

The viability of students 'Self-regulated learning in Iranian EFL context

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Abstract

The purpose of the present study was to investigate the effect of persuasion on self-regulation in Iranian EFL context. To this end, 112 male and female intermediate level Iranian EFL learners were selected to participate in this study. In the first session, learners were asked to fill out the Self-Regulation Trait Questionnaire, but they were given no specific explanation about each section of the questionnaire. In other sessions, the researcher exposed the participants to about ten minutes of positive persuasive talk about one of the components of the self-regulated trait questionnaire, and administered the questionnaire again. One-way repeated-measures ANOVA procedures were used to analyze the obtained data. Results indicated that persuasion has a positive effect on learners' planning self-regulation, self-checking, effort self-regulation and self-efficacy self-regulation. These findings can have implication for second language learners, teachers, and materials developers.

Keywords: Persuasion, Self-regulation, Self-efficacy.

1. Introduction

Self-regulation is essential to the learning process (Jarvela&Jarvenoja, 2011; Zimmerman, 2008). It can help students create better learning habits and strengthen their study skills (Wolters, 2011), apply learning strategies to enhance academic outcomes (Harris, Friedlander, Sadler, Frizzelle, & Graham, 2005), monitor their performance (Harris et al., 2005), and evaluate their academic progress (De Bruin, Thiede& Camp, 2011). Teachers, therefore, should be familiar with the factors that influence a learner's ability to self-regulate and the strategies they can use to identify and promote self-regulated learning (SRL) in their classrooms. In addition to self-regulation, motivation can have a pivotal impact on students' academic outcomes (Zimmerman, 2008). Without motivation, SRL is much more difficult to achieve.

Some researchers (Paris & Paris, 2001; Schraw, 1998; Zimmerman, 2002) emphasize that self-regulated learning is the ability to control and influence one's learning processes positively: Learners take personal initiative, apply powerful strategies to attain individually valued learning goals, and monitor their understanding in order to detect and eliminate possible comprehension problems. Self-regulated learning skills are indispensable at almost all levels of education. Unfortunately, however, the learning behavior of many students rarely conforms to the normative ideal of self-regulated learning as it is typically depicted in current theoretical models (Perels, Gurtler, & Schmitz, 2005; Winne & Hadwin, 1998; Zimmerman, 1999, 2002).

Persuasion is typically defined as "human communication that is designed to influence others by modifying their beliefs, values, or attitudes" (Simons, 1976, p. 2). Persuasion is also a fundamental form of social influence on human decision making. Miller (1980) defines persuasive communication as any message that is intended to shape, reinforce or change the responses of others.

Lee (2010) holds that effective persuasion needs several essential elements that help persuader in transferring his message and having an influential communication. One of the essential factors in persuasion is body language including gestures, hand movements, and facial expressions. Another vital element is communication skills. The next element is adjusting for others. Successful persuasion needs the speaker to arrange his words according to language and situation of listener.

Several researchers have investigated various aspects of self-regulated learning components (e.g., Carver & Scheier, 1990; Corno, 1989; Pintrich, 2000; Zimmerman, 1989) as well as different aspects of persuasion (e.g., Lee, 2010; Miller, 1980; O'Keefe, 1990). However, there seems to be a paucity of research as to the effect of persuasion on the improvement of EFL learners' self-regulated learning. This study is aimed to bridge this gap.

2. Review of the related literature

To investigate the viability of students' 'Self-regulated learning through persuasion in Iranian EFL context, there is a need to develop a clearer understanding of each of the concepts.

2.1. Self-regulation

Self-regulated learning is defined as a learner's intended effort toward learning subjects (Corno, 1989). According to Bandura (1986, p. 347) self-regulation is defined as the "process of setting goals for oneself and engaging in behaviors and cognitive processes that lead to goal completion.

Zimmerman and Schunk(2001)defined self-regulated learning (SRL) as self-generated thoughts, feelings and actions which are systematically oriented toward the attainment of students' own goals. Additionally, Zimmerman (1989a) asserts that it is important to distinguish between self-regulation processes, such as perceptions of self-efficacy, and strategies designed to optimize these processes, such as intermediate goal setting. Self-regulated learning strategies refer to actions and processes directed at the acquisition of information or skills that involve agency, purpose, and instrumentality perceptions by learners. Undoubtedly, all learners use regulatory processes to some degree, but self-regulated learners are distinguished by (a) their awareness of strategic relations between regulatory processes or responses and learning outcomes and (b) their use of these strategies to achieve their academic goals. Systematic use of metacognitive, motivational, and/or behavioral strategies is a key feature of most definitions of self-regulated learners (Zimmerman, 1989a).

A feature of most definitions of self-regulated learning is a 'self-oriented feedback' loop (Carver &Scheier, 1990; Zimmerman, 1989b).This loop entails a cyclic process in which students monitor the effectiveness of their learning methods or strategies and react to this feedback in a variety of ways, ranging from covert changes in self-perception to overt changes in behavior such as altering the use of a learning strategy. The other feature of definitions of self-regulated learning is an indication of how and why students choose to use a particular strategy or response. Because self-regulated learning involves temporally delimited strategies or responses, students' efforts to initiate and regulate them proactively require preparation time, vigilance, and effort. Unless the outcomes of these efforts are sufficiently attractive, students will not be motivated to self-regulate. They may choose not to self-regulate their learning when the opportunity arises- an outcome that requires a comprehensive accounting of their academic motivational processes.Operant theories (Mace et al.,1989) claim that all self-regulated learning responses are largely determined by contingent external rewards or punishment such as social approval, enhanced status, or material gain, whereas phenomenological theories view students as motivated by a global sense of self-esteem or self-actualization. Pintrich (2000) has a partially comprehensive definition for learning self-regulation. He considers this learning as an active and systematic process during which learners specify the aims for their own learning and then try to regulate, control and supervise their cognition, motivation and behavior.

Based on Boekaerts' (1999) model, 'self-regulated learning' has a powerful construction that allows researchers: "Firstly, to describe the various components that are part of successful learning; secondly, to explain the reciprocal and recurrent interactions that accrue among the different components, and thirdly to relate learning and achievement directly to the self, that is to a person's good structure" (P.447) .

Winne (2001) maintains that self-regulation involves a cognitive direction that requires continuous awareness to gain intelligent and valid comprehension of each situation, and a reflective disposition about what should be done in various academic activities. Later, Zimmerman (2000) refined this definition and maintained that self-regulated learning is the learners' active participation in learning from the metacognitive, motivational and behavioral points of view. Furthermore Pintrich (2000) defines self-regulated learning (SRL) as a constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior. During this process, learners are

guided and constrained by their goals and the contextual features in the environment. According to Pintrich (2000), few students are fully self-regulated; however, those with better self-regulation skills typically learn more with less effort and report higher levels of academic satisfaction. Zimmerman (2001) defined self-regulated learning as a self-controlled process via which learners convert their mental abilities to practical skills related to their homework. This approach regards learning as an activity which students actively do.

In different contexts there are different definitions of self-regulation. Pintrich (2000) recognizes some characteristics of self-regulation from these definitions:

1. Learners in self-regulated learning are active in the learning process because it is pro-active and constructive.
2. Learners can control the learning process, which is a prerequisite for self-regulated learning.
3. Learners can modify their learning process according to their goals, criteria and standards.
4. In self-regulated learning, mediators are very important because they link learners to outer expectations, and they link actual activities to expected activities.

There are a variety of definitions of self-regulated learning, but three components seem especially important for classroom performance. First, self-regulated learning includes students' metacognitive strategies for planning, monitoring, and modifying their cognition (Corno, 1989; Zimmerman & Pons, 1986, 1988). Students' control of their effort on classroom academic tasks has been proposed as another important component. For example, capable students who persist at a difficult task or block out distracters maintain their cognitive engagement in the task, enabling them to perform better (Corno, 1989; Corno & Rohrkemper, 1985). A third important aspect of self-regulated learning that some researchers have included in their conceptualization is the actual cognitive strategies that students use to learn, remember, and understand the material (Corno & Rohrkemper, 1985; Zimmerman & Pons, 1986, 1988).

Zimmerman (1989) holds that self-regulation involves learners who proactively direct their behavior or strategies to achieve self-set goals. They also rely on affective, cognitive, motivational, and behavioral feedback to modify or adjust their strategies when unable to initially attain their goals. Additionally, according to Corno(1989), in terms of metacognitive processes, self-regulated learners plan, set goals, organize self-monitor, and self-evaluate at various points during the process of acquisition. Schunk (1986) and Zimmerman (1989) believe that in terms of motivational processes, these learners report high self-efficacy, self-attributions, and instinct task interest. Zimmerman and Martinez- pons (1986) hold that in their behavioral processes, self-regulated learners select, structure, and create environments that optimize learning. They seek out advice, information, and places where they are most likely to learn; they self-instruct during acquisition and self-reinforce during performance enactments. Additionally, Zimmerman (1989) maintains that self-regulated students are motivationally, behaviorally and metacognitively active participants in their learning process. Concerning motivational processes, these students exhibit diligence and persistence in their learning and have high levels of self-efficacy and intrinsic interest.

2.2. Persuasion

Since the mid1930s, the notion of how to persuade others has been both a popular and profitable subject. Concurrently, the study and understanding of mass-mediated persuasive messages

became critical to understanding political and social change. Today, the importance of understanding the power of persuasive messages is greater than ever. Clearly, researchers believe that having an understanding of how persuasive messages work is central for surviving in today's media-blitzed society (Steiner, 1972).

Stevenson (1938; 1944) introduced the notion of 'persuasion', which means the argumentative strategy of changing the denotative meaning of an emotive word in order to make it possible to predicate it of an object which otherwise would not be included in the extension of the term.

Wenden (1998) holds that communication should consist of facts that guide the receiver of the message to attain autonomy and individuals who use them will be successful. Changing some negative thoughts and behavior can facilitate learning, and it is believed that these changes are probable through persuasive communication.

O'Keefe (1990) argues that persuasion has a goal and the intent to achieve that goal on the part of the message sender. Also in persuasion, communication is the means to achieving that goal. The third factor in persuasion is the message recipient who must have free will and there must not be threatening physical harm because it will then be considered as force not persuasion. Accordingly, persuasion is inherently communicational.

According to Mills (2000), there are two types of response to persuasion: thoughtful response and mindless response. In thoughtful response, the listener thinks about the message logically, considering both its advantages and disadvantages. If there is any doubt in terms of the correctness of the message, the listener tries to clarify by asking several questions. The effectiveness of the message in thoughtful response is determined by its appropriateness. In contrast with thoughtful responses, mindless responses are based on intuition, not logic, fact, and evidenced judgment. In addition, personality type is an influential predictor of behavior and, consequently, affects people's response to persuasion. Thus, the importance of persuader knowledge of personality types cannot be denied. Several advantages of this knowledge can be summarized as follows: identifying peoples' preferred method to be persuaded, the type of information they prefer to hear, and the way they make decisions (Mills, 2000).

Lee (2010) holds that effective persuasion needs several essential elements that help persuader in transferring his message and having an influential communication:

1. One of the essential factors in persuasion is body language including gestures, hand movements, and facial expressions
2. Another vital element is communication skills. Concerning the fact that some people deny what they are told and disagree with it, being aware of communication skills helps the persuader to cope with this problem
3. The next element is adjusting for others. Successful persuasion needs the speaker to arrange his words according to language and situation of listener.

The above-mentioned studies have shed some light on the little explored area of self-regulation and persuasion. However, there are still many gaps that remain to be filled. In an attempt to partially fill the existing gaps, the present study explores the viability of students' self-regulated learning through persuasion in an Iranian EFL context.

3. Method

3.1 Participants

The participants of this study were initially 139 intermediate level Iranian EFL learners (both male and female) who were learning English at Jahad Daneshgahi institute in Qazvin. Since the process of data collection took 5 weeks and some of the participants were absent on some sessions and were excluded from the study, the final number of participants was reduced to 112. The participants who initially agreed to participate in the study were free to decline their participation in the study anytime during the course (meaning that their data would be excluded from the subsequent analyses). The Participants included 70 females and 42 males; their age ranged from 14 to 51 years old.

3.2. Instruments:

In the present study, the required data were collected through 'Self-Regulation Trait Questionnaire (SRTQ), which was developed by O'Neil and Herl (1998). The English version of the questionnaire had 32 items and each group of 8 items measured one of the four constructs: Planning, Self-checking, Effort and Self-efficacy. The SRTQ covers two dimensions of Meta-cognition and Motivation, each of which comprises two subscales. Meta-cognition includes planning and self-monitoring and motivation includes effort and self-efficacy. The participants were required to put one for those items which were related to their personality, and zero for those that were not related. Using KR-21 formula, the reliability of the questionnaire was estimated to be about 0.81.

3.3. Procedure and data analysis

To collect the required data and to answer the research questions of the present study, the following procedure was followed. First, the participants were randomly selected. Then, in the first session, the Self-Regulation Trait Questionnaire was administered to the participants in order to measure their self-regulation and to have a basic criterion for further comparisons. Students were asked to complete the questionnaire in 20 minutes. At this stage, the participants were given no specific explanation about each section of the questionnaire. They were required to put one for those items which were related to their personality, and zero for those that were not related. Finally, the sums of scores in each section of the Self-Regulation Trait Questionnaire were computed.

In the next session, the participants' scores on SLTQ were announced, and the participants were exposed to about ten minutes of positive persuasive talk about one of the components of self-regulated trait questionnaire, planning, which included 8 items. After the positive persuasion, the learners were asked to take the questionnaires again (it took 20 to 30 minutes). In the third session, the participants' scores on SLTQ (planning) were announced, and the participants were exposed to positive persuasive talk about other component (self-efficacy). Then, they responded to questionnaire again. In the last session, the participants received positive persuasive talk about two other components of self-regulated trait questionnaire (effort and self-checking). Following this treatment, they responded to the questionnaires for the last time.

To analyze the obtained data and to answer the research questions, one-way repeated-measures ANOVA procedures were used.

4. Results and discussion

4.1. Investigation of the first research question

The first research question aimed to explore if persuasion has any significant effect on Iranian EFL learners' planning self-regulation. A repeated-measures one-way ANOVA was used to answer this research question. Table 1 contains the results of the descriptive statistics.

Table 4. 1.
Descriptive statistics for the RM ANOVA on planning self-regulation

Planning self-regulation	Mean	SD	N
Planning self-regulation1	4.714	1.585	112
Planning self-regulation2	5.866	1.539	112
Planning self-regulation3	6.383	1.415	112
Planning self-regulation4	6.910	1.263	112

Table 1 indicates that the highest mean score is for the fourth time ($\bar{x} = 6.91$), followed by the third time ($\bar{x} = 6.38$), the second time ($\bar{x} = 5.86$), and the first time ($\bar{x} = 4.71$). In other words, there is a steady increase in mean scores for planning self-regulation on the four times. To find out whether or not these mean differences are statistically significant, the RM one-way ANOVA was utilized, the results of which are presented in Table 2.

Table 2.
Test of within subjects effects for the RM ANOVA on planning self-regulation

	Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Planning self-regulation	Sphericity Assumed	296.11	3	98.70	203.04	.000	.64
	Greenhouse-Geisser	296.11	1.99	148.15	203.04	.000	.64
	Huynh-Feldt	296.11	2.03	145.49	203.0	.000	.64
	Lower-bound	296.11	1.00	296.11	203.040	.000	.64

Based on Table 2, Greenhouse-Geisser correction shows that the mean score differences for planning self-regulation are statistically significant ($F = 203.04, P < .01$). Therefore we are safe to conclude that persuasion influences Iranian EFL learners' planning self-regulation. Multivariate tests for the RM ANOVA (Table 3) verify this result.

Table 3.
Multivariate tests^b for the RM ANOVA on planning self-regulation

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
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	Pillai's Trace	.737	101.931 ^a	3.000	109.000	.000	.737
	Wilks' Lambda	.263	101.931 ^a	3.000	109.000	.000	.737
Factor	Hotelling's Trace	2.805	101.931 ^a	3.000	109.000	.000	.737
	Roy's Largest Root	2.805	101.931 ^a	3.000	109.000	.000	.737

a. Exact statistic

b. Design: Intercept

Within Subjects Design: factor

Table 3 shows that partial eta square is .737, which means that about 73 percent of the variance in the planning self-regulation scores is because of persuasion effect; this is a large effect size (.737 > .138). The results of Wilks' Lambda ($F_{(3, 109)} = 101.93, P < .01$) show that persuasion improves planning self-regulation significantly. Pairwise comparisons were made in order to locate the meaningful differences (Table 4).

Table 4.

Pairwise comparison for the RM ANOVA on planning self-regulation

(I) factor	(J) factor	Mean Difference (I-J)	Std. Error	Sig. ^a	9% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-1.152*	.093	.000	-1.403	-.901
	3	-1.670*	.107	.000	-1.958	-1.382
	4	-2.196*	.125	.000	-2.532	-1.861
2	3	-.518*	.061	.000	-.681	-.355
	4	-1.045*	.091	.000	-1.289	-.800
3	4	-.527*	.066	.000	-.704	-.350

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Bonferroni.

As Table 4 shows, all the mean differences on the four times differ significantly from one another ($P < .01$).

4.2. Investigation of the second research question

The second research question investigated whether persuasion has any significant effect on Iranian EFL learners' self-checking self-orientation. In order to answer this research question, a repeated measures one-way ANOVA was used. The results of the descriptive statistics appear in Table 5.

Table 5.
Descriptive statistics for the RM ANOVA on self-checking self-regulation

Self-checking self-orientation	Mean	SD	N
Self-checking self-orientation 1	3.964	1.073	112
Self-checking self-orientation 2	4.964	.815	112
Self-checking self-orientation 3	5.392	.727	112
Self-checking self-orientation 4	5.758	.557	112

Table 5 indicates that there is gradual increase in the mean scores for self-checking on the four times. The RM one-way ANOVA was used to see whether or not these mean differences are statistically significant, the results of which are given in Table 6.

Table 6.
Test of within subjects effects for the RM ANOVA on self-checking self-regulation

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared	
Self-checking self-orientation	Sphericity Assumed	201.90	3	67.30	209.74	.000	.654
	Greenhouse-Geisser	201.90	1.81	111.08	209.74	.000	.654
	Huynh-Feldt	201.90	1.84	109.36	209.74	.000	.654
	Lower-bound	201.90	1.00	201.90	209.74	.000	.654

Based on Table 6, Greenhouse-Geisser correction indicates that the mean score differences for self-checking are statistically significant ($F = 105.11, P < .01$). Thus we can claim that persuasion affects Iranian EFL learners' self-checking. Multivariate tests for the RM ANOVA (Table 7) confirm this result.

As shown in Table 7 (multivariate tests), the index of partial eta square is .692, which means that 69 percent of variance in the self-checking scores is caused by persuasion effect; this is a somewhat large effect size ($.692 > .138$).

Table 7.
Multivariate tests^b for the RM ANOVA on self-checking self-regulation

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	
Factor	Pillai's Trace	.692	81.555 ^a	3.000	109.000	.000	.692
	Wilks' Lambda	.308	81.555 ^a	3.000	109.000	.000	.692
	Hotelling's Trace	2.245	81.555 ^a	3.000	109.000	.000	.692
	Roy's Largest Root	2.245	81.555 ^a	3.000	109.000	.000	.692

- a. Exact statistic
b. Design: Intercept
Within Subjects Design: factor

The results of Wilks' Lambda ($F_{(3, 109)} = 81.55, P < .01$) show that persuasion influences self-checking significantly. In order to locate the differences, pairwise comparisons were made (Table 8).

Table 8.
Pairwise comparison for the RM ANOVA on self-checking self-regulation

(I) factor	(J) factor	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-1.491*	.116	.000	-1.803	-1.179
	3	-1.795*	.116	.000	-2.105	-1.484
	4	-1.938*	.133	.000	-2.295	-1.580
2	3	-.304*	.086	.004	-.534	-.073
	4	-.446*	.108	.000	-.735	-.158
3	4	-.143	.062	.138	-.309	.024

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Bonferroni.

Table 8 shows that the mean score of self-checking on the four times differ significantly from one another ($P = .000, P < .05$) except for the difference between time 3 and 4 ($P = .13, P > .05$).

4.3. Investigation of the third research question

The third research question explored whether persuasion has any significant effect on Iranian EFL learners' effort self-regulation. A repeated-measures one-way ANOVA was used to answer this research question. Table 9 represents the results of the descriptive statistics.

Table 9.
Descriptive statistics for the RM ANOVA on effort self-regulation

Effort self-regulation	Mean	SD	N
Effort self-regulation1	4.142	1.432	112
Effort self-regulation2	5.660	1.312	112
Effort self-regulation3	6.276	1.281	112
Effort self-regulation4	6.776	1.205	112

Table 9 shows a regular increase in the mean scores on the four times. The RM one-way ANOVA was used to see if these mean differences are statistically significant; the results are given in Table 10.

Table 10.

Test of within subjects effects for the RM ANOVA on effort self-regulation

Source		Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
	Sphericity Assumed	438.768	3	146.25	247.56	.000	.690
Effort self-regulation	Greenhouse-Geisser	438.768	1.734	253.04	247.56	.000	.690
	Huynh-Feldt	438.768	1.759	249.43	247.56	.000	.690
	Lower-bound	438.768	1.000	438.76	247.56	.000	.690

Based Table 10, Greenhouse-Geisser correction shows that the mean score differences are statistically significant ($F = 247.56, P < .05$). So, we can conclude that persuasion has an effect on Iranian EFL learners' effort self-regulation. Multivariate tests for the RM ANOVA (Table 11) corroborate this result.

Table 11.

Multivariate tests^b for the RM ANOVA on effort self-regulation

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	
Factor	Pillai's Trace	.774	124.198 ^a	3.000	109.000	.000	.774
	Wilks' Lambda	.226	124.198 ^a	3.000	109.000	.000	.774
	Hotelling's Trace	3.418	124.198 ^a	3.000	109.000	.000	.774
	Roy's Largest Root	3.418	124.198 ^a	3.000	109.000	.000	.774

a. Exact statistic

b.Design: Intercept

c.Within Subjects Design: factor

Table 11 indicates that the index of partial eta square is .774, which shows that about 77 percent of the variance in effort self-regulation scores is the result of persuasion effect; this is a large effect size ($.774 > .138$). The results of Wilks' Lambda ($F_{(3, 109)} = 124.19, P < .01$) show that persuasion develops the effort self-regulation significantly. In order to specify the location of the significant differences, pairwise comparisons were made (Table 12).

Table 12.

Pairwise comparison for the RM ANOVA on effort self-regulation

(I) factor	(J) factor	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound

1	2	-1.518*	.118	.000	-1.836	-1.200
	3	-2.134*	.128	.000	-2.477	-1.791
	4	-2.634*	.138	.000	-3.004	-2.264
2	3	-.616*	.062	.000	-.784	-.448
	4	-1.116*	.085	.000	-1.344	-.888
3	4	-.500*	.054	.000	-.645	-.355

*. The mean difference is significant at the .05 level.

a: Adjustment for multiple comparisons: Bonferroni.

Table 12 shows that the mean score on the four times differ significantly from one another ($P < .01$).

4.4. Investigation of the fourth research question

The fourth research question probed whether persuasion has any significant effect on Iranian EFL learners' self-efficacy self-regulation. In order to answer this research question, a repeated measures one-way ANOVA was used. Table 13 contains the results of the descriptive statistics.

Table 13.

Descriptive statistics for the RM ANOVA on self-efficacy self-regulation

Self-efficacy self-regulation	Mean	SD	N
Self-efficacy self-regulation1	4.107	1.807	112
Self-efficacy self-regulation2	5.517	1.800	112
Self-efficacy self-regulation3	5.732	1.718	112
Self-efficacy self-regulation4	5.758	1.761	112

Based on Table 13, there is a gradual increase in mean scores for self-efficacy on the four times. The RM one-way ANOVA was used to see whether these mean differences are statistically significant; the results are shown in Table 14.

Table 14.

Test of within subjects Effects for the RM ANOVA on self-efficacy self-regulation

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
	Sphericity Assumed	208.98	3	69.66	135.05	.000	.549
Self-efficacy self-regulation	Greenhouse-Geisser	208.98	1.60	130.01	135.05	.000	.549
	Huynh-Feldt	208.98	1.62	128.41	135.05	.000	.549
	Lower-bound	208.98	1.00	208.98	135.05	.000	.549

As presented Table in 14, Greenhouse-Geisser correction indicates that the mean score differences for self-efficacy are statistically significant ($F = 135.05$, $P < .01$); so we can claim

that persuasion improves Iranian EFL learners' self-efficacy self-regulation. Multivariate tests for the RM ANOVA (Table 15) confirm this result.

Table 15.
Multivariate tests^b for the RM ANOVA on self-efficacy self-regulation

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's Trace	.645	66.028 ^a	3.000	109.000	.000	.645
Wilks' Lambda	.355	66.028 ^a	3.000	109.000	.000	.645
Hotelling's Trace	1.817	66.028 ^a	3.000	109.000	.000	.645
Roy's Largest Root	1.817	66.028 ^a	3.000	109.000	.000	.645

a. Exact statistic

b. Design: Intercept
Within Subjects Design: factor

A quick look at Table 15 makes it clear that the index of partial eta square is .645, which means that 64 percent of the variance in the self-efficacy self-regulation scores is due to persuasion effect. This is a relatively large effect size (.645 > .138). The results of Wilks' Lambda ($F_{(3, 109)} = 66.02, P < .05$) reveals that persuasion improves the self-efficacy significantly. Pairwise comparisons were made to locate the differences (Table 16).

Table 16.
Pairwise comparison for the RM ANOVA on self-efficacy self-regulation

(I) factor	(J) factor	Mean Difference (I-J)	Std. Error	Sig. ^a	95% Confidence Interval for Difference ^a	
					Lower Bound	Upper Bound
1	2	-1.411*	.127	.000	-1.752	-1.069
	3	-1.625*	.120	.000	-1.947	-1.303
	4	-1.652*	.123	.000	-1.982	-1.322
2	3	-.214*	.051	.000	-.352	-.076
	4	-.241*	.069	.004	-.425	-.057
3	4	-.027	.048	1.000	-.156	.103

*. The mean difference is significant at the .05 level.

a. Adjustment for multiple comparisons: Bonferroni

Table 16 shows that the mean score for self-efficacy on the four times differ significantly from one another ($P < .01$) except for the difference between time 3 and 4 ($P > .05$).

4.5. Discussion

The present study attempted to investigate the effect of persuasion on EFL learners' self-regulation. The results of the present study showed that the mean score differences for planning self-regulation were statistically significant. This is in line with the findings of Vandewalle (1997), who found that persuasion influences Iranian EFL learners' planning self-regulation. Also, the findings of the present study support those reported by Aarsal (2009), who found that students retained knowledge better by using persuasion and were more eager to learn by using this method. This contradicts the findings of Harris et al. (2002), who found no significant difference in the level of planning self-regulation of students in persuasion-based instruction. Also, the findings of the present study are different from those reported by Harris and Graham (1999), who found that students were not influenced by persuasion because they learnt in more or less the same way whether or not they were subjected to persuasion.

Another finding of the present study was that persuasion affects self-checking of Iranian EFL learners. This finding of the present study approves that of Markus and Wurf (1987), who found a significant relationship between self-checking and academic achievement of learners. Their finding suggests that students' self-checking may have a great effect on their learning outcomes in persuasion-based situation. The finding also confirms those of Black and Wiliam (1998), who found that students who received persuasion showed higher self-checking than other students.

Based on the results, it can be concluded that Iranian students will have higher self-checking and academic achievement if they are positively persuaded. These findings also confirm those of Cohen (1998), suggesting that using persuasion may have a great effect on students' self-checking. Furthermore, there are several studies claiming that persuasion may affect students' self-checking and attitudes toward learning. In one study, Gettinger and Seibert (2002) investigated the effects of persuasion on students' self-checking and achievement of young individuals. They concluded that persuasion affected students' self-checking and achievement level.

Another finding of the present study was that persuasion has effect on Iranian EFL learners' effort self-regulation. This finding corroborates those of Harris et al. (2005), who reported that in a persuasion-based classroom, EFL learners' effort self-regulation will be improved. In addition, this finding is compatible with the finding of Deno (1995), who found that persuasion-based language materials have the potential to improve learners' effort self-regulation. Furthermore, this finding of the present study partially approves those of Dembo and Eaton (2000); they reported a significant relationship between using persuasion and learners' effort self-regulation.

Another finding of the present study was that persuasion has an effect on Iranian EFL learners' self-efficacy self-regulation. This finding is compatible with those of Bandura (1993), and Fredericks and Eccles (2002), who confirmed the effectiveness of persuasion-based teaching in the development of students' self-efficacy self-regulation. On the other hand, the findings of the present study are different from those of Santangelo et al. (2008), who found that persuasion-based course has no differential effects for students. The finding also contradicts those of Sanders (2010), who found no significant correlations between self-efficacy self-regulation and persuasion-based instruction.

An important point to bear in mind about the findings of this study is that the participants' performance on the questionnaires changed not only immediately after persuasion, but also from every measurement to the next. This implies that persuasion was not the only factor that affected the results, and there may well have been other factors that influenced the results. One of these factors could be gradual development of learners. This means that learners were learning and developing from one session to another and that this could have affected their responses.

The second factor that could have affected their responses could be test effect. Because learners answered these questionnaires several times, they may have become familiar with questions. Also, learners may have discussed questions with their friends and changed their mind as a result. As a result of repeated exposures to questions, they may have developed a different understanding of the each question and responded differently in accordance with their understanding.

It could also be argued that the persuasion the participants received on one of the components of each trait could have influenced their views about other components as well. It could even be argued that persuasion may actually have had no effect and that all the changes might have been due to factors other than persuasion.

A number of other factors might also have contributed to the results obtained in this study. One such factor may have been the number of students. This study was conducted with a small sample of participants (112), according to Caban (2004), more significant change in self-efficacy will be evident with a larger sample of participants.

The other significant factor seems to be learners' level of proficiency. The participants of this study were all at intermediate proficiency level, but the participants of Gettinger and Seibert's (2002) study were elementary school pupils.

The other possible reason resulting in different findings may be gender differences leading to different abilities of the participants. In the present study, gender was not considered as a variable, but previous studies like Fredericks and Eccles (2002) have emphasized gender differences among the participants in using persuasion.

Other possible reasons accounting for the differences by the findings of this study and those of other studies may be the personality of learners and their age, which were not considered. Also, the way of persuasion used by the researcher is a very important factor that was not considered in this study.

5. Conclusion

The aim of the present study was to explore the effect of persuasion on self-regulated learning. The analysis of the results showed that persuasion has a positive effect on planning self-regulation, self-checking, effort self-regulation and self-efficacy self-regulation and can develop these components in Iranian learners.

The findings of the present study also showed that persuasion-based instruction can improve self-regulation among learners. Since it has been found that self-regulation has positive effect on learning (Drake & Bingham, 1985; Tomarken & Davidson, 1994), it may be concluded that if language teachers want to improve learners' achievement, one way is through increasing the level of these two factors. So, they can use persuasion in language instruction.

In persuasion-based instruction, students can have self-study both inside and outside the class. So, it is necessary that educational authorities edit English textbooks and redesign them in such a way to allow the use of persuasion and in this way improve learners' self-study.

In short, it is hoped that the findings of the present study may be regarded as significant from a theoretical as well as a practical perspective. From a theoretical perspective, the findings of this study can help us develop a much clearer understanding of the nature of goal orientation and self-regulation. From the pedagogical perspective, learners, teachers, and syllabus designers may benefit from the findings of this study. Learners may benefit from the findings of this study in that they can adopt the most effective types of self-regulation and goal orientation to regulate their own learning to achieve desired goals. Teachers may also benefit from the findings of the study. If it turns out that self-regulation and goal orientation components are indeed subject to fluctuation through persuasion, teachers can persuade learners to resort to the more productive and effective components of goal orientation and self-regulation. Syllabus designers may also include materials and activities in the course books to encourage the use of the more effective types of goal orientation and self-regulation.

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