



# Promoting Writing Ability: Exploring the Influence of Symmetrical and Asymmetrical Scaffolding on Iranian High School Students' Writing Ability

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## ABSTRACT

**Objective:** This study focused on identifying any possible relationship between symmetrical (S) and asymmetrical (AS) scaffolding and writing ability of Iranian students of English as a Foreign Language (EFL). The study also examined the influence of gender as a moderating variable on the writing ability of students when taught with symmetrical vs. asymmetrical scaffolding. **Methodology:** After administering a Pre-test, 52 homogeneous intermediate students were selected, and they were divided into two experimental groups. **Results:** The experimental group (A) received instruction according to S strategy whereas the experimental group (B) was instructed via the AS strategy. A Post-test was administered, and its results were analyzed through Two-way ANOVA. **Conclusion:** The results indicated that S scaffolding and AS scaffolding have significant effect on learners' performance in Writing ability. The findings also showed that gender did not modify the relationship between scaffolding and students' writing ability.

## 1. Introduction

Find tools that have ability to solve community problems is. Writing is amongst the most prominent skills that language learners need to learn as an essential component of their academic education. However, writing does not only reside in the classroom. The need for successful writing can be seen almost everywhere, writing a formal letter to a supervisor or a casual letter to a friend, a poem or a novella are examples of writing. So, the need for acceptable writing is found in about all everyday life practices. As Celce-Murcia, (2001) mentioned, "It is via writing that a person can communicate a variety of messages to close or distant, known and unknown readers".

However, teaching and learning how to write successfully is very complicated and challenging for both language teachers and learners. In recent years, L2 writing has evolved significantly. Methodologists and teachers have suggested numerous approaches to teach composition in EFL/ESL classrooms. Looking through the literature on the teaching of composition in second language classrooms, one would find a lot of suggestions as how to teach it.

According to Gleason, (2001) published histories of writing instruction tell us that from 1850 to 1925, U.S. college writing students listened to lectures, analyzed literary texts, learned rules of grammar, practiced writing sentences, paragraphs, or daily themes. Instructors read their students' writing with an eye toward correct language use. In general, a product approach was considered for writing instruction.

Then, from 1960s to 1970s, a process approach to teaching writing arose as a reaction to product-focused pedagogies and research. In this approach, the writer is encouraged to generate ideas through a cycle of writing activities consisting of planning, drafting, revising and editing.

A second major shift in thinking about the writing process occurred when writing came to be viewed as a social act and as a practice that is embedded in social contexts. In this regard, Gleason, (2001) used the term "collaborative writing" as a newly emerging view of writing and writing instruction. In this approach, "teachers viewed writing groups as occasions for students to gain greater appreciation of audience, reader-writer relationships, and the communicative function of written language". *Scaffolding* was first introduced in the late 1950s by Jerome Bruner, a cognitive psychologist. He used the

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term to describe young children's oral language acquisition. Helped by their parents when they first start learning to speak, young children are provided with informal instructional formats within which their learning is facilitated. Scaffolding is also inspired by Lev Vygotsky's concept of an expert assisting a novice, or an apprentice. It is changing the level of support to suit the cognitive potential of the child. Over the course of a teaching session, one can adjust the amount of guidance to fit the child's potential level of performance.

Empirical research suggests that the benefits of scaffolding are not only useful during a task, but can extend beyond the immediate situation in order to influence future cognitive development. For instance, a recent study recorded verbal scaffolding between mothers and their 3- and 4-year-old children as they played together. Then, when the children were six years old, they underwent several measures of executive function, such as working memory and goal-directed play. The study found that the children's working memory and language skills at six years of age were related to the amount of verbal scaffolding provided by mothers at age three.

In writing instruction, typically support is presented in verbal form (discourse). The writing tutor engages the learner's attention, calibrates the task, motivates the student, identifies relevant task features, controls for frustration, and demonstrates as needed (Rodgers, 2004). Through joint activities, the teacher scaffolds conversation to maximize the development of a child's intra-psychological functioning. In this process, the adult controls the elements of the task that are beyond the child's ability while increasing the expectations of what the child is able to do.

Many research studies have investigated the impact of scaffolding on the improvement of language skills. Bruch, (2007) for example, in her case study, examined scaffolding of ten students in reading and writing. Teachers' scaffolding techniques included specific prompts, guided reading and writing groups, direct and explicit teaching, mini lessons, small group instruction, and instruction driven by performance-based assessment. The study revealed that the use of scaffolding was of great importance and the most effective.

In the Iranian context, Baradaran and Sarfarazi's, (2011) study described how a group of university students were guided through the process of scaffolding according to Vygotskian sociocultural theory to produce their first academic essays in English. The researcher tried to teach the students how to generate ideas, structure draft, and edit their essays within the scaffolding principles such as, contextualizing, modeling, negotiating contingency, constructing and handover, within the ZPD. The result of the analysis showed that the experimental group outperformed the control group at 0.05 level of significance. So the researchers concluded that the application of scaffolding could greatly improve the writing performance of students at university.

Riazi and Rezaii, (2011) reported a study conducted within the sociocultural framework and aimed at investigating the effect of scaffolding on EFL students' writing ability. The study intended to find out whether teacher- or peer-scaffolding was more successful in helping students improve their English texts. The results of the t-tests showed that teacher scaffolding appeared to be more successful on improving students' writing in that particular EFL context.

A study reported on by Vanderburg, (2006) examined the effects of teacher interactions with elementary students. Specially, they wanted to see if teachers could help young students develop their metacognitive abilities, intrinsic motivation for writing and strategic writing behavior. Through interviews and observations, it was found that students are able to develop their writing skills when guided using higher-level scaffolding. As students developed from the need of direct guidance to the need of a less involved questioning style of guidance, the teacher could alter their teaching to help students develop their confidence and their ability to write.

With the above extended review, the present research sought to provide answers to the following questions:

1. Does type of scaffolding (symmetrical vs. asymmetrical) have any effect on writing ability of Iranian high school students?
2. Does gender have any effect on writing ability of Iranian high school students?
3. Does the interaction between type of scaffolding (symmetrical vs. asymmetrical) and gender have any effect on writing ability of Iranian high school students?

## **2. Materials and methods**

### **2.1 Participants**

Altogether 52 students from two high schools, including 17 males and 35 females, participated in this study. Their age ranged from 15 to 17. At the time of data collection, they were all in their third year of high school education. The participants' first language was Turkish (Azari). Based on their performance on the pre-test, they were divided into two groups: group A, who covered their English writing program in homogeneous pairs and were labeled as the S (symmetrical) group with 24 students in two classes: the first class with 9 male students and second one with 15 female students. This group was called symmetrical because the small groups in these classes consisted of students with similar writing proficiency. Group B, on the other hand, covered their English writing program in heterogeneous small groups and were labeled as the AS (asymmetrical) group with 28 students in two classes: the first class with 8 male students and the second one with 20 female students.

### **2.2 Instruments**

For the purpose of this study, two kinds of instruments were employed: a pretest to measure the participants' proficiency in writing and a posttest for the purpose of differentiation on the part of students in terms of their writing ability after treatment. Both pretest and posttest were selected from the book *Language in Use* published by Cambridge University Press in year 2002. It is an international standard test to evaluate the writing ability of language learners in pre-intermediate level. For the purpose of this study two progress tests of the book were selected to be used as pretest and posttest. Put it differently, the tests had a high content validity and also high reliability. Furthermore, to be sure about the feasibility and practicality of administering these tests, they were piloted with a similar group of students in another school in Ardabil.

### **2.3 Procedure**

The process of administration of the tests and the treatment phase were done in twelve sessions. At the first session, to find out the writing proficiency of the groups, the teacher administered the pre-test. The result of this test was used as the basis for the assignment of the students into groups. In the two symmetrical classes the students with similar scores were placed in a group, whereas in the two asymmetrical classes the small groups consisted of heterogeneous (good, moderate, and poor) students. It should be mentioned that all the treatments were conducted by the researchers.

From session two students were given the required treatments. the first experimental group (symmetrical group), the teacher taught the new materials and asked the students to work in groups and answer the questions. During the cooperative working of the students in the class, the teacher walked around the class and guided students. I with their probable problems and provided some clues. This group was called symmetrical because all the students were in the same level of writing ability and they worked cooperatively.

In the second experimental group (asymmetrical group), after teaching the new materials, students were divided into groups, the teacher explained the students that they should work in group and in the case of any problem they can ask their teacher to help them. The researcher (teacher) tried to observe the students closely and solve their probable problems. This group was called asymmetrical because the students were not in the same level of writing ability and also their teacher's level was above the students' level and the teacher scaffold the students. At the first session of treatment, about 20 minutes of the class time was spent on introducing the concept of scaffolding by the teacher. The students were told the purpose of scaffolding: that by discussing the material with each other and helping each other, they would improve their own writing ability. Emphasis was placed on both asking for and giving help, and the need to reach shared knowledge. At the beginning of each passage, some new words and structures were presented to the students. Then, the students worked cooperatively in pairs while teacher observed the interaction between the pairs to fill each gap with one of the new words or phrases. This process continues until last session. At the end of study, as a posttest, a subject was given to the students to write about that subject, in order to compare the students' performance on this test after treatment. After 11 sessions of treatments, the teacher administered a post-test to two experimental groups in both schools.

### 3. Discussion and results

#### 3.1 Results

The first aim of the current study was to examine the impact of symmetrical and asymmetrical scaffolding on writing ability of Iranian L2 classroom context and secondly to examine the possible impact of gender as a moderator variable between scaffolding and writing development. So two-way ANOVA was conducted to examine the effect of type of grouping on learners' writing ability and the possible impact of gender and interaction between them. As mentioned above the pretest was administered to measure the students' proficiency in writing. Table 1 indicates the descriptive statistics for students' scores on this test.

**Table 1. Descriptive Statistics for the Scores on Pre-test**

Groups	Gender	N	M	SD	Min	Max
Asymmetrical	Male	8	17.12	3.85	14	22
	Female	20	18.05	4.83	13	28
Symmetrical	Male	9	19.77	4.68	14	27
	Female	15	17.35	3.47	10	23

Results showed that the groups' means are almost close to each other and groups can be considered homogenous in terms of proficiency level though individual scores showed enough variation to make heterogeneous as well as homogeneous groups. In order to make sure the participants were homogeneous prior to the main phase of the study one-way analysis of variance (ANOVA) was run. Table 2 depicts the result.

**Table 2. One-way ANOVA on Pretest Scores**

	Sum of squares	df	Mean squares	F	Sig.
Between groups	.561	3	.561	.032	.860
Within groups	887.95	50	17.75		
Total	888.51	53			

The sig value (.86) was higher than the .05 probability level indicating that there was not a statistically significant difference between the participating groups to begin with and the four groups could be assumed as equal in terms of their writing ability. As mentioned in chapter three, students' received a posttest following the treatment in each group. Descriptive statistics for groups' performance on the posttest is presented in table 3.

**Table 3. Descriptive Statistics for the Scores on Post-test**

Groups	Gender	N	M	SD	Min	Max
Asymmetrical	Male	8	27.50	1.60	25	29
	Female	20	25.65	2.23	22	29
Symmetrical	Male	9	23.55	2.50	20	27
	Female	15	23.93	3.53	19	29

As you can see in Table 3 the total mean value of post-test for male asymmetrical group was 27.50, for female asymmetrical group 25.65, for male symmetrical group 23.55 and for female symmetrical group was 23.93. This difference may suggest that scaffolding had an effect on writing ability.

In order to examine the research hypotheses and find out any likely influence of grouping, gender and their interaction on the writing ability of the learners a two-way ANOVA was run. The results (Table 3) revealed a statistically significant effect at 0.05 probability level for the grouping type ( $p = .001 < .05$ ).

**Table 4. Two-way ANOVA for the Scores on Post-test**

Source	SS	Df	Mean Square	F	Sig.	Partial Eta Square
Groups	90.84	1	90.84	12.91	.001	.212
Gender	6.14	1	6.14	.873	.355	.018
Groups*Gender	14.06	1	14.06	2.00	.164	.040
Error	337.706	48	7.036			
Total	33132.000	52				

As can be seen in table 4 the p-value (.001) corresponding to the effect of grouping type on writing ability is lower than 0.05. These results suggested that type of scaffolding (symmetrical vs. asymmetrical) had a significant effect on students' writing ability. Thus the first hypothesis predicting no effect for the type of scaffolding on writing ability was rejected. It should be noted that the effect size for grouping was 0.212, which can be considered small compared to Cohen's criterion.

Table 4 also shows that the p-value for the effect of gender on writing was .355 which was higher than 0.05 suggesting that gender had no significant effect on students' writing ability. This means that males and females did not differ in terms of their writing ability scores. As a result the second null hypothesis was confirmed.

Another useful piece of information from Table 4 is the influence of the interaction between grouping type and gender on the learners' writing ability. As it can be seen, the corresponding p-value is higher than 0.05 (.164 > .05). Thus, the third hypothesis claiming that interaction between gender and scaffolding (symmetrical and asymmetrical) does not have any effect on students' writing ability was confirmed. Furthermore, the line graph in Figure 1 revealed the relationship among variables. It indicated that there was a positive relationship between (symmetrical and asymmetrical) scaffolding and writing ability. This means that students who received asymmetrical scaffolding tended to have higher final scores in writing.

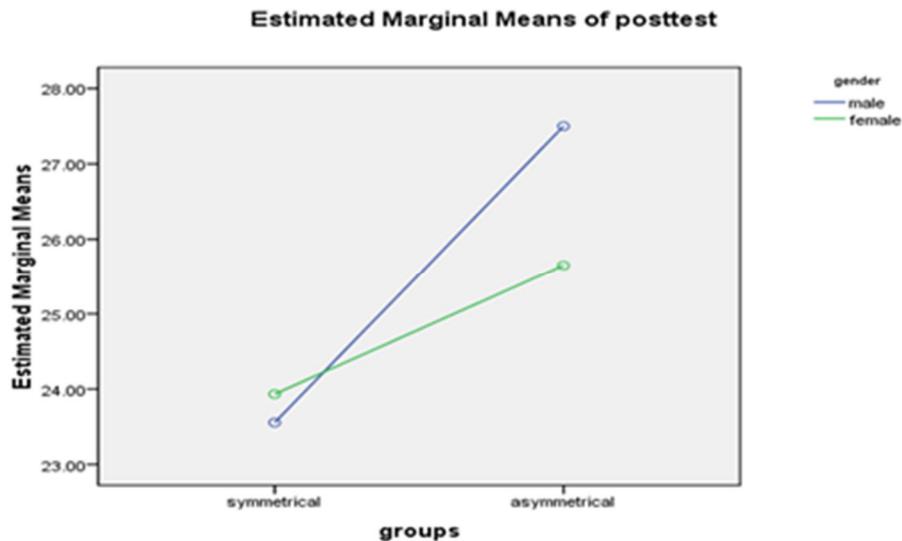


Figure 1. Line graph for mean scores on posttest across two groups

## 4. Conclusion

### 4.1 Discussion

The first research question set out to examine whether the type of instruction (symmetrical vs. asymmetrical scaffolding) had any effect on writing ability of Iranian high school students. The end results obtained from the Two-way ANOVA, showed that there was a significant main effect for independent variable (symmetrical and asymmetrical scaffolding) meaning that the first hypothesis postulating no effect for the type of intervention was rejected. In other words, type of instruction (symmetrical and asymmetrical scaffolding) had a significant role in influencing EFL learners' writing ability. The second research question intended to find out whether gender had any effect on writing ability of Iranian high school students. Based on the results, both males and females had a similar gain with regard to writing ability, so the related hypothesis to this research question was confirmed. The third question set out to explore any likely effect for the interaction between type of scaffolding (symmetrical and asymmetrical) and gender in influencing writing ability. The interaction effect was not significant; hence the third null hypothesis was confirmed. More specifically this means that student gender cannot moderate the influence emanating from a variation in the mode of instruction. Regarding the first question, the findings bear a resemblance to Crandall's, (1999) regarding cooperative groups, which emphasizes the possibilities of having several experts, students, in one group. Guk and Kellogg's, (2007) study provided further support for the practicality of scaffolding through teacher-led and student-led interaction. According to the research question of the this study, it is found that after giving instruction to both groups according to the symmetrical and asymmetrical scaffolding strategies there were not significant differences between test results when it comes to gender. These findings are not in line with the previous studies such as Pishghadam and Ghardiri, (2011) and Walqui (2006).

As stated earlier, the obtained results from the scores of the pre-test and post-test showed that the scaffolding resulted in higher writing ability scores. These findings are in line with general paradigm of scaffolding. The results of the current study indicate that the scaffolding teaching strategy improved the writing ability of the students, and this finding is consistent with Guk and Kellog's, (2007) findings, which showed the practicality of whole class scaffolding. According to the results demonstrated through examination of the data in the preceding sections, it was found that the participants in the AS group outperformed those who received symmetrical scaffolding. This may imply that AS scaffolding instruction is vital to improving EFL learners' writing comprehension. The results were more compatible with Vygotsky's theories than with those of Piaget's on learning. They are compatible with Vygotsky's, (1978) findings that learning appears first on the social plane, in collaboration with more knowledgeable individuals. Moreover, the results corroborate Bruner's, (1983) notions on the nature of a joint collaboration between more knowledgeable and less knowledgeable individuals (Pishghadam & Mirzaee, 2009).

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