

UDC378.046+378.09.

**Liudmyla V. Berezova**

PhD (Psychology), associate professor of the Department of English for Technical and Agrobiological Specialities National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine  
ORCID ID 0000-0002-8443-8442  
*berezova@nubip.edu.ua*

**Svitlana V. Mudra**

PhD (Pedagogy), associate professor of the Department of English for Technical and Agrobiological Specialities National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine  
ORCID ID 0000-0002-7524-2026  
*szasidatel@i.ua*

**Kateryna H. Yakushko**

PhD (Pedagogy), senior lecturer of the Department of English for Technical and Agrobiological Specialities National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine  
ORCID ID 0000-0001-6977-8441  
*vukladach@ukr.net*

## THE EFFECT OF WEBQUESTS ON THE WRITING AND READING PERFORMANCE OF UNIVERSITY STUDENTS

**Abstract.** WebQuests are increasingly becoming popular in teaching English as a foreign language since they provide learners with authentic and collaborative tasks. The aim of this study was to explore whether using WebQuests is effective in enhancing writing and reading performance of students at a university level. The experimental groups were taught through traditional instruction with the elements of WebQuests as additional reading and writing activities. The control groups had the traditional ESL lessons only. Significant differences occurred in the experimental groups in reading and writing performance in the post-tests. Comparing these results with those of the pre-tests, the authors draw a conclusion that using WebQuests can enhance students' reading and writing performance. The findings of this study indicate that WebQuests have potential in enhancing reading and writing abilities of students.

**Keywords:** WebQuests; English as a foreign language; writing skills; reading skills.

### 1. INTRODUCTION

**Statement of the problem.** Computer Assisted Language Learning has attracted the attention of many researchers in order to support teaching and learning a foreign language [2; 3; 6; 7; 11]. According to O. Ivanova, “as we move forward through the information age, the implementation of information and communication technologies into education has become an imperative” [11, p.155]. Many educational institutions use new technology as part of a language classroom. Due to computers students access a large number of authentic learning resources, read on different topics, analyze and synthesize information, evaluate and select relevant content, construct the meaning. WebQuests have been around for more than twenty years and received popularity among many teachers; WebQuests are also increasingly becoming popular in teaching English as a Foreign Language (EFL) since they provide learners with authentic and collaborative tasks. As G. Stoks argues, “WebQuests offer good internet-based language learning opportunities because they provide learners with exposure to authentic material, meaningful content and possibilities for real communication in the target language” [5]. While doing the WebQuest tasks, students search for the information, develop integrated language skills such as reading, writing and speaking in order to complete the task. According to T. March, “a real WebQuest is a scaffolded learning structure that uses links to essential resources on the World Wide Web and an authentic task to motivate students’

investigation of an open-ended question, development of individual expertise, and participation in a group process that transforms newly acquired information into a more sophisticated understanding” [9]. The use of WebQuests motivates students to use higher thinking and task management skills, to see deeper thematic relationships, to reflect on their own learning. However, little studies have been done on using WebQuests in teaching and learning EFL to show its potential in boosting language skills in the Ukrainian context [7; 10]. This study attempts to shed light on the effect of the WebQuest technology on the development of students’ reading and writing skills in the EFL context at a university level.

**Analysis of recent studies and publications.** Language teachers are constantly seeking innovative ways to engage their students in inquiry activities. One of such approaches is using WebQuest to have students seek out information about a topic. WebQuests are Internet-based technological applications that allow students to use the Internet to acquire new knowledge and apply it by following steps to complete a task on a specific subject or multi-disciplinary subject.

WebQuests are considered to have the following attributes: a clear structure that promotes effective use of time; the use of authentic material and the development of tasks connected with reality that motivates students; a collaborative and cooperative structure that encourages students to attain interdependence and responsibility; and a structure that promotes higher order thinking processes (analysis, synthesis, evaluation, etc.) [6]. Many studies have found that using WebQuest enhances cooperation among students [6]. When working cooperatively, language learners develop their speaking skills due to language interaction with the other students. When working in groups, students can discuss the task and thereby exchange vocabulary. According to P. Torres, the use of WebQuest can promote collaboration and cooperation among learners and help them use the target language more extensively. Such cooperation creates more meaningful learning environment and fosters independent learning [6]. As D. Murray and P. McPherson claim, WebQuests are more applicable to real life and promote authenticity by accessing the real language and authentic materials [2; 3]. G. Dudeney recognizes WebQuests as a powerful learning tool by pointing out the following advantages: “providing a relatively easy way to incorporate the Internet into the language classroom, encouraging critical thinking, leading to more communication and interaction through group activities, and eliciting greater learner motivation through interdisciplinary studies as well as “real-life” tasks” [4].

Peterson et al. state that WebQuests provide opportunities for students to be introduced to a great variety of authentic material on the Internet and thus enhance reading performance [1]. A number of research findings suggest that the use of WebQuests is also useful in promoting students’ writing skills and providing an engaging positive learning atmosphere. Thus, Chuo studied the effects of the WebQuest Writing Instruction on EFL students’ writing performance, apprehension, and perception. The findings revealed that the WebQuest Writing Instruction showed more improvement in students’ writing performance compared to the traditional writing instruction. The students also revealed positive perception of the WebQuests, demonstrating more pluses than minuses of learning a foreign language through this technology [8].

However, in the Ukrainian context very little research has been conducted on the use of WebQuests in the EFL classroom. There are a number of studies on general use of WebQuests but only a few ones dedicated to WebQuests as a language learning tool [7; 10]. Thus, the aim of this study is to explore whether using WebQuests is effective in enhancing writing and reading performance of EFL students at a university level in Ukraine.

## 2. METHODS OF THE STUDY

The study employed a number of general scientific and specific methods – analysis, synthesis, comparison, generalization, observation, pedagogical experiment and statistical methods. The participants of the study consisted of 3 groups of first-year students who were enrolled in the “English for Specific Purposes” course in the autumn semester of the academic year 2017-2018 at the National University of Life and Environmental Sciences of Ukraine. The total number of students engaged in this study was 72. Each group of students was further divided into an experimental and control group.

## 3. THE FINDINGS OF THE STUDY

A WebQuest is an inquiry-based activity in which the information that learners interact with comes from Web resources. Surfing the web, skimming websites, scanning web documents for relevant information, trying to decode the meaning, possibly making use of translation programs on the web is exceptionally good for language learning. According to G. Stoks, WebQuests consist of five main components as presented in Table 1 [5].

*Table 1*

**WebQuest Components**

<b>Component</b>	<b>Purpose</b>
Introduction	Introduces a scenario and central question, briefly explains an activity and provides background information which learners need to understand in order to complete an assigned task [5].
Task	Provides a focus for learners' activities and explains clearly and precisely what learners will have to do as they work their way through a WebQuest task which is both feasible and interesting [5].
Process	Describes the steps for students to accomplish the learning goal, includes pre-selected Internet resources to allow students to focus on a topic, and offers advice, guidelines on how to organize the information, and scaffolding to provide help in the learning process [5].
Evaluation	Describes rubrics for evaluating students' performance in doing WebQuest tasks [5].
Conclusion	Brings closure to the activity and summarizes what the teacher hopes learners have learned as a result of completing the activity, and may also encourage them to extend any knowledge they have gained throughout a WebQuest to other domains [5].

In our experiment, we integrated the appropriate WebQuests into the syllabus. The WebQuests were implemented at the English lessons during the first semester of the 2017-2018 educational year. Students in experimental groups worked to investigate automation and energy efficiency problems with the help of the WebQuests technology. The control groups also read passages on the same topics. The data came from reading performance test, writing performance test and reading and writing scores. The reading performance test was given as pre-and post-test in which students were asked to read a passage and answer reading comprehension questions. Another test, which was on the same topic, was given as the post-test at the end of the semester. The writing performance test consisted of pre-test and post-test in which students were asked to perform a writing task. These tests were followed by

perception questionnaire to evaluate students' perception of the Internet-assisted language learning.

A summary of the teaching steps is presented in Table 2. The first step concerned the reading session consisting of: pre-reading, reading and post-reading stages followed by teaching writing stage. They included the steps of pre-writing, writing and post-writing.

Table 2

**WebQuest Teaching Steps**

	<b>Components of the WebQuest</b>	<b>Steps of teaching</b>	<b>Purpose</b>
1	Introduction	Pre-reading stage	- to introduce the activity; - to activate prior knowledge; - to pre-teach difficult phrases and grammar
2	Task		- to set the purposes for reading; - to assign students' role
3	Process	Reading stage Post-reading stage Pre-writing stage Writing stage (planning, drafting, revising, editing)	- to provide reading practice; - to check reading comprehension; - to discuss difficulties students had when reading; - to help students analyze information; - to select the vocabulary needed for writing; - to complete the writing task
4	Evaluation	Post-writing stage	- to evaluate the task; - to provide feedback
5	Conclusion		- to bring the activity to the end or transfer the knowledge to other domains

The context of this research was the English for Specific Purposes course, studied by first-year students at the National University of Life and Environmental Sciences of Ukraine. The WebQuests were created by the researchers and the students were required to accomplish their tasks. The researchers had participants examine the WebQuests they designed. They were entitled "Energy Saving Solutions" and "Automated Energy Management" and included a list of web pages related to the automation and energy efficiency problems topic and located by the researchers to help each student in the experimental groups accomplish their tasks. The tasks required the students to work individually. The participants had to analyze the information they read in the resources of the WebQuest and then, to synthesize this information in the form of a project—"Energy saving tips and advice" or "Smart home technology systems". Finally, the students evaluated the whole project using the rubrics, designed by the researchers.

The participants in the control groups received traditional teaching.

Before the experiment started, both experimental and control groups performed Reading Performance Pre-test and Writing Performance Pre-test. Reading Performance Pre-test consisted of 20 questions (1 point per each correct answer) with the multiple choice answers and 10 open-ended questions (2 points per each correct and full answer). The maximum score for this test was 40 (100%). Writing Performance Pre-test consisted of 30

open-ended questions (2 points per each correct and full answer) and the maximum score for this test was 60 (100%).

At the end of the semester, both experimental and control groups received Reading Performance Post-test and Writing Performance Post-test. Reading Performance Post-test consisted of 20 questions (1 point per each correct answer) with the multiple choice answers and 20 open-ended questions (2 points per each correct and full answer). The maximum score for this test was 60 (100%). Writing Performance Post-test consisted of 30 open-ended questions (2 points per each correct and full answer) and the maximum score for this test was 60 (100%).

Table 3 shows the results of students' reading performance in pre-test. As seen from the table, there is no significant difference in test results between the experimental and control groups; students' performance varies between 70% and 76%.

*Table 3*

**Students' Reading Performance in Pre-test (percentage)**

Group	E/Group 1	C/Group 1	E/Group 2	C/Group 2	E/Group 3	C/Group 3
Percentage	76%	73%	70%	71%	72%	74%

E/Group=experimental group; C/Group=control group

Table 4 reveals the results of students' reading performance in post-test. The difference in test results between the experimental and control groups is more significant; the results show a positive effect of the WebQuest technology on students' reading performance as the participants in the experimental groups improved their reading skills.

*Table 4*

**Students' Reading Performance in Post-test (percentage)**

Group	E/Group 1	C/Group 1	E/Group 2	C/Group 2	E/Group 3	C/Group 3
Percentage	88%	76%	79%	73%	84%	78%

E/Group=experimental group; C/Group=control group

As seen from Table 5, students in both experimental and control groups reveal relatively the same results of their writing performance in pre-test, varied between 68% and 73%.

*Table 5*

**Students' Writing Performance in Pre-test (percentage)**

Group	E/Group 1	C/Group 1	E/Group 2	C/Group 2	E/Group 3	C/Group 3
Percentage	69%	71%	72%	71%	73%	68%

E/Group=experimental group; C/Group=control group

Table 6 suggests that the difference in post-test results between the experimental and control groups is significant; participants in the experimental groups show much better improvement in writing performance.

Table 6

**Students' Writing Performance in Post-test (percentage)**

Group	E/Group 1	C/Group 1	E/Group 2	C/Group 2	E/Group 3	C/Group 3
Percentage	87%	73%	84%	74%	87%	72%

E/Group=experimental group; C/Group=control group

Figure 1 and Figure 2 compare the results in students' reading and writing performance in the experimental and control groups before and after the experiment started.

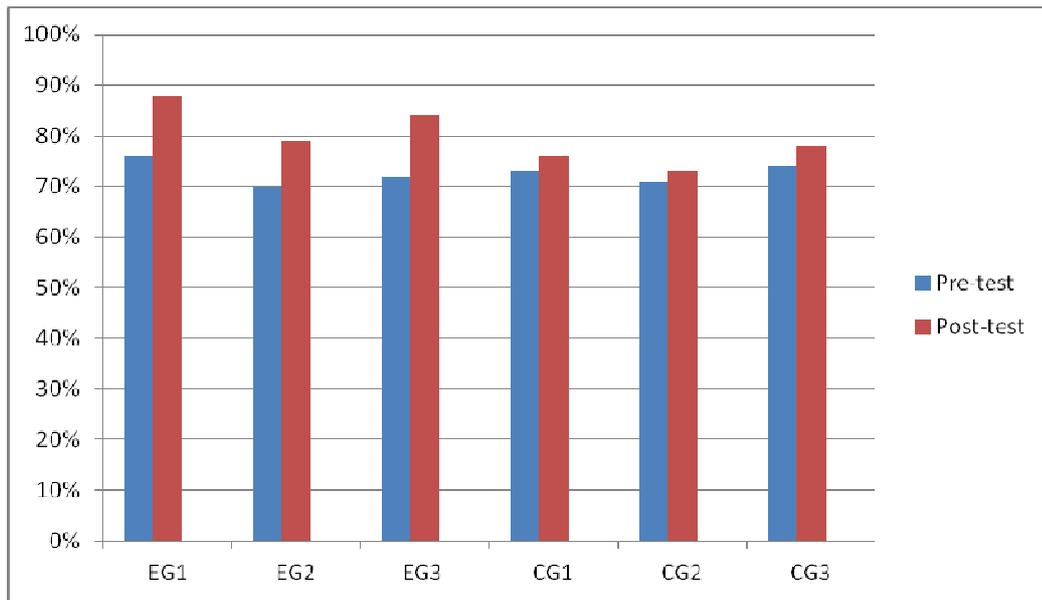


Figure 1. Difference in Reading Performance before and after the experiment started (EG=experimental group; CG=control group)

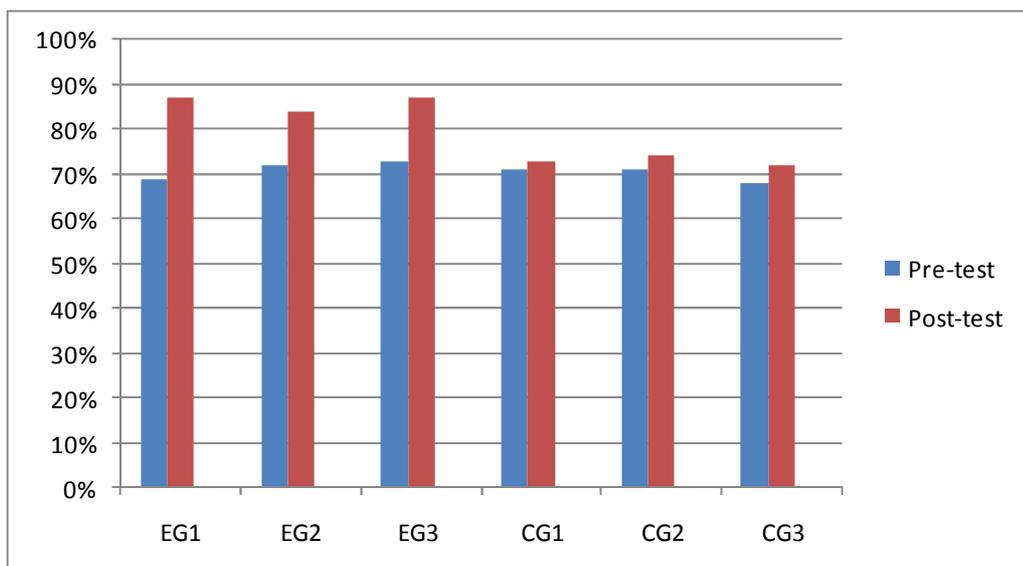


Figure 2. Difference in Writing Performance before and after the experiment started (EG=experimental group; CG=control group)

Also, students who did WebQuest activities were asked to express their attitudes towards the usefulness of WebQuests, the level of difficulty of the activities, and whether they liked studying with this technology. The findings from the students' answers demonstrated that most of the students had positive attitudes towards the implementation of the WebQuest technology in their EFL lessons. Most of them enjoyed using the Internet, collaborative activities, meaningful and authentic tasks, a relaxing and supportive learning environment. Disadvantages of using WebQuest included frustration in dealing with unfamiliar vocabulary in the Internet materials, confusion in gathering and understanding relevant information for the writing activities.

#### 4. THE CONCLUSIONS AND PROSPECTS OF FURTHER RESEARCH

Due to the development of novel technology, teachers can improve their teaching methods and make their classes interesting and beneficial. WebQuest is one of the most effective ways to integrate technology for successful teaching and learning. In this study we attempted to explore the effectiveness of using WebQuests in enhancing writing and reading performance of EFL students at a university level.

The experimental groups were taught through traditional instruction with the elements of WebQuests as additional reading and writing activities. The control groups had the traditional ESL lessons only. Significant differences occurred in the experimental groups in reading and writing performance in the post-tests. Comparing the results, the authors draw a conclusion that using WebQuests can enhance students' reading and writing performance. The findings of this study indicate that WebQuests have potential in enhancing reading and writing abilities of students.

The findings of the study also demonstrated that, overall, students had a positive perception of WebQuests as a learning tool, even though some disadvantages of this technology were mentioned.

As for the authors of the present study, WebQuests prove to be a useful novel technology for language learning if it is integrated in pedagogically sound instruction based learning model. The further experimental studies of using WebQuests in EFL learning can be highly advisable. It would be reasonable to examine the relationship between students' perception and the level of students' reduced reading and writing apprehension scores.

#### REFERENCES

- [1] C. L. Peterson, D. C. Caverly, L. McDonald, "Developing academic literacy through WebQuests", *Journal of Developmental Education*, 26(3): p. 38-39, 2003. (in English).
- [2] D. E. Murray, P. McPherson. *WebQuest. Using the Web to support language learning*, Sydney: National Centre for English Language Teaching and Research Macquarie University, Sydney, 2009. (in English).
- [3] D. Murray and, P. McPherson. *Using the Web to support language learning*. Sydney: Ligare Pty, Ltd, 2004. (in English).
- [4] G. Dudeney. "The quest for practical web usage", *TESL-EJ*, 6(4), 2003. (in English).
- [5] G. Stoks, "WebQuest: Task-based learning in a digital environment". Available: <http://www.babyloniati.ch/BABY102/PDF/stoks.pdf> (in English).
- [6] I. P. Torres, *WebQuest: a collaborative strategy to teach content and language*, University of Granada, 2007. (in English).
- [7] N. Fominykh. "Using ICT in Teaching and Studying English". Available: <http://shvidko172.narod2.ru/> (in Russian).
- [8] T. W. I. Chuo, "The effect of the WebQuest writing instruction program on EFL learners' writing performance, writing apprehension, and perception". Available: [http://tesl\\_ej.org/ej43/a3.html](http://tesl_ej.org/ej43/a3.html) (in English).
- [9] T. March. "The Learning Power of WebQuests", *Educational Leadership*, Volume 61, p. 42-47, 2004. (in English).

- [10] V. V. Schmidt. "Web-quest technology for non-English speaking students". Available: [http://sconference.org/publ/nauchno\\_prakticheskie\\_konferencii/pedagogicheskie\\_nauki/teoriya\\_i\\_metodika\\_professionalnogo\\_obrazovaniya/12-1-0-174](http://sconference.org/publ/nauchno_prakticheskie_konferencii/pedagogicheskie_nauki/teoriya_i_metodika_professionalnogo_obrazovaniya/12-1-0-174) (in Ukrainian).
- [11] O.V. Ivanova, "The Use of E-Portfolio to Develop English Language Learners Autonomy and Independence", *Information Technologies and Learning Tools*, Vol 60. N4: p. 155-165. (in English).

*Text of the article was accepted by Editorial Team 12.12.2017*

## **ВПЛИВ ТЕХНОЛОГІЇ WEBQUESTS НА УСПІШНІСТЬ ФОРМУВАННЯ НАВИЧОК ЧИТАННЯ ТА ПИСЬМА СТУДЕНТІВ УНІВЕРСИТЕТУ**

### **Березова Людмила Васи́лівна**

кандидат психологічних наук,  
доцент кафедри англійської мови для технічних та агробіологічних спеціальностей  
Національний університет біоресурсів і природокористування України, м. Київ, Україна  
ORCID ID 0000-0002-8443-8442  
[berezova@nubip.edu.ua](mailto:berezova@nubip.edu.ua)

### **Мудра Світлана В'ячеславівна**

кандидат педагогічних наук,  
доцент кафедри англійської мови для технічних та агробіологічних спеціальностей  
Національний університет біоресурсів і природокористування України, м. Київ, Україна  
ORCID ID 0000-0002-7524-2026  
[szasidatel@i.ua](mailto:szasidatel@i.ua)

### **Якушко Катерина Григорівна**

кандидат педагогічних наук,  
старший викладач кафедри англійської мови для технічних та агробіологічних спеціальностей  
Національний університет біоресурсів і природокористування України, м. Київ, Україна  
ORCID ID 0000-0001-6977-8441  
[vukladach@ukr.net](mailto:vukladach@ukr.net)

**Анотація.** WebQuests все частіше стають популярними в навчанні англійської як іноземної мови, оскільки вони пропонують студентам автентичні завдання, які можна виконувати спільно. Мета цього дослідження полягала в тому, щоб вивчити можливості використання WebQuests з метою підвищення компетенції студентів у читанні та письмі на рівні університету. У ході дослідження експериментальні групи отримували традиційне навчання з використанням технології WebQuests як додаткового засобу розвитку навичок читання та письма. Контрольні групи отримували лише традиційне навчання. Значні відмінності у виконанні пост-тестів з читання та письма в експериментальних групах, порівняно з попередніми тестами, свідчать про те, що використання WebQuests мають потенціал у підвищенні компетенції студентів в читанні та письмі.

**Ключові слова:** WebQuests; англійська як іноземна мова; навички письма; навички читання.

## **ВЛИЯНИЕ ТЕХНОЛОГИИ WEBQUESTS НА УСПЕШНОСТЬ ФОРМИРОВАНИЯ НАВЫКОВ ЧТЕНИЯ И ПИСЬМА СТУДЕНТОВ УНИВЕРСИТЕТА**

### **Березовая Людмила Васильевна**

кандидат психологических наук,  
доцент кафедры английского языка для технических и агrobiологических специальностей  
Национальный университет биоресурсов и природопользования Украины, г. Киев, Украина  
ORCID ID 0000-0002-8443-8442  
[berezova@nubip.edu.ua](mailto:berezova@nubip.edu.ua)

**Мудрая Светлана Вячеславовна**

кандидат педагогических наук,  
доцент кафедры английского языка для технических и агробиологических специальностей  
Национальный университет биоресурсов и природопользования Украины, г. Киев, Украина  
ORCID ID 0000-0002-7524-2026  
*szasidatel@i.ua*

**Якушко Катерина Григорьевна**

кандидат педагогических наук, старший преподаватель кафедры английского языка  
для технических и агробиологических специальностей  
Национальный университет биоресурсов и природопользования Украины, г. Киев, Украина  
ORCID ID 0000-0001-6977-8441  
*vukladach@ukr.net*

**Аннотация.** WebQuests все чаще становятся популярными в обучении английскому как иностранному языку, поскольку они предлагают студентам аутентичные задачи, которые можно выполнять кооперативно. Цель настоящего исследования состояла в том, чтобы изучить возможности использования WebQuests с целью повышения компетенции студентов в чтении и письме на уровне университета. В ходе исследования экспериментальные группы получали традиционное обучение с использованием технологии WebQuests качестве дополнительного средства развития навыков чтения и письма. Контрольные группы получали только традиционное обучение. Значительные различия в результатах пост-тестов по чтению и письму в экспериментальных группах по сравнению с результатами предварительных тестов, свидетельствуют о том, что использование WebQuests имеет потенциал в повышении компетенции студентов в чтении и письме.

**Ключевые слова:** WebQuests; английский как иностранный язык; навыки письма; навыки чтения.



This work is licensed under Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.