1 for L2 writing is recommended.

The results of the present piece of research are also in line with Mart (2013) which concludes that whether the teacher is a native or a non-native speaker, and whether the learner is a beginner or an advanced, the use of L1 in ESL classes should not be avoided. According to Mart (2013), "a total ban on the use of L1 will hinder the comprehension

of the target language effectively. The lack of comprehension will prevent learners from achievement; therefore, L1 should be used when it is needed" (p. 10).

6. Conclusions

According to the results acquired from this study, it was revealed that the use of L1, i.e., Persian, may have a contributing function in the process of teaching and learning grammatical structures. Therefore, the facilitating role of the L1 cannot be ignored. In fact, if the learners' mother tongue is used efficiently in teaching grammatical structures, there would be more improvement in EFL learners' grammatical knowledge.

These conclusions, however, are based on examining the use of L1 on grammatical knowledge improvement of elementary and intermediate learners as a treatment in a quasi-experimental design. Results may vary if any of the variables change. Since there are still debates regarding the use/nonuse of L1 in the field of language teaching, there is a need for doing more pieces of research using different variables, designs, and conditions.

References

Ammar, A. (2008). Prompts and recasts: Differential effects on second language morphosyntax. *Language Teaching Research, 12*(2), 183-210.

Atkinson, D. (1987). The mother tongue in the classroom: A neglected resource? *ELT Journal, 41*(4), 241-247.

Alshehri, E. (2017). Using learners, first language in EFL classrooms. *IAFOR Journal of Language Learning, 3*(1), 20-33.

Bozorgian, H. and Fallahpour, S. (2015). Teachers' and students' amount and purpose of L1 use: English as a foreign language (EFL) classrooms in Iran. *Iranian Journal of Language Teaching Research (IJLTR), 3*(2), 67-81.

Dujmovic, M. (2014). The ways of using mother tongue in English language teaching. *International Journal of Language and Linguistics, 2*(1), 38-43.

Grim, F. (2010). L1 in the L2 classroom at the secondary and college levels: A comparison of functions and use by teachers. *Electronic Journal of Foreign Language Teaching, 7*(2), 193-209.

Karimian, Z. and Mohammadi, S. (2015). Teacher's use of first language in EFL classrooms. *Journal of Applied Linguistics and Language Research, 2*(3), 61-71.

Krashen, S. (1982). *Principles and practice in second language acquisition.* Oxford: Pergamon Press.

Larsen-Freeman, D. (2000). *Techniques and principles in language teaching.* New York: Oxford University Press.

Lyster, R. (2004). Differential effects of prompts and recasts in form-focused instruction. *Studies in Second Language Acquisition, 26*(3), 399-432.

Meyer, H. (2008). The pedagogical implications of L1 use in the L2 classroom. *Maebashi Kyoai Gakuen College Ronsyu, 8,* 147-159.

Nation, P. (2003). The role of the first language in foreign language learning. *Asian EFL Journal, 1,* 35-39.

Nazary, M. (2008). The role of L1 in L2 acquisition: attitudes of Iranian university students. *Novitas-Royal, 2*(2), 138-153.

Paker, T. and Karaaga, . (2015). The use and functions of mother tongue in EFL classes. *Social and Behavioral Sciences, 199,* 111-119.

Pallant, J. (2013). *SPSS: Survival manual.* New York: Open University Press.

Rahimi, A. and Izadpanah, M. A. (2001). *English through Persian.* Iran: Gam Mehr Press.

Schweers, C. W. Jr. (1999). Using L1 in the L2 classroom. *English Teaching Forum, 37*(2), 6-9.

Shabir, M. (2017). Student-teachers' beliefs on the use of L1 in EFL classroom: A global perspective. *English Language Teaching, 10*(4), 45-52.

Stapa, S. and Majid, A. (2006). The use of first language in limited English proficiency classes: good, bad, or ugly? *Journal e-Bangi, 1*(1), 1-12.

Timor, T. (2012). Use of the mother tongue in teaching a foreign language. *Language Education in Asia, 3*(1), 7-17.

White, L. (2003). *Second language acquisition and universal grammar.* London: Cambridge University Press.

Zulfikar, Z. (2018). Rethinking the use of L1 in L2 classroom. *Englisia: Journal of Language, Education, and Humanities, 6*(1), 42-51.