The Relationship between EFL Learners' Self-efficacy, Strategy Use and their Performance on a Grammar Test: Is there any Difference between High and Low Self-efficacious Learners?

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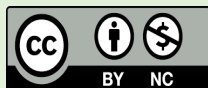*Department of TEFL, University of Isfahan, Iran*
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Abstract

Since the emphasis of the studies has shifted from a teacher-centered approach to a learner-centered one, researchers have discovered the significance of variables originating inside learners during the learning process. The present study was an attempt to focus on self-efficacy and strategy use as two learners' variables. The purpose of this study was to investigate whether there is any relationship between EFL learners' self-efficacy, strategy use, and grammar performance. In addition, it aimed to find out whether there is any difference between high self-efficacious learners and low self-efficacious learners in strategy use and grammar performance. To conduct the study, a non-experimental correlational design was used and thirty-five participants consisting of males and females studying English language teaching were selected randomly out of all the sophomores. Two questionnaires and a test were the main instruments in gathering data. Based on the results of the questionnaire, they were divided into two groups of high and low by using a normal distribution curve. As a result of running several data analysis tests, the findings of the present study revealed a significant relationship between EFL learners' self-efficacy, strategy use, and their performance on a grammar test. Furthermore, it was illustrated that high self-efficacious learners performed better than low self-efficacious ones on the grammar test and grammar strategy use questionnaire.

Introduction

From the time researchers investigated the process of teaching and learning, they have been commonly concerned about different factors affecting the teaching and learning process. By recognizing these factors researchers can remove some weaknesses of today's system of education. One of these factors is the learner's variables. It may be a range of factors that originate in learners. Among learners, some of them are more successful and motivated than others. Students may be at different levels of success because different factors may affect their success. Many students enter university without having basic academic ability. It often leads to disappointment and failure (Hadden, 2000). One of the areas students have difficulties with is grammar.

Within the field of second language learning, there has been a shift from a teacher-centered toward a learner-centered approach. Studying in the field of language education without considering learners is limited and insufficient (Tamada, 1996). Social Learning theories connected academic performance and success to behavioral and cognitive factors. Personality traits, aptitude, self-efficacy, and motivation are all examples of individual variances. Thus, an important question is: What kind of learner variables may lead to higher performance? As Williams and Burden (1997) mentioned, the only answer can be given by investigating learning strategies. The answer to this question may include some variables such as self-efficacy or strategy use. Self-efficacy refers to an individual's belief in the ability to perform the actions necessary to achieve a particular outcome (Bandura & Watts, 1997). Learning strategies, which are "behaviors or actions that learners use to make language learning more successful, self-directed and enjoyable" (Oxford & Nyikos, 1989, 235), play an important role in language learning. Students who have previously performed well in an area are more likely to feel that they are capable of additional learning; students who have had problems may have doubts about their ability. O'Malley et al. (1985, as cited in Bonyadi et al., 2012) claimed that to develop foreign language learning skills and strategies, less proficient learners can use the strategies used by those who are highly proficient.

In addition, EFL learners need a situation in which they can reach a high proficiency level to comprehend their surrounding input well and produce the language as well. In this sense, learners' variables such as self-efficacy become prominent factors in managing the learning process. The role of affective factors cannot be ignored in any skill because it may make the learners lead toward success or failure (O'Malley et al., 1985). Grammar as an important part of language learning should be the focus of researchers because learners cannot produce and understand the language communicatively without knowing its grammar. It is important because it's the grammar that enables us to talk about the language. It is important to use the correct grammar to avoid misunderstandings and help listeners understand the speaker's intention. Most of the students have some difficulties regarding learning grammar "Since grammar is complex, and students' learning styles vary, learning grammar is not likely to be accomplished through a single mean." (Larsen-Freeman, 2001, 40). Learning strategies are especially important to help students work on their weaknesses in different fields such as grammar performance. So, it is important to know what the most important strategies are which may affect grammar performance.

Literature Review

Learners differ greatly in how successful they are in learning a language. This applies to both learning the first language (L1) and the second language (L2). In L2 acquisition (SLA), learners differ not only in speed and mastery but also in their ultimate achievement level, some have reached native proficiency and others are far behind. The difference between individuals has various domains such as individuality traits, learning style, learning strategy, age, and motivation (Dörnyei, 2005; Sawyer & Ranta, 2001). This topic was first addressed by Skehan (1991), that discussed aptitude, motivation, language learning strategies, risk-taking, intelligence, and anxiety. More than a decade later, Dörnyei (2005) added personality, aptitude, motivation, strategy, and beliefs. Arabski and Wojtaszek (2011) focused on strategy, autonomy, personality, gender, and self-efficacy. To understand why some learners, learn a language better with almost the same abilities and skills as others, researchers have recognized learners' self-efficacy (Williams & Burden, 1997).

Self-efficacy

Self-efficacy as a learner variable is one of the effective factors in the success of language learners. Bandura (2010) defined self-efficacy as a person`s particular set of beliefs that determine how well one can execute a plan of action in prospective situations. In the field of language acquisition, researchers investigated that those students who have low self-efficacy and lack learning strategies don`t perform well and need help (Oxford & Shearin, 1994). Self-efficacy beliefs are responses to a question: "Can I do this task?" (Pintrich & De Groot, 1990, 33–34). Self-efficacy is the willingness to learn (Wolters & Rosenthal, 2000) and more use of learning strategies (Siow & Wong, 2003). Self-efficacy beliefs are context-dependent. One may have high self-efficacy in a specific field such as listening, but low self-efficacy in the grammar field. Self-efficacy beliefs differ conceptually from constructs, such as outcome expectations, self-concept, and perceived control.

Grammar Strategy Use

Grammar learning strategy as one of the effective factors in the field of language teaching and learning has attracted the attention of several studies in recent years such as Cohen (2003), Ellis (2008), and Oxford (1990). (Oxford 2017, 244) described L2 grammar learning strategies as "teachable, dynamic thoughts and behaviors that learners consciously select and employ in specific contexts to improve their self-regulated, autonomous L2 grammar development for effective task performance and long-term efficiency". Like all other types of strategic behaviors, grammar learning strategies have distinguishing features which are outlined by Griffiths (2018) as follows: They are what learners do, which indicates an active approach. Their application is at least partly conscious and their use is goal-oriented and intended to facilitate the process of learning, and purposeful activity. They are optional means learners choose and are applied to regulate and control the process of learning". Based on Pawlak (2009), GLS is divided into metacognitive strategies, cognitive strategy, affective strategies, and social strategies.

Related Studies

Liem et al. (2008) studied the relationship among self-efficacy, task value, and performance goals in English proficiency in junior high school students. The results showed that English test scores could be predicted by self-efficacy. Thus, similar to this study, results showed that the higher the self-efficacy the better your performance. The results are comparable because this study focused on grammar as a subskill of language proficiency. Doordinejad and Afshar (2014) also found that students with higher levels of foreign language self-efficacy achieved a higher English score. This is also in line with the results of this study because those who got better scores had higher self-efficacy. A similar study to this study conducted by Wilson and Narayan (2016) investigated the relationships between self-efficacy, self-regulated learning strategy use, and academic performance. Results like the results of this study showed that for each subtask, learners with higher task self-efficacy had higher task performance. Those who used more learning strategies on each subtask also had higher performance. In turn, high performance was associated with high self-efficacy on subsequent subtasks. Surprisingly, unlike this study, results showed that task self-efficacy and learning strategy use were not significantly related during any subtask. Overall, results implied that task self-efficacy, learning strategy use, and past performance are important predictors of task performance two of these factors, self-efficacy, and learning strategies, were examined in this study again and demonstrated the same result, having effective roles on performance.

Since grammar strategy use and self-efficacy are important variables in language learning and teaching, different studies have been done in these fields. Prastiwi (2019) investigated the students' self-efficacy in grammar classes. The data analysis showed that the first-year English department students had good self-efficacy and showed positive responses to the grammar class. They believed in their ability. Self-efficacy can help students in believing their abilities to learn English, especially grammar. The findings of the study suggested that self-efficacy can help them achieve goals. So, like the findings of this study, high self-efficacy has a boosting effect on grammar performance. There are lots of studies in the field of grammar strategy and grammar performance such as Azizmohammadi and Barjesteh (2020) studied the interplay between grammar strategies employed by intermediate EFL learner and their performance on a grammar test. The results indicated a significant difference between male and female students in terms of their performance on the grammar test. Similar to the finding of this study, it attested that cognitive strategy and compensation learning strategy were the most and the least strategy types employed by the participants. Another article which is written by Collins and Bissel (2004) proposed that there is a correlation between self-efficacy and grammar ability. They said that this was the first study to empirically link grammar self-efficacy and grammar performance. The results showed a positive relationship between self-efficacy and grammar ability. Thus, it is in line with the results of this study.

In Bonyadi et al. 2012 explored the relationship between EFL learners' self-efficacy and language learning strategy use. In the study, frequent language learning strategies by EFL learners and the existence of a significant difference in their self-efficacy beliefs and strategy use due to gender and years of English study were investigated. In contrast with this study, the results showed that there was no association between self-efficacy and the use of language

learning strategies. In addition, metacognitive strategies were language learning strategies commonly used by EFL learners. Moreover, there was no significant difference in either gender-based self-efficacy or strategic use. However, based on years of studying English, there was only a significant difference in self-efficacy beliefs and metacognitive strategies. By considering the results of most of the previous studies, it is clear that self-efficacy as one of the learners' variables has an effective influence on grammar performance and performance. So, it is of high importance. In addition, grammar strategy as one of the effective factors in the process of grammar performance has attracted researchers' attention. However, the results were not the same in some cases. Thus, due to the conflicting results of the previous studies and the lack of enough investigations regarding the relationship between learners' self-efficacy and grammar strategy use, this study was deemed to be necessary.

Research questions

To achieve the above research goals, the following research questions were proposed:

1) Is there any relationship between Iranian EFL learners' self-efficacy, strategy use, and their scores on a grammar test?

2) Do EFL learners with high and low self-efficacy differ in strategy use?

3) Do EFL learners with high and low self-efficacy differ in grammar performance?

Method

Research Design

In this study, a non-experimental correlational design was used. First of all, to investigate the first research, the relationship between self-efficacy, grammar strategy use, and grammar performance was examined. To examine the second research question, self-efficacy was considered as an independent variable, and grammar strategy use was the dependent one. To investigate the last question self-efficacy was considered as an independent variable, whereas grammatical performance was the dependent one.

Participants

The target population of this study was all Iranian EFL learners who were studying ELT at the level of B.A in Isfahan. To carry out this study, one of the universities of Isfahan was selected randomly without considering any point about that university. The only point that was taken was the existence of English language teaching major at the level of B.A. in that university. The aim of choosing this major was that students of this major passed some courses related to the field of learner variables. Thus, they were more familiar with different strategies in language learning than other students of other majors. Thirty-five participants consisting of 8 males and 27 females were selected randomly. They were chosen without considering any specific races, educational backgrounds, levels of proficiency, or genders. They were sophomores in the last semester, and their age ranged from twenty to thirty years. Their native language was Persian.

Materials and Instruments

According to the purpose of the study, three instruments were used in this study. Two of them were questionnaires and one of them was a test.

Grammar learning strategy questionnaire

The first tool was the grammar learning strategy questionnaire (GLSI) developed by Pawlak (2018). Pawlak's questionnaire contains altogether 70 items, but because of the difficulty in gathering data for this number of items, the questionnaire was shortened to 35 items (see appendix A). It consists of four major categories of general use of grammar strategies: cognitive, meta-cognitive, affective, and social strategies each of which uses a 5-point Likert-type scale ranging from 1 (never or almost never true of me) to 5 (always or almost always true of me). Reports about the validity and reliability of the questionnaire were presented at the end of the next part.

Learners' self-efficacy questionnaire

The second instrument was a self-efficacy questionnaire developed by Prastiwi (2019). it was used to classify the participants into two groups high self-efficacious and low self-efficacious. It was a close-ended questionnaire. The questionnaire used a four-point Likert scale ranging from (1) Strongly Disagree to (4) Strongly Agree. Based on Prastiwi (2019) the questionnaire items were carefully designed based on Jinks et al. (1999) and Paradewari (2017) with some changes in the number of questions, statement part, and word choice. The questionnaire consists of 20 questions that are divided into 3 parts. The first part is about effort in studying grammar (4 questions), the second part is about students' awareness of self-efficacy in studying grammar (10 questions), and the third part is about grammar aptitude in studying grammar (6 questions). The process of content validity was done by a panel of qualified judges, and experts through the process of reviewing the self-efficacy questionnaire's items (Dobakhti, 2020) such as I work hard in grammar class, I always get good grades in grammar when I try hard, etc. as well as strategy use items like I preview the grammar structures to be covered in a lesson, I pay attention to grammar structures when reading and listening, etc. Finally, experts confirmed the content validity of these questionnaires.

Oxford grammar test

The third tool was an Oxford grammar test (see appendix B). It was taken from a book which is written by Yule (2015) and published by Oxford University Press. It is advanced level. It includes 20 multiple-choice items measuring learners' performance. Some of the items (7 items) were written by the researcher in addition to the book's items (13 items). It consists of the following items: 10 items (verb tenses such as present perfect, passive, etc.), 1 item (embedded question), 2 items (modal verbs), 4 items (perfect modals), and 3 items (quantifiers). To establish its content validity, like the questionnaires a group of experts asserted that this test has content validity based on items such as:

1) I think Mr. Wilson………………………. in this school since 2005 or maybe earlier.

a) teaches   b) is teaching   c) has taught   d) taught

2) How did this …………………… broken?

a) get   b) was   c) become   d) be

Pilot study of the questionnaires

To ensure the appropriateness and reliability of the instruments, pilot studies were conducted (Dobakhti, 2020). Fifteen students from among a representative population in Iran with the same characteristics as the main participants took part in the pilot study to ensure that the questionnaires were reliable and worth working on.

The reliability of the questionnaires was assessed by computing Cronbach's alpha coefficient for estimating the internal consistency for the items of the "self-efficacy and grammar learning strategies use questionnaires (Dobakhti, 2020). The estimated reliability scores were higher than the minimum index required and thus were satisfactory ($\alpha \geq .70$).

Pilot study of the test

Since the test was written based on different sources, estimating its reliability is necessary (Dobakhti, 2020). So, to assess the reliability, 15 students of the target population participated in the pilot study. The reliability was calculated based on the Kuder–Richardson 20 (KR-20) formula (Dobakhti, 2020), and it was 0.86.

Procedure

Data were collected by the researcher during one season with the cooperation of students. Permission from professors was obtained before entering classrooms. Data on various variables were gathered in a short time while participants took part during their class period. First, the grammar self-efficacy questionnaire was administered. Then, the participants were divided into high and low groups based on the results of the self-efficacy questionnaire. After that grammar test was used to check the grammar level of the learners. After completing the grammar test, the grammar learning strategy Questionnaire was delivered to them. The students filled out the first questionnaire and answered the paper test but the second questionnaire was filled online through a website. During the administration of the questionnaires, it was announced to learners that both their scores and their comments would remain confidential. The participants were informed that this information was just for a research study and academic purposes.

Data Analysis

After all, to answer our research questions and analyze data, correlation formulas, and T-tests were used. Data collected from the questionnaire were analyzed using the Statistical Package for Social Science (SPSS). To compare the results of the tests given to the participants in the course of the experiment, the independent sample t-test was conducted to determine whether there has been a significant difference between high self-efficacious learners and low self-efficacious ones. Pearson correlation coefficients were computed to examine the correlation between the participants' self-efficacy and grammar learning strategies.

Results

Descriptive Statistics

Descriptive statistics including reliability, mean, standard deviation and variance were computed for the results of the grammar test. As shown in the table below, the total mean for the EFL learners' grammar performance was computed as (M = 11.4; SD =5.8). As the result of the KR-20 formula showed, the reliability of the whole test is 0.89 which is a good reliability ($\alpha \geq .70$).

Table 1. *Descriptive statistics of grammar test*

KR-20	0.89
Variance	32.7
Mean	11.4
SD	5.8

Table 2 presented the results and descriptive statistics of the self-efficacy questionnaire which was filled by 35 EFL learners. Based on the table, the reliability of the self-efficacy questionnaire which was computed through Cronbach's Alpha for the whole participants was 0.78. The mean score of the questionnaire was 52.46 with the SD of 8.1. Descriptive statistics were needed to group the participants in the second phase.

Table 2. *Descriptive statistics of the self-efficacy questionnaire*

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.785	.793	20
Scale Statistics		
Mean	Variance	Std. Deviation	N of Items
52.46	66.9	8.1	20

As can be seen in Table 3, the grammar strategy questionnaire had the reliability of 0.96 using Cronbach's Alpha formula. The standard deviation and mean of thisquestionnaire are 29.49 and 92.25 respectively.

Table 3. *Descriptive statistics of grammar strategy use*

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.965	.964	35
Scale Statistics		
Mean	Variance	Std. Deviation	N of Items
92.25	870.0	29.49	35

Inferential statistics

Analysis of Research Question One

To answer the first research question and test the first hypothesis, multiple correlation coefficient was run to examine the relationship among EFL learners' self-efficacy, strategy use, and their scores on a grammar test. The result of the analysis is as follows:

Table 4. *Table of correlations*

Correlations		test	self	strategy
test	Pearson Correlation	1	.796[**]	.782[**]
	Sig. (2-tailed)		.000	.000
	N	35	35	35
self	Pearson Correlation	.796[**]	1	.824[**]
	Sig. (2-tailed)	.000		.000
	N	35	35	35
strategy	Pearson Correlation	.782[**]	.824[**]	1
	Sig. (2-tailed)	.000	.000	
	N	35	35	35

The first research question is answered by showing the results of the Pearson correlation through which the relationship between students' grammar performance, students' self-efficacy, and their strategy use was shown. The statistical analysis revealed that the participants' grammar performance was significantly correlated with their strategy use (0.78). It has also shown that the relationship between grammar performance and learners' self-efficacy was significant (0.79). Finally, the relationship between self-efficacy and grammar strategy use was computed as 0.82 which was to some extent significant.

As the hypothesis stated, there is a positive relationship among learners' grammar performance, students' self-efficacy, and their strategy use.

Analysis of Research Question Two

Descriptive analyses of the participants' responses to the self-efficacy questionnaire were conducted to group the participants into two groups: high self-efficacious and low self-efficacious. For grouping the participants, a normal distribution curve was used.
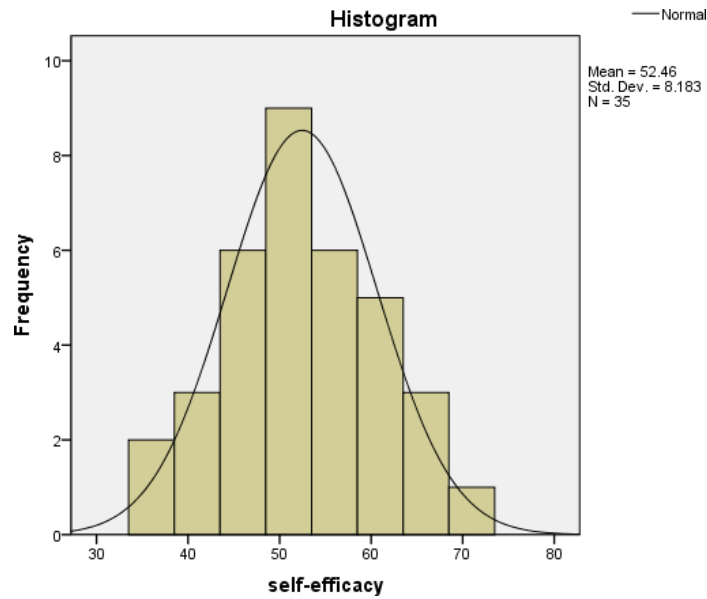
Figure 1. N*ormal distribution curve*

Based on the descriptive statistics, the minimum score of self-efficacy was 36 and the maximum score was 69. There was an attempt to divide the participants based on the rule of +1SD above and -1SD below the mean, but because most of the self-efficacy scores were near to the mean score and in order not to lose a large number of students the researcher used +0.25 SD above the mean (score of 54.4) and -0.25 SD below the mean (score of 50.3). Thus, 20% of the scores in the middle of the curve were removed (7 participants).

Descriptive analyses of high and low self-efficacious groups are as below:

Table 5. *Descriptive analyses of high and low self-efficacious groups*

Statistics		low self-efficacious	high self-efficacious
N	Valid	14	14
	Missing	0	0
Mean		44.43	60.36
Median		44.50	59.50
Mode		50	56
Std. Deviation		4.502	4.236
Variance		20.264	17.940

As the table shows, the mean score of the low group was 44.4 and its standard deviation was computed as 4.5. On the other side, we saw the mean and standard deviation of the high group as 60.3 and 4.2 respectively.

To see the differences regarding grammar strategy use between low and high-self-efficacious learners, an independent sample T-test was used. The 14 participants who are high self-efficacious (M = 116.2, SD = 28.7) compared to the 14 participants who are low self-efficacious (M = 70.1, SD = 12.8) demonstrated significantly better scores ($p< 0.05$, df= 26).

The mean score of the high group was 116.2 which indicated that more grammar strategies were used in comparison to the low group with the mean of 70.1.

Table 6. *Independent sample t-test statistics*

	Group Statistics				
	group	N	Mean	Std. Deviation	Std. Error Mean
Strategy	low self-efficacious	14	70.14	12.847	3.434
	high self-efficacious	14	116.29	28.781	7.692

Table 7. *Independent Samples Test*

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upperr
strategy	Equal variances assumed	11.875	.002	-5.478	26	.000	-46.143	8.424	-63.458	-28.828
	Equal variances not			-5.478	17.983	.000	-46.143	8.424	-63.842	-28.444

Table 8. *Mean and standard deviation of different types of grammar strategy regarding low-group*

Strategy	mean	Standard deviation
metacognitive	29	5.4
Cognitive(b1)	27.8	3.4
Cognitive(b2)	27.6	5.3
Cognitive(b3)	30.2	5
Cognitive(b4)	29	2.5
Affective	24.4	3.7
Social	25.8	1.6

Based on the above table, the most frequently used strategies were cognitive strategies(b3) in the low group with the mean of 30.2 and SD of 5. In addition, the least frequently used

strategies were affective in the low group (M:24.4, SD: 3.7). Other five strategy categories were in the medium-use range. The mean of both metacognitive and cognitive(b4) strategies was 29 which is close to the higher end of medium-degree range.

Table 9. *Mean and standard deviation of different types of grammar strategy regarding high-group*

Strategy	mean	Standard deviation
metacognitive	45.8	4.6
Cognitive(b1)	49	5.4
Cognitive(b2)	47.6	4.3
Cognitive(b3)	48.6	2.3
Cognitive(b4)	47	2.7
Affective	41.2	4.2
social	47.4	2.9

According to the table regarding the high group, the most frequently used strategies were cognitive strategies(b1) in the high group with the mean of 49 and SD of 5.4. In addition, the least frequently used strategies were affective ones in the high group like the low group with M:24.4, SD: 3.7.

Analysis of Research Question Three

Descriptive statistics about the grammar performance of the two groups were calculated. The mean score of the low group was 5.2. the maximum score and the minimum score were 8 and 2 respectively. The most frequent scores were 7 and 3 in the low group.

Table 10. *Descriptive statistics of low group*

Statistics		
N	Valid	14
	Missing	0
Mean		5.29
Median		5.50
Mode		3[a]
Std. Deviation		2.016
Variance		4.066
Minimum		2
Maximum		8

About the high group, the mean score was 17.6. the minimum score was 16 and the maximum was 19. Furthermore, the most frequent scores in the high group were 18 and 19. Like the previous question, an independent sample t-test was used to answer this question. The descriptive analysis for both groups is as follows:

Table 11. *Descriptive statistics of high group*

Statistics		
N	Valid	14
	Missing	0
Mean		17.64
Median		18.00
Mode		18a
Std. Deviation		1.151
Variance		1.324
Minimum		16
Maximum		19

Like the previous research question, an independent sample t-test was used to answer it. The descriptive analysis for both groups is as follows:

Table 12. *Independent sample t-test statistics*

Group Statistics					
	Group	N	Mean	Std. Deviation	Std. Error Mean
Test	Low	14	5.29	2.016	.539
	High	14	17.64	1.151	.308

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
TEST	Equal variances assumed	6.340	.018	-19.9	26	.000	-12.357	.620	-13.633	-11.082
	Equal variances notassumed			-19.9	20.656	.000	-12.357	.620	-13.649	-11.065

Considering the difference in grammar performance between the low and high groups, it was confirmed that there was a significant difference. As shown in the table, the difference between the high and low groups concerning their performance on grammar was significant (t:

-19.9, p<0.05). Fourteen participants who were high self-efficacious (M = 17.6, SD = 1.1) compared to the 14 participants who were low self-efficacious (M = 5.2, SD = 2) demonstrated significantly better scores on the grammar test (df= 26).

Discussion

The first aim of this study sought to understand the potential link between learners` beliefs in their abilities (self-efficacy), their choice and implementation of strategies to improve their grammar skills (strategy use), and their actual performance in grammar tasks. While many studies supported that one`s belief in his or her ability to accomplish a task is positively related to performance (e.g., Nurittamont, 2012; Wu et al., 2012), we decided to go further in determining whether self-efficacy would have a positive impact on performance, not only by influencing strategy use but also if self-efficacy affects strategy use and thereby leads to higher performance. It had been our belief, then, that this performance would lead to an increase in the feeling of self-efficacy about forthcoming tasks and sustained use of learning strategies.

The findings of this study supported the hypothesis that there exists a positive relationship among learners' grammar performance, students' self-efficacy, and their strategy use. The strong correlation coefficient of 0.78 between grammar performance and strategy use suggested that students who employ effective strategies are more likely to excel in grammar tasks. This highlights the importance of teaching students how to utilize appropriate strategies to enhance their grammar performance. Furthermore, the significant correlation of 0.79 between grammar performance and self-efficacy indicated that students who have confidence in their ability to succeed are more likely to perform well in grammar tasks. This underscores the significance of nurturing students' self-efficacy beliefs in language learning contexts. The correlation coefficient of 0.82 between self-efficacy and strategy use suggested that students with higher levels of self-efficacy are more inclined to utilize effective strategies in grammar tasks. This finding underscores the role of self-efficacy beliefs in shaping students' learning behaviors. Thus, the results of this study emphasized the interconnected nature of learners' grammar performance, self-efficacy, and strategy use.

Similar to the results of this study, Çetinkaya and Tilfarlioğlu (2020) found the same result regarding the relationship between grammar learning strategies and academic success, self-efficacy, and learner autonomy. They were significantly correlated.

Other studies like Naseri and Zaferanieh (2012) which investigated the relationship between reading self-efficacy beliefs, reading strategy use, and reading comprehension level of Iranian EFL learners are also in line with this study since there was a significant strong positive correlation between reading self-efficacy beliefs and reading comprehension and also between reading self-efficacy beliefs and reading strategies use. The results are comparable, even though this study focused on grammar self-efficacy. In terms of the relationship between self-efficacy and learner success in L2 acquisition, there appears to be a similar trend.

Another study with the same pattern which matches this study was conducted by Wilson and Narayan (2016). Investigation showed that for each subtask, learners with higher task self-efficacy had higher task performance. Those who used more learning strategies on each subtask

also had higher performance. Overall, results imply that task self-efficacy, learning strategy use, and past performance are important predictors of task performance.

Thus, as the hypothesis stated, there is a positive relationship among learners' grammar performance, students' self-efficacy, and their strategy use. Additionally, it is because of the belief in his or her capabilities, which promote motivation, focused learning, and controlled learning, that a high self-efficacious person can use more strategies to learn (Zimmerman & Kitsantas, 2005). Confidence in their abilities allows them to take a risk and try new ways of solving problems, thus increasing their willingness to experiment with various strategies (Zimmerman & Kitsantas, 2005).

The study also tried to examine whether there is any difference between high self-efficacious learners and low self-efficacious learners in strategy use. The results of the current study revealed significant differences in grammar strategy use between low and high-self-efficacious learners. The mean score for the high self-efficacious group was 116.2, while the mean score for the low self-efficacious group was 70.1. An independent sample T-test was conducted to compare the two groups, resulting in a statistically significant difference ($p < 0.05$, df = 26). The findings indicated that high self-efficacious learners utilized significantly more grammar strategies compared to their low self-efficacious counterparts. This suggests that self-efficacy plays a crucial role in influencing learners' strategy use in grammar tasks. The higher mean score of 116.2 for the high self-efficacious group further underscores the importance of self-belief and confidence in driving effective strategy implementation for successful grammar performance.

The results of the study indicated that cognitive strategies (b3) were the most frequently used strategies in the low group. On the other hand, affective strategies were the least utilized in the low group. The other five categories of strategies were found to be in the medium-use range. The predominance of cognitive strategies in the low group suggested that learners in this group may rely more on cognitive processing and problem-solving approaches when engaging in grammar tasks. This finding aligns with previous research highlighting the importance of cognitive strategies in language learning and suggests that learners may prioritize these strategies to compensate for other areas of weakness in their language proficiency. The lower utilization of affective strategies in the low group may indicate a potential area for improvement in terms of addressing learners' emotional and motivational factors in grammar learning. Educators could explore ways to enhance learners' affective strategies to promote a more positive and engaging learning experience. The relatively higher mean scores for metacognitive and cognitive strategies suggested that learners in both groups exhibit a moderate level of engagement in these strategic approaches. This finding underscores the importance of fostering metacognitive awareness and cognitive processing skills in language learners to enhance their grammar performance and overall language proficiency. The results from the high group in the study revealed that cognitive strategies (b1) were the most frequently utilized strategies. Conversely, similar to the low group, affective strategies were the least utilized in the high group. The dominance of cognitive strategies in the high group suggested that learners in this group may heavily rely on cognitive processing and problem-solving approaches when engaging with grammar tasks. This emphasis on cognitive

strategies may indicate a preference for analytical and strategic thinking in approaching language learning activities, potentially contributing to their higher overall strategy use and grammar performance.

The lower utilization of affective strategies in the high group mirrors the findings observed in the low group, indicating a consistent trend across both groups. The limited engagement with affective strategies in the high group may suggest a potential area for improvement in addressing learners' emotional and motivational factors in grammar learning. Educators could explore ways to enhance the incorporation of affective strategies to cultivate a more supportive and positive learning environment for high self-efficacious learners.

The substantial difference in the mean scores for cognitive strategies between the low and high groups (49 in the high group compared to 30.2 in the low group) underscores the distinct strategic preferences and approaches employed by learners with varying levels of self-efficacy. These findings highlighted the importance of considering individual learner characteristics, such as self-efficacy beliefs, in understanding differences in strategy use and performance outcomes in language learning contexts. Overall, the distribution of strategy uses in the high group sheds light on the diverse strategic repertoire employed by learners when tackling grammar tasks.

The findings of the current study were not congruent with Bonyadi et al. (2012) that explored the relationship between EFL learners' self-efficacy and language learning strategy use and claimed that there was no association between self-efficacy and the use of language learning strategies. In addition, metacognitive strategies are language learning strategies commonly used by EFL learners. According to the hypothesis, high self-efficacious learners use more strategies than low self-efficacious ones.

Bandura's theory of self-efficacy (2010) suggests that belief in one's abilities influences motivation, behavior, and performance. In the face of challenges, strong self-efficacy plays an important role in increasing effort, persistence, and resilience. Students with high self-efficacy are more likely than others to take on tasks confidently, put their efforts into them, and remain engaged in learning. The better performance can be achieved by such increased motivation and perseverance. Thus, as research question three showed, there was an attempt to see the determining role of self-efficacy in learners' grammar performance as one area of language. The results indicated a substantial disparity in grammar scores between the two groups, with a significant t-value of -19.9 ($p<0.05$). This finding underscores the substantial difference in performance levels between high self-efficacious participants (M = 17.6, SD = 1.1) and low self-efficacious participants (M = 5.2, SD = 2) on the grammar test. The t-test results, with degrees of freedom (df=26), confirmed that participants with higher self-efficacy demonstrated significantly better performance on the grammar test compared to those with lower self-efficacy.

The outcomes of the t-test highlighted the impact of self-efficacy beliefs on grammar performance, with high self-efficacious individuals outperforming their low self-efficacious counterparts. These findings suggested that learners' confidence and belief in their abilities play a crucial role in their academic achievements and language learning outcomes.

The results of the study match those of Collins and Bissel (2004) who proposed that there is a correlation between self-efficacy and grammar ability. In addition, the findings were congruent with Doordinejad and Afshar (2014) that found that students with higher levels of foreign language self-efficacy achieved a higher English score. Furthermore, the results were in line with Miranda (2022) which was conducted to examine the effect of self-efficacy and achievement with independent learning. The results showed that self-efficacy has a positive effect on self-regulated learning.

Similar results may be seen in other areas of language than grammar. For example, Li & Wang (2010) showed that reading self-efficacy was significantly positively related to the use of reading strategies in general and the use of three subcategories of reading strategies: metacognitive strategies; cognitive strategies; and social/affective strategies. Therefore, as the hypothesis stated high self-efficacious learners perform better than low self-efficacious ones on the grammar test.

Conclusion

The present study made a rigorous attempt to investigate how significantly self-efficacy could have parts in learners' grammar performance in general and in their grammar, strategy use in particular. The main aim of this study was to find any significant relationship between grammar self-efficacy, grammar strategy use, and grammar performance. Given the outcomes of this research, the study came up with the conclusion that grammar self-efficacy, grammar strategy use, and grammar performance correlated significantly. In addition, results indicated that there was a statistically significant difference between the high and low self-efficacious groups on their grammar performance and there was also a significant difference in using grammar learning strategies between the high and low groups. The high group outperformed the low counterpart group in grammar performance.
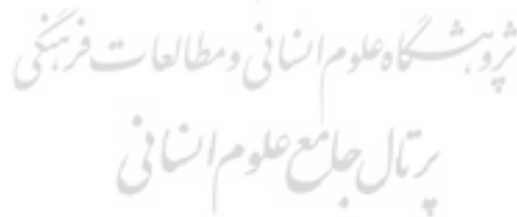
Furthermore, they used more and different grammar strategies in comparison to the low group. The highly preferred strategy from both groups' viewpoints was cognitive strategy but different types. This was followed by meta-cognitive, social, and affective strategies. As Oxford (1990) claims, cognitive strategies are more practical for language learning. Thus, these strategies require learners to solve different problems. As a final remark, the higher self-efficacy is, the more strategies students use and the better performance they have. By and large, this study concluded that self-efficacy as one of the learners' variables is a crucial factor concerning learners' performance and strategy use.

The results of this study have several implications for language learners and teachers. First, the learners may benefit from the results of this study in that they should be aware of the role of self-efficacy in terms of its contribution to their performance in language learning. Second, the findings of this study may also aid teachers, as they must be aware of the positive correlation between the learners' self-efficacy, strategy use, and grammar performance. They may look after and assist learners who have low self-efficacy, assisting them in improving their self-efficacy. Third, the findings of this study revealed that Iranian EFL students employed emotional, and social strategies less frequently than cognitive and metacognitive strategies. As a result, it is the responsibility of teachers to introduce students to various strategies and their

uses. Social strategies play a crucial role in learning a foreign language and teachers should encourage students to engage with others and work in groups during the language learning process. Teachers should inform students about the benefits of employing these strategies and encourage them to use them. Like other studies, there are some limitations in this study. First, since the first phase of the study is a correlational one, it is better to investigate more participants. A larger population could have been used and more generalizable results could have been achieved. second, gender differences were not taken into account. In addition, as it was said before, the main strategy use questionnaire included 70 items but 35 items of them were used in this study.

Acknowledgments

References

Arabski, J., & Wojtaszek, A. (Eds.). (2011). *Individual learner differences in SLA*. Multilingual Matters.

Azizmohammadi, F., & Barjesteh, H. (2020). On the relationship between EFL learners' grammar learning strategy use and their grammar performance: Learners' gender in focus. *Journal of Language Teaching and Research,* 11(4*)*, 583-592. http://dx.doi.org/10.17507/jltr.1104.08

Bandura, A. (2010). Self-efficacy. *The Corsini encyclopedia of psychology*. 2010: 1-3. http://dx.doi.org/10.1002/9780470479216.corpsy0836

Bandura, A., & Watts, R. E. (1997). *Self-efficacy in changing societies*. Cambridge University Press.

Bonyadi, A., Nikou, F. R., & Shahbaz, S. (2012). The relationship between EFL learners' self-efficacy beliefs and their language learning strategy use. *English Language Teaching,* 5(8), 113-121. http://dx.doi.org/10.5539/elt.v5n8p113

Çetinkaya, İ. G., & Tilfarlioğlu, F. Y. (2020). Three Factors Affecting Language Learning: Grammar Learning Strategies, Self-efficacy, and Learner Autonomy. *Universal Journal of Educational Research*, 8(7), 2929-2936. http://dx.doi.org/10.13189/ujer.2020.080721

Cohen, A. D. (2003). *The Learner's Side of Foreign Language Learning: where do styles, strategies, and tasks meet?*

Collins, S. J., & Bissell, K. L. (2004). Confidence and competence among community college students: Self-efficacy and performance in grammar. *Community College Journal of Research & Practice, 28*(8), 663- 675. http://dx.doi.org/10.1080/10668920390254663

Dobakhti, L. (2020). The process of enhancing validity, reliability, and ethics in research. *Iranian Journal of Applied Language Studies*, 12(2), 59-88. https://doi.org/10.22111/IJALS.2020.5978

Doordinejad, F. G., & Afshar, H. (2014). On the relationship between self-efficacy and English achievement among Iranian third-grade high school students. *International Journal of Language Learning and Applied Linguistics World*, 6(4), 461-470. https://doi.org/10.22132/tel.2017.53185

Dörnyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition.* Lawrence Erlbaum Associates.

Ellis, R. (2008). *The study of second language acquisition*. Oxford University.

Griffiths, C. (2018). How Individual Differences Relate to Successful Strategy Use. *Language learning strategies and individual learner characteristics: Situating strategy use in diverse contexts*, 55.

Hadden, C. (2000). The ironies of mandatory placement. *Community College Journal of Research & Practice*, 24(10), 823-838. http://dx.doi.org/10.1080/10668920050179826

Jinks, Jerry, & Morgan, V. (1999). Children's perceived academic self-efficacy: An inventory scale. *The Clearing House,* 72(4), 224-230.

Larsen-Freeman, D. (2001). Teaching grammar. *Teaching English as a second or foreign language*, *3*, 251-266.

Li, Y., & Wang, C. (2010). An empirical study of reading self-efficacy and the use of reading strategies in the Chinese EFL context. *Asian EFL Journal*, 12(2), 144-162.

Liem, A. D., Lau, S., & Nie, Y. (2008). The role of self-efficacy, task value, and achievement goals in predicting learning strategies, task disengagement, peerrelationship, and achievement outcome. *Contemporary Educational Psychology*, 33(4), 486-512. http://dx.doi.org/10.1016/j.cedpsych.2007.08.001

Miranda, V. (2022). The Effect of Self-Efficacy and Achievement Motivation on Self-Regulated Learning. *Jurnal Pendidikan Ekonomi, Perkantoran, dan Akuntansi-JPEPA*, 3(1), 151-160. http://dx.doi.org/10.23960/jpp.v13.i2.202303

Naseri, M., & Zaferanieh, E. (2012). The Relationship between Reading Self-Efficacy Beliefs, Reading Strategy Use and Reading Comprehension Level of Iranian EFL Learners. *World Journal of Education*, 2(2), 64-75. http://dx.doi.org/10.5430/wje.v2n2p64

Nurittamont, W. (2012). The relationship among organizational commitment, self-efficacy, and business performance: An empirical study of hotel businesses in Thailand. *Journal of the Academy of Business & Economics*, 12, 99-108.

O'Malley, J. M., Chamot, A. U., Stewner-Manzanaraes, G., Küpper, L., & Russo,R.(1985). Learning strategy applications with students of English as a second language. *TESOL Quarterly*, 19(3), 557-584.

Oxford, R. L. (1990). Language learning strategies: What every teacher should know. *Bilingual Research Journal.* 147-173 http://dx.doi.org/10.1515/9781614514749-008

Oxford, R. L. (2017). *Teaching and researching language learning strategies: Self-regulation in context.* New York and London: Routledge.

Oxford, R. L., & Nyikos, M. (1989). Variables affecting the choice of languagelearning strategies by university students. *Modern Language Journal,* 73(3),291-300.

Oxford, R., & Shearin, J. (1994). Language learning motivation: Expanding the theoretical framework. *The Modern Language Journal*, 78(1), 12-28.

Paradewari, D. S. (2017). Investigating students' self-efficacy of public speaking. *International Journal of Education and Research*, 5(10), 97-108.

Pawlak, M. (2009). Grammar learning strategies and language attainment: Seeking a relationship. *Research in Language*, 7, 43-60.

Pawlak, M. (2018). Grammar learning strategy inventory (GLSI): Another look. *Studies in Second Language Learning and Teaching*, 8(2), 351-379. http://dx.doi.org/10.14746/ssllt.2018.8.2.8

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learningcomponents of classroom academic performance. *Journal of Educational Psychology*, 82(1), 33.

Prastiwi, A. (2019). *Students' Self-Efficacy in Grammar Class at English Department of Satya Wacana* (Doctoral dissertation, Program Studi Pendidikan Bahasa Inggris FBS-UKSW). Unpublished masteral thesis, Kristen Satya Wacana University, Indonesia.

Sawyer, M., & Ranta, L. (2001). *Aptitude, individual differences, and instructional design* (pp. 319-353). na.

Siow, H. L., & Wong, M. S. L. (2003). Adolescents'self-efficacy and self-regulatedlearning practices in science. *International Perspectives on Adolescence*, 3, 367.

Skehan, P. (1991). Individual differences in second language learning. *Studies in second language acquisition*, 13(2), 275-298.

Tamada, Y. (1996). Japanese Learners' Language Learning Strategies: The Relationship between Learners' Personal Factors and Their Choices of Language Learning Strategies.

Williams, M., & Burden, R. (1997). Motivation in language learning: A social constructivist approach. *Cahiers de l'APLIUT*, 16(3), 19-27.

Wilson, K., & Narayan, A. (2016). Relationships among individual task self-efficacy, self-regulated learning strategy use and academic performance in a computer-supported collaborative learning environment. *Educational Psychology*, 36(2), 236-253. http://dx.doi.org/10.1080/01443410.2014.926312

Wolters, C. A., & Rosenthal, H. (2000). The relation between students' motivational beliefs and their use of motivational regulation strategies. *International Journal of Educational Research*, 33(7-8), 801-820.

Wu, X., Lowyck, J., Sercu, L., & Elen, J. (2012). Self-efficacy, task complexity, and task performance: Exploring interactions in two versions of vocabulary learning tasks. *Learning Environments Research*, 15, 17–35. doi:10.1007/s10984-012-9098-2.

Yule, G. (2015). *Oxford practice grammar advanced*. Oxford University Press.

Zimmerman, B. J., & Kitsantas, A. (2005). Homework practices and academic achievement: The mediating role of self-efficacy and perceived responsibility beliefs. *Contemporary Educational Psychology*, 30(4), 397-417. http://dx.doi.org/10.1016/j.cedpsych.2005.05.003

Appendices

Appendix A

Grammar strategy use questionnaire

Part A – metacognitive GLS

1	I preview the grammar structures to be covered in a lesson.	1	2	3	4	5
2	I pay attention to grammar structures when reading and listening.	1	2	3	4	5
3	I look for opportunities to practice grammar structures in many different ways.	1	2	3	4	5
4	I try to find more effective ways of learning grammar.	1	2	3	4	5
5	I know my strengths and weaknesses when it comes to grammar.	1	2	3	4	5

Part B – cognitive strategies

Part B1 – GLS used to assist the production and comprehension of grammarin communication task

6	I try to use specific grammar structures in communication (e.g. telling a story).	1	2	3	4	5
7	I read for pleasure and watch television to improve my knowledge of grammar.	1	2	3	4	5
8	I notice (or remember) structures that cause me problems with meaning or communication.	1	2	3	4	5
9	I notice (or remember) structures that are repeated often in the text.	1	2	3	4	5
10	I use Google or other search engines to see how a specific grammar structure is used in meaningful contexts.	1	2	3	4	5

Part B2 – GLS used to develop explicit knowledge of grammar

11	I pay attention to rules the provided by the teacher or coursebook.	1	2	3	4	5
12	I try to understand every grammar rule.	1	2	3	4	5
13	I mark new grammar structures graphically (e.g. colors, underlining).	1	2	3	4	5
14	I use rhymes or songs to remember new grammar rules.	1	2	3	4	5
15	I use a notebook/note card for new rules and examples.	1	2	3	4	5

Part B3 – GLS used to develop implicit knowledge of grammar.

16	I repeat the rules and examples to myself or rewrite them many times.	1	2	3	4	5
17	I do many exercises to practice grammar (e.g. paraphrasing, translation, multiple-choice).	1	2	3	4	5
18	I use newly learned rules to create new sentences (to write about my plans).	1	2	3	4	5
19	I listen to and read texts containing many examples of a grammar structure.	1	2	3	4	5
20	I compare the way grammar is used in written and spoken language with how I use it.	1	2	3	4	5

Part B4 – GLS used to deal with corrective feedback on errors in theproduction of grammar.

21	I listen carefully for any feedback the teacher gives me about the structures I use.	1	2	3	4	5
22	I pay attention to teacher correction when I do grammar exercises and try to repeat the correct version.	1	2	3	4	5
23	I try to notice and self-correct my mistakes when practicing grammar.	1	2	3	4	5

| 24 | I try to negotiate grammar forms with the teacher when give a clue (e.g., a comment about the rule). | 1 | 2 | 3 | 4 | 5 |
| 25 | I try to notice how the correct version differs from my own and improve what I said. | 1 | 2 | 3 | 4 | 5 |

Part C – affective GLS

26	I try to relax when I have problems with understanding or using grammar structures.	1	2	3	4	5
27	I encourage myself to practice grammar when I know I have problems with a structure.	1	2	3	4	5
28	I try to use grammar structures even when I am not sure they are correct.	1	2	3	4	5
29	I give myself a reward when I do well on a grammar test.	1	2	3	4	5
30	I talk to other people about how I feel when learning grammar.	1	2	3	4	5

Part D – social GLS

31	I ask the teacher to repeat or explain a grammar point if I do not understand.	1	2	3	4	5
32	I ask the teacher or more proficient learners to help me with grammar structures.	1	2	3	4	5
33	I like to be corrected when I make mistakes using grammar structures.	1	2	3	4	5
34	I practice grammar structures with other students.	1	2	3	4	5
35	I try to help others when they have problems with understanding or using grammar.	1	2	3	4	5

Appendix B

Grammar test

Name:
Age:

Choose the word or phrase that best completes each sentence.

1) **I think Mr. Wilson ……………………. in this school since 2005 or maybe earlier.**
a) teaches   b) is teaching   c) has taught   d) taught

2) **How did this ……………….. broken?**
a) get   b) was   c) become   d) be

3) **I stopped watching the game before the end, but I thought we ……………………**
a) had won   b) have won   c) have been winning   d) will have won

4) **That's very sad news. If ………………… sooner, I would have tried to help.**
a) I know   b) I'll know   c) I knew   d) I'd known

5) **My sister …………………. me once or twice since she's been living in Athens.**
a) was messaging   b) has messaged   c) has been messaging   d) had messaged

6) **According to the memo, we …………………… the meeting at noon tomorrow.**
a) are having   b) have   c) have had   d) will have had

7) By next month I ……………..… all my exams, and I can relax!
a) will finish   b) will have finished
c) will have been finishing   d) will be finishing

8) I'd love to …………. in the 19th century.
a) have been lived   b) lived   c) live   d) have lived

9) Could you tell me …………………………?
a) is where the bus stop   b) where the bus stop is
c) where is the bus stop   d) the bus stop is where

10) You look as if you are having trouble with your homework …………… you like me to help you with it?
a) could   b) may   c) shall   d) would

11) A permit is a document that states that you ………………….. do something.
a) are allowed to   b) should   c) may   d) shall

12) He ………………. have helped us if he'd really wanted to.
a) could   b) may   c) must   d) will

13) My laptop …………… be old, but it still works really well.
a) can   b) could   c) may   d) would

14) I don't know where she is. I suppose she ………………… got stuck in traffic.
a) can have   b) should have   c) might have   d) must have

15) DNA tests ………….. accepted in court cases.
a) are known   b) were used   c) have been   d) will have

16) Something ………………. happened or they would be here by now.
a) must   b) must be   c) must have   d) must have been

17) The film …………………. by Quentin Tarantino.
a) directed   b) did directed   c) was directed   d) was direct

18) They said on the news that ……………… of Scotland was covered in snow.
a) each   b) half   c) whole   d) any

19) The new job provided money for expensive toys, but not very ……………. time to play with them.
a) little   b) few   c) much   d) a lot

20) Cars were parked on ……………… side of the street.
a) all   b) both   c) each   d) any