The Role of Visual Scaffolding in Enhancing Iranian EFL Students' Writing Ability

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Abstract

To better illuminate the link between scaffolding and visual aids, this quasiexperimental study attempted to scaffold an intact group of 14 intermediate-level Iranian English as a foreign language (EFL) learners through providing graphs with the aim of enhancing their writing ability. Ensuring lack of familiarity with eight unknown words, they were scaffolded through visual images. The scaffolding process included three respective phases of contingency, fading, and transferring. As post-tests for checking the learners' understanding of and opinion about the graph scaffolding process, a researcher-made questionnaire and a semi-structured interview followed the treatment phase. The results of the questionnaire showed that visual scaffolding aided the learners to better grasp the meaning of the target vocabularies and even some grammatical points in the materials. Moreover, the visual scaffolding helped them to produce the material in different modalities. The results also indicated all the three characteristics of scaffolding were met by the visual scaffolding. Finally, the interview results revealed the learners had favorable attitude toward visual scaffolding and considered the third phase of the scaffolding as the most challenging one. It can be concluded that the findings gave credence to the effectiveness of visual scaffolding in improving EFL students' writing ability.

Keywords: Visual aids, Graphs, Scaffolding, Writing ability, EFL learners

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INTRODUCTION

Today, language teachers try to use whatever they have at their disposal to engage learners more with the language and facilitate their comprehension. One of the devices enjoying extensive use is visual aids in the classroom, mainly being utilized for illustrating meaning. In fact, from the time that Corder (1966) has published his ground-breaking work entitled The Visual Element in Language Teaching, enthusiastic methodologists welcomed the idea by trying to highlight the significance of employing various types of visual elements in teaching and learning English language. Visual aids are believed to be an extremely useful framework for word storage and can be employed to highlight relationships between items (Gairns & Redman, 1986). One further advantage of them is that human memory is extremely viable and reliable for visual images, and there is no doubt that these pictures can facilitate memory functioning. One type of these widely used images is graphs. A well-designed and structured graph can be recognized as a vivid, memorable, and easy-to-understand depiction of quantitative information (Larkin & Simon, 1978; Shah, Freedman, & Vekiri, 2005; Smith, Best, Stubbs, Archibald, & Roberson-Nay, 2002; Tufte, 2001). In fact, there has been a dramatic rise in the prevalence of graphs illustrating quantitative data. In one analysis, Zacks, Levy, Tversky, and Schiano (2002) found that between the 10-year period from 1984 to 1994, the mean number of graphs found in the content of academic journals nearly doubled and the number of graphs in newspapers more than doubled. The importance of making use of visuals, as stated by Dancygier and Vandelanotte (2017), lies in the notion that visuals have a paralinguistic nature which can help learners perform better on related tasks.

Quite on par with these merits, there have been some learning tenets advocating the use of graphs in language classes. Materials have exploited the potential of non-verbal representations (including pictures and graphics such as tables, charts, graphs, schedules, and maps) along with linguistic input briefing learners on problems to be solved rather than on the language to be used. That is, instead of relying more or less on tightly-scripted prompts to direct speakers into particular grammatical and functional areas of talk, materials designers concentrated on providing a purpose for talk, with learners responsible for sorting out precisely what talk to produce and to check that they were making sense.

In addition, writing is one of the four language skills that students should tackle. As an essential skill, writing helps to articulate one's feelings and emotions, transfer information, facilitate communication, make rational and persuasive arguments, and give and take feedback among other things (Chappell, 2011). In this regard, Walsh (2010) also highlighted the primary role of the writing skill as it is recurrently utilized in the workplace or higher education context. According to Walsh (2010), if learners are not competent enough at writing, they will face difficulties in making communications with people including their peers, professors, or colleagues because a great extent of professional and academic communication is carried out through the writing of various types such as research articles, proposals, letters, application forms, reports, memos, and emails.

LITERATURE REVIEW

The dominant paradigm in teaching writing ability is the process writing which comprises of various stages including pre-writing, drafting and revising and receiving feedback in different stages of writing (Celce-Murcia, Brinton, & Snow, 2014), each involving the attainment of various skills on the part of the learners. The pre-writing stage is conceived of as the most important stage, in which schematic knowledge of the learners become activated, they are taught essential lexical and grammatical items to be used in the following stages, and a context pertained to the students' writing activity is created with the students' cooperation and the teacher's help. As it is evident, this stage is where the maximum amount of scaffolding by the teacher or a more competent peer to the learner is required (Shams, Khanam, & Imtiaz, 2016). In fact, the primary role of the teacher in writing

classes is to aid students to reach better writing proficiency in accordance with both students' specific needs and the course objectives. How best to achieve this goal may differ depending on the teacher, the learners, or the instructional context (Kroll, 2001).

One way for providing such helps to learners is through employing visual aids. However, Hill (2013) warned that visual elements utilized in English as a foreign language (EFL) course books should not be incorporated as decorative images, but to be integrated into specific tasks and activities in a way that they are necessary for successful understanding or completion of the activity or task in hand. By the decorative function, Hill (2013) meant that if one removes the visual part of the material, the tasks would work as smoothly as it would have without the visual element. The problem is that the incorporation of such decorative visual aids is controlled by some non-educational factors such as the space left for including a picture or the budget controlling the size and number of the pictures to be included. Effective visual elements, instead, should stimulate a linguistic and mental response or understanding on the part of the learners.

Based on the sociocultural theory, which looks at language beyond the mere formal system of linguistic elements, language learning or development happens in a social context where learners engage in social interactions with their peers or their teacher within the classroom or with any other language user outside the limitations of the classroom (Lantolf & Thorne, 2006). During such communicative and social practices, learners appropriate the necessary linguistic means by the help of a more experienced participant. According to the theory, for the assistance to be effective, it should be tailored to each learner's Zone of Proximal Development (ZPD), referring to the distance between what a learner can perform independently and what he/she can do with the assistance of a more expert partner (Lantolf, 2006; Vygotsky, 1987). The employment of visual elements in improving language development was also accentuated by Lantolf and Thorne (2006), maintaining that assistance or scaffolding with the potential to facilitate learning can be provided through use of linguistic

means or other sign systems like numbers, available objects in the immediate environment, charts, and graphs. Scaffolding has been claimed to have three key characteristics of contingency, fading, and transfer of responsibility (Van de Pol, Volman, & Beishuizen, 2010). By contingency, it is meant that just enough amount of scaffolding is provided in the learning situation. Fading means when a specific level of mastery is achieved, the scaffolding is removed. At last, by transfer of responsibility, it is meant that when independence is reached by the learner, there is no need for further scaffolding. Scaffolding is beneficial as it permits the teacher to aid learners move from assisted to independent task performance (Van de Pol & Elbers, 2013).

Many empirical studies in this regard have given credence to the effectiveness of scaffolding in the process of writing development. In this line, as two of the first researchers working on this area, Bodrova and Leong (1998) first presented a good picture of what scaffolded writing is and discussed the theoretical notions of ZPD, scaffolding, and private speech as being at the heart of the sociocultural theory of language development. Then, they gave flesh to their theoretical elaborations by describing a case study of 34 at-risk kindergarten kids for whom the scaffolding writing was used to show its effect on supporting the learners' subsequent developmental level of their emergent writing considering their ZPD. The results of this study well described how the learners move from assisted to independent performance when the scaffolding is tailored to their ZPD. In another study, Hassan (2018) explored the influence of motivational scaffolding on 10 Indian university EFL learners' higher order thinking skills and academic essay writing. The results of the study shed light on the notion that for learners to develop effective writing skills, teachers should change their writing instruction techniques toward more incorporation of efficient scaffolding strategies suiting the needs and levels of the L2 situation and learners. Similarly, Kamal and Faraj (2015) investigated the effect of scaffolding on writing ability of a group of Iraqi university EFL students. In this study, the teacher scaffolded the learners through all the

stages of prewriting, drafting, revising, editing, and publishing involved in the writing process. The comparison of pre-test and post-test results supported the effectiveness of the scaffolding as the students showed improved performed in the post-test. In addition, Veeramuthu and Veerappan (2011) examined the effectiveness of scaffolding for improving the journal writing ability of three undergraduate Malaysian students who studied intensive English as part of their business foundation program. To gather the data of the study, five written journals of the student each written from week one to week five were collected. Further data were provided through observation of students' progress from week one to five. The results of data analysis revealed that the scaffolding provided to the learners aided remedying the problems they faced during their journal writing sessions.

More particularly, few other studies have explored the role of visual scaffolding in the development of language skills (e.g., Chang, 2006; McCloskey, 2005). In this respect, in a quasi-experimental study, Lestari and Misdi (2016) examined the usefulness of visual scaffolding in instruction reading comprehension to a group of eighth grade high school students in Indonesia. Data were collected from pre-test, post-test, and observation instruments. As the results of data analysis uncovered, the students showed significant gains in their post-test results after they had received the visual scaffolding in the treatment phase. However, to the best of the researchers' knowledge, to date, no study has examined the impact of visual scaffolding on the writing development of EFL learners in the context of Iran.

In addition, while the communicative approach has been revolutionary in pedagogical terms, it nonetheless remains poorly informed by views of the kinds of abilities which it aimed to stimulate, or of the ways in which they might develop (Bygate, 2009). In any case, choosing technology that supports texts with images such as photos, graphs, or charts is highly advisable since it links the text with its visual representation and acts equally as a mnemonic device (Erben, Ban, & Castaneda, 2009). According to Hegarty's (2005) model of display comprehension, top-down processes interact with bottom-up information in the comprehension of all external displays, so we can claim that this type of interactive model applies to graph interpretation as it does for other less abstract visual displays (Freedman & Shah, 2002). Yet, there has been little empirical evidence demonstrating the interaction of top-down and bottom-up processes in the context of graphs. So as Welch (1978) rightly puts:

Print-imprinted intellectuals, including professors, must learn the world of the graphic, a word which derives from the Greek graphe and refers both to the written and the pictorial. The humanities/illiteracies must relinquish semiconscious resistance to pictorial communication and its technologies. (p. 20)

PURPOSE OF THE STUDY

Based on the aforementioned paucity of research regarding the incorporation of both bottom-up and top-down processes along with graphs as a visual scaffolding element in teaching the writing skills in the ESL/EFL context, the present study attempts to achieve two aims. First, it targets at investigating a lesson (see Appendix), which concentrated on the use of graphs with a group of EFL learners in Iran. Second, it tries to highlight the benefits of using graphs to teach vocabulary and check the learners' opinion about using graphs and its potential as a teaching device in the language classroom. Therefore, the present study sought to find answers for the following research questions in particular:

- 1. What are Iranian EFL learners' perceptions of visual images in learning the selected unknown vocabulary words used?
- 2. How do visual images scaffold the writing task for the Iranian EFL learners?

METHOD

Participants

A group of 14 male and female Iranian EFL learners, with an age range of 15 to 18, took part in the present study. The participants comprised of eight male and six female intermediate English language learners studying American English File 2 (Latham-Koenig, Oxenden, & Seligson, 2010). The participants, who all studied at the same class, took part in the study on a voluntary basis.

Instrumentation

The visual materials used in the study were downloaded freely from the following URL dedicated to providing visual resources for teachers to boost the learners' reading and writing abilities. The site can be found at the following URL: <u>http://www.bilingualmaths.com/2level.htm</u>. The materials, which are freely available for language teachers on the site, were freely downloaded and adapted for the present study. The whole lesson can be found in appendix A.

A researcher-made questionnaire and a semi-structured interview followed the lesson to check the students' understanding of the process. A questionnaire and a recorded interview following the lesson examined the students' opinions of the graph reading lesson. The questionnaire was conducted by the researchers and went through some revisions to accommodate for the raters' opinions. The estimated reliability of its final version was .85. The questionnaire items were intended to elicit learners' opinions of different parts of the lesson and the whole process. The questionnaire was composed of 10 questions, and the learners could choose one of the three responses which ranged from *I agree, I neither agree nor disagree,* to *I disagree.*

The semi-structured interview, following the questionnaire, was to gain an in-depth understanding of the learners' views of the process. It was

conducted immediately after the questionnaire in the learners' native language. It also went through transcription and further analysis.

Data Collection Procedure

The Scaffolding Session

To ensure the efficacy of the materials in scaffolding the learners' reading and writing activities, they first took part in a pretest of the vocabulary items that were to be used in the lesson. The test checked their ability to provide Persian equivalents for eight vocabulary words that were to be scaffolded through visual images. As the purpose of the study was to scaffold the learners through images (i.e., enabling them to work out the meaning of words which were beyond their current abilities through relying on scaffolding from the visual aids), the students were left to their own devices to do the activity. The process of scaffolding was divided into the following four phases in sequence. Each phase was completed by the students themselves with minimal teacher intervention.

Presentation Phase

The intermediate level participants of the study lacked familiarity with the words in the lesson based on their pretest results. As the graph lesson contained some extra vocabulary unattended to in the scaffolding process, these words were presented to the learners prior to the main phases of the lesson. These words were some commonly-used adjectives and verbs employed in some stages of tasks such as task rubrics and instructions. In teaching the main vocabulary of the study, no translations or definitions were provided. This was done because the leaners had to deduce their meanings by analyzing the sample graph and the text they were presented to immediately after the wordlist. In fact, the graph and the accompanying text here worked as a scaffold to help learners work out the meaning of words they had never seen before.

Transferring the Scaffolded Words

In the second phase of the lesson, the learners were to fill in the blanks to complete a text based on a given graph. In fact, in this phase of the lesson, they were to transfer the words they had learned in the previous session to a new situation. This meets the contingency principle of scaffolding (Wood, Bruner, & Ross, 1978; Leith, Yuill, & Pike, 2018) as the assistance provided should be just enough and in-time to be effective for the learner. In fact, they believed that scaffolding should be provided in the critical moments of the process of instruction.

Writing a Sample Paragraph

In this stage, the learners were given a graph as well as a topic sentence to write a sample paragraph. In their sample paragraph, they could use the words they had learned in the previous phases of the lesson. This stage can be called "the fading stage" of scaffolding (Leith et al., 2018; McNeill, Lizotte, Krajcik, & Marx, 2006). By fading, it is meant that the scaffolding materials are gradually driven away, making the learners use the materials by themselves, while they are still required to return to the scaffolded materials again and again to ascertain their proper use of the previously learned materials.

Converting the Material to Different Forms

The last stage of the scaffolding process related to the ability of the learners to work with the materials in different modalities. These kinds of activities demand changing the modality of the given tasks. In fact, these activities pave the way for independent work on the part of the learners. In case of the present study, the learners were to convert a sample text to a graph or vice versa. This resembles the third main characteristic of scaffolding (i.e., transfer of responsibility). Transfer of responsibility means that the responsibility to do the task is transferred to the learner who has experienced enough progress to accomplish the task independently. In fact, it corresponds to what Vygotsky (1978) called interiorization. He believed that when this stage is achieved in the expert-novice interaction, the learner is believed to appropriate what has been delivered inter-subjectively in the scaffolding process, and now he has developed a new functional system (Shvarts & Bakker, 2019). In this phase of the scaffolding, it is expected that any help provided so far has been removed and the learners come up with something new. Furthermore, to keep the process of scaffolding as smooth as possible, it was envisaged to first ask the learners to convert a text to a graph to notice how the acquired words and structures were used. As a final step, they were asked to write a text based on the given graph.

RESULTS

Immediately after the lesson was over, the questionnaire was distributed among the learners who were supposed to choose from among the three options of *I agree*, *I neither agree nor disagree* and *I disagree*. The items in the questionnaire were developed with consideration of the specific nuances of the scaffolding process, aiming to elicit learners' views regarding the stages they underwent to cover the whole lesson. The students' responses to the questionnaire are shown in Table 1.

Table 1 shows that visual scaffolds support students' mastery over the vocabulary words used in the lesson. The data in the table indicate that visuals even ameliorate the presentation and understanding of the grammatical points used in the lesson. For more than 80% of the learners, the visual aids were proved to be more helpful than other forms of assistance. In fact, the kind of scaffolding provided to the learners through visuals made it easy for them to tackle with the unknown words they were to cover. The findings also showed that where the scaffolding provided the learners with enough information to go ahead with the task, they were better able to complete the task. This relates to the contingency nature of scaffolding as good scaffolding enters the learning scene when it is required.

No.	Item	I agree %	I Neither agree nor disagree %	I disagree %
1	Visuals make vocabulary learning easier and more comprehensible in comparison with other methods like dictionary definitions.	100	0.0	0.0
2	Visuals highlight the nuances of differences between words making these nuances easier to understand.	100	0.0	0.0
3	Visuals are more comprehensible than written information.	81.25	18.75	0.0
4	Texts accompanied by visuals are easier to understand.	87.5	12.5	0.0
5	It is possible to understand the graphs used in the lesson without knowing all words.	68.75	18.75	12.5
6	Extensive vocabulary and grammar is needed to study illustrative visuals.	56.25	37.5	6.25
7	Special grammatical structures are necessary to use visuals.	43.75	50	6.25
8	When texts are accompanied with visuals, the text is easy to understand	72.5	10.5	7.0
9	Writing a paragraph is the most challenging when the words and text in the previous section of the lesson have not been checked	45.75	50	4.25
10	Converting the forms of data is the most difficult part of the lesson.	84.25	13.75	3.0

Table 1. The Students' Responses to the Questionnaire

In addition to elucidating the meaning of the target words and acquiring grammatical structures, visual scaffolds assisted the learners to convert modalities. According to the results, this part proved to be the most challenging one as it required learners to work with some newly-learned materials in another format. Items 9 and 10 in the questionnaire corroborated this claim. Considering the key characteristics of scaffolding, it is clear that all three key characteristics of scaffolding were met. Likewise, it can be claimed that the scaffolding, provided to the learners in this part of the lesson, was a contingent one because the visual element facilitated the learner to act in the task with as enough help as the task demanded, and it faded while it was no longer needed. Furthermore, its final aim was to transfer to the learners the ability they need to work with the acquired materials in different formats. In fact, in changing modalities, the scaffolded materials were no longer available and the learners were to rely on their acquired knowledge to go ahead with the task requirements.

Table 1 shows that the visuals provide the learners with better quality scaffolding. It can be claimed that the scaffolds work more successfully (items 1, 2, 3, and 4) as learners reported having easier tasks to follow the lesson or do the required tasks.

Another benefit of using visuals as scaffolds is that they obviate the need for complicated structures and vocabulary to do the task. As responses to items 5, 6, 7, and 8 indicate, a moderate number of learners believed that analyzing the graphs is possible without knowing highly difficult words or complex grammatical structures. These findings again corroborated the usefulness of the visual materials as high-quality scaffolds for the learners in the study.

To have a better picture of the views the learners had of the lesson, a semi-structured interview followed the questionnaire phase. Some questions were posed to the learners one by one and their responses were recorded for further analysis. The interview was conducted in the learners' native language and they were given the option whether to answer the questions or skip them. The first question inquired whether they had any feeling about the process used in the lesson or not. As it was clear, they unanimously claimed that the lesson had been a fascinating experience and in the future they would like to have similar lessons of this kind. The question aimed to locate the easiest and the most challenging parts of the lesson. Nine out of fourteen found the first task the easiest, and other five found the second phase the easiest to follow. On the contrary to their disagreements in relation to the two first tasks, all except one found the third task the most challenging, which corroborated the fact that converting the information in the absence of scaffolding was the most demanding on the part of the

learners. This finding contributed to the fact that even knowing all the words used in a task does not guarantee a full grasp of the material to the extent of enabling one to transfer the learned material to a new situation.

The learners were all asked to express their ideas about the lesson freely. They had differing views in this regard. They all had the opportunity to pass their comments. From among all their comments, five of the learners' were elaborated on. One (male) student believed that:

Although the words were nearly the same in meaning I was able to differentiate between them because I had the graph at my disposal. It acted like a blueprint for my work. Some of the words used in the graphs were very useful and practical. I was able to provide Persian equivalent for words I had never heard of before this lesson besides being able to understand the nuances of differences in meanings between them. It was a good experience. Despite the fact that I had never heard about these kind of material [Business English] it was neither difficult nor easy.

Another female learner believed that:

I learned the words better than I were to learn them without the help of the graph. It was worth the time I put into it. I wish we would be able to spend more time on tasks like this. I would like to learn other words using this method.

Another female student, pointing to the merits of this kind of activity in fostering the reading and writing abilities of learners in language classes, added the point that:

The lesson was in general easy for me and I did it fairly easily. In general it was a good experience because learning in this way is more long lasting. I had never worked with graphs in English. This method

of learning is far better than other methods. All parts were equally challenging and difficult for me. When I was writing, I felt that I was completely able to work with the words.

Appreciating the role of visuals at facilitating learning some collocations (e.g., *fell sharply* and *increase slightly*), another learner stated:

In general reading and writing using graphs is easier than reading texts without having graphs. There is no need to understand the meaning of all words to be able to work with graphs. Graphs can compact the information that can be said in multiple pages. They enable us to compare data. If we wanted to compare non-graphic data great amount of time would be needed but graphs make it easy to do this very quickly. Using a graph we can compare data very easily by a very short glance. We can learn the nuances of meanings using graphs for example I learned fell sharply and increase slightly very easily by working on the graph. The part in which we had to fill in the blank using the graph was the easiest and the part in which we had to convert the text into graph was the most difficult. In my opinion graphs are more practical than just the text without following any graphics.

One of the females referred to the matter of time and question types she generally had a problem with before using visuals in learning. In this regard, she pointed out that

The easiest part was the part I had to fill in the blanks and use the graph to fill in the blanks and the most difficult part was where I had to complete the graph using the text. This method was very quick for me because if I wanted to learn in any other way surely it would take me more time.

DISCUSSION

The present study sought to present a group of Iranian intermediate-level EFL learners with graphs as visual scaffolds in a reading and writing class and obtain and analyze their feedback. Despite the extant literature on scaffolding, very few studies have been conducted on the efficiency of visual scaffolding in fostering language skills in real classrooms. On the contrary, most studies have analyzed scaffolding from a theoretical point of view. In the present study, these two frontiers have been considered.

As it was clear in the study, when the learners were to fill in the blanks using the words given, they were able to achieve task demands if right amount of scaffolding was presented in the right time. This was evident in their answers to the questionnaire items as they pointed to the fact that this activity was quite easy for them. This was in line with the ideas of Carr and Pike (2012) as well as Pino-Pasternak, Whitebread, and Tolmie (2010), who believed that a learner's behavior both prior and after an intervention by a scaffolding session signifies the contingency of the support. Another component of the metaphor of scaffolding was fading. Wood et al. (1976) defined scaffolding as a dynamic process that happens at the time of conducting an activity. They believed that as the child matures in doing a task, less scaffolding is necessary. The quality of fading can provide valuable information about the adequacy of the scaffolding presented (Van de Pol & Elbers, 2013). This component was also observed in the lesson as the more familiarity the learners got with the words, the more comfortable they were to work with them and to use them to write a new paragraph. The third quality relating to the scaffolding process is transferring the responsibility for learning the task to the learner. As learners gain the knowledge presented to them, they are able to do the task independently and there is no further need to provide them with scaffolding.

It has been claimed that there is even statistical associations between the quality of scaffolding and the transition of regulation to the child in doing and developing the scaffolded skills (Pino-Pasternak et al., 2010). As it was observed in the lesson, the last phase required learners to draw a graph using the text and to write a text without having any scaffolding. The data in the questionnaire showed that this part seemed to be the most challenging one for the learners, but most of them were able to go ahead with the task. On the whole, it can be said that as the learners moved from contingency phase to the fading and finally the transferring phases, less amount of scaffolding was provided to them as they could perform the activity more independently. This finding was in line with the theoretical conceptualization of scaffolding which rests on the notion that as learners move along with the learning process, the scaffolding provided to them should become less and less up to the point that they can carry out a task on their own (Van de Pol & Elbers, 2013). Additionally, the effectiveness of graphs in improving writing ability of the learners in this study corroborated the results of previous studies highlighting the efficacy of visual aids in enhancing various writing skills among ESL/EFL learners (Bodrova & Leong, 1998; Hassan, 2018; Kamal & Faraj, 2015; Veeramuthu & Veerappan, 2011).

Aside from the theoretical considerations, the lesson is also valuable from the practical point of view because such visual materials rarely find their ways to general English classes, especially in lower levels. As it was clear from the results of the pretest, none of the students had any knowledge of the vocabulary words used in the lesson, but the activity familiarized them with these words throughout the cycle of the lesson. In fact, the knowledge of the words gained through the lesson was also in line with the literature on vocabulary learning. Nation (1990) asserted that knowing a word entails knowing its spelling, pronunciation, collocation, and appropriateness. The tasks presented here demanded the learners to work out the meaning and use the words in appropriate places mandated by the visual element. Another benefit of the lesson was that the learners had the chance to work with some collocations.

Reading and writing practices were other merits of the lesson as the learners were required to come up with their own writing product. The scaffolding provided in the lesson guided the learners in a stepwise fashion to move from simple reading to ending up with a written product. Therefore, corroborating the results of previous studies claiming the efficiency of visual scaffolding in enhancing ESL/EFL learners' reading ability (Lestari & Misdi, 2016; McCloskey, 2005). Furthermore, through practicing their own writing, the learners had further opportunities to recycle the learned materials. Besides writing, the reading ability is also practiced. The reading ability in this study was considered as the ability to make meaning from a text entailing processes like "decoding, word reading, and fluency along with integration of background knowledge and previous experiences" (Klinger & Geisler, 2008, p. 65). The activity introduced in the third section of the lesson provided different opportunities for the learners. They had to decode the text itself and also be able to transfer what they had learned through working with the graphs in the previous sections to complete the bar graph. Moreover, as vocabulary knowledge has been found to be crucial for learners to understand a text (Klinger, Artiles, & Barletta, 2006) and lack of this knowledge may lead to failure to 'link new information with prior knowledge or monitor their comprehension of what they are reading' (Narkon & Wells, 2010, p. 2), this activity may be helpful in this regard. The learners had ample opportunities to work with the necessary words to complete the task although the activity was still demanding.

CONCLUSION AND IMPLICATIONS

Although the instructional and scaffolding activities described here are far from being complete and the coverage of the crucial concept of scaffolding is far from ideal, there are some points worth paying attention to regarding this study. The first is that despite the learners' unfamiliarity with the words covered in the lesson based on their pretest results, the lesson culminated in their mastery of the words as it was unfolded. Consequently, it highlights the efficacy of using visual scaffolds in language classrooms (Lantolf & Thorne, 2006). As stated by Hassan (2018), for teachers to prepare more effective learning context for their learners, they should teachers should change their writing instruction techniques for more incorporation of efficient scaffolding strategies suiting the needs and levels of the L2 situation and learners. Another point may be that the time and effort put to this lesson was worthy because besides theorizations, students had a rewarding learning experience as they declared in their interviews. The findings of this study can be beneficial to material developers as in the future they can design instructional materials for developing writing ability which would not solely emphasize textual input but integrates visual or even auditory input in the material to better cater for learners with various learning styles and preferences. Furthermore, when material developers incorporate visual elements such as graphs, charts, pictures, and tables in their materials, they indirectly prompt teachers who are the main appliers of such materials and textbooks to use them in their instruction. In addition, teachers can further benefit by the findings of this study by realizing that in a classroom context where scaffolding technique is to be applied, they should not be the sole provider of information and input to the learners. As learners progress during the semester, teacher can step aside and allow the learners to take more active role in their own learning process.

On the whole, considering the limited sample of the present study, more studies of this kind with a broader sample can be a rewarding recommendation. Future studies can be conducted with much wider scope using both quantitative and qualitative designs, first to study scaffolding and its theoretical underpinnings, and second to ensure its practicality, especially in second language classroom contexts. On the theoretical side, such studies can focus on the unclear nature of scaffolding and its characteristics to further elucidate the nature of these characteristics. On the practical side, such interventions can be utilized to boost language learning in both general and English for Specific Purposes (ESP) classes with a focus on prespecified points in mind. Taking into account the learners' willingness to have such lessons is another added benefit of such visuals. They can be used to break the monotony of the language class to make language learning a pleasant experience. This study was one of the rarest studies carried out on examining the role of visual scaffolding in teaching writing ability. Other studies of this kind in the area of writing ability from various contexts with students of other proficiency levels are recommended as they can solidify the findings of the current study. Even similar studies of the role of visual scaffolding can be conducted on examining its effect on other language skills of reading, listening, and speaking.

References

- Bodrova, E. & Leong, D. (1998). Scaffolding emergent writing in the zone of proximal development. *Literacy Teaching and Learning*, 3(2), 1-18.
- Bygate, M. (2009). Teaching and testing speaking. In M. H. Long, & C. J. Doughty (Eds.), *The handbook of language teaching* (pp. 412-440). Chichester: Blackwell Handbooks in Linguistics.
- Carr, A., & Pike, A. (2012). Maternal scaffolding behavior: Links with parenting style and maternal education. *Developmental Psychology*, 48(2), 543–551.
- Celce-Murcia, M., Brinton, D. M., & Snow, M. (Eds.). (2014). *Teaching English as a second or foreign language* (4th Ed.). Cengage Learning, Boston, USA.
- Chang, Y. (2006). Visual organizers as scaffolds in teaching English as a foreign language (Unpublished Master's thesis). University of Bridgeport, Connecticut, United States.
- Chappell, V. (2011). *What makes writing so important?* Retrieved January 19, 2015, from http://www.marquette.edu/wac/WhatMakesWritingSoImportant.shtml.
- Corder, P. S. (1966). *The visual element in language teaching*. London, UK: Longman.
- Dancygier, B., & Vandelanotte, L. (2017). Image-schematic scaffolding in textual and visual artefacts. *Journal of Pragmatics*, 122, 91-106.
- Erben, T., Ban, R., & Castaneda, M. (2009). *Teaching English language learners through technology*. New York, NY: Routledge.
- Freedman, E. G., & Shah, P. (2002). Toward a model of knowledge-based graph comprehension. In M. Hegarty, B. Meyer, & N. Hari Narayanan (Eds.), Diagrammatic representation and inference (pp. 8–31). Berlin: Springer Verlag.

- Gairns, R. & Redman (1986). Working with words: A guide to teaching and learning vocabulary. Cambridge: Cambridge University Press.
- Hassan, M. (2018). Impact of motivational scaffolding on the acquisition of writing skills in L2 situation. *International Journal of Humanities and Social Science Invention*, 7(12), 39-45.
- Hegarty, M. (2005). Multimedia learning about physical systems. In R. E. Mayer (Ed.), Handbook of multimedia (pp. 447–465). New York, NY: Cambridge University Press.
- Hill, D. A. (2013). The visual element in EFL coursebooks. In Tomlinson, B. (Ed.) (1998) *Developing materials for language teaching*. (2nd Ed.) (pp.174-182). London, UK: Bloomsbury.
- Kamal, A., & Faraj, A. (2015). Scaffolding EFL students' writing through the writing process approach. *Journal of Education and Practice*, 6(13), 131-141.
- Klinger, J. K., Artiles, A. J., & Barletta, L. M. (2006). English language learners who struggle with reading: Language acquisition or LD? *Journal of Learning Disabilities*, 39(2), 108-128.
- Klinger, J. K., & Geisler, D. (2008). Helping classroom reading teachers distinguish between language acquisition and learning disabilities. In J. K. Klinger, J. J. Hoover, & L. M. Baca (Eds.), Why do English language learners struggle with reading? Distinguishing language acquisition from learning disabilities (pp. 57-74). Thousand Oaks, CA: Corwin.
- Kroll, B. (2001). Considerations for teaching an ESL/EFL writing course. In M. Celce-Murcia (Ed.), *Teaching English as a second/foreign language* (pp. 219–232). Boston: Heinle & Heinle.
- Lantolf, J. (2006). Sociocultural theory and L2: State of the art. *Studies in Second Language Acquisition, 28*, 67–109.
- Lantolf, J., & Thorne, S. (2006). Sociocultural theory and the genesis of second language development. Oxford: Oxford University Press.
- Larkin, J. H., & Simon, H. A. (1987). Why a diagram is (sometimes) worth ten thousand words. *Cognitive Science*, 11(1), 65-100.
- Latham-Koenig, C., Oxenden, C., & Seligson, P. (2010). *American English File 2*. Oxford: Oxford University Press.
- Leith, G., Yuill, N., & Pike, A. (2018). Scaffolding under the microscope: Applying self-regulation and other-regulation perspectives to a scaffolded

task. British Journal of Educational Psychology, 88(2), 174-191.

- Lestari, N. F., & Misdi, M. (2016). Using visual scaffolding strategy for teaching reading in junior high school. *ELT Perspective*, 4(2), 131-138.
- McCloskey, M. L. (2005). *Visual scaffolding to support ELL reading*. Salt Lake: Rocky Mountain TESOL.
- McNeill, K. L., Lizotte, D. J, Krajcik, J., & Marx, R. W. (2006). Supporting students' construction of scientific explanations by fading scaffolds in instructional materials. *The Journal of the Learning Sciences*, 15(2), 153-191.
- Narkon, D. E., & Wells, J. C. (2010). Improving reading comprehension for elementary students with learning disabilities: UDL enhanced story mapping. Manuscript submitted for publication.
- Nation, I. S. P. (1990). *Teaching and learning vocabulary*. New York, NY: Newbury House.
- Nunan, D. (March, 2002). English as a global language: Counting the cost. Featured presentation, TESOL International convention, Salt Lake City, U.S.A.
- Pino-Pasternak, D., Whitebread, D., & Tolmie, A. (2010). A multidimensional analysis of parent-child interactions during academic tasks and their relationships with children's self-regulated learning. *Cognition and Instruction*, 28(3), 219-272.
- Shah, P., Freedman, E., & Vekiri, I. (2005). The comprehension of quantitative information in graphical displays. In P. Shah & A. Miyake (Eds.), *The Cambridge handbook of visuospatial thinking* (pp. 426–476). New York: NY: Cambridge University Press.
- Shams, A., Khanam, A., & Imtiaz, S. (2016). The impact of audio-visual aids and graphic organizers on the writing skills of ESL learners at AMU +2 girls. *Global Journal of Interdisciplinary School Sciences*, 5(5), 15-36.
- Shvarts, A., & Bakker, A. (2019). The early history of the scaffolding metaphor: Bernstein, Luria, Vygotsky, and before. *Mind, Culture, and Activity, 26*(1), 4-23.
- Smith, L. D., Best, L. A., Stubbs, D. A., Archibald, A. B., & Roberson-Nay, R. (2002). Constructing knowledge: The role of graphs and tables in hard and soft psychology. *American Psychologist*, 57(10), 749-761.
- Tufte, E. R. (2001). The visual display of quantitative information. Cheshire, CT:

Graphics Press.

- Van de Pol, J., & Elbers, E. (2013). Scaffolding student learning: A micro-analysis of teacher-student interaction. *Learning, Culture and Social Interaction*, 2(1), 32-41.
- Van de Pol, J., Volman, M., & Beishuizen, J. (2010). Scaffolding in teacherstudent interaction: A decade of research. *Educational Psychology Review*, 22(3), 271–296.
- Veeramuthu, A., & Veerappan, L. (2011). The effect of scaffolding technique in journal writing among the second language learners. *Journal of Language Teaching and Research*, 2(4), 934-940.
- Vygotsky, L. (1978). Mind in society. Cambridge, MA: Harvard University Press.
- Vygotsky, L. (1987). Thinking and speech. In R. Rieber & A. Carton (Eds.), L. S. Vygotsky, *Collected works, volume 1* (pp. 39–285). New York, NY: Plenum.
- Walsh, K. (2010). The importance of writing skills: Online tools to encourage success. Retrieved August 3, 2015, from <u>http://www.emergingedtech.com/2010/11/the-importance-of-writing-skills</u> online-tools-to-encourage-success/.
- Welch, W. (1978). Science education in Urbanville: A case study. In R. Stake & J. Easley (Eds.), *Case studies in science education* (pp. 5–33). Urbana, IL: University of Illinois.
- Wood, D., Bruner, J. S., & Ross, G. (1976). The role of tutoring in problem solving. *Journal of Child Psychology and Psychiatry*, 17(2), 89-100.
- Zacks, J., Levy, E., Tversky, B., & Schiano, D. (2002). Graphs in print. In M. Anderson, B. Meyer, & P. Olivier (Eds.), *Diagrammatic representation and reasoning* (pp. 187–206). London: Springer-Verlag.

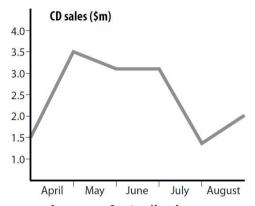
APPENDIX A

The Lesson

Describing graphs

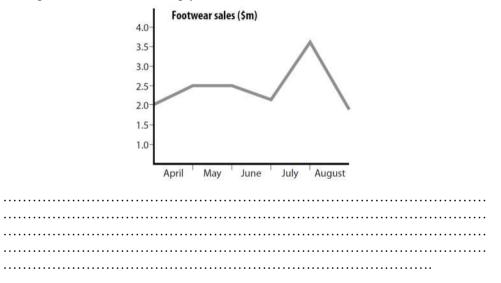
1. Look at the graph and fill in the blanks in the report. Please do this on CD sales at Save-O-Mart discount stores. Use the words in the box.

rose slightly	rose sharply	remained constant	fell slightly	fell sharply
0)	1 2		0,	1 2



CD sales were very uneven last year. In April sales..... from \$1.5 million to \$3.5 million. In May they..... to just over \$3 million. In June sales..... but..... in July to just under \$1.5 million. In August they..... to \$2 million.

2. Now use the graph below to write a short report on footwear sales. Use the report in Exercise 1 to help you.



3. Koç (pronounced *coach*) is Turkey's largest group of companies. It produces cars, buses, trucks, and auto parts. Other businesses include household appliances, insurance, food production, construction, and tourism. Read this information about the company and use it to complete the graph below.

The company's net income increased from 1988 to 1997. However, growth was uneven and was greatly affected by the Turkish economy. After slow growth at the end of the 1980s, there was a large increase in 1990, but the following year income fell again. In 1992 there was a large increase to \$320 million. Income rose sharply by \$216 million to \$536 million in 1993. In 1994 income fell to \$330 million, but rose again by \$95 million in 1995. There was a slight increase in 1996 to \$438 million, but then income fell sharply by \$281 million in 1997, finishing at \$157 million. However, prospects in the next few years are good for Turkey's largest industrial company.

