

**Using a Constructivism–Based WebQuest Program on Developing
Technical Colleges Students’ Written Communication A Dissertation**

Submitted in Partial Fulfilment of the Requirements

Mrs.Basma Abd El–Monem El–Salamony*

Prof.Dr. Zeinab Ali EL Naggar**

Dr. Dalia Ibrahim Yahya***

Abstract:

This study aimed to investigate the effect of a Constructivism–Based Program on Developing Technical Colleges Students’ English Language Written Communication Skills Using WebQuests. Literature and related studies concerning written communication skills and WebQuests were reviewed. A one– group pretest–posttest design was employed, along with a mixed research approach incorporating both quantitative and qualitative methodologies. The participants were forty (N=40) students enrolled in the first year, Industrial Technical Institute, Mataria Technical College, in the academic year 2022–2023. The written communication skills were delimited to reading and writing skills which were appropriate to technical colleges students. The instruments of the study included Reading skills list, Writing skills list, The Pre/ Post written communication test, Reading Rubric, Writing Rubric; and, Satisfaction questionnaire. A website with the six components of WebQuest was designed and the activities of reading and writing skills were uploaded. The students' pre / post test scores were analyzed using the appropriate statistical techniques. Findings of the study indicated that there were statistically significant differences between the students’ scores in the pre and post tests in favor of the post test due to the WebQuest program. Thus, the proposed program was effective in developing Technical Colleges students’ English Language written communication skills.

Key words: constructivism, written communication, reading, writing and WebQuest.

* English Language Teacher Industrial Technical Institute Mataria Technical College

**Professor of curriculum and Instruction Faculty of Education Ain Shams university

***Lecturer of curriculum and Instruction Faculty of Education Ain Shams university

Introduction

English for specific purposes (ESP) is an approach to language learning which is based on learners' needs where students need to reach an adequate level of English to fulfill their recent and future work duties in a professional manner in the workplace. All decisions as to content and method are based on the learner's reasons for learning. ESP focuses on language that is used in real professional context rather than on teaching grammar, structure and vocabulary unrelated to the learner's mainstream subject. It helps learners to accomplish and fulfill their academic and occupational needs. (Hyland, 2022, pp.203,204).

Egyptian Technical Colleges are an example of instructional institutions which basically include ESP in their programs. These colleges are specialized in different technical fields, such as Industry, Commerce, Tourism and Hotel Management, Optics and Social service.

Communication is an essential aspect of ESP courses for technical college students. It is vital for those students to master written communication skills whereby they can advance in the workplace. Written Communication has become such an important part of our everyday professional lives. Therefore, competence in written communication is a

professional requirement, particularly in relation to the effective operation of the organizations. Written communication skills can be learned and practiced. They involve learning about how to read and write appropriately, how to exactly communicate what should be said, what mode of communication is best and what factors are influencing people's ability to send and receive messages successfully. (Maruntelu,C.L. & Galbeaza,A., 2019, p.47; Paretti, Eriksson & Gustafsson, 2019, pp. 27,28)

Henceforth, communicating through reading and writing is essential for Technical College students' development, since reading and writing skills are critical to success in the workplace and in predicting job success. If students can communicate well through reading and writing, they can get their message across to others in an effective way and they then have accurate instructions to complete their assigned tasks.

Constructivism is a generally accepted approach in foreign language teaching where the classroom goals are focused on all the components (grammatical, discourse, functional, sociolinguistic, and strategic) of communicative competence. Constructivist language techniques are designed to engage learners in the authentic, pragmatic, and functional use of

language for meaningful communication purposes. In a constructivist class, students ultimately need opportunities to use the language productively outside the classroom. So, it is important to equip the students with written communication skills necessary to communicate in those contexts. Students are encouraged to take control of and feel responsible for their own learning and teachers help their students in constructing and understanding their written communication tasks. (Qiu ,2019: pp. 9–12)

Due to the importance of written communication skills in general and reading and writing skills in particular, to technical students, many studies aimed at developing these skills.

The positive impact of Web Quests on students' language learning performance was reported by many researchers such as Al-Sayed (2018), Zaki (2017), Al-Shamisi, (2016) and Eltantawi (2015). Their studies aimed at developing students' autonomy and multi –literacies, supporting them to understand and transform information in hyper textual resources. Furthermore, they encouraged students to self-assess their learning process.

The effect of WebQuests on the language skills of ESP students has also been investigated and proved successful in

various specializations, such as environmental studies (Chang, Chen & Hsu, 2011), Ecology (Rudneva, Valeeva, Nigmatzyanova & Guslyakova, 2018), and ESP for People's Police university (Thu, 2013). The results of these studies showed that using WebQuests influenced students' learning performance positively and promoted their communicative competence regarding both oral and written language skills.

For technical college students, WebQuests have the potential to develop their ESP skills. Baguzina (2020), for example, claimed that WebQuests developed both vocational and English language skills of post-graduate students specializing in International Business and Management as they promoted students' communicative competence. Laborda (2009, p. 258), on the other hand, asserted that WebQuests could be critical to enhance technical students' professional communication, as they were examined in the case of developing students' English communication skills in Tourism studies context. The researcher pointed out that WebQuests can trigger the situations necessary to develop both written and oral communication. The presented framework aimed at helping students' skills both in language development and professional growth through addressing three main aspects of the use of WebQuests: as a social

constructivist learning approach, as a professional development activity and as an oral development task.

Despite the importance of written communication skills in general and reading and writing in particular, teaching written communication has been undervalued in technical institutions and English language teachers have continued to teach reading and writing just as repetition of drills or memorization of dialogues.

Context of the problem

Being a teacher at Industrial Technical Institute, Mataria Technical College, the researcher has noticed that the great majority of the students face a problem in reading and writing in English. Through her teaching and communicating with students, she noticed that students are very shy to read as they are poor at reading in English. They tend to translate word by word and lack focus on the overall purpose of a text. Also, they have insufficient writing skills, mainly because they do not practice writing. They do not know how to express or organize their thoughts or how to start their writing.

The Pilot Study

The researcher conducted interviews with some managers of companies such as Arab contractors (Osman Ahmed Osman & Co.), El Sewedi Cables, Ghabbour Auto, and Sharp

AC to determine the written communication skills Technical Colleges students will need in their professional career. They reported that Technical Colleges students have to master reading and writing skills that enhance the following written communication forms: letters, memos, e-mails and reports. And so, the researcher assumes the following reading and writing skills to focus on:

Reading Skills

- Identifying the purpose of a brief written communication text .
- Extracting significant ideas and details in a piece of written communication.
- Identifying the meaning of key technical words in a written communication text.
- Summarizing, commenting on and responding to information included in a written communication text.

Writing Skills

- Focus: The purpose of written communication is focused and stated clearly.
- Content and Sequence: Presenting all essential ideas/information with supporting details in a logical order associated and relevant to the purpose of written communication. (e.g. headings and subheadings)

- Structure: producing a well-structured content, following a format/layout appropriate to the purpose of written communication (e.g. Complete the missing parts in a report)
- Responding to a written communication appropriately (e.g. answering questions, providing information, e-mailing, ...etc.)

Statement of the problem

The problem of this study is that Technical Colleges students' written communication skills (reading and writing) are poor and need to be improved.

To handle this problem, the present study attempted to find an answer to the following main question: "How effective would be the use of the proposed constructivism-based program on developing Technical College students' written communication skills using WebQuests?"

The following sub questions were also answered:

1. What are the reading and writing skills that Technical Colleges students should have?
2. What are the principles of building the proposed WebQuest-based program in light of Constructivism?
3. What is the effect of the proposed program in developing Technical Colleges students' reading skills?

4. What is the effect of the proposed program in developing Technical Colleges students' writing skills?
5. 5-To what extent are Technical Colleges students satisfied with the suggested Web Quest program?

Study Hypotheses

The study hypothesizes the following:

- There will be statistically significant differences between the mean scores of the research group in the pre-post overall reading test favoring post-testing.
- There will be statistically significant differences between the mean scores of the research group in each reading skill favoring the post-test.
- There will be statistically significant differences between the mean scores of the research group in the pre-post overall writing test favoring post-testing.
- There will be statistically significant differences between the mean scores of the research group in each writing skill favoring the post-test.

Review of Literature and Previous Studies

English for Specific Purposes (ESP) for Technical Colleges' students

Importance and Characteristics of ESP

Fitria (2019, pp.7-9) pointed out that English for Specific Purposes (ESP) is concerned about the teaching of English to the learners who have specific goals and purposes. These goals may be technical, professional, academic or scientific. The purpose of an ESP course is to enable learners to function appropriately in the target situation. Thus, an ESP program is aim-directed, learner directed and situation-directed. An ESP course has the following three features: authentic material, purpose-related direction and self-direction.

Objectives in Teaching ESP

Strapasson (2015, pp. 85-89) presented five broad objectives on which a specific teaching process is based and should be reached to

- reveal subject-specific language use;
- develop target performance competencies;
- teach underlying knowledge;
- develop strategic competence; and
- foster critical awareness.

Williams (2014, pp. 67–71) distinguished between four types of ESP teaching objectives: proficiency, knowledge, affective, and transfer. Proficiency objectives are concerned with the mastery of the four skills: reading, writing, listening, and speaking. The knowledge objectives are concerned with the acquisition of linguistic and cultural information. The Affective objectives are concerned with the development of positive feelings towards the subject study. Finally, the transfer objectives deal with the ability to generalize from what has been learnt in one situation to other situations.

Constructivism: Origin and background

Lister (2020, pp.35–37) asserted that constructivism is generative learning which is the act of creating meaning from what is learned. Knowledge is structured and built in the mind of the student himself when he tries to organize his new experience based on the cognitive framework that already exists in his mind. Thus, knowledge cannot be transferred simply from the brain of a teacher to the student's brain.

Principles of Constructivism

Ramsook and Thomas (2019, pp.28–33) listed the following six main principles of constructivism as follows:

- Principle one– Prior knowledge. The idea behind constructivism is that we actively construct our own

learning by using the information we already know to make sense of new information.

- Principle Two– learners learn better when they are actively involved.
- Principle Three –The role of community and social interaction constructivism
- By interacting with others, students get the opportunity to share their views and thus generate a shared understanding related to the concept.
- Principle Four – The influence of culture. The content of the knowledge is influenced by the culture which includes language, values and beliefs. Integrating students’ cultural practices with each aspect of learning promotes students’ ability to connect with what they are learning.
- Principle Five – Experience is essential to knowledge construction.
- Knowledge is constructed by students as they attempt to make sense of their experiences.
- Dimensions of Constructivism
- Cognitive dimension.
- Social dimension.
- Cultural dimension.

- **Constructivism in the language classroom**
- Characteristics of constructivist language teaching and learning
- Hendry, Hays, Challinor & Lynch (2017: pp.7-13) highlighted the fundamental characteristics of constructivist language learning as follows:
- Knowledge is actively constructed by the learner, not passively received from the outside, and therefore; Students' beliefs, attitudes and viewpoints should be taken into consideration.
- Learners have their own individual ideas about the world so, multiple concepts, presentations and content materials are presented and encouraged.
- Although knowledge is personal and individual, the learners construct their knowledge through their interaction with the physical world, collaboratively in social settings and in a cultural and linguistic environment.
- Knowledge is represented in the brain as conceptual structures and it is possible to model and describe them in details. Approaches, opportunities and environmental conditions are created to encourage

meta -cognition, self-analysis, regulation, reflection and awareness.

- Exploration is a favored approach. When students aspire to seek adequate understanding of the concepts and achieve academic goals, aspects that should be emphasized are problem-solving, high order thinking skills, rational decision making, and in depth understanding.
- Scaffolding is facilitated to help students carry out their assignments and activities beyond their abilities.
- The Role of Teachers in a Constructivist Language Classroom
- Providing experience with the knowledge construction process.
- Appreciating multiple perspectives.
- Providing social and emotional learning.
- Using multiple modes of representation.
- The Role of Students in a constructivist language classroom
- Engage in the concept, process or skill to be learned.
- Explore their environment or manipulate materials.
- Explain the concepts they have been exploring to demonstrate new skills.

- Elaborate and develop deeper and broader understanding of major concepts obtain more information and refine their skills through new experiences.
- Evaluate their understanding , abilities and progress.

Written Communication

Sonnenschein and Ferguson (2020: p.42) explained that written communication is the presentation of ideas or compositions that make a clear point and supply detail supporting that point and demonstrate unity and coherence of thought. The mastery of good written English and the ability to comprehend and write about information acquired through reading are skills of written communication.

Importance of written communication to Technical College students

According to Eggleston & Rabb (2018, pp.84-89), written communication skills are essential for ESP students as well as professionals because professional ability and performance are strongly linked with written communication competence. Many employers specifically identify written communication skills as a job requirement. They place a high premium on written communication skills as professional students will be

expected to spend a significant amount of time in written communication.

Elements of written communication

- Clarity.
- Courtesy.
- Accuracy.
- Brevity.
- Correct Language.
- Correct Attitude.
- Coherence.

Types of Written Communication

Memos

A memo is a short, written, authenticated, and formal communication technique only used within an organization or workplace among the employees of an organization to provide and share work-related information or to ask/request for some form of work-related actions to take place. (Alam, 2021, p.75)

Business Letters

A business letter is a letter which is used by organizations to communicate in a professional way with customers, other companies, clients, shareholders investors, etc. Business

letters use formal language and a specific format. Companies use it to convey important information and messages (Lannon and Gurak, 2021,pp.49–51)

A business letter is a formal document which provides recipients with specific information, such as a notification of an award or a note of appreciation for a donation. Business letters also can be used to persuade recipients to take some type of action such as employment. (Ahmadi, 2019, p.11)

E- mails

Sabbagh (2021, p.25–28) stated that e- mail is a way to send and receive messages across the internet. It is a communication tool that allows information flow and sharing, in large quantities and simultaneously to multiple recipients, regardless of where they are, at reduced costs. When e-mail is provided to employees by the organization, it is assumed as a working tool and should be only used for the work-related tasks and activities that are set by those employees.

Business Reports

Das (2017, p. 2) defined a business report as a formal communication written for a specific, significant business purpose that includes a description of procedures followed for collection and analysis of data, their significance, the conclusions drawn from them and the recommendations, if

required. It helps the interested persons to get insight into the problem and assists in decision making and problem-solving.

Essential written communication skills

The current study and the review of literature are limited to some reading and writing skills of written communication.

Written communication in ESP contexts

Rus (2020: pp. 89–96) asserted that learning language successfully comes through having to communicate real meaning. When learners are involved in real communication, their natural strategies for language acquisition will be used, and this will allow them to learn to use the language. ESP is an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning. Communicative language teaching makes use of real-life situations integrated to the needs of communication. The teacher sets up situations that students are likely to encounter in real professional life, creates the appropriate environment in order to stimulate tasks that permit students to be the protagonists of their own learning, The real-life simulations change daily. Students' motivation to learn comes from their desire to communicate in meaningful ways about meaningful topics related to their field of specialization and their future career.

WebQuests

Tsichouridis, Batsila, Vavougiou & Tsihouridis (2020: pp.395-405) state that WebQuests are inquiry-oriented activities in which most or all of the information used by learners is drawn from the web. They are inquiry-oriented group projects that use internet resources to investigate particular topics. Free websites exist that facilitate the design of such projects as well as the sharing of results.

WebQuests are believed to be valuable language learning tools. They provide opportunities for collaboration and the practice of integrated language skills such as reading, writing and speaking. They are also claimed to be beneficial for English as a foreign language students, because they expose students to authentic materials, provide meaningful content and offer possibilities for real communication in the target language.

Using WebQuests gives students the opportunity to be exposed to many resources while they are in the classroom. Students' engagement with this method develops a deeper understanding of the content when compared to the traditional method of learning. To complete a WebQuest task, students search through links provided on the WebQuest. These links

are relevant to the topic and are efficient and focused learning tools. (Zeng and Fu,2019, pp.77-81)

Components of WebQuests

1. Introduction

The introduction of a WebQuest provides basic information and motivational scenarios

2. Task

The task should be inherently important, feasible and interesting, and should engage students in solving real problems.

3. Process

The process refers to clear and appropriate stages. Steps which students should complete should be outlined in the process section.

4. Resources

A great WebQuest uses sites that are readable, interesting to students, up-to-date and accurate.

5. Evaluation

These tools set the criteria for appropriate learning targets for students. The standards of evaluation should be fair, clear, consistent, and specific and explicit to help students understand the task effectively.

6. Conclusion

The conclusion should allow students to reflect upon the WebQuest experience and the task.

Advantages of implementing WebQuests in the ESP classroom

Nataliia, Larisa , Maryna , Nataliia and Svitlana (2022, pp.288–300) proposed some advantages for using Web Quests in the ESP classroom as follows:

- It promotes the effective use of time by students; students use the links given by the teacher and search for information in a structured efficient manner.
- The provision of rich authentic current information and exposure to colorful visual elements enhance flexibility of individual learning pace. It also reinforces learning of the subject matter, as students are required to read, think, analyze, synthesize and evaluate information.
- Web Quests foster students' critical thinking skills by encouraging different learning tasks and expression of opinions. It also supports constructivist learning that incorporates thinking and knowledge application and fosters problem solving skills.

Method

Design of the study

This study employed the one- group pretest-posttest design along with a mixed research approach incorporating both quantitative and qualitative methodologies.

Participants of the study

The participants of the current study were forty (N = 40) students enrolled in the 1st year at Mataria Industrial Technical Institute, Mataria Technical College, in the 1st Semester, the academic year 2022-2023.

Instruments of the study

The instruments of the current study were the following:

- Reading skills list,
- Writing skills list,
- The Pre/ Post written communication test,
- Reading Rubric,
- Writing Rubric; and,
- Satisfaction questionnaire.

The program Aim

The overall aim of the WebQuest program was to develop the participants' written communication skills (reading and writing skills).

Content of the WebQuest Program

The content of the program was selected to fulfil its purpose and reflect its objectives. The researcher launched a website for the suggested program at the following address:

<https://sites.google.com/view/writtencommunication/%D8%A7%D9%84%D8%B5%D9%81%D8%AD%D8%A9%D8%A7%D9%84%D8%B1%D8%A6%D9%8A%D8%B3%D9%8A%D8%A9>

The WebQuest was divided into four units. Each unit tackled one type of written communication that the students could search for and get information about as well as find answers to their tasks (i.e., email, memo, report and letter). Each unit included a variety of activities on the addressed type of written communication, in addition to three written communication tasks that the participants were assigned to accomplish collaboratively.

Analysis and Discussion of Results

Quantitative Results of the Study

Testing the validity of the first hypothesis

The first hypothesis of the current study states that: "There is a statistically significant difference between the mean scores of the students in the overall reading skills of the pre-test and the post-test, in favor of the post-test."

To check the validity of this hypothesis, the researcher calculated students' reading scores in the pre/post-test using paired samples t-test (SPSS, Version 27).

Meeting all the requirements, the data of the pre-post reading test were then analyzed using the paired samples t-test, using SPSS. The following table shows the statistics of the pre/post-test.

Table (4.1): Paired samples t-test for the overall reading skills pre/post-tests

		N	Mean	Std. Deviation	t-value	P-value	Effect ≥ 0.14
Reading Skills	Pre	40	24.00	5.08	37.89	0.000	0.88
	Post	40	62.50	7.92			Large

As shown in table (4.1), there is a significant difference between the scores of the students in the post-test ($M=62.50$, $SD=7.92$) and in the pre-test ($M=24.00$, $SD=5.08$); $t(39) = 37.89$, $p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students' mean scores of the post-test and those of the pre-test in the overall reading skills in favor of the post-test. This indicates that the objectives of the study were achieved in raising the reading level of the study group.

Testing the validity of the second hypothesis.

The second hypothesis of the current study states that: "There are statistically significant differences between the mean scores of the students' pre-posttest in each reading sub-skill in favor of the post-test."

Table (4.2): Paired samples t-test for the reading pre-posttest

Reading Skills		N	Mean (M)	Std. Deviation (SD)	t-value T (39)	P-value (P)	Effect ≥ 0.14
Identifying the purpose of a brief written communication text	pre	40	6.62	2.37	24.03	0.000	0.94
	post	40	18	2.48			Large
Extracting the significant ideas and details in a piece of written communication	Pre	40	6.62	2.62	17.66	0.000	0.89
	Post	40	16.62	2.86			Large
Identifying the meaning of key technical words in a written communication text	Pre	40	5.12	0.79	25.66	0.000	0.94
	Post	40	14.75	2.51			Large
Summarizing, commenting on and/or responding to	Pre	40	5.50	1.51	16.42	0.000	0.87
	Post	40	13.25	3.11			Large

Reading Skills		N	Mean (M)	Std. Deviation (SD)	t-value T (39)	P-value (P)	Effect >=014
information included in a written communication text.							

As shown in table (4.2), there is a significant difference between the scores of the students in the post-test ($M=18$, $SD=2.48$) and in the pre-test ($M=6.62$, $SD=2.37$); $t(39) = 24.03$, $p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference

between students' mean scores of the pre-posttest in the first skill of reading "Identifying the purpose of a brief written communication text". Thus, the program was effective in developing Identifying the purpose of a brief written communication text skill.

Table (4.2) shows that there is a significant difference between the scores of the students in the post-test ($M=16.62$, $SD=2.86$) and in the pre-test ($M=6.62$, $SD=2.62$); $t(39) = 17.66$, $p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a

statistically significant difference between students' mean scores of the pre-posttest in the second reading skill,

“Extracting the significant ideas and details in a piece of written communication”. Thus, the program was effective in developing Extracting the significant ideas and details in a piece of written communication skill.

Table (4.2) above indicates that there is a significant difference between the scores of the students in the post-test ($M=14.75$, $SD=2.51$) and in the pre-test ($M=5.12$, $SD=0.79$); $t(39) = 25.66$, $p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students' mean scores of the pre-posttest in the reading skill, “Identifying the meaning of key technical words in a written communication text”. Thus, the program was effective in developing Identifying the meaning of key technical words in a written communication text.

Table (4.2) shows that there is a significant difference between the scores of the students in the post-test ($M=13.25$, $SD=3.11$) and in the pre-test ($M=5.50$, $SD=1.51$); $t(29) = 16.42$, $p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students' mean

scores of the pre–posttest and those of the pre– test in the fourth skill of reading, “Summarizing, commenting on and/or responding to information included in a written communication text”. Thus, the program was effective in Summarizing, commenting on and/or responding to information included in a written communication text.

The Effect size

To measure the total effect of the suggested program on developing the overall reading skills, Eta square (η^2) value was calculated.

Table (4.3): The effect size of the overall reading skills

Skills	Tc	ETA– Square	Strength
As a whole	37.89	0.97	Large

The results of table (4.3) show that the effect size of the test was (0.97), which is greater than the minimum ETA squared of (0.14), and this indicates that there is an effect of the suggested program on improving the overall reading skills.

To measure the effect of the suggested program on developing each reading skill, Eta square (η^2) value was calculated.

Table (4.4): The effect size of each reading skill

Skill	Tc	ETA- Square	strength
Identifying the purpose of a brief written communication text	24.03	0.94	Large
Extracting the significant ideas and details in a piece of written communication	17.66	0.89	Large
Identifying the meaning of key technical words in a written communication text	25.66	0.94	Large
Summarizing, commenting on and/or responding to information included in a written communication text.	16.42	0.87	Large

As shown in table (4.4), the size of the impact of Identifying the purpose of a brief written communication text skill reached (0.94), which is greater than the minimum for ETA squared of (0.14), and this indicates that there is an impact of the suggested program on improving Identifying the purpose of a brief written communication text skill.

The results of table (4.4) show that the size of the impact Extracting the significant ideas and details in a piece of written communication skill reached (0.89), which is greater than the minimum for Eta squared of (0.14), and this indicates that there is an impact of the suggested program on improving Extracting the significant ideas and details in a piece of written communication skill.

The results of table (4.4) also show that the size of the impact of Identifying the meaning of key technical words

in a written communication text skill reached (0.94), which is greater than the minimum for ETA squared of (0.14), and this indicates that there is an impact of the suggested program on improving Identifying the meaning of key technical words in a written communication text skill.

The results of table (4.4) show that the size of the impact of Summarizing, commenting on and/or responding to information included in a written communication text skill reached (0.87), which is greater than the minimum for Eta squared of (0.14), and this indicates that there is an impact of the suggested program on improving Summarizing, commenting on and/or responding to information included in a written communication text skill.

Testing the validity of the third hypothesis

The first hypothesis of the current study states: "There is a statistically significant difference between the mean scores of the students in the overall writing skills of the pre-test and the post-test, in favor of the post-test."

To check the validity of this hypothesis, the researcher calculated students' writing scores in the pre/post-test using paired samples t-test (SPSS, Version 27).

Meeting all the requirements, the data of the pre-post reading test were then analyzed using the paired samples t-

test, using SPSS. Table (4.5) shows the statistics of the pre/post-test.

Table (4.5): Paired samples t-test for the overall writing skill pre/post-tests

		N	Mean	Std. Deviation	t-value	P-value	Effect >=0.14
writing Skills	Pre	40	26.50	6.52	32.05	0.000	0.96
	Post	40	67	7.14			Large

As shown in table (4.5), there is a significant difference between the scores of the students in the post-test (M=67.00, SD=7.14) and in the pre-test (M=26.50, SD=6.52); $t(39) = 32.05$, $p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students 'mean scores of the post-test and those of the pre-test in the overall writing skills in favor of the post-test. This indicates that the objectives of the study were achieved in raising the writing level of the study group.

Testing the validity of the fourth hypothesis

The second hypothesis of the current study states that: " There are statistically significant differences between the mean scores of the students' pre-posttest in each writing skill in favor of the post-test."

Table (4.6): Paired samples t-test for the writing pre-posttest

Skills		N	Mean (M)	Std. Deviation (SD)	t-value T (39)	P-value (P)	Effect >=014
Structure	Pre	40	7.25	2.76	25.95	0.000	0.95
	Post	40	19.50	1.51			Large
Focus	Pre	40	6.62	2.37	24.18	0.000	0.94
	Post	40	17.87	2.50			Large
Content and Sequence	Pre	40	6.75	2.41	17.09	0.000	0.88
	Post	40	15.87	2.74			Large
Responding to a written communication text appropriately	Pre	40	5.76	2.15	14.05	0.000	0.84
	Post	40	13.46	3.47			Large

As shown in table (4.6), there is a significant difference between the scores of the students in the post-test (M=19.50, SD=1.51) and in the pre-test (M=7.25, SD=2.76); $t(39) = 25.95$, $p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students' mean scores of the pre-posttest in the first writing skill, "Structure". Thus, the program was effective in developing Structure skill.

Table (4.2) also shows that there is a significant difference between the scores of the students in the post-test (M=17.87, SD=2.50) and in the pre-test (M=6.62, SD=2.37);

$t(39) = 24.18, p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students' mean scores of the pre-posttest in the second writing skill, "Focus". Thus, the program was effective in developing the Focus skill.

Table (4.2) above indicates that there is a significant difference between the scores of the students in the post-test ($M=15.87, SD=2.74$) and in the pre-test ($M=6.75, SD=2.41$); $t(39) = 17.09, p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students' mean scores of the pre-posttest in the third writing skill, "Content and Sequence". Thus, the program was effective in developing Content and Sequence.

Table (4.2) shows that there is a significant difference between the scores of the students in the post-test ($M=13.46, SD=3.47$) and in the pre-test ($M=5.76, SD=2.15$); $t(39) = 14.08, p = 0.000$. The significance of t is (0.000), which is smaller than (0.05), and this means that there is a statistically significant difference between students' mean scores of the pre-posttest and those of the pre-test in the fourth writing skill, "Responding to a written communication text appropriately". Thus, the program was effective in

developing Responding to a written communication text appropriately.

The Effect size

To measure the total effect of the suggested program on developing the overall writing skills, Eta square (η^2) value was calculated.

Table (4.7): The effect size of the overall writing skills

Skills	Tc	ETA- Square	strength
As a whole	32.05	0.97	Large

The results of table (4.7) show that the effect size of the test was (0.97), which is greater than the minimum ETA squared of (0.14), and this indicates that there is an effect of the suggested program on improving the overall writing skills. To measure the effect of the suggested program on developing each separate writing skill, Eta square (η^2) value was calculated.

Table (4-8): The effect size of each writing skill

Skill	Tc	ETA- Square	strength
Structure	25.95	0.95	Large
Focus	24.18	0.94	Large
Content and Sequence	17.09	0.88	Large
Responding to a written communication text appropriately.	14.08	0.84	Large

As shown in table (4.8), the size of the impact of the Structure skill reached (0.95), which is greater than the minimum for ETA squared of (0.14), and this indicates that there is an impact of the suggested program on improving the Structure skill.

The results of table (4.8) show that the size of the impact of the Focus skill reached (0.94), which is greater than the minimum for Eta squared of (0.14), and this indicates that there is an impact of the suggested program on improving the Focus skill.

The results of table (4.8) also show that the size of the impact of the Content and Sequence skill reached (0.88), which is greater than the minimum for ETA squared of (0.14), and this indicates that there is an impact of the suggested program on improving the Content and Sequence skill.

The results of table (4.8) show that the size of the impact of the Responding to a written communication text appropriately skill reached (0.84), which is greater than the minimum for Eta squared of (0.14), and this indicates that there is an impact of the suggested program on improving the Responding to a written communication text appropriately skill.

Discussion of the results

As shown from the statistical analysis, the results obtained on the posttest indicated that the participants of the study group have achieved significant improvement in written communication skills (reading and writing skills).

The WebQuest provided students with a variety of reading materials, helped them to use the acquired knowledge from the reading resources and provided them with the specific information to complete their tasks in writing. Exposing students to reading materials through the WebQuests made students outperform in writing skills.

The WebQuest enhanced the online reading and writing skills of the students. Reading online is the most challenging activity for the ESP learners. There were some difficulties that faced learners such as inadequate proficiency of English and the lack of researching skills. The researcher tackled these problems by training students on how to enhance the required online skills. Students were scaffolded by the teacher and by their peers. Students received an orientation session to be familiarized with the WebQuest; they received an overall idea about the website and how to deal with it.

Another attribute of the WebQuest is collaborative learning. Using WebQuest enhanced vital cooperation and

collaboration among students. A positive finding showed that working in groups allowed some of the low proficient students to check their answers and the meaning of difficult words with their peers before presenting the information to the whole group.

WebQuest increased student- student communication which provided fluency practice and reduced the dominance of the teacher. Students became more independent through letting them work in groups to read the assigned web sites and write the assigned tasks.

Qualitative Results of the Study

Participants' Satisfaction Questionnaire

The 1st question was about what the students liked and disliked most in WebQuest. Some of what they stated in this respect was as follows:

- The WebQuest included lots of materials with visual aids and that was very motivating.
- The WebQuest is flexible as everyone can participate in the website at any time from everywhere.
- We enjoyed arranging work group; group work has a positive effect on promoting relationships among friends.

- The 2nd question considered the benefits the students got out of WebQuest. Some of what they stated in this respect was as follows:
 - WebQuest helped us to take responsibility for our learning and enhanced our motivation.
 - It improved our research skills and provided access to current and up-to-date technical information.

The 3rd question is related to the participants' opinions about group work versus individual work. Their responses showed that about 25 students preferred group work, in contrast with 12 students who liked individual work more and (3) students who liked mixed activities.

The 4th question was concerned with the participants' opinions about WebQuest activities and which they enjoyed more: reading activities or writing activities.

17 students enjoyed reading activities. They stated that WebQuest activities made reading and information accessibility easier and more enjoyable.

23 students enjoyed writing activities. They said that WebQuest writing activities were useful, motivating and enjoyable in addition to enhancing self-confidence and independent learning.

The 5th question in the Participants' Satisfaction Questionnaire asked the participants to state their suggestions for improving written communication WebQuest in case it would be implemented again. They stated, for example,

- We should be given the rules of reading and writing in English first.
- We need to add a conversation course for free because we need to improve our listening and speaking skills and we need to correct our pronunciation.

The sixth question investigated Students' opinions about the activities they had. 23 students choose very satisfied, 12 students choose moderately satisfied 5 students choose Slightly satisfied.

The seventh question investigated Students' opinions about the extent to which the course developed their written communication skills. 28 students choose very satisfied, and 12 students choose moderately satisfied.

The last question investigated Students' opinions about how far they were overall satisfied with the WebQuest course. 33 students choose very satisfied, and 7 students choose moderately.

Findings of the study

Using WebQuest proved to be effective in developing students' reading and writing skills. This was proved by analyzing the results of the pre and post – reading and writing test through using T. test and calculating the effect size. In other words, it can be said that the written communication skills were developed due to using the WebQuest program.

References

- Abd Elfatahl S A. (2016). WebQuest and EFL Critical Reading and Writing. Cultural and Religious Studies. Vol.4, No.3, Pp. 175–184.
- Abd-Allah, A. A. M. (2016). Using E- Portfolio for Developing the Second Year Preparatory Stage Students' EFL Critical Writing Skill. (M. A. Thesis). Faculty of Education. Ain Shams University.
- Abderrahim, L., & Gutiérrez-Colón Plana, M. (2021). A Theoretical Journey from Social Constructivism to Digital Storytelling. The EuroCALL Review, Vol.29, No.1, Pp.38–49.
- Abu Warda, M. (2018). The Impact of Collaborative Learning on WebQuest Strategy Used in Learning Educational Psychology. International Journal of Web- Based Learning and Teaching Technologies. Vol.13, No.4,PP.77–90.
- Adanan, H., Adanan, M., & Herawan, T. (2020). M-WebQuest development: Reading comprehension of senior high school students in Indonesia. International Journal of Emerging Technologies in Learning (IJET), Vol.15, No.3, Pp.374–92.
- Ahmad, R.M.R. (2019). The Effect of Using Blended Learning to Teach EFL Novel on Developing Secondary Stage Students' Critical Reading, Written Communication Skills and Attitudes towards Reading. (Doctoral Dissertation). Faculty of Education. Beni- Suef University.
- Ahmadi, C.D. (2019). Official Writing/Correspondence. Journal of Humanities and Social Science, Vol.5, No.1, Pp.7–16.
- Ahmadi, M. R. (2017). The Impact of Motivation on Reading Comprehension. International Journal of Research in English Education, Vol.2, No.1, Pp.1–7.
- Ah-Nam, L., & Osman, K. (2017). Developing 21st Century Skills through a Constructivist-Constructionist Learning Environment. K-12 STEM Education, Vol.3, No.2, Pp.205–216.

- Akilandeswari, V., Kumar,A.D., Pavithra, M., Mariyam, A.T., & Banu, J.N. (2015). Elements of Effective Communication. International Journal of Multidisciplinary Research and Modern Education, Vol.1, No.1, Pp.154-156.
- Akpan, V. I., Igwe, U. A., Ikechukwu, B., Mpamah, I .,Okoro, C. O. (2020). Social constructivism :Implications on teaching and learning. British Journal of Education, Vol.8, No.8, Pp. 49-56.
- Al Asadi, S. (2020). Intercultural Awareness and Writing through the Use of WebQuest: Iraqi Students at Al Awsat Technical University as a Case Study, Arab World English Journal, Vol.6, No.4, Pp.379-393.
- Al Moadih N.S. (2017). The effectiveness of a program based on Strategies of Round House diagram and Concept Maps in the development of reading and writing Skills in English in the light of Social Constructivism among the basic Education Students in Jordan. (Doctoral Dissertation). Faculty of Education, Ain Shams University, Cairo, Egypt.
- Alam, I. M. S. (2021). Understanding the Concept of Memo in Managerial Communications. Journal of Business Communication. Vol.5, No.9, Pp.236 – 251.
- AL-Ghazo, A., & Al-Zoubi, S. M. (2018). How to Develop Writing Skill through Constructivist Design Model. International Journal of Business and Social Science, Vol.9, No.5, Pp.117-130.
- Alghlonaim, A.S. (2018). Explicit ESL/EFL Reading-Writing Connection: An Issue to Explore in ESL/EFL Settings. Theory and Practice in Language Studies, Vol.8, No.4, Pp.385-392.
- Algofaili, S.R. (2019). A study of Saudi Teachers' and Students' Attitudes towards the use of ESP at a Saudi Military Academy. (Doctoral Dissertation). The King Abdualaziz Military Academy, University of Memphis, Saudi Arabia.

- Ali, K.S.S. (2019). The Effectiveness of a Blended Program on Enhancing Official Language Prep School Students' English Creative Writing Skills. (Doctoral dissertation). Faculty of Education. Ain Shams University.
- Ali, N. M. A. (2022). Improving EFL Reading Comprehension Skills and Engagement of Secondary Stage Students by Using Glogster Technology. Journal of The Faculty of Education– Mansoura University, Vol.120, No.4, Pp.83–109.
- Aljohani, M. (2017). Principles of “Constructivism” in Foreign Language Teaching Journal of Literature and Art Studies, January, Vol.7, No.1, Pp.97–107.
- AL–Khataybeh, M.M., & AL–Awasa, A.S. (2016). The Effect of Using Web Quests on Improving Seventh Grade Female Students' Writing Skills in Southern AL–Mazar Directorate of Education. Faculty of Educational Sciences, Mutah University, Jordan–Kerak –Mutah. Journal of Education & Social Policy, Vol. 3, No. 1, Pp. 19–33.
- Alnagar, A. M. A. I. (2017). Using a Constructivist Learning Model for developing some critical Reading for Developing some Critical Reading and Argumentative Writing Skills among Alazhar Secondary Stage Students. Journal of the Faculty of Education, Mansoura University, Egypt. Vol.99, Issue.3, Pp. 23– 41.
- Alnagar, M. I. (2018). The effect of Web 2.0 writing tools (blogs/ wikis) on developing writing skills, International Journal of Education Learning and Development Vol.5, No.8, Pp. 65–78.
- Alsamadani, H. (2017). Needs Analysis in ESP Context: Saudi Engineering Students as a Case Study. Advances in Language and Literary Studies, Vol.8, No. 6, Pp.58–68.
- Al–sayed, R. K. M. (2018). Enhancing English Language Planning Strategy Using a WebQuest Model. (Doctoral dissertation). Faculty of Education. Benha University. Egypt.

- Al-Shamisi, A. S. (2016). The Effect of WebQuests on Grade 11 Reading Comprehension and Student Perceptions of WebQuests. (Doctoral dissertation). College of Education U.A.E. University.
- Alshayban, A. (2022). Teaching English for Specific Purposes (ESP) to Saudi Arabian Banking Employees. Language Teaching Research Quarterly, Vol.27, No.3, Pp.1-18
- Alshumaimeri, Y., & Bamanger, E., (2013). The Effects of WebQuest Writing Instruction on The Writing Performance of Saudi Male EFL Learners, 2nd World Conference on Educational Technology Researches – WCETR2012, Procedia – Social and Behavioral Sciences 83, Pp. 960 – 968.
- Andersson, M; Najafabadi, H; Wren, J. (2016). Improving written communication skills in engineering programs, Proceedings of the 12th International CDIO Conference, Turku University of Applied Sciences, Turku, Finland, June 12-16, 2016.
- Andhale, B. S. (2022). Effect of Constructivist Approach Enhancing Academic Achievement in History among 7th Standard Students. Educational Resurgence Journal, Vol.5, No,1,Pp.123-145
- Anggita, Sutrisno, E. and Desanti, N. (2019). Developing Students' Writing Skills by using WebQuest. Journal EKSOS, XV (2), Pp.231-255.
- Ardiansyah, W., & Ujihanti, M. (2018). Social Constructivism-Based Reading Comprehension Teaching Design at Politeknik Negeri Sriwijaya. Arab World English Journal, Vol.9, No.1, Pp. 103-116.
- Arputhamalar, A. & Kannan,P. S. (2015). Growth of Business English and the Need to Teach Memo-Writing Skills to Indian Tertiary-Level Learners. International Journal of English Language & Translation Studies. Vol.3, No.2,Pp.74-83.
- Awada, Burston, J., Ghannage, R.(2020). Effect of Student team Achievement Division through WebQuest On EFL Students' Writing Skills and their

- Instructors' Perceptions, Computer Assisted Language Learning. Vol.33 No.3, Pp.275-300.
- Awang, H & Daud, Z. (2015). Improving a Communication Skill Through the Learning Approach Towards the Environment of Engineering Classroom, World Conference on Technology, Innovation and Entrepreneurship, Procedia-Social and Behavioral Sciences, 195, Pp.480-486 .
- Aydin, S. (2016). WebQuest as Language- learning Tools. Computer Assisted Language Learning. Vol.29, No.4, Pp.765-778.
- Baguzina, E. (2020). Webquests: fostering foreign language learning in a university environment. SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.3552707>
- Bahidin, A., Tanduklangi, A. and Rhim, A. (2018). The Effect of WebQuest on Students' Reading Comprehension and Reading Attitude at SMIKN 4 Kendari. Journal of Language Education and Educational Technology, Vol. 3, No.2, Pp.37-49.
- Bansal, R. and Dull, S(2020). Using WebQuest- based Instruction to enhance Students' Critical Thinking. Journal of Issues and Ideas in Education, Vol.18, No 1, Pp.111-125.
- Barrett, N. E., Liu, G. Z., Hsu, W. C. & Wang, H.C. (2020). Computer-Supported Collaboration and written communication: Tools, Methods and Approaches for Second Language Learners in Higher Education. Human Behavior and Emerging Technologies, Vol.3, No. 2, Pp. 261-270.
- Basturkmen, H. (2021). ESP research directions: Enduring and emerging lines of inquiry. Language Teaching Research Quarterly, Vol.23, Issue.5, Pp. 5-11.
- Batova,T. (2018).Global Technical Communication in7.5 Weeks online: Combining Industry and Academic Perspectives, IEEE Transaction on Professional Communication, Vol. 61, No.3, Pp. 311-329.

- Berezova, L.; Mudra, S., & Yakushko, K. (2018). The effect of WebQuests on the writing and reading performance of university students, *Information Technologies and Learning Tools*, Vol.64, No.2, Pp.110–118.
- Berkeley (2020). *Cognitive Constructivism*. GSI Teaching & Resource Center. University of California. (n.d.).
- Bobkina, J. (2015). WebQuests: a Constructivist tool in the EFL teaching Methodology for Engineering Students. Conference: XXIX Congreso International de AESLA, en la Universidad de Salamanca At: Salamanca.
- Brown, J. D. (2016) *Introducing needs analysis and English for specific Purposes*. New York, NY: Routledge.
- Chang, C; Chen, T & Hsu, W. (2011). The study on integrating WebQuest with mobile learning for environmental education, *Computers & Education*, Vol. 57 Issue,1, Pp. 1228–1239.
- Chen, J. C. (2019). Designing Online Project-based Learning Instruction for EFL learners: A WebQuest Approach. *MEXTESOL Journal*, Vol.43, Issue.2, Pp. 124–136.
- Chen, P. H., Hong, J.C., Ye, J. H. & Ho, Y.J. (2022). The Role of Teachers' Constructivist Beliefs in Classroom Observations: A Social Cognitive Theory Perspective. *Frontiers in Psychology* 13:904181
- Chibi, M. (2018). The Role of the ESP Practitioner as Business English Teacher. *International Journal of English Literature and Social Sciences*, Vol. 3, Issue. 2, Pp.197–203.
- Cleary, y., Karreman, J., Closs, S., Drazek, Z., Engberg, J., Ghenghea, V., Meex, B., Minacori, P., Muller, J., & Straub, D. (2017). TecCOMFrame: A competence Framework for technical Communication. In *Proceedings of the 2017 IEEE international Professional Communication Conference (ProComm)*, 1–5.

- Cuiping, H. (2019). On Writing Strategies of Business Letters in Cross Border E-Commerce. East African Scholars Journal of Economics, Business and Management, Vol. 2, No.8, Pp.54-65.
- Dandashly, N. A., Barbar, A., & Antoun, M. (2019). The effects of using blogs and webQuests in teaching education postgraduate courses. Global Journal of Information Technology: Emerging Technologies, 9(1), 12-19.
- Das, A. (2017). How to Write a Technical Report. Conference: National Project & Seminar Competition - 2016 (NPSC--2016) At: Sriniketan Affiliation: Bengal Institute of Technology and Management
- Demana, N. (2017). A Study of The English Reading Comprehension Strategies Utilised by Level- One Students at University of Venda. (MA. Thesis). University of Venda. Limpopo Province of South Africa.
- Demiroglue, N. B. (2020). E-mail as a Tool for Effective Management of Small Business. International Conference on Economic and Social Trends for Sustainability of Modern Society (ICEST 2020)., Vol.4, Issue.1, Pp. 78-97.
- Diaz, K. (2017) Prior Knowledge: Its Role in Learning. University of the Philippines Los Banos Vol. 9, Issue,2, Pp.19-27.
- Doghonadz, N. (2017). Teaching EFL Reading and Writing in Georgia. Cambridge Scholars publishing. PP. 82-84
- Ebadi, S. and Rahimi, M. (2018). An Exploration into the Impact of WebQuest-based Classroom EFL Learners' Critical thinking and Academic Writing Skills: A Mixed - Methods Study, Computer Assisted Language Learning, Vol.31, No.4, Pp. 1-35.
- Eggleston, A. G. & Rabb, R. J. (2018). Technical Communication for Engineers: Improving Professional and Technical Skills, In Proceedings of the 2018 ASEE annual Conference and Exposition.
- El Abiad, N. (2017). Technical Writing and Communication Skills. (M.A. Thesis). Faculty of Engineering. Cairo University.

- El Ramly, H. M. (2018). Effectiveness of Inquiry-based Program in Developing some ESL Writing Skills for preparatory Stage Students. M.A. thesis. Faculty of Education, Ain Shams University.
- El-Esery, A. M. (2017). Developing Productive Transferable Communication Skills among ESP learners. (Doctoral Dissertation). King Marriott Higher Institutes, Alex. Egypt.
- Elgeddawy, M. (2018). University Students' Attitude towards WebQuest: An Empirical Correlational Study. Proceeding of INTCESS 2018- 5th International Conference on Education and Social Science. 5-7 February 2018- Istaubul, Turkey.
- Elsayed, S. M. (2016) The Effect of using Program Based on Beyond Constructivism Paradigm on Developing Prep Students' English Reading & Writing Proficiency. (Doctoral dissertation). Faculty of Education, Ain Shams University.
- Eltantawi,S.M.(2015). The Effectiveness of a WebQuest Program in Developing Secondary School Students' Reading and Writing Skills. (Doctoral Dissertation). Faculty of Education, Ain Shams University, Cairo, Egypt.
- Fahas, R., & Author, C. (2021). Improving Students' Reading Comprehension Through Request (Reciprocal Question) Strategy for Indonesian Junior High School, Vol.2, Issue.1, Pp. 37-50.
- Feak, C. and Harwood, N. (2016). English for Specific purposes. Journal of Teaching English for Specific and Academic Purposes.Vol.1, N0.1. Pp.29-43
- Febrina, F., Usman, B., & Muslem, A. (2019). Analysis of Reading Comprehension Questions by Using Revised Bloom's Taxonomy on Higher Order Thinking Skill (HOTS). English Education Journal, Vol.10, Issue.1, Pp. 1-15.

- Fitria, T. N. (2019). Business English as a part of Teaching English for Specific Purposes (ESP) to Economic Students. *Journal of Education and Economics*, Vol.2, No.10, Pp. 87–99
- Fomenko, T. M. (2021). Use of Internet resources when learning Ukrainian as a foreign language Pedagogy of creative personality formation in higher and general education schools. *International Journal of Higher Education*, Vol.74, Issue.3, Pp. 174–177.
- Ford, J. D.,Paretti, M.,Kotys–Schwartz, D., Howe, s.& Ott, R.(2021). New engineers' transfer of communication activities from school to work. *IEEE Transactions on Professional Communication*, Vol.64, Issue. 2, Pp.105–120.
- Ganie, R. D., & Rangkuti, R. (2019). Reading Comprehension Problems on English Texts Faced by High School Students in Medan. *The Second Annual International Conference on Language and Literature 2019*, Pp.684–694.
- Gilyazava, E. N., Khakimova,I.F., Bulanova,L.N. & Zakirova,L. R. (2020). WebQuest Technology as a Tool for the Formation of IT–Competence of Future Specialists. *Conference: New Silk Road: Business Cooperation and Prospective of Economic Development (NSRBCPED 2019)*, Pp.1–13
- Gurgil, F., Unal, M. and Aksoy, B. (2019). Social Studies Preservice Teachers' View and Experiences with WebQuest. *Journal of Education and Training Studies*, Vol.7, No.4, Pp.131–149.
- Hadriana (2017). WebQuest Application to Improve English Writing Skill. *International Journal of software Engineering and its Applications*. Vol.11,Issue.4, Pp. 61–68.
- Hadriana, S (2017). WebQuest Application to Improve English Writing Skill. (Doctoral Dissertation). Faculty of Teacher Training and Education, Universitas Riau, Kampus Panam Pekanbaru, Riau, Indonesia.

- Hamzah, N., Ariffin, A. and Hamid, H. (2017). Web-based Learning Environment based on Students' needs. IOP Conference Series Materials Science and Engineering. Vol.226, No,1. 012196
- Hasan, D. (2022). Grant students independence and enhance written communication skills, Avans University of Applied Sciences.
- Hassan, W. (2019) The Impact of a Proposed Online Self –Regulation Based Vocabulary Learning Program on Developing Secondary Stage Students' EFI Reading Comprehension Skills and Reading Speed .(Doctoral Dissertation), Mansoura University, Mansoura, Egypt.
- Hasting, C. (2015). Perspectives on teaching English for Specific purposes in Saudi Arabia. Alexandria, VA:TESOL press.
- Hazaea and Alzubi (2016). The Effectiveness of using Mobile on EFI learners' Reading Practices in Najran University. (Unpublished Doctoral Dissertation). Najran University, Saudi Arabia.
- Hazmani, I.(2019) An Investigation into ESP Learners' Reading Comprehension Difficulties:The case of first year doctoral students of the Faculty of Economic and Commercial Sciences and Management Sciences at Biskra University. Faculty of Letters and Languages. Mohamed Kheider University of Biskra, Algeria.
- Hembrough, T. (2019). A case study: Focusing on sustainability themes and eco-composition through student blogs in a professional and technical writing course. International Journal of Instruction, Vol.12, Issue 1, Pp. 895–914.
- Hembrough, T. (2020). Integrating Reading- to- write Strategies and Pairing Composition and Reading Courses for first-year, At-risk College Students. International Journal of Instruction, Vol. 13, No.4, Pp.177–196.
- Hendry, A., Hays, G., Challinor, K., & Lynch, D. (2017). Undertaking Educational Research Following the Introduction, Implementation,

- Evolution, and Hybridization of Constructivist Instructional Models in an Australian PBL High School. *Interdisciplinary Journal of Problem-Based Learning*, Vol. 11, Issue.2,P.7.
- Hussain, S. S., (2019). Strategies for Teaching Academic Writing to Saudi L2 Learners. *English Language Teaching*, Vol.12, No. 12, Pp.114-129.
- Hyland, K. (2022). English for Specific Purposes: What is it and Where is it Taking Us ?. *E. S. P. Today*, Vol.10, Issue 2, Pp. 163-176.
- Irafahmi, D.T. (2016). Creating a Real WebQuest: Instructional Design Point of View. *International Journal of Education and Research*. Vol. 4, Issue.2, Pp. 427-438.
- Jabali, O. (2018). Students' attitudes towards EFL university writing: A case study at An-Najah National University, Palestine. Language Center, Faculty of Humanities, An-Najah National University, Nablus, Palestine
- Janssen, D., Carradini, S. (2021) Generation Z Workplace Communication Habits and Expectations. *IEEE Transactions on Professional Communication*, Vol.64, No.2, Pp. 137-153.
- Jesuis, K. (2017). Business Report Writing. *Journal of Technical writing and Communication*. Vol.5, Issue.2, Pp. 73-86
- Kapur, R. (2018). The significance of social constructivism in education. Available:
https://www.researchgate.net/publication/323825342_The_Significance_of_Social_Constructivism_in_Education [Accessed 21 Sep. 2019].
- Kara, M. (2019). A Literature Review: The Usage of Constructivism in Multidisciplinary Learning Environments, *International Journal of Academic Research in Education*, Vol. 4, No.1, Pp.19-26.
- Kaur, S. and Kauts, A. (2018). Impact of WebQuest on Student engagement. *Indian Journal of Public Health Research and Development*, Vol.9, No.12, Pp. 27-41.

- Knapp, N. F. (2019). The shape activity: Social constructivism in the psychology classroom. *Teaching of Psychology*, Vol.46, No. 1, Pp. 87–91.
- Kocoglu, Z. (2010). WebQuests in EFL reading/writing classroom, *Procedia – Social and Behavioral Sciences*, 2, 3524–3527.
- Kovalyova, Y., Soboleva, A. and Kerimkulov, A. (2016). Project based learning in teaching communication skills in English as a foreign language to engineering students. *International Journal of Emerging Technologies in Learning*, Vol.11, Issue.4, Pp. 113–145.
- Kulamikhina, I., Kamysheva, E., Samylova, O. & Balobanova (2020). Development of Professional Communication Skills in the ESP Class: Integration of Communicative and Critical Thinking Approaches. Conference: International Scientific Conference on Philosophy of Education, Law and Science in the Era of Globalization (PELSEG 2020). Pp. 210–215.
- Kundu, R., & Bain, C. (2015). WebQuests: Utilizing technology in a constructivism manner to facilitate meaningful preservice learning. *Art Education*, Vol.11, Issue 2, Pp. 6–11.
- Lamri, C. (2016). *An Introduction to English For Specific Purposes (ESP)*. Faculty of Arts and Languages, Tlemcen University, Algeria.
- Lannon, J. & Gurak, L. (2021) *Technical Communication*, E. Book. Global Edition. Harlow, UK: Pearson Education
- Lin, F. (2018). Exploring the Influence of English for Specific Purposes (ESP) Curriculum on Chinese Graduates' Career. (MA Thesis). University of Windsor. Windsor, Ontario, Canada.
- Lister, C. (2020). *Constructivism: The Foundation of Inquiry Learning*. Unlearn to Learn. Retrieved 20 June 2020, from [https://christopherlister.ca/tiegrad-2/constructivism-the-foundation-of-inquiry-learning./](https://christopherlister.ca/tiegrad-2/constructivism-the-foundation-of-inquiry-learning/)

- Mahmood, A.F. and Abdullah, A.S. (2019). The Written Communicative Language, its Effect and its Impact on the Development of Modern Social Media. *International Journal of Interdisciplinary Environmental Studies*, Vol.10, Issue.4, Pp.65– 78.
- Marlisa, E. (2019). The Effect of WebQuest Strategy on Students' Reading Comprehension at the Second Grade of SMA Negeri 14 Pekanbaru.(MA Thesis). English Study Program Teachers Training and Education Faculty. Islamic University of Riau Pekanbaru.
- Maruntelu, C.L. & Galbeaza, A. (2020). Life-Fulfilling Education and Written Communication in ESP. Case Study. *Innovative Trends in Teaching Language for Specific Purposes in the Context of the Current Social Instability INNO-LSP 2019. The Annals of Ovidius University of Constanta: Philology Series*, Vol. 8, Issue. 1, Pp. 41–53.
- Mazouzi, N. (2020). Identifying the Learner and Learning Needs in ESP Third year Students of Economic Department at Adrar University as a case for study. (Doctoral Dissertation). Faculty of Arts and Languages, Adrar University, Algeria.
- Megala, M. and Madhumathi (2016). Enhancing Reading Skill through WebQuest in Collaborative Learning Environment. *Language in India*, Vol.16, No.12, Pp. 83–97.
- Melink, O. (2019) Webquest in Teaching Students. Conference: PCSF 2019–9th PCSF Professional Culture of the Specialist of the Future.
- Melnik, O., Sidelnik, E., & Lutsenko N. (2019). Webquest in teaching students. 19th PCSF 2019 Professional culture of the specialist of the future. *European proceedings of social and behavioral science*, LXXIII, 618–629.
- Miftah, M., Z. (2020) . Incorporating WebQuest as an internet-based learning device in EFL writing class .Proceeding of the Borneo International

- Conference on education and Social Sciences (BICESS 2018), 218-225.
- Mohammed M.A.A. (2020) The Impact of Culture on English Language Learning. International journal on studies in English Language and Literature, Vol.8, Issue.1, Pp. 21-27.
- Mohammed, K. S.H. (2019). The effectiveness of a collaborative Wikis- based Program In Developing some EFL Reading and Writing skills in secondary School Students. (Doctoral Dissertation). Faculty of Education, Beni- Suef University.
- Mohammed, S.H.& Kinyo, L. (2020). The Role of Constructivism in The Enhancement of Social Studies. Journal of Critical Reviews, Vol.7, No.7, Pp. 9-17.
- Mokhamar, N.W. (2016). The Impact of Integrating Reading and Writing Skills on Palestine Technical College Students' Paragraph Writing and Attitudes. (MA Thesis). Faculty of Education.The Islamic University- Gaza
- Montgomery, M. (2020). Culture, Community and Constructivism: Exploring the Elements of a Successful Classroom. (Honors Thesis). Honors College. Texas State University. The united State of America.
- Moore, T., & Morton, J., (2017). The myth of job readiness? Written Communication employability, and the skills gap in higher education; Studies in Higher Education, Vol. 42, No.3, PP. 591-609.
- Nădrag, L., & Buzarna-Tihenea, G. (2017). ESP Teaching and Needs Analysis. "Ovidius" University Annals, Economic Sciences Series, Vol.17, No.2, Pp.268-273.
- Nasser, T. M. N. (2017). The effectiveness of an English Blended - based program in Enhancing the integration of Tenth Graders' Reading of English Narrative Texts and their Critical writing Abilities. (Unpublished

- Doctoral dissertation). Faculty of Education, Ain Shams University, Cairo, Egypt.
- Nataliia A. Tsymbal, Larisa M. Zadoiana, Maryna O. Kovalyk, Nataliia M. Savchuk, Svitlana A. Sichkar (2022) Web quest method in online teaching Ukrainian as a foreign language in higher educational institutions. *Journal for Educators, Teachers and Trainers*, Vol.13 Issue.1,Pp. 288 – 300.
- Nguyen, N., & Williams, P. J. (2018). Foster interaction by the integration of ICT with sociocultural and constructivist learning principles. *Proceedings of the 5th International Conference for Science Educators and Teachers (ISET) 2017*.
- Noga, T.& Rupert, T. (2017). Reducing written Communication apprehension for students in tax classes, in Timothy J. Rupert, Beth B. Kern (ed). *Advances in Accounting Education: Teaching and Curriculum Innovations*. *Advances in Accounting Education*, Vol.21,Pp. 57-97
- Nurjanah, R. L., & Pratama, M. R. A. (2020). Self-Regulated Learning Strategy Instructions in Reading Comprehension Skill Learning During Outbreak Era. *Journal of English Language Teaching and Linguistics*, Vol. 5, No.2, p.191.
- Pererva, K. (2015). WebQuests in the English language studying and teaching as a valuable resource and effective tool, *Science and Transport Progress Bulletin of Dnipropetrovsk, National University of Railway Transport*, Vol.57, No. 3, Pp. 208-2014.
- Peter,J. & Singaravelu, G.(2020). Problems in Writing in English among High School Learners. *Aegaeum Journal*. Vol. 8, No.9,PP. 26-35.
- Prabavathi, R.,&Nagasubramani,P.C.(2018). Effective Oral and Written Communication. *Journal of Applied and Advanced Research*, 2018, Vol.3, Issue.1,Pp. 89-97.

- Qiu, J. (2019). A Preliminary Study of English Mobile Learning Model Based on Constructivism. *Theory and Practice in Language Studies*, Vol.9, No. 9, Pp. 119–134.
- Rababah, E.Q. (2021). From theory to Practice: Constructivist learning Practices among Jordanian A Kindergarten teachers. *Cypriot Journal of Educational Science*, Vol.16, No.2 , Pp.612–626.
- Rafidi, T. Y. Q. (2020). The Effect of CALLA–Based Learning Strategies on Developing Students’ Reading and their Satisfaction towards English. (Doctoral dissertation). Faculty of Education, Ain Shams University.
- Rajih, G.H.S. (2016). Improving Written Communication in English through Social Media– Facebook. *International journal of English Language, literature and translation Studies*, Vol.3, No.2, Pp.8–17.
- Ramírez, C. (2015). English for Specific Purposes: Brief History and Definitions. *Revista de Lenguas Modernas*, 23, 379–386.
- Ramsook, L. and Thomas, M. (2019). Implementation of the Principles of Constructivism and Connectivism. *International Journal of Contemporary Applied Researches*, Vol.6, No.5, Pp. 99–112.
- Rao, C.S. (2017). English for Business and Management. *Journal of Research, Scholars and Professionals of English Language Teaching*, Vol.1, Issue 2, Pp. 17– 32
- Rasakumaran, A. (2018). The application of the theory of constructivism to the learning of English as a second language through the WebQuest. (Doctoral Dissertation). University of Jaffna, Sri Lanka.
- Renau, M., & Pesudo, M. (2016). Analysis of the implementation of a WebQuest for learning English in a secondary school in Spain, *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, Vol. 12, No. 2, Pp. 26–49.
- Royhana, A., Hafidz, M. and Ulfa, M. (2021). The Effect of WebQuest on Students’ writing Skills. *SELL Journal*. Vol.5, No.2, Pp. 19–31.

- Rudneva, M., Valeeva, N., Nigmatzyanova, Y., & Guslyakova, A. (2018). Using WebQuests for ESP training: Case study of Ecology students, 12th International Technology, Education and Development Conference, INTED2018 Proceedings, 45-48.
- Rus, D. (2020). Communicative Competence in the Context of ESP Methodology. *Acta Marisiensis Philologia*, Vol.1, No.1, Pp. 123-144.
- Sabbagh, F. (2021). Email Marketing: The most Important Advantage and Disadvantage. *Journal of Economics and Technology Research*, Vol. 2, No.3, Pp.101-122.
- Salem, A. A. M. S.(2019). Exploring the Impacts of WebQuests on Developing Persuasive Writing Skills, Online Social Presence, and Sense of Belonging among ESP Majors. *Faculty of Education Journal, Alexandria University*. Vol. 29, No.4, Pp.445- 483.
- Sayed, E. S. (2020). The Effect of Using WebQuest Strategy on Developing Reading Comprehension Performance for EFL Students. October 6 University. *Journal of Research in Curriculum Instruction and Educational Technology*, Vol.6 Issue.4, Pp. 77- 89.
- Schrijver, I & Leijten, M. (2019) The diverse field of professional writing: current perspectives on writing in the workplace. *Hermes-Journal of Language and Communication in Business*, Vol.5, Issue.1, Pp. 11-19.
- Shcherba, N. S. (2021). The characteristics of WebQuests promoting English language teacher training for inclusive instruction of learners with disability. *Journal of edagogical Sciences*, Vol.4, No.103, Pp.109 -117
- Sidelink, E. (2019). WebQuest in Teaching Students. 9th PCSF (2019) Professional Culture of the Specialist of the Future. *European proceedings of social and behavioral science*, LXXIII, 618-629.
- Sieo, W. M., Amini, M., lee, k. F., Siew, L. (2022). Reading Strategies in Teaching and Learning English as a foreign Language: A mixed- Method

- Study. *Pertanika Journal of Social Science and Humanities*, Vol.33, No.2, Pp.475 – 499.
- Silalah1, S. A. Zainal, A., & Sagala, G. H. (2021). The Importance of Deep Learning on Constructivism Approach. *Advances in Economics, Business and Management Research*, volume 204. Proceedings of the 2nd International Conference of Strategic Issues on Economics, Business and Education (ICoSIEBE 2021).
- Sithara, F., and Faiz, M. (2017). Constructivist teaching/learning theory and participatory teaching methods. *Journal of curriculum and teaching*, Vol.6, Issue.1, Pp. 110–122.
- Sleem, A., Kausar, H. and Deeba, F. (2021). Social Constructivism: A New Paradigm in Teaching and Learning Environment. *Perennial Journal of History*, Vol. 2, No.2, Pp. 403–421.
- Sochor, T., & Chalupova, N. (2019). Survey on messaging in the internet. *Advances in intelligent systems and computing*, 986,127–136
- Sonnenschein, K. and Ferguson, J., (2020). Developing professional communication skills: Perceptions and reflections of domestic and international graduates. *Journal of University Teaching & Learning Practice*, Vol.17, No.3,Pp. 45–57
- Stockwell, E. (2018). Revisiting WebQuests to develop intercultural Communication Competence. *International Journal of Technology and Inclusive Education*, Vol.7, No.1, Pp. 66–79.
- Strapasson, G.(2015). Needs Analysis And English For Business Purposes. *Language Arts English/Portuguese College Final course assignment – Federal University of Technology – Paraná. Curitiba. 2015.*
- Sumarno, W. K., Hasas, T. and Shodikin, A. (2017). Developing Constructivist– WebQuest Online Materials For TEFL Course. *Journal of English Language, literature and Teaching*. Vol.1, No.2, Pp. 123–135.

- Sviatiuk, V. Y. (2015). Business Correspondence Style and Format. International Scientific Journal. Theoretical & Applied Science, Vol.29 No.9,Pp. 83-88.
- Synekop, O. (2020). WebQuests as technology of differentiated ESP instruction at university level, Journal of Teaching English for Specific and Academic Purposes, Vol.8, No.1, Pp. 43-52.
- Thu, N. (2013). The WebQuest – An Effective Web-based Tool for Teaching ESP to English Non-Major Students, AsiaCall online Journal, Vol.12, No.3,Pp. 1-11.
- Tilahun, A. (2018). An Investigation in to Student's Attitude Towards basic Writing Skills: The Case of Civil Engineering at Hawasa University. Global Journal of Social Science: G Linguistics. & Education, Vol.18, No.1,Pp. 51-63.
- Tronina, I. A., Tatenko, G. I., & Bakhtina S. S. (2019). Digital technologies in solving problems of innovative development of Russian regions. Proceedings of the 1st International Scientific Conference "Modern Management Trends and the Digital Economy: from Regional Development to Global Economic Growth" (MTDE 2019)
- Tsichouridis, C., Batsila, M., Vavougios, D., & Tsihouridis, A. (2020). Webquests: from an inquiry-oriented instruction to the connectivist approach to science teaching for the 21st century learners. International Conference on Interactive Collaborative learning (ICL 2019),1134, Pp. 395-405.
- Tsymbal, N. A., Zadoiana, L.M., Kovalyk, M. O., Savchuk, N. M. and Sichkar,S.A. (2022). Web quest method in online teaching Ukrainian as a foreign language in higher educational institutions. Journal for Educators, Teachers and Trainers, Vol.13, Issue .1, Pp. 288 – 300.

- Umida, K., Dilara, A., & Umar, E. (2020). Constructivism in Teaching and Learning Process. *European Journal of Research and Reflection in Educational Science* Vol.8, No.3, Pp.17-26.
- Utami, M. A., Rahman, R., & Albiansyah. (2021). Analysis of Teachers-Constructed Reading Comprehension Test. *English Language in Focus (ELIF)*, Vol.3, Issue.2, Pp. 89-98.
- Verma, V. and Shahwan, Y. Qualitative Characteristics of Business Reporting: A Historical perspective. *Corporate Ownership and Control*, Vol.18, Issue.3, Pp. 360-366.
- Wang, Y. H. (2021). Integrating modified WebQuest activities for programming learning. *Journal of Computer Assisted Learning*, Vol.37, Issue.4, Pp. 978-993.
- Williams, C. (2014). The future of ESP studies: building on success, exploring new paths, avoiding pitfalls. *ASP (la revue de GERAS)*,66, Pp.137-150.
- Wulandari. S. S. (2016). Business Letter Writing Skills Improved Learning through the Inquiry Method in the Administration Office of Education Students Faculty of Economic UNESA. *Journal of Humanities and Social Science*, Vol.13, No.1, Pp.123-134.
- Yang, J. and Zhang, J. (2020). Using WebQuest as Scaffolding in the Wiki for Collaborative Learning. *International Journal of Continuing Engineering Education and Life-Long Learning*.Vol. 23, Issue.3, Pp.229-239.
- Yarmakeev, I.E., Valiakmetova, N .and Akmadulina, R. and Terane, G.(2019). WebQuest Technologies as Learning Motivation. *Mevlana International Journal of Education*.Vol.20, Issue.2, Pp.113-127.
- Yong, E. & Ashman, P.J. (2019). Integration of the Structured Development of Communication Skills within a Chemical Engineering Curriculum at the University of Adelaide. *Education for Chemical Engineers*, Vol.27, No.3, Pp.20-27.

- Yuliana, I. (2020). Learner Attitude towards Written Communication Skills. (MA Thesis). University of Muhammadiyah Malang, Malang, East Java, Indonesia.
- Yulizah, S.(2022). The Effectiveness of Using WebQuest on Students' Reading Comprehension in Descriptive Text. (MA Thesis). Tarbiyah and Teacher Training Faculty, Raden Intan State Islamic University.
- Zahawi, Q. M.(2019).The Implementation of Constructivism in Teaching Reading to Kurdish EFL Students at Salahaddin University– Erbil.(Doctoral Dissertation). College of Basic Education, Salahaddin University– Erbil. Kurdish. Iraq.
- Zahroh, R., Mujiyanto, J., & Saleh, M. (2020). Students' attitudes toward teachers' written corrective feedback and their writing skill. English Education Journal, Vol.10, Issue.1,PP. 9–17.
- Zaki,E.M.F.(2017). A suggested Program Based on WebQuest for Developing Students' EFL Academic Writing Abilities. (Doctoral dissertation). Faculty of Education. Ain Shams University.
- Zeng, Q., & Fu, J. (2019). Teaching mode of WebQuest in college English flip class under the mobile learning environment. Proceedings of 2019 5th International Conference on Education Technology, Management and Humanities Science (ETMHS 2019), 1177–1181.
- Zhang, M., Hao, Z., Zhou, L. and Liu, X.(2022). Influence of WebQuest Teaching on Learners' Learning Performance under the learning Technology Paradigm. Journal of Engineering Science and Technology Review. Vol.15, Issue.3, Pp.220–226.

أثر برنامج قائم على النظرية البنائية في تنمية مهارات الاتصال الكتابي في اللغة الإنجليزية لدى طلاب الكليات التكنولوجية باستخدام الرحلات المعرفية

أ. بسمة عبد المنعم السلاموني*

د. زينب علي النجار**

د. داليا إبراهيم يحيى***

المستخلص:

هدفت الدراسة إلى معرفة أثر برنامج قائم على النظرية البنائية في تنمية مهارات الاتصال الكتابي في اللغة الإنجليزية لدى طلاب الكليات التكنولوجية باستخدام الرحلات المعرفية. واقتصرت الدراسة الحالية على مهارات القراءة والكتابة التي تناسب طلاب الكليات التكنولوجية. وتمت مراجعة المؤلفات والدراسات ذات الصلة المتعلقة بمهارات التواصل الكتابي والرحلات المعرفية للإجابة على أسئلة الدراسة، واستخدمت الباحثة تصميم الاختبار القبلي والبعدي للمجموعة الواحدة إلى جانب منهج بحث مختلط يتضمن المنهجيات الكمية والنوعية. وبلغ عدد المشاركين أربعين طالبًا وطالبة مسجلين بالفرقة الأولى بالمعهد الفني الصناعي بالكلية التكنولوجية بالمطرية للعام الدراسي ٢٠٢٢-٢٠٢٣. أدوات الدراسة الحالية هي قائمة مهارات القراءة، وقائمة مهارات الكتابة، واختبار الاتصال الكتابي قبل / بعد، مقياس تحليلي لمهارة القراءة، و، مقياس تحليلي لمهارة الكتابة؛ واستبيان الرضا. وتم إعداد البرنامج وتصميم موقع إلكتروني بمكونات الرحلات المعرفية الستة وتحميل أنشطة مهارات القراءة والكتابة. وتم تحليل درجات الطلاب في الاختبارات القبلي والبعدي باستخدام الأساليب الإحصائية المناسبة. وأشارت نتائج الدراسة إلى وجود فروق ذات دلالة إحصائية بين الاختبار القبلي والبعدي لمهارات القراءة والكتابة لصالح الاختبار البعدي تعزى لبرنامج الرحلات المعرفية. وأخيرًا، تم التوصل إلى أن البرنامج القائم على النظرية البنائية كان له تأثير كبير على تطوير مهارات الاتصال الكتابي باللغة الإنجليزية لدى طلاب الكليات التكنولوجية باستخدام الرحلات المعرفية.

الكلمات المفتاحية: النظرية البنائية، الاتصال الكتابي، القراءة، الكتابة، والرحلات المعرفية.

* مدرس لغة انجليزية المعهد الفني الصناعي كلية المطرية التقنية

** أستاذ مناهج وطرق تدريس اللغة الإنجليزية بكلية التربية جامعة عين شمس

*** مدرس المناهج وطرق تدريس اللغة الإنجليزية بكلية التربية جامعة عين شمس