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The Effect of the Model Contingent Teaching on Improving Iranian EFL Learners' Writing Self-Regulation Strategies

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Abstract: Self-regulation strategies regarding writing can be referred to as learners' initiative and self-directed behavior to achieve several goals to foster their writing skills. Based on the three main aspects of scaffolding; contingency, fading, and the transfer of responsibility, this study aimed at delving into the effect of the model of contingent teaching on improving Iranian language learners' writing self-regulation strategies and its components. The participants of the study aged between 20-30 included 60 intermediate language learners from a language institute in Tabriz, Iran. The participants were selected based on convenience sampling in the form of four intact classes. Then, they were randomly assigned to two groups: the control and the experimental group. The experimental group was exposed to treatment for 18 sessions. The Questionnaire of English Writing Self-Regulated Learning Strategies (QEWSRLS) was applied to both groups before and after the treatment. The questionnaire was designed as a multifaceted model, consisting of cognition, metacognition, social behavior, and motivational factors. The results of MANCOVA analysis revealed that teaching writing by the model of contingent teaching was influential in improving EFL learners writing self-regulation strategies ($F=7.36$, $p<0.05$, Wilks' Lambda=0.38, Eta Square=0.61). Also, the main effect was exerted on text processing ($F=26.4$, $P<0.05$, Eta Square=0.35). The study offers some practical implications for teacher trainers, teachers, and EFL learners which are discussed.

Keywords: Contingency, Model of Contingent Teaching, Scaffolding, Self-Regulation, Writing Self-Regulation Strategies

Introduction

Self-regulation in second language learning is defined as the learners' willingness to participate actively in their learning(Dörnyei,2005). Learners with effective self-regulation strategies are capable of setting goals for learning and pursuing knowledge construction procedures based on their initiative (Seker, 2015). Since education strategies are shifting from teacher-centered to student-centered learning and teaching, it seems vital to cultivate learners to get much more involved in their learning than ever. Zimmerman (1989) believes that it is possible to characterize learners as self-regulated learners when they have meta-cognitive, motivational, and behavioral influence over their learning process. Self-regulated learning has three main characteristics, all of which are based on a social-cognitive perspective. First, self-regulated learners are aware that strategic planning and academic performance are intertwined (Zimmerman, 1990). These learners are aware that metacognitive strategies may affect their academic performance. Second, self-regulated learners take steps to control the amount of effort required to complete academic assignments (Pintrich & De Groot, 1990). This group of learners would remove any barriers that will divert attention away from the intended target. Third, self-regulated

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learners monitor their strategies and methods in their learning process and reflect on the received feedback (Zimmerman, 1990).

Regarding research history, there have been several problems in becoming self-regulated in writing classes. First, learners cannot write well and therefore they cannot become competent writers (Bai & Guo, 2021; Du,2020; Guo & Bai,2019). Second, it has been suggested that the learners who barely utilize self-regulation strategies are prone to quitting while facing some challenges (Harris et al., 2009). On the contrary, those learners who employ self-regulation strategies were able to write competently (Bai et al., 2014; Schünemann et al., 2013). Third, writing is a skill that requires learners to be self-sustained and self-regulated. It needs setting goals, planning, and constant attempts to achieve the goal which makes writing a daunting task for learners (Zimmerman & Risemberg, 1997). Finally, training learners to become self-regulated in their learning has been the goal of education in recent years (Hoffman, et al., 2015). Learners are recommended to improve their self-regulation strategies to become autonomous learners (Zimmerman,2001) and it is one of the teachers' responsibilities to lead the learners to autonomy and self-regulated learning. Employing strategies for writing by EFL learners and the teachers' role are two significantly influential factors in their writing performance (Zhang, 2016). Hence, the present study aims at improving the EFL learners' writing self-regulation strategies by utilizing scaffolding and the model of contingent teaching.

Guo et al., (2021) contended that providing learners with some instruction before writing was the most beneficial to improve their writing self-regulation strategies. More specifically, there have been several studies regarding the impact of self-regulation in writing. A case in point is Teng and Zhang (2016) who designed a questionnaire that provides a better understanding of self-regulation writing strategies. This questionnaire, which is utilized in the present study, is a multifaceted model, consisting of cognition, metacognition, social behavior, and motivational factors. Moreover, employing strategies for writing by EFL learners and the teachers' role are two significantly influential factors in their writing performance (Zhang, 2016).

Scaffolding is defined as a process of constructive support offered by interaction in ZPD between an adult (an expert) and a child (a novice) until the child can do the tasks without assistance. This study applied the model of contingent teaching introduced by Van de pol et al., (2014) incorporating various aspects of scaffolding. Van de Pol et al. (2010) determined three essential scaffolding aspects: (a) contingency, (b) fading, and (c) transfer of responsibility. Contingency was first proposed by Wood and Middleton (1978) which signifies the assistance adjusted to a learner's existing level of understanding. Fading is the process of reducing assistance and transferring responsibility to the students. Transfer of responsibility, on the other hand, occurs providing that it is done contingently.

Van de Pol. et al., (2010) suggested an interrelated model for scaffolding strategy. The model involves a number of intentions and means. Five scaffolding intentions that account for learner cognition and affect are direction maintenance, cognitive structuring, recruitment, and contingency management. Direction maintenance is related to keeping the learner on track and helping them pursue specific

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objectives, which is largely metacognitive. Cognitive structuring refers to providing brief and explanatory structures to organize learning. The reduction of freedom of degree accentuates reducing the complexity of the task so that the learner can manage it. Recruitment emphasizes making the learners interested in the task so that they follow the requirements. Contingency management underlies facilitating learner performance through a system of reward or punishment while decreasing frustration and increasing motivation. Scaffolding from a contingency viewpoint is not a state-of-the-art idea in education. However, it has received little attention from applied linguistics researchers. Teacher scaffolding in small group practice was investigated by Van de Pol et al. (2011). They concluded that the model can give a precise picture of how learning takes place. In a sense, the model offers the requisite insight into the learners' learning process and can aid in the discovery of this process.

Moreover, Dix (2016) believes that scaffolding has three elements: the expert, the learner, and the task. Learning is aided by the coordination of these three components. The position of the expert, or in this case, the teacher, is crucial. Scaffolding necessitates constructive engagement and interactions, all of which contribute significantly to changing learners' thoughts and behavior.

Lucantonio (2011) states that contingency is the teacher's judgment on when and how to assist the students. By offering precise, step-by-step assistance, the model of contingent teaching (Figure 1) contributes significantly to the conceptual and practical description of scaffolding. This model functions as a circle, requiring the instructor to begin instruction by diagnosing a learner's current level of knowledge and skills, such as through diagnostic interrogation or reading what the learner has created. To ensure mutual understanding, the teacher must share his or her understanding with the learner. Following that, the teacher should assist the learners according to the diagnostic data collected. In the end, the teacher has to ensure that the learners' previous understanding has been replaced by the current understanding.

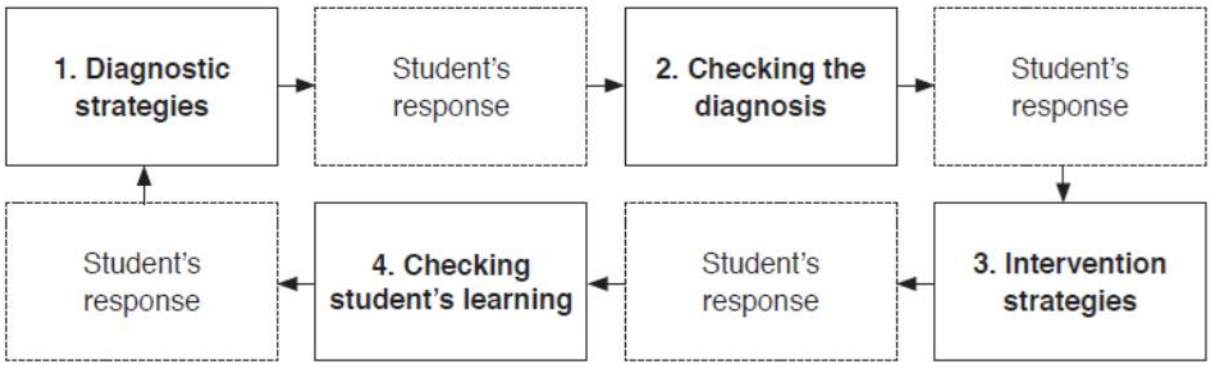


Figure 1. *Model of Contingent Teaching (Adapted from Van de Pol. et al.,2014)*

The scaffolding means to further assist learners are:1. Feedback: providing information according to learner performance 2. Hints: providing clues and suggestions to help the learner move ahead. 3. Instruction: telling the learner what to do or how to do it 4. Explaining: providing more clarification or

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detailed information 5. Modeling: offering the learner a type of behavior to imitate by demonstrating some skills 6. Questioning: asking learners questions to engage them in linguistic and cognitive activities.

Self-regulation is a branch of educational psychology that has been the focus of research in language studies recently. Dörnyei (2005) was the person who drew attention to this concept in language learning research. Oxford (2017) and Bai (2018) believe that self-regulation can be beneficial in fostering competence in English language learning. Cheng (2011) indicated that using self-regulation strategies can be influential on the learners' performance.

By and large, writing is a complex, recurrent process, that consists of interactive stages such as cognitive strategies like drafting and revising, metacognitive strategies like monitoring, and motivational strategies including interest enhancement (Graham & Sandmel, 2011; Teng & Zhang, 2018).

In the Iranian context, there have been a substantial number of studies regarding self-regulation and enhancing writing performance. For example, Pahlavani and Maftoon (2015) investigated the effect of using computer-based argument mapping (CAAM) on enhancing Iranian English language learners' writing self-regulation. Their findings revealed that using CAAM in writing classes fostered learners' self-regulation. Also, they found out that collaboration among learners resulted in higher self-regulation. In addition, applying different strategies in EFL/ESL classrooms which aimed at boosting self-regulatory skills enhances learners' writing skills (Harris, et al., 2015). However, learning and improving writing self-regulatory strategies are painstaking, and it requires teachers' help and support to endorse these strategies skills in their writing (Hammann, 2005).

Utilizing scaffolds can help teachers to improve their teaching practices to enhance learners' self-regulatory strategies in writing. For instance, Hemmati and Mortazavi (2016) carried out a study on the impact of various kinds of scaffolds regarding writing on language learners' perception of self-regulation strategies for writing. Their findings underscored that written scaffolds significantly boosted the participants' perceptions of their abilities to monitor what they write in L2. In general, they indicated that written scaffolds were more beneficial in enhancing learners' writing self-regulation strategies.

However, investigating writing self-regulation strategies is in its infancy, and the self-regulatory strategies of writing have not been investigated thoroughly (Ruan, 2005). The dearth of empirical research into the effect of different kinds of scaffolding on improving writing self-regulation gave impetus to the present study to provide a thorough picture of the effect of the model of contingent teaching on improving writing self-regulation strategies of Iranian EFL learners including cognitive, metacognitive, feedback, and emotional aspects. Presumably, not many studies have delved into the impact of the model of contingent teaching on writing self-regulation strategies among EFL learners. Hence, to address the gap in the research history, this study was an attempt to scrutinize the impact of the model of contingent teaching on improving the writing self-regulation strategies of Iranian EFL learners. As a result, the research questions are as follows:

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-Does the contingent teaching model improve EFL learners' writing self-regulation strategies?
-Which components of writing self-regulation strategies were mostly affected by the contingent teaching model?

Material and Methods

Participants: The statistical population of this study consists of 71 language learners aged 20 to 30 years old in Tabriz. The participants took the Oxford Placement Test. Their EFL proficiency level was found to be intermediate as determined by Oxford Placement Test. However, some of the students (N=8) were determined to be a lower-intermediate level of proficiency, and some other students (N=7) did not complete the course. Therefore, the final statistical analysis was conducted on data collected from 60 EFL learners. According to Ary, Jacobs, Sorensen Irvine, and Walker (2019), this sample size is considered to be acceptable for educational research purposes. After ensuring the initial homogeneity, they were randomly assigned to the control and experimental group.

Materials

Two instruments were applied to collect the required data: Oxford Placement Test and the Self-Regulated Learning Questionnaire (WSSRLQ).

Oxford Placement Test: To commence with, an Oxford Placement Test was utilized to ascertain that participants were homogenous. The Oxford placement test is divided into four parts, each of which tests four skills: speaking, listening, reading, and writing. The speaking subcomponent of this test was excluded for two reasons. First, speaking was not a variable in this report, and it was deliberately skipped because it is a complex method that could have a detrimental effect on the research procedure.

Self-Regulated Learning Questionnaire (WSSRLQ): The original Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ), which was designed in English, was utilized to probe into the effect of the model of contingent teaching on improving EFL learners' writing self-regulation strategies. This questionnaire consists of different categories such as cognition, metacognition, behavior, and motivation (Teng & Zhang, 2016). The questionnaire employs a seven-point Likert scale, varying from 1 (not at all true of me) to 7 (very true of me). It aimed at evaluating context-based, task-specific self-regulation strategies in EFL writing. It examined four aspects of self-regulation strategies, such as cognitive including text processing and knowledge rehearsal, metacognitive including goal-oriented monitoring and idea planning, social behavior such as feedback handling and peer learning, and motivation like motivational self-talk, interest enhancement, and emotional control. The initial reliability tests of the questionnaire showed that Cronbach's alpha for each of the nine strategies ranged from .75 to .84, indicating robust internal reliability (Teng &Zhang,2016). Moreover, the reliability and validity of this questionnaire were evaluated by first piloting for 30 learners in a setting similar to the research context. The reliability of the questionnaire and its components was calculated through Cronbach's Alpha ranging from .71 to. 82 and its content validity was confirmed by expert judgment.

Procedure: The writing course lasted for 20 sessions being held twice a week. The first and last sessions were allocated to pre-test and fill in the Strategies for Self-Regulated Learning Questionnaire

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(WSSRLQ). Also, in the last session, the students took the posttest and filled in the questionnaire again. In the first session, the students took part in the pretest chosen from Cambridge IELTS 13 (academic) which was an opinion essay. The topic was "Some people believe that nowadays we have too many choices. To what extent do you agree or disagree with this statement.". They were supposed to write at least 250 words. Afterward, the treatment, which lasted for 18 sessions, started. During the treatment, the students were offered the opportunity to interact in both individual and group activities. The students were asked to brainstorm and share ideas related to the topic of writing. The treatment included the provision of scaffolding by the model of contingent teaching during writing activities proposed by Van de Pol et al. (2010) which is elaborated below:

The model of contingent teaching was based on three characteristics of scaffolding, namely, contingency, fading, and transfer of responsibility. Contingency necessitates that the teachers' support must be adapted to the current level of the students' understanding. To this end, the teacher had one-to-one interactions with students to evaluate and determine their initial understanding which was mainly achieved by questioning. At the outset of the class, the teacher asked a question regarding the topic of writing and asked the students to discuss it in groups and share their ideas. The teacher monitored them and took notes. This helped the teacher to provide a proper scaffold later. Fading, the second feature, is a gradual dismantling of scaffolds. In order to integrate this feature into the study, the provided scaffolds were divided into three phases. To put it simply, the number of scaffolds offered declined little by little during the three phases. The third feature, transfer of responsibility was also achieved by fading and the students had to accept more responsibility. Table 1 demonstrates how scaffolding means were provided in the first phase to improve various components of writing.

Table 1. Scaffolding Strategies Applied in Classroom

Writing component / Mean	Task achievement	Coherence and cohesion	Lexical resource	Grammatical range and form accuracy
feedback	The teacher provided feedback on the response given to the writing prompt.	The teacher gave feedback on organizing the paragraphs, ideas, and the correct use of linking words and discourse markers.	The teacher gave feedback on the correctness of the vocabulary related to the topic used by learners.	The teacher gave feedback for correcting grammatical mistakes in the learners' writing.
Hint	The teacher gave hints on the ideas learners have about the topic.	The teacher provided hints on the organization and linking words they have written.	The teacher circled the words in their writing and gave clues about their word choice and spelling.	The teacher underlined the grammatically wrong sentences.

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Instructing	The teacher explained in detail they need to provide a clear answer for the question asked.	The teacher elaborated on different sequencing ways of ideas and linking words explicitly.	The teacher instructed the topic vocabulary needed for the task.	The teacher taught in detail the grammar needed for the writing task.
Explaining	The teacher explained the topic and what it wanted learners to write.	The teacher explained how important it is to use sequencing expressions, planning, and linking words.	The teacher explained the related topic vocabulary and how it can improve their band score.	The teacher explained the grammatical mistakes that learners have.
Modeling	The teacher provided a model of writing for perfect task response.	The teacher highlighted the organization, sequencing, and linking of words in the model essay	The teacher underlined all the related topic vocabulary in the model writing.	The teacher circled all the grammar and punctuation rules in the model essay.
Questioning	The teacher asked for some thought-provoking ideas to encourage learners to exchange more ideas.	The teacher asked learners some thought-provoking questioning about the way they have organized their writing.	The teacher asked some questions to elicit more vocabulary from learners.	The teacher asked some questions to elicit and encourage learners to display their grammar knowledge.

The first phase of utilizing scaffolding means based on the model lasted for 10 sessions. During the first phase, the teacher provided a model essay, gave explanations and feedback (oral and written), dropped some thought-provoking hints, asked questions, and made use of instructions. The second phase lasted for 5 sessions in which the teacher only provided explanations and feedback. Finally, in the last phase, the teacher merely offered explanations.

While the students in the experimental group received treatment in three phases, the learners in the control group were asked to share their ideas in groups and then write their own writing. The teacher did not explain, instruct, or even provide feedback to this group. However, after the post-test, they were all provided with feedback on their essays. An example of teacher-learner interaction which has been done contingently is as follows:

Teacher: what did you mean by this sentence: Not only do they have their own time, and they can get all the money for themselves (Reading and Questioning).

Student1: I want to say they can have both advantages.

Teacher: “Not only” is a negative adverbial expression and it is used differently at the beginning of the sentence. Do you know how to use it? (Intervention strategy question)

Student: I should use it with but also?

Teacher: and another one? (Intervention strategy question)

Student: I don’t know.

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Teacher: When we have negative adverbial expressions such as not only in the beginning, there will be an inversion. (Instructing and explaining)
Student: Not only have they more free time, but they can earn more money. Is this right?
Teacher: You need an auxiliary verb, have is the main verb. (Giving a hint)
Student: Not only do they have more free time but also they can earn more money.
Teacher: That's right. (Giving positive feedback)
Teacher: Now can you tell me what we should do if we have a negative adverb like never? (Questioning to check the new understanding)
Student: There will be an inversion. We change the position of the subject and auxiliary verb.
Teacher: That's right.

In the last session of the course, both groups participated in the post-test. The post-test was based on a topic taken from Cambridge IELTS 14 (opinion essay). The topic was "some people say that music is a good way of bringing people of different cultures and ages together. To what extent do you agree or disagree with this opinion." They were supposed to write at least 250 words. After the post-test, they were3 asked to fill in the Strategies for Self-Regulated Learning Questionnaire (WSSRLQ). The teacher (also the researcher) who scored the learners' writings is a Ph.D. candidate who has been teaching English for more than 10 years. Also, to measure inter-rater reliability, another teacher was asked to rate the writings. The second rator who was asked to score the pretest and post-test is a Ph.D. candidate who has been teaching English for more than 10 years. They scored the papers using the Cambridge University IELTS essay writing rubric (public version). In order to assure that there was no significant difference between the scores of the two raters, inter-rater reliability was computed. The results indicated that the pre-test scores ($r=0.84$, $p<0.05$) and post-test scores ($r=0.87$, $p<0.05$) were highly correlated. It is worthy to mention that the researcher assured all the participants that their writings and answers to the questionnaires were all confidential and were just used for the research purpose.

Design: This study was considered to be quasi-experimental and had a pretest-intervention-posttest design. It aimed to examine a cause-and-effect relationship between the dependent and independent variables. The dependent variable of the study was writing self-regulation strategies. The independent variable was the model of contingent teaching. intact classes were used based on convenient sampling to save time. In order to answer the questions, the data was collected by utilizing pre-test and post-test and the Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ) by the researcher.

Results

The data collected from both groups were analyzed utilizing MANCOVA to investigate the effect of the model of contingent teaching on improving EFL writing self-regulation strategies. Table 2 represents the mean scores and standard deviation of writing self-regulation strategies before and after the intervention.

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Table 2. Mean scores and SDs of the two groups in pre and posttests of Self-regulation strategies

Variables		Groups	N	Mean	SD
Text processing	Control	Pre-test	30	24.93	1.01
		Post-test	30	24.8	0.88
	Experimental	Pre-test	30	24.8	2.7
		Post-test	30	30.06	2.49
Knowledge rehearsal	Control	Pre-test	30	12.7	1.08
		Post-test	30	12.43	0.85
	Experimental	Pre-test	30	10.96	1.73
		Post-test	30	12.76	1.04
Idea planning	Control	Pre-test	30	12.2	0.84
		Post-test	30	11.33	0.84
	Experimental	Pre-test	30	10.1	1.6
		Post-test	30	12.5	1.4
Goal-oriented monitoring and evaluating	Control	Pre-test	30	24.33	2.82
		Post-test	30	24.2	2.68
	Experimental	Pre-test	30	20.86	4.72
		Post-test	30	25.03	2.29
Peer learning	Control	Pre-test	30	9.56	2.07
		Post-test	30	9.46	2.01
	Experimental	Pre-test	30	9.3	2.36
		Post-test	30	14.8	2.8
Feedback handling	Control	Pre-test	30	18.16	2.18
		Post-test	30	17.06	2.18
	Experimental	Pre-test	30	18.7	1.72
		Post-test	30	21.33	2.27
Interest enhancement	Control	Pre-test	30	15.83	3.38
		Post-test	30	15.56	3.14
	Experimental	Pre-test	30	17.76	2.56
		Post-test	30	17.63	1.75
Motivational self-talk	Control	Pre-test	30	32.26	5.17
		Post-test	30	31.83	4.91
	Experimental	Pre-test	30	34.63	2.97
		Post-test	30	35.33	2.59
Emotional control	Control	Pre-test	30	11.43	1.92
		Post-test	30	11.26	1.81
	Experimental	Pre-test	30	13.03	1.4
		Post-test	30	13.06	1.17
Self-regulation	Control	Pre-test	30	161.43	13.6
		Post-test	30	157.96	13.8
	Experimental	Pre-test	30	160.16	11.82
		Post-test	30	182.53	7.99

The Shapiro–Wilk test was applied to verify the normality of the collected data. After ensuring the normality, MANCOVA was run to analyze the collected data. The results of Box's M Test of Equality of Covariance Matrices and Levene's Test for Equality of Variances are displayed in Tables 3 and 4.

Table 3. Box's M Test of Equality of Covariance Matrices

Box`s M	**F**	**df1**	**df2**	**Sig**
109.62	2.03	45	11051.35	0.003

As Table 3 displays, the equality of Covariance Matrices for data is confirmed (p>.001).

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Table 4. Levene's Test for Equality of Variances

Variables	F	df1	df2	Sig
Text processing	8.23	1	58	0.06
Knowledge rehearsal	1.51	1	58	0.22
Idea planning	1.54	1	58	0.21
Goal-oriented monitoring and evaluating	3.15	1	58	0.08
Peer learning	36.75	1	58	0.013
Feedback handling	7.01	1	58	0.014
Interest enhancement	3.44	1	58	0.06
Motivational self-talk	18.41	1	58	0.013
Emotional control	9.36	1	58	0.03

According to Table 4, the equality of variances for the data was confirmed (p.>01). Table 5 represents a noticeable difference in the performance of the experimental group applying the model of contingent teaching in terms of improving the writing self-regulation strategies (F=7.36, p<0.05, Wilks' Lambda=0.38, Eta Square=0.61). In other words, the learners in the experimental group exceeded the control group, and the model of contingent teaching was up to 61% effective in improving the learners writing self-regulation strategies. Moreover, this study intended to inquire which components of the writing self-regulation strategies were mostly affected by the model of contingent teaching. Table 6 represents the MANCOVA analysis of the writing self-regulation strategies components.

Table 5. Multivariate Analysis of Variance for the Model of Contingent Teaching and Self-Regulation

	Value		**F**	**Sig**	**Eta**
Wilks` Lambda	0.38		7.36	0.000	0.61

Table 6 represents the results of writing self-regulation strategies and their components for both groups. The results for text processing (F=26.4, P<0.05, Eta Square=0.35), idea planning (F=20.32, P<0.05, Eta Square=0.29), peer learning (F=23.52, P<0.05, Eta Square= 0.32), feedback handling (F=22.97, P<0.05, Eta Square=0.31) and motivational self-talk (F=4.42, p<0.05) are significantly different. To put it simply, the model of contingent teaching has been effective in improving text processing by 35%, idea planning by 29%, peer learning by 32%, feedback handling by 31%, and motivational self-talk by 8%. The principal effect was exerted on text processing. However, the results for knowledge rehearsal (F=1.38, P>0.05), goal-oriented monitoring and evaluating (F=1.23, P>0.05), interest enhancement (F=0.08, P>0.05), and emotional control (F=1.7, P>0.05) are not significantly different. Therefore, it can be concluded the contingency model of teaching was not effective in improving these components.

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Table 6. MANCOVA Analysis of Writing Self-Regulation Strategies and its Components

	Variables	SS	DF	MS	F	p	Eta
Group	Text processing	84.31	1	84.31	26.4	0.000	0.35
	Knowledge rehearsal	1.006	1	1.006	1.38	0.24	0.02
	Idea planning	22.06	1	22.06	20.32	0.000	0.29
	Goal-oriented monitoring and evaluating	5.11	1	5.11	1.23	0.27	0.02
	Peer learning	101.72	1	101.72	23.52	0.000	0.32
	Feedback handling	72.49	1	72.49	22.97	0.000	0.31
	Interest enhancement	0.28	1	0.28	0.08	0.77	0.002
	Motivational self-talk	20.65	1	20.65	4.42	0.04	0.08
	Emotional control	2.26	1	2.26	1.97	0.16	0.03

Table 7. Mean and Standard Deviation of Writing Self-Regulation Strategies and its Components

Variables	Group	Mean	Std Error
Text processing	Control	25.33	0.46
	Experimental	29.53	0.46
Knowledge rehearsal	Control	12.37	0.22
	Experimental	12.82	0.22
Idea planning	Control	10.84	0.27
	Experimental	12.99	0.27
Goal-oriented monitoring and evaluating	Control	24.09	0.53
	Experimental	25.13	0.53
Peer learning	Control	9.82	0.54
	Experimental	14.44	0.54
Feedback handling	Control	17.25	0.46
	Experimental	21.14	0.46
Interest enhancement	Control	16.47	0.47
	Experimental	16.72	0.47
Motivational self-talk	Control	32.54	0.56
	Experimental	34.62	0.56
Emotional control	Control	11.82	0.28
	Experimental	12.51	0.82
Self-regulation Learning	Control	160.57	1.82
	Experimental	179.92	1.82

Discussion

This study addressed two research questions. In this section, the obtained results are justified and discussed. To answer the first research question regarding the effect of teaching writing by the model of contingent teaching on improving the Iranian EFL learners' writing self-regulation strategies, the mean scores of the pre-test and post-test for both groups were compared. There was no significant difference between the mean scores in the pr-test, whereas their post-test scores were significantly different. The results of MANCOVA revealed that the model boosted the overall writing self-regulation strategies.

To answer the second research question regarding improving writing self-regulation strategies components, the mean scores in the pre-test and post-test were compared and the results of MANCOVA analysis indicated that it was influential in improving text processing (cognitive strategies), peer learning, and feedback handling (social behavior strategies), and idea planning (metacognitive strategies), and motivational self-talk (motivational strategies).

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In line with the findings of the present study, Li and Zhang (2021) found out that the teacher's help and support allowed the learners to go beyond their current level of understanding by applying writing self-regulation strategies such as brainstorming, sharing ideas in groups, and getting feedback from the teacher and their peers. Moreover, the results of the study are supported by the findings of the study by Rahimi and Fathi (2021) which investigated the writing self-regulation strategies. They reported that the teacher's help and support play an important role in moving learners from other-regulated to self-regulated in their writing performance by learning how to apply writing self-regulation strategies.

All in all, there have been quite a few studies concerning the impact of scaffolds on improving EFL writing self-regulation strategies. The results of the study conform with the findings of Hemmati and Mortazavi (2016) who reported that scaffolds have been influential in promoting learners' attitudes toward their writing self-regulation strategies. Moreover, the results are consistent with the findings reported by Raes, et al., (2012). Their findings accentuated the positive effect of multiple scaffolding as an approach to improving both knowledge acquisition and metacognitive awareness. Moreover, the results are commensurate with the findings of Guo et al., (2021) who found out that teaching self-regulation strategies before writing had the strongest effect on improving learners writing ability based on process writing.

Additionally, this study tried to illuminate which components of writing self-regulation were mostly affected by the model of contingent teaching. The results indicated that the principal effect was exerted on text processing, a cognitive strategy, which is in line with the findings of Da Silva and Graham (2015) who argue that awareness of planning, monitoring, and evaluating enhance the writing performance. Also, with regards to idea planning, the findings of the study confirm previous studies such as Harris et al., (2019) indicating a positive relationship between metacognition and writing performance. Finally, regarding motivational self-talk, the results align with the results of Teng et al., (2021) that emotional control has a positive effect on learners' active engagement in writing.

In justifying the results, it can be indicated that teaching writing by the model of contingent teaching created an engaging environment for learners and teachers to co-construct the meaning and the form. Also, the interaction between the teacher and the learners increased the learners' awareness of their potential and areas that needed development. It is safe to conclude that the model of contingent teaching created a collaborative environment for the teacher and the learner to interact. The dynamic and interactive nature of collaborative activities resulted in co-constructing the knowledge between the teacher and the learner.

Another possible reason for the findings can be making the writing task purposeful by applying the model of contingent teaching. by setting goals, the learners strive to achieve the goal by writing self-regulation strategies. another argument that can be put forward to justify the results is that the feedback provided to the learners was diagnostic and dialogic. By negotiating the form and the meaning, learners became more aware of different writing self-regulation strategies and how to utilize them in their process of learning.

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The finding can be attributed to the findings by Van de Pol. (2010), the main aspects of scaffolding are contingency, fading, and transfer of responsibility. The model of contingent teaching accentuated the contingent support meaning that the teachers' support was little by little fading and the teacher delegated more responsibilities to the learners which is the core of self-regulated strategy training. The ultimate goal of the self-regulation strategy is to lead the learners to become autonomous and self-regulated which was achieved by applying the model of contingent teaching in the present study.

This study has faced some limitations and several shortcomings. Consequently, it seems inevitable to be cautious in generalizing the results. One limitation can be related to the short time of training (12 sessions) in which if it lasted for more sessions, it could generate different results. Moreover, because of some practical restrictions, only female learners took part in the study which might impose some limitations in generalizing the results.

Conclusion and Implications

Based on research findings, it can be concluded that the model of contingent teaching was beneficial in improving learners' writing self-regulation strategies. It also proved that this model was more facilitating and beneficial in improving cognitive strategies in terms of text processing, social behavior strategies in terms of peer learning, and feedback handling, metacognitive strategies in terms of idea planning, and motivational strategies in terms of motivational self-talk specifically. In addition, the findings proved that the text processing was mostly affected by the model. This study accentuates how Van de Pol et al.'s (2014) interrelated model can be effectively applied to scaffold learners and language learning in classrooms. This model can be used to lead students from the known to the unknown. It can be helpful for teachers to assess what learners already know and identify places where assistance from the teacher is required, creating a more engaging learning situation for both the teacher and the learners. Teachers and learners will benefit from the findings of this study because the model of contingent teaching assists teachers in handing over responsibility to learners and assisting them in becoming self-regulated language learners. Furthermore, the results could be valuable for teacher educators in training teachers to assist learners contingently in the classroom, potentially leading to more self-regulated learners. The model of contingent teaching isn't the most cutting-edge principle of scaffolding. However, it has not been the subject of applied linguistics research. It was employed in this study to see if it could assist EFL students to improve their writing self-regulation strategies. Hence, it can be extended to a variety of other language learning skills and sub-skills.

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