Impact of Using Web-quests on Learning Vocabulary by Iranian Pre-university Students

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Abstract
Web-quests are internet-based technology applications in which groups of students follow a specific set of steps toward the completion of a final project on a specific subject or a multi-disciplinary subject. The present study aimed to investigate the impacts of using web-quests on learning vocabulary by Iranian pre-university students. The sample of the study consisted of 72 students assigned into two groups. One of the groups represented the control group, and included 23 students; the other group represented the experimental group and comprised 49 students. The two groups were chosen from a population of pre-university students in Chadegan, Isfahan, Iran. The web-quest strategy was used in teaching the experimental group, while the traditional method was used with the control group in the second term of the school year 2015-2016. An Oxford Placement Test (OPT), a vocabulary pretest, a vocabulary posttest, and an attitude questionnaire were the data elicitation tools employed in this study. The collected data were analyzed using independent-samples t test, which was used to determine the existence of possible significant differences between the groups both before and after the instruction. The results indicated that there were statistically significant differences between both groups in favor of the experimental group. The conclusion, thus, could be that the students in the experimental group, who used the web-quest resources for learning vocabulary, performed significantly better than the students in the control group, who learnt vocabulary through traditional method of learning vocabulary. Finally, questionnaire data analyzed via one-sample t test indicated that the experimental group learners had a positive attitude towards the treatment they experienced in the experiment.

Keywords: Attitude, Computer-assisted language learning, vocabulary learning, Web-quest

Introduction

Learning a second language is probably the most cognitively challenging task a person goes through. But whereas the grammar of a language is largely in place by the time a child is 10 years old (Crystal, 1988), vocabulary continues to be learned throughout one's lifetime. This is because the grammar of a language is made up of a limited set of rules, but a person is unlikely to ever run out of words to learn (Schmitt, 2000). There are several ways through which the term word is understood in the academic circles. In the Oxford dictionary, the term word is described as a single distinct meaningful element of speech or writing, used with others (or sometimes alone) to form a sentence and typically shown with a space on either side when written or printed (Stevenson, 2010). The Cambridge dictionary defines the term word as a single unit of language that has meaning and can be spoken or written (Cambridgedictionariesonline.com). Another definition is offered by Katamba (2005) that "A word is the smallest meaningful element in

linguistics" (p. 3). Booji and Beard (1995) stated that a word is "a symbol of mutually implied sound and meaning" (p. 1).

All the definitions mentioned above recognize the term word as the smallest unit of a language with a meaning. Learning vocabulary of a foreign language is, despite all intensive research by researches, teachers, curriculum designers, theorists and other people involved in foreign language learning, still a very complex and undiscovered process (Shen, 2008). Even though there are many theories of foreign language vocabulary acquisition, there are still unanswered questions remaining to be answered. Despite the fact that the process of learning vocabulary is not yet well understood, students have to learn vocabulary on an everyday basis. Nowadays students learn words of a foreign language by many ways. Everyone goes through a different set of methods of learning vocabulary because everyone prefers different styles, but the intended result is almost the same for most of them. When learning a word, students learn not only its translation to their mother tongue, but also the definition, pronunciation, spelling, inflection, collocation, and information regarding whether it is connected to a particular style or register and the context it is most often used in (Shoebottom, n.d.). There is not one universal method that would be able to provide a way to acquire all the information connected to a word at once. Students have to combine different methods to achieve the complex knowledge of a desired word (Saville-Troike, 2006).

According to McCarthy (1988), the major part of knowing any language is determined by the amount of vocabulary one possesses. Too many researchers (e.g. Coady & Hukin, 1997; Harley, 1996; Nation, 2001), an essential component of second and foreign language proficiency is vocabulary learning. The meaning is conveyed by words and a major obstacle in using second language effectively is lack of vocabulary (Krashen, 1989). Regarding this issue, vocabulary learning has attracted the attentions of a wide range of researchers in second language learning. It seems that the findings of the previous studies on vocabulary learning are not conclusive and it is a controversial issue for the researchers to know how the learners can learn vocabulary effectively and efficiently. For many years, the traditional method, which includes the memorization of a long list of words and explicitly providing the students with paired translation equivalents, has been used in language classrooms in Iran. The problem is that traditional method lacks any theoretical support and the vocabulary learning is more than memorization of long list of words in the target language.

To Nation (1990), understanding a word means understanding its spelling, pronunciation, and appropriateness. To this end, the memorization of the target words with their equivalents cannot be an effective method for learning vocabulary. This traditional method seems an ineffective method for learning vocabulary that has been used for many decades. Therefore, the authors of this article decided to engage students in learning the vocabularies within a lively context. It is time to turn to a new approach or method: one in which computers play a part.

Literature Review
Background to Web-quest

Web-quest was introduced by Bernie Dodge and Tom March in 1995; it was designed based on constructivist philosophy, and it promoted cooperative learning and scaffolding of instruction (Hsu & Hwang, 2017). According to Dodge (1997), web-quest is an inquiry-oriented lesson format in which most or all the information that learners work with comes from the web. In language learning, web-quest not only allows students to construct their knowledge of the language through exploring structured web resources on their own (Laborda, 2009), but also helps students become better learners by increasing their autonomy and providing them a sense of

fulfillment (Lou, 2010). Hence, it could be an alternative learning tool that can facilitate the learners in studying English (Warda, 2016). According to Dodge (1998), a well-designed web-quest typically consists of six components, namely introduction, task, process, resources, evaluation, and conclusion. The introduction serves to launch the topic by providing interesting background information and a blueprint for the whole quest. The task and process sections present a general description of the assigned task and the step-by-step procedure to be followed for completing the task. A set of information sources needed to complete the task is provided in resources section. Information sources might include web documents, searchable databases on the net, and books and other documents physically available in the learner's setting. The evaluation component is usually in the form of a rubric that will be used to assess students' work, and the conclusion brings the quest to closure, reminds learners of what they have learned and encourages them to extent the experience into other domains.

There are two types of web-quest, namely short-term web-quest, and long-term web-quest. Short-Term web-quest focuses on learners' knowledge acquisition and integration that can be completed in one to three hours, whereas long-term web-quest emphasizes learners' ability to extent and refine knowledge. Thus, it may take between one week and a month in a classroom setting (Dodge, 1997). Web-quest is an alternative learning tool that can increase students' motivation in learning vocabulary. Web-quest consists of motivating and authentic material tasks (Zheng, Perez, Williamson, & Flygare, 2008 as cited in Almarsi, Alfadda, & Alshumaimeri, 2011). In addition, it is stimulating and useful; students remember lessons better via web-quest than through traditional ways of learning (Hassanien, 2006). In other words, web-quest is an incentive agent that can help students to increase their motivation and improve their understanding and achievement in learning language skills and components including vocabulary (Jahromi, Mosalanejad & Rezaee, 2016).

Integrating the Web and Curriculum

In 1995, Bernie Dodge, a professor of educational technology at San Diego State University, developed a model for integrating the use of web, to teach any subject at any grade level. He called his work a web-quest and posted summery of his idea on the web. Since then educators around the world have incorporated web-quest into their Curricula (Schwartz & Willing, 2001). In a web-quest, students are sent to a quest for knowledge. They are directed to online resources within the context of specific curriculum mission rather than accessing textbook which may be dated, or filter CD-ROM. Web-quest exposes students to a wide range of online resources such as subject experts, directories of information, current news, and all manners of interest groups. They must critically evaluate and extract relevant information to construct meaning within the context of the goal. It may be conducted independently or in small groups. Since cooperation is essential in group setting, students gain experience in team work.

Schwartz and Willing (2001) emphasized that web-quest is a teaching process that can be applied to all curricular areas. Students become confident web explorers and begin to make connections between the web-quest process and broader web exploration. Life in the information age has many requirements that are imposed on educators and learners to work hard on providing students with the capacity, the competencies and the skills that make them unable to meet these requirements, on the top of these requirement is the ability to obtain information from several sources in the age of increasing knowledge, rather than relying on the teacher only in filling the minds of students. So, we must not teach the students only information, but we must teach them how to get this information by themselves.

Turville (2008) concluded that the goal of a web-quest is to provide students with opportunities to explore content in meaningful and engaging ways, and to create an activity that will engage students in the topic and content to be explored so that they can discover new information and go beyond current knowledge to develop their own understanding and then present this new understanding to others in a meaningful way. Cohen and Cowen (2008) added more goals as (a) to extend and refine knowledge, (b) to analyze information, (c) to enhance students' reading skills, (d) to recognize and produce basic structures of the vocabulary, (e) to learn tenses, and (f) to learn about Internet opportunities for learning language.

Components of a Web-quest

A web-quest is composed of six stages which introduce the activity to students and familiarize them with the steps of the process. These six building blocks are common to all web-quests and serve specific purposes to ensure that transformative learning occurs. Dodge (1995, 1997) described the six basic parts of web-quests: (1) an introduction provides some background information to prepare the student to lead the web-quest program, (2) a task that is a doable and an interesting activity that allows students to learn and enhance their current knowledge by gathering information through the web-quest. Students are exposed to an inquiry-oriented activity. (3) A set of information sources needed to complete the task. Many (though not necessarily all) of the resources are embedded in the web-quest document itself as anchors pointing to information on the World Wide Web. Information sources might include web documents, experts available via e-mail or real time conferencing searchable databases on the net, and books and other documents physically available in the learner's setting. Because pointers to resources are included, the learner is not left to wander through web space completely adrift. (4) A description of the process: the learners should go through a detailed description of the steps of the process which leads them to accomplish the task. The process should be broken out into clearly described steps. (5) Some guidance (resources) on how to organize the information acquired. This can take the form of guiding questions or direction such as timelines, concept maps or cause and effect diagrams. (6) A conclusion: It is the closure of the quest that reminds the learners of what they've learned, and perhaps encourages them to extend the experience into other domains. Dodge, (2001), Schwartz and Willing (2001), Chatel and Nodell (2002), Macgregor and Lou (2005), Sanders (2006), and Hassenien (2006) all agreed that the components of Web-quest are the following: (a) Introduction, (b) Tasks, (c) Process or procedure, (d) Resources, and (e) Conclusion teacher page.

This study aimed to answer the following research questions:

Q1. Does using web-quest significantly affect Iranian pre-university students' vocabulary learning?

Q2. What are the Iranian pre-university students' attitudes towards using web-quest for vocabulary learning?

Methodology

The methodology of the research has been delineated in this section.

Participants

Seventy two pre-university students from high schools in Chadegan, Isfahan, Iran took part in this study. The participants were 49 males and 23 females within the age range of 17-19 years. Most of the participants had never taken part in English institutes classes. The students were divided randomly into two groups, i.e., experimental group (EG) and control group (CG). An Oxford Placement Test (OPT) was given to all pre-university students to assure their

homogeneity in terms of their overall proficiency level. Then, the students in EG were taught using web-quest materials, whereas the students in CG did not get any treatment. An appropriate pretest was presented to both groups, and after 20 sessions of instruction, a posttest was used for both groups.

Design

For the purpose of conducting this research, a pretest-posttest-control-group design was used. The EG members in this research learnt vocabulary according to the web-quest program, and the CG members learnt vocabulary through the traditional method, which focused on reading the words two or three times and repeating them, where the students reviewed the list of vocabulary and tried to explain each word by giving examples or writing synonyms or antonyms for the words and answering certain questions. The schematic representation of the research design can be seen in Table 1.

Table 1. *Schematic Representation of the Research Design*

	Step 1	Step 2	Step 3	Step 4
Experimental Group (EG)	Pretest	Treatment	Posttest	Distributing Questionnaire
Control Group (CG)	Pretest	Placebo	Posttest	----------

Instruments and Materials

The following instruments and materials were used in this study. First, an OPT was given to all students to make sure of their homogeneity in terms of their proficiency level. The OPT is a standardized test of English proficiency which has been widely used throughout the world by a great number of researchers. The test has 60 items, which target at testing the learners' grammar, vocabulary, and reading comprehension.

Second, Vocabulary Level Test (VLT) which is a valid and reliable test was given to all the participants to make certain that they had a roughly similar amount of words at their disposal on the pretest. The items in this test were rearranged and the test was once again used as the posttest in this study.

Third, there was the Word Lists (WL) in which the words were selected from students' book, each containing ten words. These word lists were taught to the students during the 20 sessions of instruction; every session, students worked on one word list.

Fourth, an attitude questionnaire was given to the learners in the experimental group to elicit their opinions regarding the treatment. This researcher-made questionnaire contained 15 closed-ended Likert-scale items on the learners' attitudes towards web-quest, and 2 open-ended items asking the pros and cons of the treatment. The Cronbach's alpha reliability of the questionnaire was 0.86, and its validity had been affirmed by three TEFL university lecturers.

Finally, Web-quest Resources (WR) were introduced to the students to improve the experimental group students' vocabulary knowledge.

Data Collection Procedures

Two kinds of procedures were used for this study: one for EG and the other for CG. These two procedures are delineated below:

Procedure for EG

To examine the initial difference between the groups, a pretest was fulfilled during the first session of the experiment. In the first session, the students received a brief explanation about the purpose of the study by the researcher. Then, the students were allowed to bring their laptops to the class. The students were allowed to ask their questions about web-quest. The students were asked to take part in class twice a week on different days for the ten weeks. In the second session, the researcher brought the words' source file in to the classroom. These words' source files were given to the students at the beginning of every session. The students clicked the main window in internet, and then main lists appeared that included some words. Each word contained meaning, difficulty level, and phonetic symbol. The students were able to hear the pronunciation of the words. In the second part, the words were displayed and pronounced automatically. In the third part, the students practiced the spelling of the words. The definitions of the words also appeared automatically. The students also wrote the spelling of the words. If the students wrote the spelling wrong, the web-quest alarmed that meant the spelling of the words was incorrect. After that, the correct spelling and the student's spelling appeared.

In the fourth part, the students were given a multiple-choice vocabulary test. The items of the tests were taken from the vocabulary lists which had been worked on during the sessions. By the test, the students were able to choose meaning by word or choose word by meaning. Based on the students' selection, the students chose the correct definition or word. The last two parts were games. There were some cards that could be matched with each other. On one card, the word was written and on the other the meaning or picture was written/drawn. If the students clicked one card, the card displayed the content or the picture it held. When another card was clicked by the students, if they would be matched, they disappeared; otherwise, the first one would hide its content and picture. When all cards disappeared, the student would win the game. This procedure was repeated in all sessions. After the students received the treatment, they received a posttest to evaluate the effects of the treatment on their vocabulary knowledge.

Procedure for CG

In each session, the students in CG received usual classroom instruction. Like the students in EG, the students in CG received a pretest to examine the initial differences between groups. The students were asked to follow the steps in order to teach the new words. At first, the students were allowed to read each word twice or three times with a short pause. The students were able to check the pronunciation. In the second step, the students were allowed to read each word two or three times again and they repeated the words. Then, the researcher asked all the students to repeat the word once more. In the third step, the students opened their books and listened to the words for two or three times. In the last step, the students reviewed the list of vocabulary and tried to explain each word by giving examples or they wrote synonyms or antonyms for the words. After the treatment, the students received a posttest to check the effect of instruction on their vocabulary knowledge.

Data Analysis

The data obtained through the pretest, posttest, and the attitude questionnaire were analyzed. First, the pretest scores of EG and CG were compared by means of an independent-samples *t* test. Then another independent-samples *t* test was used to compare the posttest scores

of the learners in the two groups. Finally, a one-sample *t* test was used to analyze the data obtained through the attitude questionnaire.

Results

The obtained results and findings are reported in this section.

Results of the OPT

The participants in this study were put into two different groups of EG and CG. To make certain these two groups of learners were at the same overall proficiency level, their OPT scores were compared by means of an independent-samples *t* test, the results of which are shown in Tables 2 and 3 below:

Table 2. *Descriptive Statistics for Comparing the OPT Scores of the EG and CG Learners*

	Groups	*N*	Mean	Std. Deviation	Std. Error Mean
OPT	EG	49	39.43	5.34	1.76
	CG	23	38.75	7.82	1.63

As it can be observed in Table 2, there was a difference between the OPT scores of the EG (*M* = 39.43) and the CG (*M* = 38.75) participants. To find out whether the difference between the OPT scores of the two groups was statistically significant or not, the following *t* test table (Table 3) needed to be consulted:

Table 3. *Results of the Independent-Samples t Test Comparing the OPT Scores of the EG and CG Learners*

	Levene's Test for Equality of Variances		*t* test for Equality of Means			
	F	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	Mean Difference
Equal variances assumed	4.40	.07	-7.82	70	.51	.68
Equal variances not assumed			-6.83	68.67	.51	.68

Table 3 depicts that there was not a statistically significant difference in the OPT scores for EG (*M* = 39.43, *SD* = 5.34) and CG (*M* = 38.75, *SD* = 7.82) learners, *t* (70) = -7.82, *p* = .51 (two-tailed). This result was obtained since the *p* value was found to be greater than the significance level (i.e. .51 > .05). If the *p* value were less than the significance level, the conclusion would be that the OPT scores of the two groups of learners differed significantly. Thus, it could be inferred that the two groups were not significantly different in terms of their overall language proficiency.

Addressing the first research question

The first research question was: Does using web-quest significantly affect Iranian pre-university students' vocabulary learning? To provide an answer to this research question, the vocabulary pretest scores of the EG and CG participants were compared via an independent-samples *t* test to make sure they were similar in terms of their vocabulary knowledge at the outset of the study. Then another independent-samples *t* test was employed to compare the vocabulary post-test scores of the learners in the two groups to see if there was a significant difference between the learners in these groups or not. The results of these analyses are presented below.

Table 4. *Descriptive Statistics for Comparing the Vocabulary Pre-test Scores of the EG and CG Learners*

	Groups	*N*	Mean	Std. Deviation	Std. Error Mean
Pretest	EG	49	91.02	21.00	3.00
	CG	23	85.39	14.75	3.07

As Table 4 shows, there was a difference between the vocabulary scores of the EG (*M* = 91.02) and the CG (*M* = 85.39) learners in favour of the EG learners. To unearth whether the difference between the vocabulary pretest scores of the two groups was statistically significant or not, the following *t* test table (Table 5) had to be checked:

Table 5. *Results of the Independent-Samples t Test Comparing the Vocabulary Pretest Scores of the EG and CG Learners*

	Levene's Test for Equality of Variances		*t* test for Equality of Means			
	F	*Sig.*	*t*	*df*	*Sig.* (2-tailed)	Mean Difference
Equal variances assumed	1.67	.20	1.15	70	.25	5.62
Equal variances not assumed			1.31	59.20	.19	5.62

As Table 5 displays, there was no statistically significant difference in vocabulary pretest scores for EG (*M* = 91.02, *SD* = 21.00) and CG (*M* = 85.39, *SD* = 14.75) learners, *t*(70) = 1.15, *p* = .25 (two-tailed). It could thus be concluded that the two groups were almost similar with respect to their vocabulary scores at the beginning of the study, and that any possible difference between the posttest vocabulary scores of the learners in the two groups could be attributed to the conditions under which they learned vocabulary.

It can be seen in Table 6 that there was a difference between the vocabulary posttest scores of the EG (*M* = 161.53) and the CG (*M* = 111.00) learners. In order to find out whether the difference between the vocabularies post-test scores of the learners in the two groups was statistically significant or not, the researcher had to check Table 7 as well.

Table 6. *Descriptive Statistics for Comparing the Vocabulary Posttest Scores of the EG and CG Learners*

Groups	N	Mean	Std. Deviation	Std. Error Mean
Posttest EG	49	161.53	28.95	4.13
Posttest CG	23	111.00	16.59	3.46

Table 7. *Results of the Independent-Samples t Test Comparing the Vocabulary Post test Scores of the EG and CG Learners*

	Levene's Test for Equality of Variances		t test for Equality of Means			
	F	*Sig.*	*t*	*df*	*Sig.* (2-tailed)	Mean Difference
Equal variances assumed	10.03	.002	7.74	70	.000	50.53
Equal variances not assumed			9.37	67.04	.000	50.53

Table 7 revealed that there was a statistically significant difference in vocabulary posttest scores for EG (*M* = 161.53, *SD* = 28.95) and CG (*M* = 111.00, *SD* = 16.59) learners, *t* (70) = 9.37, *p* = .000 (two-tailed). Hence, it can be concluded that the two groups were significantly different in terms of their vocabulary posttest scores, and this difference could be because of the conditions under which they learned vocabulary.

Addressing the second research question

The second research question of the study was: What are the Iranian pre-university students' attitudes towards using web-quest for vocabulary learning? To unearth the attitudes of the participants towards the use of web-quest for vocabulary learning, one-sample *t* test was conducted. This statistical tool compares the mean score of a distribution with a constant (which was 3.00 in this analysis since the choices in the Likert-scale questionnaire ranged from 1 to 5 and the average value of the choices was 3.00). Table 8 shows the results of descriptive statistics performed for this purpose.

Table 8. *Descriptive Statistics for EG Learners' Attitude Scores*

	N	Mean	*Std.* Deviation	*Std.* Error Mean
Attitude Questionnaire	15	4.08	.63	.07

The attitude mean score of the EG learners was found to be 4.08, which was larger than 3.00. This shows that the learners' attitudes towards using web-quest for the purpose of vocabulary learning were positive. To find out whether this positive attitude was of statistical significance or not, the researcher had to check the *Sig.* (2-tailed) value in the one-sample *t* test table (Table 9).

Table 9. *One-Sample t Test Results for the EG Learners' Attitude Scores*

			Test Value = 3			
					95% Confidence Interval of the Difference	
	T	*df*	*Sig.* (2-tailed)	Mean Difference	Lower	Upper
Questionnaire	15.43	14	.000	1.08	1.24	1.92

As could be seen in Table 9, there was a statistically significant difference between the EG learners' mean attitude score (*M* = 4.08) and the average value of the choices (i.e. 3.00) due to the fact that the *p* value was smaller than the specified level of significance (.000 < .05). Consequently, it could be concluded that the degree of the participants' positive attitude towards the use of web-quest to learn vocabulary was statistically significant. In other words, the EG learners approved the treatment they received to a considerable extent.

The open-ended questions at the end of the questionnaire revealed some pros and cons of the web-quest from the viewpoints of the EG learners. These advantages and disadvantages are listed below:

The advantages of using web-quest included: being fun and absorbing for the learners, being learner-centered, appeal to the learners' various learning styles (i.e. visual, audio, tactile, kinaesthetic), providing efficient use of class time, helping learners meet learning competencies, encouraging critical thinking skills, promoting learners' computer competency, helping learners focus on tasks, stimulating learners' imagination, and helping learners apply, synthesize, analyze and evaluate what they were learning.

The disadvantages of using web-quest included: most web-quests were not designed to meet the learners' specific educational curriculum, access slowed web connectivity and there were inadequate number of computers, resource links' readability was often too high, creating learners' own web-quest required time, upgrading technical skills, and information literacy skills, the structure was inflexible, it was difficult to search and find suitable internet resources for the learners, web-quests with too much integration might disclose too much information about the learners, learners with limited technology skills would have difficulty completing the project, keeping learners on task was a problem when using computers, and this treatment required learners to already have a certain level of English language abilities.

Discussion

The general results of the study reflects the superiority of the experimental group, which received learning vocabulary by using web-quest resources, compared with the control group who received practicing learning vocabulary by using the traditional way. The results also reflected the positive attitude of the experimental group learners towards the treatment they received. The present researchers attribute these results to the advantages of the web-quest as a teaching /learning strategy.

Like previous studies on the effectiveness of web-quest (e.g. Castronova 2002; Dutt-Doner, Wilmer, Stevens, & Hartmann, 2000; Lou & MacGregor, 2001; Milson, 2001; Monroe & Orme, 2003), the present study concluded that web-quest had positive impacts on the students' performance and on their vocabulary learning. Moreover, like the studies by Williams (2003), Castronova (2002), and Milson (2001), it was shown that the students who were exposed to web-quest developed positive attitudes towards this approach to vocabulary learning.

Although this study addressed the impacts of using web-quest on learning vocabulary, the benefits and issues are common to many specialized fields and also to General English. Although the authors of this article believe that web-quests should not be seen as the main teaching and learning tool in English for professional purposes, it is clear that they can be very valuable tools for providing students with many interaction opportunities in realistic settings, thus making the learning experience meaningful, experiential and very motivating. Web-quest brings two types of benefits to the students: on the one hand, the students' professional competences in the use of both computers and internet; on the other hand, the improvement of their language skills in aspects such as fluency, professional vocabulary, and capacity to work using a foreign language.

From a technical point of view, web-quest permits the development of critical thinking in the choice of internet sources promoting, at the same time, autonomous thinking by analyzing, contrasting, and recommending prospective on request custom-made actions (such as accommodation, transportation means, and so on) while receiving double feedback from the net itself and classmates. The language goals and the procedure are structured to facilitate the integration of productive (speaking and writing) as well as receptive (listening-reading) skills but the program could also be supplemented by the inclusion of listening activities through the reproduction or incorporation of video repertoires such as those existing on many websites. These types of activities reinforce the application of the social constructivist theory more specifically since there is a clear relation between the students' communicative and social interaction through critical thinking, dialogue and activity cooperation which reinforces individual, pair and group learning in the shape of an internet-based dialogue. It is in this way that students restructure their knowledge and communicative competence. This process must be observed by themselves and the instructor as a means of controlling, verifying, and motivating language learning. Hence, evaluation has a significant value in the process.

Conclusion

Web-quests present a unique opportunity to combine a wide range of effective instructional practices in one activity, integrating technology, scaffolding, collaborative learning, critical thinking; authentic assessment and constructivism all in one seem less bundle. The web-quests have three main contributions to the students' learning:

The first is that the web-quest increases the students' motivation to learn through the challenge of confronting authentic tasks, which require them to solve a problem, to make a comparison, or to construct a hypothesis in relation to a real-life situation using real sources; they are motivated because the effort that they must put into the given task goes beyond the walls of the classroom. The web-quest tasks require the students to reflect on their own perspectives, thereby strengthen the link between themselves and the task.

The second one is developing critical thinking skills again through the use of a real-life cognitive psychology the collected information but also analyzed, synthesized and transformed it into something new by adding important contribution' as students are guided towards the main task step by step, completing one stage at a time. Together these students develop an in-depth understanding of the main issue they are confronted with through the consolidation of their prior knowledge with the new information they discover. This provides them with coping strategies to use when they encounter a similar issue again in a different context by activating their schemata.

The last one is creating an opportunity for collaboration as students need to work together to complete the given task, an energetic element of the learner-centered approach. Collaborative tasks diminish the feeling of isolation students may have when encountering problems for the first time, as there will be peer support provided through group work. This will also help maintain

motivation at a higher level as they must continue to work together toward achieving a common goal.

This study investigated impacts of using web-quest on learning vocabulary by Iranian pre-university students. The researchers are encouraged to conduct research in these areas in the future: (1) The effect of web-quests on developing students' critical thinking, (2) The Impact of web-quests on developing students' speaking skills of English language, (3) The effect of web-quests on developing the student's vocabulary, (4) The effect of web-quests on students' attitudes toward English language and vocabulary learning, (5) The effect of web-quests on developing class activities, and (6) Using web-quests for real communication in English as a EFL/ESL activities.

References

Alfadda, H., Almasri, M., & Alshumaimeri, Y. A. (2011). A preliminary study of the effect of web-quests on the writing performance of Saudi female (EFL) elementary school students. *Jalt Call Journal, 7*(3), 373-390.

Castronova, J. (2002). Web-quest in wonderland: The eighth grade comes to the edge. *Learning & Leading with Technology, 30*(1), 22-27.

Chatel, R., & Nodell, J. (2002). *Web-quests: Teachers and students as global literacy explorers.* Retrieved October 9, 2016, from http://files.eric.ed.gov/fulltext/ED471843.pdf

Coady, J. & Huckin, T. (1997). *Second language vocabulary acquisition.* London: Cambridge University Press.

Cohen, V., & Cowen, J. (2008). *Literacy for children in an information age, teaching Reading, writing, and thinking.* California: Wadsworth Publishing

Crystal, D. (1988). The English language. London: Penguin Books.

Dodge, B. (1995). Web-quests: A technique for Internet-based learning. *The Distance Educator*, 1(1), 10-13.

Dodge, B. (1997). Some thoughts about web-quests. Retrieved October 18, 2016 from http://WebQuest.sdsu.edu/about_WebQuests.html.

Dodge, B. (1998). The web-quest page. San Diego State University. Retrieved October 18, 2016 from http://WebQuest.sdsu.edu.

Dodge, B. (1998). *Web-quests: A strategy for scaffolding higher level thinking.* Retrieved October 18, 2016 from http://webquest.sdsu.edu/necc98.htm.

Dodge, B. (2001). Focus: Five rules for writing a great web-quest. *Learning & Leading with Technology, 28*(8), 6-9, 58.

Dutt-Doner, K., Wilmer, M., Stevens, C., & Hartmann, L. (2000). Actively engaging learners in interdisciplinary curriculum through the integration of technology. *Computers in the Schools, 16*, 151-166.

Harley, B. (1996). Introduction: Vocabulary learning and teaching in a second language. *The Canadian Modern Language Review, 53*(1), 3-11.

Hassanien, A. (2006). An evaluation of the web-quest as a computer-based learning tool. *Research in Post-Compulsory Education, 11*(2), 235–250.

Hassanien, A. (2006). Using web-quest to support learning with technology in higher education. *Journal of Hospitality, Leisure, Sport and Tourism Education, 5*(1), 41-49.

Hsu, T. C., & Hwang, G. J. (2017). Effects of a structured resource-based web issue-quest approach on students' learning performances in computer programming courses. *Journal of Educational Technology & Society*, 20(3).

Jahromi, Z. B., Mosalanejad, L., & Rezaee, R. (2016). The effect of web-quest and team-based learning on students' self-regulation. *Journal of Advances in Medical Education & Professionalism,* 4(2), 80.

Krashen, S. (1989). We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. *The Modern Language Journal, 73*, 440-464.

Laborda, J. G. (2009). Using web-quests for oral communication in English as a foreign language for tourism studies. *Educational Technology & Society, 12*(1), 258–270.

Lou, Y., & MacGregor, K. S. (2001). Learning with Internet resources: Task structure and group collaboration. In R. S. Burkett, M. Macy, J. A. White, & C. M. Feyton (Eds.), *Preservice teacher education: Proceedings of SITE 2001*. Norfolk, VA: Association for the Advancement of Computing in Education. Retrieved September 24, 2003, from ERIC database (ERIC Document Reproduction Service No. ED457833).

Lou, M. (2010). Web-quest [An experimental study on web-quest in promoting non-English majors' learner autonomy]. *Journal of Heilongjiang College of Education. 29*(4), 148-150.

Macgregor, K., & Lou, Y. (2005). Web-quest learning: How task scaffolding and web site design support knowledge acquisition. *Journal of Research on Technology in Education, 37*(2), 161-175.

Milson, A. J. (2001). *Engaging students in historical inquiry using Internet resources.* Paper presented at the National Council for the Social Studies, September 25, 2011, from ERIC database (ERIC) Document Reproduction Service No. ED 462360).

Monroe, E. E., & Orme, M. P. (2003). *The nature of discourse as students collaborate on a mathematic Web-Quest.* Retrieved September 6, 2003, from center.uoregon.edu/con/necc _pdf_ upload/necc2003_RP_handouts/MONROE Orme.pdf.

Nation, I. S. P. (1990). *Teaching and learning vocabulary.* New York: Newbury House Publishers.

Nation, I. S. P. (2001). *Learning vocabulary in another language.* Cambridge: Cambridge University Press.

Sanders, J. (2006). *E-learning for GP educators.* Oxford: Radcliffe- Oxford Publishing.

Saville-Troike, M. (2006). *Introducing second language acquisition.* New York: Cambridge University Press.

Schmitt, N. (2000). *Vocabulary in language teaching.* Cambridge: Cambridge University Press.

Schwartz, L., & Willing, K. (2001). *Computer activities for the cooperative classroom.* Portland: Stenhouse Publishers.

Shen, Z. (2008). The roles of depth and breadth of vocabulary knowledge in EFL reading performance. *Asian Social Science, 4*(12), 135-137.

Shoebottom, P. (n.d.). *How to learn vocabulary.* Retrieved March 15, 2014, from a guide to learning English: http://esl.fis.edu/learners/advice/vocab.htm

Shoebottom, P. (n.d.). *Types of vocabulary.* Retrieved March 18, 2014, from a guide to learning English: http://esl.fis.edu/learners/advice/vocab_types.htm.

Stevenson, A. (2010). *Oxford dictionary of English.* Hong Kong: China Translation & Printing Services Ltd.

Turville, J. (2008). *Differentiating by student learning preferences, strategies and lesson plans.* New York: Eye on Education, Inc.

Warda, M. H. M. A. (2016). Can collaborative learning maximize the effectiveness of web-quest used in learning educational psychology at Al Majmaa University?. *Journal of Research in Curriculum, Instruction and Educational Technology*, 2(4), 117-144.

Williams, S., & Williams, E. (2003). *Wild about web-quests: Using web-quests in the classroom and loving them.* Presentation to the Georgia Association for Gifted Children.

Zheng, R., Perez, J., Williamson, J., & Flygare, J. (2008). Web-quests as perceived by teachers: Implications for online teaching and learning. *Journal of Computer Assisted Learning, 24*(4), 295-304.