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The impact of different scaffolding techniques on IELTS candidates' writing anxiety: From perceptions to facts

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ABSTRACT

Writing anxiety is effective on writing performance. Although anxiety is not always an obstacle, controlling its probable damages can facilitate the learning process. The present study investigated the effects of peer, reciprocal, and distributed scaffolding on English as Foreign Language (EFL) learners' anxiety level. 120 IELTS candidates were randomly selected in an IELTS center in Iran. Prior to the course, the participants were interviewed about their perceptions toward anxiety and the ways to reduce it. Then, the participants were randomly placed in one control group and three experimental groups. In each of the experimental groups, one of the aforementioned scaffolding techniques was practiced by a trained IELTS teacher. The Second Language Writing Anxiety Inventory (SLWAI) was administered before and after the treatment, and the results were analyzed using Analysis of Covariance. The findings showed that only the reciprocal scaffolding group had a significant difference with the control group. Also, the use of reciprocal scaffolding had a significant effect only on cognitive anxiety. The qualitative analysis showed a general misperception and a pessimistic view toward the employment of reciprocal and peer scaffolding by the participants. These findings can have implications for all the stake-holders in language learning; especially IELTS test takers, teachers, and language institutes.

1. Background and purpose

Ever since its introduction in 1980, IELTS has been used as a reliable test to measure non-native speakers' English language proficiency (Pearson, 2019; Uysal, 2010). Various researchers have studied the different types of validity and inter-rater reliability of IELTS (Alshammari, 2016; Chalhoub-Deville & Turner, 2000); the findings have generally shown that IELTS is a reliable and valid test.

The IELTS writing test (in both academic and general training modules) consists of two tasks. Certified and trained examiners assess both tasks giving more weight to task 2. Finding effective ways for teaching writing to IELTS candidates has always been of abundant interest. Since competition is high among people who plan to emigrate, time has always been a precious determinant of efficiency. Hence, the desire to have a course that can help learners reach their goal as quickly as possible has put pressure on researchers and teachers.

Becoming an autonomous and independent writer is presumably not easy. Since learning is a multifaceted process in which various factors are involved, looking at it from a narrow perspective would be naïve. Finding new ways of improving one's writing ability requires a comprehensive view toward the learning process.

Learning cannot be separated from the environment in which it occurs. The context in which learning takes place is really of

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importance. Scaffolding is a central term in the socio-cultural view to language learning which has been studied ever since Vygotsky introduced the 'socio-cultural theory' (Alwahibee, 2019; Delen et al., 2014; Faraj, 2015). Scaffolding techniques have been shown to be beneficial in learning the four language skills (Author, 2020). Nevertheless, it is almost undeniable that even when learners are scaffolded, their performance on IELTS is affected by anxiety. The present study exclusively focused on Second Language Writing Anxiety (SLWA).

Anxiety has been shown to have a negative impact on language learning (Horwitz, 2001, 2010; Pichette, 2009). Writing anxiety, in particular, has been the subject of many studies in recent years. Various researchers (e.g., Atay & Kurt, 2006) have emphasized the possible negative effects of writing anxiety on learners' writing skill.

Writing is a skill which, according to the literature, can be improved in social contexts in which interactions among peers and teacher are at maximum (Alghasab et al., 2019; Kieft et al., 2008). This interaction, which is named scaffolding in the socio-cultural theory, could be among peers themselves or between the teacher and the learner in a two-way manner.

Although the effect of scaffolding on EFL learners' writing ability has been studied in previous research (Gholami Pasand & Tahriri, 2017), few, if any, studies have investigated the effects of using different types of scaffolding in IELTS preparatory courses on teaching writing and decreasing writing apprehension. This is a gap which needs to be filled. In an attempt to do so, this study addressed the following questions:

Q1: Are there any significant differences among the effects of different types of scaffolding and the control condition on IELTS learners' writing anxiety?

Q2: How do different scaffolding techniques influence somatic, cognitive, and behavioral components of English writing anxiety?

Q3: To what extent do the perceptions of IELTS teachers and candidates confirm the quantitative results of the study?

2. Literature review

2.1. Scaffolding

In educational contexts, the term scaffolding refers to the temporary assistance that can be provided for students to complete a task in such a way that they can complete similar tasks alone. This assistance could be in different forms; however, they are most likely presented by teachers, peers, books, and multimedia. To analyze the concept of scaffolding further, we need to know what classifications of scaffolding have been proposed. The most prominent classifications of scaffolding techniques are briefly mentioned below.

Hannafin et al. (1999) differentiated between four types of scaffolding, including conceptual, meta-cognitive, strategic and procedural scaffolding. Xun and Land (2004) refer to elaborative, procedural and reflective question prompts, to be used as scaffolds to solve ill-structured problems.

A number of studies have focused on different aspects of scaffolding in recent years and found that scaffolding techniques, such as distributed and reciprocal scaffolding, are generally facilitative in EFL classes (Alake & Ogunseemi, 2013, Author, 2020).

Using different scaffolding techniques has been proven to be effective on learning the four language skills. A trend can be recognized on the employment of different forms of scaffolding for improving language learners' reading comprehension and writing skill in the last decade. To mention a few, Obeiah and Bataineh (2016) carried out an experimental study with Jordanian EFL learners to check the effect of scaffolding-based instruction on their writing performance. The results confirmed the positive effect of scaffolding instruction on overall writing performance as well as performance on most writing sub-skills. Gholami Pasand and Tahriri (2017) investigated teacher- and peer-scaffolding in EFL writing classrooms to see the participants' improvement in writing. Baleghizadeh et al. (2011) also studied the effect of high- and low-structured scaffolding on EFL learners' writing ability. Both of these studies showed that scaffolding is actually helpful when the writing skill is being taught.

In another recent research, Hanjani (2019) studied the effect of peer-scaffolding and self-revision techniques on a group of EFL learners in a paragraph writing course. The results showed that peer-scaffolding followed by self-revision had facilitative effects on the learners' writing performance on the paragraph scale.

The studies mentioned above show that scaffolding can, in fact, have a positive effect on EFL learners' writing skill as well as other skills in various classroom environments. Scaffolding can be practiced in different forms, and as the results of the aforementioned studies clearly suggest, different scaffolding techniques could have differential effects on learners.

2.2. Writing anxiety

Daly and Miller (1975) used 'writing apprehension' to describe a type of anxiety from which many learners suffer when doing writing tasks. The nature of the relationship between writing apprehension and writing performance is rather baffling. What is clear, according to recent research, is that writing anxiety has, to some extent, impact on the quality of writing, and these effects might be moderated by different factors. For instance, Balta (2018) studied the relationship between writing anxiety and writing skills with 375 students of 8th grade. The results showed that a decrease in students' writing anxiety leads to better performance in argumentative text writing skills. It has also been suggested that time pressure could be the reason why apprehensive writers cannot perform well (Kean et al., 1987).

By the end of twentieth century, research on SLWA became interesting and various researchers started to work on this issue (Cheng et al., 1999; Saito et al., 1999; Vogely, 1998). Although a consistent, positive correlation has been reported in writing anxiety between L1 and L2, the results of studies on the relationship between L2 writing anxiety and L2 writing performance have been equivocal.

Qashoa (2013) suggests that high anxiety levels in writing could stem from affective, cognitive, and pedagogical reasons.

In more recent studies, researchers have attempted to find reasons for this phenomenon and uncover its effects on different aspects of second language learning. According to Cheng (2004), SLWA is basically avoidance of writing due to the situation, which is usually caused by the evaluation of that writing. In fact, anxiety is created due to a situation in which learners are supposed to be evaluated in some way, and the results of this evaluation are vital for them.

The cause of writing anxiety in educational environments has also been of interest among researchers. Shang (2013) conducted a study to analyze the factors involved in creating writing anxiety for EFL learners. The results showed that no matter the experience in learning English, writing anxiety is always there. Self-estimation and linguistic limitations were mentioned as the main factors. In a mixed method study, Rezaei and Jafari (2014) attempted to find the main reasons for EFL learners' writing anxiety using Cheng's (2004) SLWAI. The findings not only showed high levels of anxiety among the participants due to reasons such as fear of teacher's negative comments, low self-confidence, and preoccupation with high expectation, but also suggested that judgmental and threatening classroom environments are most likely responsible for this deficiency.

SLWAI has three sub-scales, which as Cheng (2004) explains, are in fact three different types of writing anxiety; somatic and cognitive anxiety as well as avoidance behavior. He explains that cognitive anxiety is associated with the learners' minds and their perception of writing and its consequences. Thus, this anxiety shows itself as fear of others' judgments, their mental concerns, and their psychological background. The students with cognitive anxiety as their predominant anxiety type are preoccupied with writing as a mental activity. They are basically worried about the results of the writing and what will happen if they did not do it correctly. Somatic anxiety, on the other hand, is associated with learners' physical reactions to essay writing. They see this task as a burden, and hence, their body shows reactions like sweating, heart-beat, headache, dizziness, and shivering. Avoidance behavior is neither about mental nor about physical reactions, but habits. The students with this type of anxiety would simply dodge the opportunity to write. They, consciously or sub-consciously, choose to avoid these tasks. These students usually find excuses to forget their homework, and to be absent in sessions which they had to write in the class. According to the literature (Cheng, 2004; Rezaei & Jafari, 2014), the former type of writing anxiety is the most common one, and the latter is the least common one.

Considering the above-mentioned studies, and the fact that even replication studies were not totally confirmative of previous findings, it appears that there are areas of writing anxiety that need to be investigated. In particular, research findings do not seem to be consistent when it comes to the effect of scaffolding techniques on writing anxiety, especially different types of writing anxiety. This study was an attempt to address this issue.

3. Method

3.1. Research design

The design of the present study was 'explanatory sequential mixed design'. In such designs, the researcher starts with a quantitative phase and follows up on specific results with a second phase, which is qualitative. The objective of the second phase is to explain the initial results.

The reason for choosing an explanatory sequential mixed-design for this study was to obtain statistical quantitative results from a sample and then follow up with qualitative data through open-ended interviews with the participants and the teachers to elaborate on those results in more depth. The present researchers believed that the qualitative phase could help to understand the reasons behind the possible effectiveness of scaffolding on IELTS learners' writing anxiety.

There were one independent variable and one dependent variable in this study. The independent variable was scaffolding which has three levels, including peer, reciprocal, and distributed scaffolding. The dependent variable was writing anxiety, and had three levels; somatic and cognitive anxiety and avoidance behavior. The participants were also divided into three groups; low-anxiety, moderate-anxiety, and high-anxiety.

3.2. Participants

The study was conducted with 120 Iranian IELTS students who passed IELTS MOCK test prior to the course and were ready to start their IELTS preparatory courses at two branches of Kadoos Language Complex, and IRSAFAM IELTS Center in Rasht, Iran. The participants were male and female. All of the participants were selected from among the IELTS candidates who took part in IELTS MOCK test held three times a month in the only certified center in the North of Iran, IRSAFAM. The participants suitable for this study obtained the band score 3.5, 4 (equal to B1 level in CEFR), or 4.5 in the writing skill and their overall band scores.

The quantitative phase of the study was quasi-experimental. The control group and the experimental groups (three groups) were formed randomly. The participants were aged between 18 and 34, from both genders (12 male and 18 female IELTS candidates in each group).

In order to ensure homogeneity, the participants were selected out of a pool of 400 based on their report cards in their IELTS MOCK test within the last 5 months before the start of the study. The experimental groups were given a 30-session (each session lasting for 2 h) treatment in which the teachers used different types of scaffolding. Two experienced teachers, both male aged 34 and 38, with similar experience and educational background taught in the classes. Both of the teachers were PhD students in TEFL at the time and had 10 and 12 years of experience, and 6 and 9 years of experience in IELTS preparatory classes, respectively.

For the data collection in the qualitative phase, 16 IELTS teachers from different cities in Iran were selected. They had at least a bachelor's degree in EFL teaching and at least 3 years of teaching experience. These participants were interviewed online with three

open-ended questions.

3.3. Instruments

The present study was conducted in two phases, a quantitative phase, and a qualitative phase. The following instruments were used in each of these phases in order to answer the research questions.

3.3.1. Writing anxiety test (apprehension test)

The Second Language Writing Anxiety Inventory, devised by Cheng (2004), includes three subscales and 22 items. It is widely employed as a measurement device for second or foreign language writing anxiety (Rezaei & Jafari, 2014), and its Cronbach alpha coefficient is reported as 0.91 (Cheng, 2004). This questionnaire applies a Likert-type 5-choice response format; 1 (strongly agree), 2 (agree), 3 (neither agree nor disagree), 4 (disagree), and 5 (strongly disagree). The questionnaire items were translated into Persian by two professors of English translation to facilitate the participants' understanding of each item, given the fact that they were at intermediate level of English proficiency and were likely to struggle with ambiguity. According to Dörnyei and Taguchi (2009), translation to the participants' mother tongue is advised in such studies and with participants at such proficiency levels. The internal consistency reliability of this instrument in the context of the present study was checked using Cronbach alpha, and the result was 0.83.

3.3.2. Unstructured interviews

The participants of the present study were interviewed twice, once before the course, and once after. In addition, 16 IELTS teachers from different cities of Iran were interviewed online. The questions for both groups were the same; they were about the 'reasons for writing anxiety', 'their possible solutions', and 'their idea about the effects of peer, reciprocal, and distributed scaffolding on reducing writing anxiety'. The open-ended questions were emailed to them, and they were asked to respond within 48 h.

3.3.3. Teachers' diaries

Both teachers were asked to write a diary about their observation in each session during the course. They were encouraged to pay attention to the details and reflect on them.

3.4. Data collection procedure

In the quantitative phase, prior to the course, the participants' proficiency level was checked with an official IELTS Mock test. The participants with the writing band scores and overall band scores between 3.5 and 4.5, were selected for the study. Their writing anxiety was also measured before the course using Cheng's (2004) SLWAI.

The maximum score of SLWAI is 110, and the minimum is 22. According to Cheng's (2004) guideline, the participants who scored above 65 can be grouped into high anxious, and those scoring below 50 can be considered as low anxious. Meanwhile, those scoring in between will be labeled as moderately anxious. As a result, each participant's writing anxiety level and type (somatic anxiety, cognitive anxiety, or avoidance behavior) became clear.

After the initial IELTS Mock test, 120 male and female IELTS candidates who were preparing themselves for the IELTS test were randomly selected. The course for all the groups included 30 sessions, and each session lasted 2 h.

For all the groups, the main textbook was 'Complete IELTS – Band 4 to 5 (Cambridge University Publication)', of which the first 6 chapters were fully covered in the course. The book contains lessons and exercises for all the four skills. Therefore, the lessons and exercises related to the writing skill took about half an hour in each session.

For the control group, writing techniques were directly taught by the teacher. In each session, the teacher taught the techniques for writing essays in IELTS, and finally, the corresponding exercises in the main textbook were done.

The treatments consisted of three different scaffolding techniques; peer, reciprocal, and distributed scaffolding, each of which was used with one of the experimental groups. For the first experimental group, peer scaffolding techniques were used. In each session, the students shaped pair groups. The teacher explained the writing lessons, and then each pair discussed and reviewed the lessons and helped each other to understand them. Next, all pairs were asked to do the exercises as a pair; when they had any question or problem, the teacher helped them. The writing activities in the course book included some preliminary introduction which was reviewed and discussed by both members of the pair. In case of ambiguity, each pair was allowed to ask the teacher for clarification. This procedure occurred at the beginning of each session and lasted for about 30 min.

For the second experimental group, writing techniques were taught in a reciprocal scaffolding environment. In each session, the teacher raised a question to start a discussion about a technical or conceptual problem in essay writing. The students guessed, brainstormed, expressed their ideas, and introduced their solutions while the peers challenged them. Furthermore, the essay topic for writing was discussed and the learners were asked to express their ideas about the requirements of the topic and the organization of the essay. The teacher was mainly a facilitator. The exercises in the textbook were also done in an interactive way. Like the previous group, the activities were practiced in the beginning of the session and lasted for about 30 min.

For the third experimental group, writing techniques were taught in a distributed scaffolding way. The teacher used multimedia such as images, audio files, videos, PowerPoint presentation, and realia for teaching. All the introductory parts of the writing activity and the necessary tips were explained using a multimedia device (mostly PowerPoint presentation). The students were not encouraged to discuss the lesson with each other or the teacher. Instead, they were requested to visually analyze different parts of the lesson and to ask their peers for clarification. If none of the peers were able to help them, the teacher would interfere and try to facilitate. All the

exercises were done in the same way. Similar to the previous groups, the whole writing activity took place in the beginning of each session and continued for about 30 min.

As for the assignment, the teacher gave the students a writing topic, and the learners were expected to employ the techniques and the grammar points they had learnt in their essays. In addition, they were asked to do all the exercises related to writing at home. The homework was exactly the same for all the groups. After the course, the students took another official IELTS Mock test. The writing anxiety test was also re-administered.

The second phase was the 'qualitative phase'. First, the questions for the interview were sent to each of the participants. In the interview, the students were asked about their opinion about the reason of their anxiety and their possible solutions. Second, 20 IELTS teachers were interviewed with regard to the reason(s) why the experimental groups (possibly) had different results with each other and with the control group. Furthermore, the IELTS teachers in all the groups were asked to have a diary and report their observation throughout the course.

The researchers sent the interview questions to the students via e-mail. The questions were given to the participants shortly before the course and after their final session, and they had 48 h to send them back.

3.5. Data analysis

To answer the research questions, the SLWAI was given to all the participants. Several one-way ANCOVA procedures were needed to answer both research questions. In ANCOVA procedures, the covariate was the participants' performance on the pretest of SLWAI. For the data analysis of the qualitative phase, the teachers' diaries were narrated. Moreover, a content analysis was done for the interviews with the participants and the IELTS teachers.

4. Results and discussion

4.1. The first research question

The first research question of this study aimed to investigate the effects of different types of scaffolding, on Iranian IELTS candidates' writing anxiety level. To test the learners' level of anxiety prior to the course, the SLWAI was given to them. The same questionnaire with shuffled items was given to all the participants once more at the end of the course to analyze their possible improvement.

A One-way ANCOVA procedure was used to examine the significance of the possible improvement in the learners' writing anxiety level. All the assumptions underlying this procedure were checked before the analysis. The results of histogram, Q-Q plot, and Box plot showed that the data were normally distributed. The assumption of homogeneity of regression slopes were checked as well. The significance level of the interaction (Groups * WRanxietyPRE) was 0.77, $P > .05$, which indicates that the assumption was not violated. To make sure there is a linear relationship between the dependent variable and the covariate for each of the groups, the scatter-plot for the pretest and the posttest of writing anxiety was drawn. The plot clearly indicated that the assumption of linearity is met. After all the assumption checks, the researchers used a one-way ANCOVA procedure. The results can be seen in Table 1.

According to Table 1, the ANCOVA results ($F_{(3, 115)} = 9.26$, $P < .005$, $\eta^2 = 0.195$), show significant differences among the groups. In other words, the scaffolding techniques were differentially effective on the learners' writing anxiety after controlling for the pre-existing differences. The table also shows that the covariate is statistically significant ($F_{(3, 115)} = 373.662$, $P < .005$, $\eta^2 = 0.765$).

To locate the significant difference(s), post-hoc comparisons were made; the results are shown in Table 2. As the results show, the Experimental-2 group, in which the reciprocal scaffolding was practiced, was the only group that had a significant difference with the control group (Sig. < 0.05). The other mean differences were not statistically significant.

4.2. The second research question

The second research question of this study aimed to investigate how different scaffolding techniques influence writing anxiety subscales, somatic anxiety, cognitive anxiety, and avoidance behavior. To test the learners' level of anxiety prior to the course, SLWAI was administered. In this questionnaire, three sub-scales are introduced, and the questions are designed in such a way to allow the researcher to not only measure the learners' anxiety level, but also identify their anxiety type. The same questionnaire with shuffled items was given to all the participants once more at the end of the course to analyze their change.

Table 1
Tests of between-subjects effects for writing anxiety.

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial Eta squared
Corrected model	8113.765	4	2028.441	102.852	.000	.782
Intercept	1460.415	1	1460.415	74.050	.000	.392
WRanxietyPRE	7369.340	1	7369.340	373.662	.000	.765
Groups	547.998	3	182.666	9.262	.000	.195
Error	2268.026	115	19.722			
Total	357,607.000	120				
Corrected total	10,381.792	119				

Table 2
Post-hoc comparison for writing anxiety.

(I) Groups	(J) Groups	Mean difference (I-J)	Std. error	Sig.	95 % confidence interval	
					Lower bound	Upper bound
Control	Experimental-1	4.867	2.358	0.171	−1.28	11.01
	Experimental-2	6.733	2.358	0.026	0.59	12.88
	Experimental-3	3.300	2.358	0.502	−2.85	9.45
Experimental-1	Experimental-2	1.867	2.358	0.858	−4.28	8.01
	Experimental-3	−1.567	2.358	0.910	−7.71	4.58
Experimental-2	Experimental-3	−3.433	2.358	0.468	−9.58	2.71

To check whether each one of these anxiety types showed any significant difference after the course, a One-way ANCOVA procedure was used for each one of the anxiety types, in which the scores in the pretest of SLWAI was the covariate. Before doing the ANCOVA, all the necessary assumptions were checked and met. Table 3 shows the ANCOVA results for cognitive anxiety.

According to Table 3, the ANCOVA results ($F_{(3, 115)} = 13.746$, $P < .005$, $\eta^2 = 0.26$), show that there are significant differences for cognitive anxiety among the different groups. In other words, the scaffolding techniques used for teaching the writing skill in IELTS preparatory classes were differentially effective on the learners' cognitive anxiety after controlling for the pre-existing differences. As it can be seen in Table 3 ($F_{(3, 115)} = 536.51$, $P < .005$, $\eta^2 = 0.82$), the covariate is also statistically significant. To locate the significant differences, post-hoc comparisons were made, and the results are shown in Table 4.

As Table 4 shows, the difference between the experimental-2 group (in which reciprocal scaffolding was practiced) and the other groups is significant ($P < .05$), suggesting that the cognitive anxiety of the learners of this group was significantly lower than that of the other groups. To analyze somatic anxiety type, the ANCOVA procedure was used once more. The results are shown in Table 5.

As it can be seen in Table 6 ($F_{(3, 115)} = 9.287$, $P > .05$), there are no significant differences for somatic anxiety among the different groups. To analyze avoidance behavior type, another ANCOVA procedure was used. The results are shown in Table 6.

According to Table 6, the result ($F_{(3, 115)} = 7.411$, $P > .05$), shows that there are no significant differences for avoidance behavior among the different groups. In other words, the scaffolding techniques used for teaching the writing skill in IELTS preparatory classes were not differentially effective on the learners' avoidance behavior.

4.3. The third research question

4.3.1. IELTS candidates' and IELTS teachers' perceptions

To learn about the IELTS candidates' perceptions, an online interview was conducted both before and after the course. The interview included three open-ended questions. The first question was about the learners' own learning background and level of writing anxiety. The second question was about their solutions and suggestions for reducing their writing anxiety. The third question was which of the scaffolding techniques is more beneficial for controlling writing anxiety. The content analysis of the interview before the course showed that most of the moderate- and high-anxiety students (nearly 90 %) believed that their writing anxiety will not be reduced after a 30-session course. Although about 42 % of them believed it can probably be reduced in the long term. Furthermore, the majority of the participants (78 %) believed that since their peers are not qualified in any way to help them, the teacher has undoubtedly the most important role in this issue. This is in line with a number of studies (e.g., Leki, 1990; Nelson & Murphy, 1993). As for the peer-scaffolding, the students mostly showed a negative attitude. They reasoned that since their peers are basically in the same language level and have more or less the same kinds of deficiency, they cannot help to reduce their writing anxiety. As for the reciprocal scaffolding, although most of the participants (69 %) had a generally positive attitude toward discussion-based classes, they believed that it will not be useful in the short term. About distributed scaffolding and the use of multimedia in the classrooms, the learners argued that it cannot affect anxiety. Nevertheless, they were generally in favor of PowerPoint presentations.

The content analysis for the same interview after the course showed that the students in the peer-scaffolding class modified their position about the role of their peers. They acknowledged that knowing they are not alone in their problem and talking to a person with the same issue can be helpful. The students in the reciprocal class were mostly satisfied with their learning process and felt that they became more confident in writing. The students in the distributed scaffolding group, however, argued that the class did not help them

Table 3
ANCOVA results for cognitive anxiety.

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial Eta squared
Corrected model	4577.866[a]	4	1144.466	148.259	0.000	0.838
Intercept	475.081	1	475.081	61.544	0.000	0.349
COGNscoresPRE	4141.574	1	4141.574	536.518	0.000	0.823
Groups	318.337	3	106.112	13.746	0.000	0.264
Error	887.726	115	7.719			
Total	51,369.000	120				
Corrected total	5465.592	119				

[a] R squared = 0.838 (adjusted R squared = 0.832).

Table 4

Post-hoc comparisons for cognitive anxiety.

(I) Groups	(J) Groups	Mean difference (I-J)	Std. error	Sig.	95 % confidence interval for difference[a]	
					Lower bound	Upper bound
Control	Experimental-1	1.766	0.700	0.078	−0.114	3.646
	Experimental-2	4.464	0.700	0.000	2.584	6.343
	Experimental-3	1.190	0.701	0.555	−0.693	3.073
Experimental-1	Experimental-2	2.697*	0.701	0.001	0.816	4.579
	Experimental-3	−0.576	0.702	1.000	−2.461	1.308
Experimental-2	Experimental-3	−3.274*	0.702	0.000	−5.159	−1.389

Table 5

ANCOVA results for somatic anxiety.

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial Eta squared
Corrected model	3811.097	4	1093.532	81.139	0.000	0.655
Intercept	546.310	1	546.310	61.544	0.000	0.387
SOMATscoresPRE	3409.118	1	3409.118	232.098	0.000	0.609
Groups	241.912	3	29.733	9.287	0.097	0.122
Error	736.012	115	9.212			
Total	42,177.000	120				
Corrected total	4423.390	119				

Table 6

ANCOVA results for avoidance behavior.

Source	Type III sum of squares	df	Mean square	F	Sig.	Partial Eta squared
Corrected model	3144.477	4	1144.466	74.473	0.000	0.741
Intercept	398.912	1	398.912	38.023	0.467	0.099
COGNscoresPRE	2982.665	1	2982.665	179.92	0.000	0.433
Groups	198.441	3	106.112	7.411	0.287	0.118
Error	604.334	115	25.732			
Total	38,076.000	120				
Corrected total	3671.573	119				

with their anxiety. The types of comments and the learners' general attitudes after the course were approximately compatible with the quantitative results and confirmed them. About the teachers' role in the learners' minds, there was no change, and they still believed that the teacher is the most prominent factor in the class.

Meanwhile, 16 IELTS teachers were also interviewed. The questions were exactly identical to those of the IELTS candidates. As for the reasons of writing anxiety, they introduced several factors based on their own experience. The content analysis showed that the most noted factors were 'the learner's personality type', 'the learner's negative previous experiences', 'fear of committing mistake', 'fear of shame and being judged by others', and 'strict unprofessional reactions by the teacher in the classroom', respectively. Their solutions to this problem were also colorful, but most of them unanimously emphasized that the teacher should not pressure students, the students should understand that others are like them and they are not alone, the class environment should be stress-free, and the teacher should reinforce and encourage the learners and guide them with transparent comments. The IELTS teachers, unlike the students who believed the teacher has the most important role in the learning process, gave the same weight to the roles of teachers and learners. Regarding their opinion about the scaffolding techniques, most of them agreed that peer, reciprocal, and distributed scaffolding will be helpful, though probably not in a 30-session course. Moreover, unlike the moderate- and high-anxiety learners who believed that their anxiety will not be reduced, the teachers mostly believed that all kinds of anxiety can be controlled and reduced, at least in IELTs classes.

4.3.2. Analysis of teachers' diaries

The content analysis of the teachers' diaries confirmed that in the first sessions of the course, the learners were anxious and stressed about writing. The teacher reported that in the reciprocal class, the students clearly felt more at ease and the environment was fun and informative at the same time. According to the teacher's notes, in the reciprocal group, the students were certainly more involved in almost every exercise. In this group, the gradual improvement of self-confidence was apparent. These comments were not repeated for the other three groups. The teacher clearly expressed his satisfaction in his diary and associated it with the students' co-operation with his plans and the way he handled the class.

As for the peer scaffolding class, the teacher explained that he sensed his own participation is not enough (due to the focus on pair work, peer feedback, and peer correction). Nevertheless, he noticed that the students are getting better at writing and their writing anxiety is reducing. As for the distributed scaffolding group, the teacher held that although the use of multimedia scaffolding is

extremely effective in teaching writing techniques, the effects on the reduction of writing anxiety per se cannot be recognized. He suggested that a mix of reciprocal and distributed scaffolding techniques in the IELTS courses would probably be the best prescription. In such classes, not only can the essay writing ability be improved, but also the writing anxiety could gradually reach to the minimum.

5. Discussion

The first research question attempted to check the effects of different scaffolding techniques on IELTS learners' writing anxiety. The results suggested that only the reciprocal scaffolding technique significantly reduced the participants' writing anxiety. From the theoretical perspective, this finding is in line with a number of second language researchers who believe that writing anxiety is mostly based in the learners' own perceptions, previous experiences, and the factors related to the learning environment (Cheng et al., 1999; Foroutan & Noordin, 2012; Rezaei & Jafari, 2014).

One explanation for this finding could be the fact that in the experimental-2 group, unlike the other three groups, a large amount of teacher-learner and learner-learner interactions occurred. Reciprocal scaffolding, to a large extent, relies on discussion and verbal communication among the teacher and the students. It appears that if learners have more opportunities to present their problems and talk about their doubts, they will probably feel more confident and less anxious. Learner-learner interaction can show students that they are not alone in their writing anxiety. Since there was no significant improvement for the peer scaffolding group, in which mostly peer interaction took place, it can be deduced that learner-learner interaction is probably not sufficient for reducing writing anxiety.

Learners may also benefit from teacher-learner interactions in that they can resolve their possible mistakes, misconceptions, and weaknesses which created their writing anxiety in the first place. Hence, they gradually learn how to control their anxiety. These explanations are congruent with Cheng (2002), Gregersen and Horwitz (2002), and Shang (2013).

Another explanation could be learners' meta-cognitive awareness. Reciprocal scaffolding might create a better context for raising learners' meta-cognitive awareness, and as a result, help them effectively control their anxiety. This is in line with Balta (2018) and Cheng (2002), who argued that if the teacher could help students to have a positive and realistic view of their writing competency, they could most likely control their writing anxiety and improve their writing performance.

Cheng (2004) introduced some other sources of writing anxiety, including lack of ideas for writing, restrictions and rules for writing, unreasonable time pressure, teacher's emphasis on the grammatical aspects of writing, learners' wrong personal beliefs about writing, learners' low self-confidence in language learning, and fear of being judged by peers and by the teacher. The findings of this study can be justified by some of these anxiety sources. In reciprocal scaffolding classes, due to the large amount of interaction, the learners' misconception of writing can be rectified. They will have better chances to gain a more realistic conception of their own writing performance. Moreover, in such an interactional environment, the interpersonal threat of being judged will probably decrease.

Enjoyment from writing can be another way to control the writing anxiety (Martinez et al., 2011). This enjoyment can make learners' minds at ease and give them a sense of confidence. It seems that having a friendly discussion-based environment in the reciprocal scaffolding group may have been more enjoyable for the learners and has had positive effects on their writing anxiety level.

Regarding the type of writing anxiety, the findings showed that only for cognitive anxiety, there was a significant improvement. To justify this, it can be said that cognitive anxiety is mostly related to the previous mental image and perceptions of students. These negative perceptions are created by unpleasant past experiences of writing and the learning environment in which the learner learned writing. In fact, it seems rational that these mental images can gradually be modified by new pleasant experiences. This is probably why the cognitive anxiety level of the students was reduced in the reciprocal scaffolding class in which everything was taught in a discussion-based friendly context. The post-hoc results of ANCOVA also showed that the level of cognitive anxiety dramatically, though not significantly, fell in the peer scaffolding group. Perhaps, had the course continued a little longer, the difference could have become significant (the P value for peer scaffolding group and the control group was 0.07). On the other hand, for distributed scaffolding group, it is pretty clear that the treatment was not effective. This may imply that the cognitive anxiety level is probably affected by the class environment directly. It seems that the more interaction we have in the classes, the less the amount of anxiety will be. In short, discussion-based classes in which learners are free to interact with other peers and the teacher, and to share their fears and doubts, are probably the best environment for learners with cognitive anxiety. However, since somatic anxiety is mostly related to the physiology of the person, a wider scope should be considered for controlling it. The students with somatic anxiety are mostly anxious in some other parts of their lives as well. This was deduced clearly from the content analysis of the participants' interview. Therefore, this type of anxiety might be too deeply rooted to be reduced in just a language learning course. As for avoidance behavior, the same explanation holds true. Habits are shaped over time and are less likely to be changed in short periods. Perhaps, if the study took longer than 30 sessions, we could have a more transparent picture. What is obvious is that unlike somatic anxiety and avoidance behavior, cognitive anxiety is influenced by different learning environments.

The qualitative findings showed that teachers' perceptions about the reasons of anxiety in IELTS classes, although based on experience, are in line with scientific research on this issue. However, regarding their attitude toward the effectiveness of scaffolding techniques, they are generally pessimistic. The IELTS candidates also had negative attitudes toward the efficacy of scaffolding techniques for reducing writing anxiety. Nevertheless, by the end of the course, they generally changed their mind and clearly sensed that they can be facilitative.

6. Conclusion and implications

As it was mentioned above, both teachers and EFL students had negative attitudes toward the effects of scaffolding techniques for reducing writing anxiety in IELTS preparatory courses. Part of this pessimistic attitude toward scaffolding could be traced back to the

conventional pedagogy in Iran. Contemporary teaching methods and practices are not dominant in high schools and institutes in Iran. Perhaps, it is time to change the old-fashion methods that are being practiced for a long time in Iran and to consider socio-cultural and constructivist ideologies which are practiced in some of the developed countries as a better option. Socio-cultural theory and its conceptual and practical implications (such as pair work, scaffolding techniques, ZPD, corrective feedback, etc.), and constructivism, with its learner-centeredness, could, and should, become more highlighted in the classrooms.

The present findings suggest that the employment of scaffolding for pedagogical reasons could generally be beneficial. In particular, for IELTS preparatory courses in which some learners struggle with anxiety problems, scaffolding techniques can be useful. Even though some Iranian teachers are currently using some scaffolding-based techniques in general English classes and IELTS courses, these sporadic attempts should be encouraged to become common practice in all English learning centers. Learners should be encouraged to share their fears and phobias and discuss their feelings. This will open a communication channel by which they can release the tension. More importantly, this safe environment will allow teachers to analyze learners individually and by locating the very source of their anxiety and assist them in controlling it. As the findings for the distributed scaffolding group showed, it is probably not enough if the teacher solely presents the lessons and corresponding materials with multimedia in an isolated environment. What is missing is a socially comfortable opportunity to talk, share, observe peers, interact, and finally, learn.

On the individual level, learners seem to be more engaged, more motivated, and less pre-occupied in the reciprocal scaffolding and peer scaffolding classes. This is clearly owing to the stress-free environment which usually is an inherent feature in such classes.

On the other hand, we must note that each of the different scaffolding techniques might be more suitable for a specific EFL class. The present study focused on IELTS classes, and the findings showed that reciprocal scaffolding and distributed scaffolding can have positive effects on controlling the writing anxiety; however, only for the former, the influence was statistically significant. Hence, it can be suggested that discussion-based classes could probably be a proper option for eliminating not only writing apprehension, but also any other types of language learning anxiety. Language teachers are advised to utilize reciprocal environments in their classes to prepare the best possible context for students to interact.

The findings of the second research question showed that the use of peer and reciprocal scaffolding had positive effects on the learners with cognitive type of anxiety; however, the latter showed a significant difference. These findings suggest that for controlling somatic anxiety and avoidance behavior, scaffolding techniques will probably not be adequate. This is quite an interesting deduction. Teachers should pay attention to the fact that when they analyzed their students and found out that they are unwilling or too stressed to even try writing and always bring up some excuses not to do it, they are showing avoidance behavior, which can probably not be solved in a discussion-based or pair-work-based class. Furthermore, when they show physical reactions to the writing task, such as sweating, shivering, nausea, dizziness, etc., they probably have somatic anxiety, which cannot be controlled by reciprocal scaffolding either. It is important to teach the teachers of English to distinguish between anxiety types and to employ the proper techniques for each one of them. However, as for somatic anxiety and avoidance behavior, the findings of the present study cannot give any possible solution. This is an area which deserves more research.

Having analyzed the qualitative data and the results of statistical procedures, it can be concluded that a mix of peer and reciprocal scaffolding techniques might be a proper approach to improve language learning in general, and the writing skill in particular. The qualitative data analysis also showed that Iranian teachers and language learners' viewpoints are rather negative toward modern social-constructivist techniques like scaffolding. Considering the proven beneficial effects of these techniques in various language learning contexts, and the findings of the present study, it seems that teachers need to be taught about the modern scaffolding techniques and the way they should be employed in language classes. This way, learners' attitude toward discussion-based classes, group work, and pair-work can be modified and, hence, they will be more open to such classes. This acceptance may accelerate the positive results of these techniques.

Other than teachers and learners, all other stake holders are encouraged to consider them, and put them into use. Furthermore, these findings can be of help to all IELTS teachers, EFL university students, and IELTS candidates on a global scale.

Declaration of competing interest

The authors declare that they have no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

Data will be made available on request.

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