

The Impact of an Instructional Program Based on Using Web-Enhanced Language Learning (WELL) on Jordanian EFL Tenth-Grade Female Students' Writing Skills

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Abstract:

This study investigated the impact of an instructional program based on using web-enhanced language learning (WELL) on Jordanian EFL tenth-grade female students' writing skills. A quasi-experimental methodology was followed during the second semester of the scholastic year 2023-2024 in Al-Jami'ah Directorate of Education. The participants of the study were 44 students in two sections who were randomly distributed to a control group (22 students) and an experimental group (22 students). A comprehensive writing achievement test (pre-post test) was used and the data were analyzed using means, standard deviations and ANCOVA.

The findings showed a statistically significant difference ($\alpha=0.05$) between the mean scores of the experimental and control groups regarding writing skills in favor of the experimental group. These results indicate that the instructional program based on WELL had a positive impact on students' writing skills. Therefore, the study recommended that stakeholders should consider implementing WELL in teaching English effectively.

Keywords: Instructional program, Web Enhanced Language Learning, writing skills.

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أثر برنامج تدريسي قائم على استخدام التعلم اللغوي المعزز عبر الويب (WELL) على مهارات الكتابة باللغة الإنجليزية كلغة أجنبية لدى طالبات الصف العاشر في الأردن

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ملخص:

هدفت الدراسة للبحث في أثر برنامج تدريسي قائم على استخدام التعلم اللغوي المعزز عبر الويب على مهارة الكتابة لدى طالبات الصف العاشر في الأردن. ولتففيذ هذه الدراسة تم اتباع المنهج شبه التجريبي خلال الفصل الدراسي الثاني من العام الدراسي 2024/2023 في لواء الجامعة. وقد تكونت عينة الدراسة من 44 طالبة تم تقسيمهن على مجموعتين، التجريبية والضابطة، وتكونت كل مجموعة من 22 طالبة. وقد استخدم اختبار كتابة قبلي وبعدي كأداة لتنفيذ الدراسة وتم تطوير مقياس سلم تقدير لفظي لتقييم مهارة الكتابة لدى الطالبات. للإجابة على سؤال الدراسة تم تحليل البيانات باستخدام المتوسطات الحسابية والانحرافات المعيارية وتحليل التباين الأحادي المشترك (ANCOVA). وقد أظهرت نتائج اختبار الكتابة لكلا المجموعتين أن هناك فروقا ذات دلالة إحصائية على مستوى $(\alpha=0.05)$ بين المتوسطات الحسابية للمجموعتين التجريبية والضابطة لصالح المجموعة التجريبية. مما يعني أن البرنامج التدريسي المعزز بالويب كان أكثر فاعلية لتطوير مهارات الكتابة لدى الطالبات. ولذلك أوصت الدراسة القائمين على التعليم لتوظيف WELL لتعليم اللغة الإنجليزية بفاعلية. الكلمات المفتاحية: برنامج تدريسي، التعلم المعزز عبر الويب، مهارات الكتابة.

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1. Introduction

English is one of the most important subjects in the learning process. It has become the first and most widespread language worldwide since it is the language of science, technology, and scientific research. Writing is a vital academic skill that must be developed to succeed in education and future careers (Boonpattanaporn, 2008). Despite the importance of writing skills in the English language, it is a challenging skill that English as a Foreign Language (EFL) learners need to develop, Enneifer (2021) believed that EFL students face numerous problems in writing in English including spelling, punctuation as well as grammar. Teaching EFL writing is a challenging task for several reasons. Teachers come across unique challenges when teaching EFL students because of the learners' English language proficiency, first language (L1) influence, and familiarity with the target culture (Guo et al., 2019).

Learners communicate their ideas through writing and may enhance other language components like vocabulary, spelling, and grammar ensuring they learn more about how to write well (Latifah & Rahmawati, 2019). Even though writing is an essential skill for language production (Hyland, 2003), it is commonly regarded as the most difficult skill in the EFL context where students face several challenges in writing such as vocabulary, grammar, spelling, and student readiness (Fareed et al., 2016). When taught appropriately, writing can reinforce the grammatical structure and vocabulary that students are expected to learn while learning EFL. Kibler et al. (2016) implied that teachers are generally improvised in adopting the appropriate pedagogical approaches and classroom techniques to use in the K-12 EFL writing classroom. Therefore, identifying effective instructional practices is required to enhance the quality of EFL writing teaching and learning. The current era is witnessing many rapid changes in the flow of knowledge, and technology. As learners live in the era of satellite communication, mobile phone networks and Internet services, teachers should be equipped with the appropriate knowledge to use technology to facilitate the educational process and help students develop learning skills using these technologies. Alnujaidi (2017) argued that despite the benefits offered by technology in foreign language teaching and learning contexts, technology integration in the classroom remains a challenging process due to several factors. Some of these factors are related to the students' and teachers' attitudes towards the use of technology in the classroom. Furthermore, students' and learners' skills in using technology in the classroom determine whether this use is beneficial

or a waste of time and effort.

In their pedagogical practice, web-enhanced language learning WELL technologies have been used as a form of instructional technology to enhance teaching effectiveness and student achievement (Egbert, Nakamichi, & Paulus, 2002). The term WELL includes audio and visual technology and all kinds of software that can be used to support the language learning process. The use of WELL has developed dramatically since the Covid-19 pandemic. In the beginning, students and teachers were not fully trained to use it, and this caused a kind of misuse and resistance to the use of the new technology in teaching. However, several researchers showed the positive impact of distance learning and technology use in teaching EFL afterward like Hazaymeh (2021) and Jittisukpong (2022). Teachers have learned to use WELL technologies through various teacher education programs, professional organizations, conferences and other resources (Arnold & Ducate, 2015). Therefore, the researcher realized the importance of studying the effectiveness of WELL in teaching writing. Whether teachers approve it or not, learners have access to the web and spend a good amount of their time using it, therefore, it is wise to equip them with the awareness and skills to use such available tools to improve their language learning in general and writing skills in particular.

1.1 Statement of the problem

EFL students in Jordan face difficulties in writing, some local studies in Jordan addressed this problem like Al-Sariera and Yunus (2023) who found that the EFL Jordanian students failed to achieve coherent writing because of their limited vocabulary knowledge. They suggested employing modern techniques and practices in teaching to overcome these obstacles. Adas & Bakir (2013) encourage teachers to try new methods other than the traditional ones of teaching and help the students become better achievers. Cameron (2003), also believed that students' achievements increase with positive motivation towards learning, he suggests that students' motivation increases when the material is varied as in using interactive learning tools such as simulations and static graphics in an online environment. Therefore, this study aims to determine the impact of a proposed instructional program using Web-Enhanced Language Learning on writing skills among tenth-grade female students in Jordan.

1.2 Purpose and Questions of the Study

The purpose of this study is to find out the effect of applying an instructional program based on WELL on writing skills among tenth-grade

female students in Jordan, therefore, this study comes to answer the following question:

1. Are there any statistically significant differences at ($\alpha = 0.05$) in the writing mean scores of tenth-grade EFL students in Jordan, attributed to the instructional program based on WELL versus the conventional method?

1.3 Significance of the study

The importance of this study is derived from the importance of writing skills that English students need to master and the importance of providing the students with adequate skills to make use of the web to enhance the learning process. Students may benefit from the program by enhancing their writing skills and their self-learning skills using the Web. The findings of this study can also indicate to the curriculum designers and decision-makers whether to emphasize the use of technology in the curriculum design or to avoid it. The results will show a realistic indication of whether using WELL can enhance or decrease the learning process. The developers of EFL teachers' technological pedagogical content knowledge (TPACK) can also benefit from the results of this study by being introduced to the practical use of technology in teaching English. In addition, this study can direct the attention of researchers to the importance of conducting more research on using WELL in teaching other skills and on investigating the students' beliefs toward these instructional programs.

1.4 Definitions of terms

This section provides the definitions of the main terms of this study.

1. Web-Enhanced Language Learning:

The use of the service that runs on top of the internet, the World Wide Web, provides language learners with access to online resources and learning activities that would not be available to them in conventional classroom-based study. In this study, WELL includes interactive activities based on gaming using the Wordwall website, watching videos, communicating on WhatsApp, and posting the students' writing on Padlet, a web-based platform that is used to post students' writing for peer feedback and assessment. More sophisticated forms of WELL blend activities in the classroom with Web-enabled online learning activities which promote collaborative learning among students even when they are distant from the classroom. The impact of this WELL on the students' writing skills was examined by implementing a writing test.

2. Writing skills:

Writing skills in the English language is an art through which a person can express their thoughts, feelings, points of view, and everything that goes through their mind by using proper language as a medium to convey these ideas and present them to others in the form of a written topic (Rahayu, 2020). In this study, writing skills refer to learners' abilities to produce linguistically and rhetorically acceptable pieces of writing that are informative, address a specific audience and can be measured by a writing test.

Limitations and delimitations of the study

1. The study is limited to the participants who were 44 students distributed into two sections of tenth-grade female students at Al Jubeiha school in Amman.
2. It is limited to Action Pack 10 units six, seven and eight.
3. The study is also limited to the second semester of the academic year 2023-2024.

2. Literature review

2.1. Theoretical Background

Since the study investigates the impact of an instructional program based on WELL on students' writing and encourages students to post their writings on a blog for peer feedback, this theoretical background discusses the concepts of WELL, peer- feedback, writing skills and blogs.

2.1.1. Web Enhanced Language Learning

The focus of the classroom has shifted from the instructor to students' needs being taught to acquire skills set for the twenty-first century. Twenty-first-century learning can be understood as the learning experiences that help students foster the sociocultural, cognitive, metacognitive, productive, and technological competencies to function in a 21st-century workplace (Koh, Chai, & Lim, 2016). This type of learning includes abilities in eighteen social and cross-cultural interactions, productivity and accountability, leadership and responsibility. It also includes information literacy, media literacy, technology literacy, flexibility and adaptability, and creativity. All these aspects need more effective learning resources and methods, and more exposure to authentic and real-life situations for language use. WELL, is expected to fulfill this need if properly used.

Swinton (2018) argued that as second language learning continues to grow, world language teachers across the globe have been making strides

to integrate instructional technology into their pedagogical practice to improve language acquisition. Community, family, and peer interaction are social-cultural assets that can promote extended learning contexts beyond the classroom through the use of mobile devices (Borrero & Yeh, 2010). Although early attempts to experiment with computers in language teaching date back to the 1960s, when some teachers managed to design their materials on big mainframe computers, it was not until the early 1980s that Computer-Assisted Language Learning (CALL) officially became a field of interest in English language teaching. At the time, CALL dealt with (CD-ROMS) and software programs that featured mainly point-and-click activities with immediate feedback. The web only emerged as a topic in (EUROCALL) conferences in 1995, when language teaching professionals still harbored doubts about the benefits of its implementation in the language classroom because it lacked the degree of interactivity existing software had achieved (Manda, 2017).

The fascinating technological innovation provided limitless access to a wide array of data. Since the user was then regarded as a consumer, being able to read but not to modify or interact with the content in any way, this first version of the web came to be known in time as the Web 1.0, the Read Web, or the one-way Web (Al-Nafisah, 2015). The Read Web brought about significant changes in education since vast amounts of information were equally available to teachers and students at any time and beyond the educational setting. This development was especially relevant to foreign language learning since it was possible to find authentic material, increasing students' motivation and exposure to the target language. With widespread access to constantly updated material, such as news sources, encyclopedias, etc., information overload became an unavoidable concern. Furthermore, without appropriate guidance from the teacher, students would "copy and paste" material for school projects, making it evident that the abundance of resources did not constitute an educational advantage on its own (Zadeh, 2018).

The movement of reform and change has given our educational system in the Hashemite Kingdom of Jordan, starting from the early childhood stage until the end of the secondary stage, a large space to take advantage of the available technology to improve the teaching and learning process. Efforts to address 21st-century skills in today's classrooms are apparent all around the globe (Voogt & Pareja Roblin, 2012). To achieve the goals of this new curriculum, the curriculum development for the basic school stage in Jordan requires the teacher to be aware of modern

educational technologies, including Web Enhanced Language Learning WELL.

2.1.2. Writing skills

Writing is one of the language skills that English learners should master to facilitate using the target language for communication whether for personal relationships or career purposes. Enneifer (2021), Latifah & Rahmawati (2019) and Fared et al. (2016) believed that to achieve learning writing, several subskills need to be learned, vocabulary, spelling, punctuation and grammar. Davis & Liss (2006) believed in achieving good writing by focusing on two goals, Rhetorical and language focus. They think writers can achieve rhetorical competence by developing good content of the topic, organization on the text and paragraph levels, and coherence and cohesion of the written text.

2.1.3 Peer feedback

Feedback is important for students in the learning process in general, Poehner and Infante (2017) indicated that feedback informs the learners about their understanding of a specific area of the second language. Feedback in foreign language education refers to 'reactions to incorrect learner utterances' (Ellis, 2006). The student-centered pedagogy is considered the most effective way of teaching recently (Otara et al., 2019). This approach addresses the dissimilar needs and interests of the learners who work cooperatively for their learning. These learners develop their communicative skills via discussion with their peers and discussing their language use whether with or without the help of the teacher. An outstanding feature of the student-centered approach is peer feedback, which is also referred to as peer review that is used along with or in place of teachers' feedback (Dippold, 2009).

Although research revealed that some students felt uncomfortable and embarrassed about exposing their work online and receiving criticism publicly, web-enhanced peer feedback is preparing these students for their future in which "they will be exposed to open criticism throughout their careers" (Silva & Moreira, 2003). Therefore, students should be exposed to both negative and positive feedback from their peers and teacher, this will not only help them improve their writing but will also prepare them for real-life situations in which they will receive suggestions for improvement in all aspects of life. Teachers should set clear rules about the manners of giving feedback and encourage students to build positive attitudes about it.

2.1.4 Blogs

Using blogs in teaching EFL gives students the chance to express themselves through interaction and gives them access to English resources to improve their acquisition of the language. Using blogs to achieve this interaction is based on Vygotsky's sociocultural theory (Marginson and Dang, 2017). Social interaction via blogs among learners and their mates leads to learning in an interactive context. It allows the less proficient students to learn from their more proficient peers in a sociocultural environment.

2.2. Related Studies

Several studies have dealt with the employment of WELL in language teaching and acquisition. For example, AlZahrani and Al-Otaibi (2024) examined the impact of artificial intelligence, notably ChatGPT, which is considered part of WELL on enhancing EFL writing skills among high school students. A pre-post test design was employed on middle school participants who used ChatGPT over eight weeks. The results showed improvement in writing skills, so the researchers recommended the incorporation of AI in EFL curricula.

In Jordan, Al-Jboul and Al-Sharah (2019) investigated the impact of an instructional program based on cloud computing on the development of writing skills in the English language among tenth-grade students. There were forty participants male and female students from Jordan University School. The experiment took place over eight weeks, and results showed a statistically significant difference between the two groups that can be attributed to the impact of the instructional program at all writing levels in favor of the experimental group. There were statistically significant differences in the post-writing skills test (Linguistics skills, Discoursal skills) that can be attributed to differences in group gender in favor of the females.

While in Egypt, Helwa (2016) examined the effectiveness of using some web-based social learning applications in developing EFL secondary-stage students' writing skills and self-esteem. The research was a mixed research methodology that combined quantitative and qualitative inquiry methods. The participants of the study were thirty students enrolled in the second year at Met-Kenana Secondary School for Girls in Egypt. The experimental group was taught through a program based on some web-based social learning applications (Edmodo, Facebook and Twitter). The instruments of the research included an EFL writing skills

test, a self-esteem scale, and a semi-structured interview. The results revealed a statistically significant difference between the mean score of the study participants in the EFL writing skills and self-esteem in favor of the post-administration. These results were ascribed to using some web-based social learning applications.

Another study was also conducted in Turkey by Cakir, Solak and Tan (2015) in which the researcher employed augmented reality applications in teaching English vocabulary by providing new vocabulary to two control and experimental groups, in the control group the vocabulary was presented in the traditional form, while it was presented in the experimental through the application of augmented reality, and the results of the study showed an increase in the learning motivation of the experimental group in addition to increasing their yield of the vocabulary provided, compared to the control group.

Segers and Verhoeven (2009) examined the effects on writing while learning in an Internet environment using WebQuests in elementary school classrooms in the Netherlands. Children were given a task to write a travel brochure describing an extensive trip and were given the chance to search for information on the Internet. One group conducted a closed-search WebQuest and the other one conducted a free-search WebQuest. 229 sixth graders were participating in the study. The closed-search WebQuest resulted in better learning outcomes than free-search conditions while language quality performance was higher under free-search conditions

In conclusion, the studies above investigated the effect of using WELL in various forms on writing skills. AlZahrani & Alotaibi (2024) studied the impact of AI in particular while Al Jboul & Al Shra'a (2019) investigated the effect of a web-based program. On the other hand, Helwa (2016) studied the impact of social web-based learning (Edmodo, Facebook and Twitter) while Segers & Verhoeven (2009) studied the impact of WebQuests. This study is distinguished from the previous studies because it combines the effect of social web-based learning in addition to the use of blogs, peer feedback, multimedia, videos and gamification on the learning process to build the subskills necessary for learning writing.

3.1. Study Methodology

To achieve the purpose of the study, the researcher used a quasi-experimental design with one independent variable having two levels: the instructional program based on WELL and the conventional teaching

method. There is one dependent variable: students' writing achievement. The design of this study is quasi-experimental which is statistically represented as follows:

EG: O1 X O2

CG: O1 O1

EG: is the experimental group, CG: is the control group, X: is the treatment "the instructional program based on WELL", and O1: is the EFL writing achievement test.

3.2. Participants in the Study

The participants in the study were chosen purposefully from Al Jubeiha School for Girls in Jordan who were registered in the scholastic year 2023 – 2024. This school was selected among several schools in Al Jami'a Directorate since the school and the tenth-grade teacher agreed to participate in the study and were willing to cooperate with the researcher. Two tenth-grade sections were randomly assigned to participate in this study among five tenth-grade sections. They were randomly assigned as the experimental group (22 students) and the control group (22 students). Units six, seven and eight of Action Pack 10 were taught, while the experimental group students were taught by applying the instructional program based on WELL, the control group students were taught by the conventional teaching method. A third section from the tenth grade was also chosen for the pilot study to ensure the reliability of the instruments.

3.3. Instruments of the Study

To collect data for this study: a writing achievement test with a writing rubric was designed to answer the question of this study. The writing test was designed to investigate the impact of the instructional program on writing skills. The test was taken from the tenth-grade textbook to guarantee the appropriateness of the test. The researcher also added some instructions and guiding questions to guarantee the clarity of the test. Students in both experimental and control groups were given the writing pre-post test to find out if there was an impact of the instructional program on students' writing skills.

To mark the students' writing, the researcher developed a writing rubric to mark the writing test referring to the literature. Enneifer (2021), Latifah & Rahmawati (2019), and Fareed et al. (2016) assured the significance of grammar, vocabulary, spelling and punctuation in developing writing skills, in addition, Davis and Liss (2006) emphasized the importance of linguistic and rhetorical focus in writing and highlighted

essay organization, content, coherence and cohesion to as the main aspects of rhetorical competence. Therefore, the rubric was divided into two main domains, the rhetorical and the linguistic features, the rhetorical features were given (60%) of the total mark while the linguistic features were given 40%. The total mark of the writing exam was out of (100), each domain was divided into the following sub-categories with the following mark distribution based on the mentioned literature and the referee's suggestions:

Table (1) The subskills for the rhetorical features

Rhetorical features	Content	Essay organization	Paragraph organization	Coherence	Cohesion	Total
Marks	12	12	12	12	12	60

Table (2) The subskills for the linguistic features

Linguistic features	Grammar	Spelling	Punctuation	Vocabulary use	Total
Marks	12	8	8	12	40

3.4. The teaching method

The researcher developed an instructional program based on the related literature and the Intended Learning Outcomes (ILOs) of Action Pack 10 (The Ministry of Education, 2013) to study the impact of using WELL on Jordanian EFL tenth-grade female students' writing skills. The study was conducted at Al Jubeiha School for Girls, the program was introduced to the experimental group only, while the control group was taught by the conventional method based on the teacher's book. The researcher trained the teacher and discussed the objectives of the instructional program based on WELL, the researcher also provided the teacher with detailed lesson plans for the program and all the web-based activities. The researcher also observed some classes to ensure the program was implemented appropriately. The program took place over eight weeks during the second semester of the scholastic year 2023-2024, units six, seven and eight were taught for both sections with the same number of classes and by the same teacher. Although the study aimed to investigate the effect of WELL on writing, it did not address the writing exercises only. The subskills needed to improve writing skills as presented by Enneifer (2021), Latifah & Rahmawati (2019) and Fareed et al. (2016) and Davis and Liss (2006) were included in the program, basically vocabulary, grammar, punctuation, spelling, coherence and cohesion. The program scaffolded students' autonomous learning by implementing flipped classes since flipped learning (FL) optimizes an innovative pedagogical strategy that shifts direct instruction outside the classroom and

dedicates class time to active learning (Johnson & Renner, 2012).

The experimental group learned vocabulary and grammar by referring to the videos and the interactive worksheets based on gamification using Wordwall. Gamification is believed to boost students' performance and engagement (Bawa, 2015) while Wordwall is proven to enhance language proficiency by Darmawan, Santosa and Dewi (2023). In this program, the students could listen to the pronunciation of the new vocabulary, match the new vocabulary with their meanings or pictures within several game templates they could choose according to their preferences. They could get immediate feedback for their answers, and repeat playing the games till they got higher scores. They could also add their names to the leaderboard to compete with each other. Regarding the writing exercises, the experimental group referred to authentic educational videos provided by the program to enrich their knowledge of the writing topics, they also posted their writing on a blog, giving and receiving peer feedback to edit their writing accordingly. The control group on the other hand studied vocabulary and grammar by using the book and referring to limited access to online dictionaries as recommended by the teacher's book. Peer feedback was implemented as mentioned in the teacher's book in the conventional way of checking the peer's notebook and giving feedback. They learned the new vocabulary by memorizing the meanings and answering the exercises in the textbooks.

3.5. Validity and Reliability of the Research Instruments

Validity of the Research Instruments

The research instruments, the writing achievement test with the rubric were sent to fifteen EFL university professors and English supervisors at schools in the private and public sectors to validate the instruments of the study. The jury gave feedback regarding the exam instructions' relevance, appropriateness, and clarity. For the writing rubric, the jury gave their feedback on the accuracy of the criteria, comprehensiveness, relevance, and mark distribution. Some comments were about the number of words for the writing question to reduce them to (100-150) words instead of 200 words. Another comment was to simplify the language of the instructions and questions for each topic. In addition, some professors suggested including the same questions from the students' textbooks to ensure the appropriateness of the exam level.

Regarding the rubric, some comments were about clarifying the description of each criterion and changing the mark distribution to increase

the marks allotted for grammar and vocabulary compared to spelling and punctuation. Another comment was to increase the total mark for the exam to be out of one hundred not twenty. The researcher considered these comments and made adjustments accordingly.

Reliability of the research instruments

Reliability was established by choosing a pilot group from the same school, the writing test was given to the students and repeated after two weeks to calculate the Cronbach Alpha which was (0.906) which is considered statistically significant.

Statistical analysis

- To ensure the reliability of the test-retest reliability method (test-retest) was used.
- The mean scores, standard deviations, adjusted mean scores and standard errors were also calculated. To find out the effect size, Eta square was also obtained.
- One-way MANCOVA test was also used to test the statistical differences between the mean scores of the two groups concerning their responses to the writing tests.

Findings

This study aims to determine the effectiveness of a proposed instructional program based on using WELL on writing skills among tenth-grade female students in Jordan.

Therefore, this study comes to answer the following question:

1. Are there any statistically significant differences at ($\alpha = 0.05$) in the writing mean scores of tenth-grade EFL students in Jordan, attributed to the instructional program based on WELL versus the conventional method?

To answer this question the researcher marked the writing exam and the results were analyzed by calculating the means and standard deviations of students' writing as shown in Table 3. Table 3 reveals there were differences in the mean scores of both groups (experimental and control). The mean score of the experimental group on the post-test for writing was (71.500) while the control group's mean score was (53.591).

Table (3) Means and standard deviations of tenth-grade students about the program of teaching (Conventional Vs. based on WELL)

Dependent Variable	Group	N	Pretest		Posttest	
			Mean	St.Deviation	Means	St.Deviation
Writing test						

Dependent Variable	Group	N	Pretest		Posttest	
			out of 100	Control	22	51.136
	Experimental	22	56.682	19.318	71.500	18.249

To test if those differences were statistically significant at ($\alpha=0.05$), a One-way Analysis of Covariance (ANCOVA) test was applied. Results were presented in Table 4. Table 4 reveals that there were statistically significant differences in the mean scores of students of both groups regarding their writing skills due to the teaching method. The "F" value (9.593) is statistically significant at ($\alpha=0.05$).

Table (4) One-way analysis of covariance (ANCOVA) of the writing skills mean scores due to the program of teaching (Conventional vs. WELL)

Dependent Variable	Source	Sum of squares	Df	Means squares	F	Sig	Partial Eta Square (η^2)
Writing test out of 100	Pre-test	156.230	1	156.230	0.466	0.499	0.011
	Method of teaching	3217.914	1	3217.914	9.593	0.004*	0.190
	Error	13752.588	41				
	Total	189562.00	44				
	Adjusted total	17436.909	43				

* Statistically significance at level ($\alpha = 0.05$).

The adjusted mean scores and standard errors were also calculated. As given in Table 5, the adjusted mean score of the experimental group (71.203) was higher than the adjusted mean score of the control group which was (53.888). This indicates that the differences were in favor of the students who were taught using the instructional program based on WELL.

Table 5. Adjusted mean scores and standard errors of students of both groups (experimental vs. control) of the writing skills mean scores due to (Conventional vs. WELL-based program)

Achievement in the writing test	Group	Adjusted Mean	Std. Errors
	Control	53.888	3.929
	Experimental	71.203	3.929

Discussion

This study aimed to answer the following question:

Are there any statistically significant differences at ($\alpha = 0.05$) in the writing mean scores of tenth-grade EFL students in Jordan, attributed to the instructional program based on WELL versus the conventional method?

The study showed that there was a statistically significant difference

at ($\alpha=0.05$) between the mean scores of the two groups' results. The difference was in favor of the experimental group which was taught using the WELL-based instructional program. This could be due to several reasons related to using gamification, which was used to teach vocabulary and grammar and allowed the students to repeat the exercises until they mastered them. Gamification is based on student-centered pedagogy which is recently considered the most effective way of teaching (Otara et al., 2019). This result is consistent with the results of Cakir, Solak and Tan (2015) in which using augmented reality improved learners' motivation and learning vocabulary, and the study of Al-Jboul and Al-Sharah (2019) who found a positive effect of an instructional program-based on cloud computing on the development of EFL writing skills among tenth-grade students. Posting the students' writing on a blog could have encouraged them to write carefully and edit their writing with the assistance of the autocorrection provided by the program, this is supported by the results of AlZahrani and Alotaibi (2024) who found a positive effect for AI on learners' writing.

The program also provided the students with several authentic resources like videos to enrich their ideas about the topics they studied which could have enriched the vocabulary they used. Peer evaluation which was a major part of the WELL program could have affected the students' writing since they had to give precise feedback to their colleagues, this activity needs revision and high-level skills to do so, as responding to the students' feedback and editing the writing according to the valid comments gave the students a chance to use the language for social purposes, this goes with the results of Helwa (2016) who found a positive effect of using some web-based social learning applications in developing the students' writing skills.

In conclusion, the WELL instructional program had a positive impact on improving the tenth-grade female students' writing which could be related to being exposed to authentic materials like online videos, playing learning games, posting the writing on a blog, having access to peer feedback and communicating with each other via the net.

Recommendations

Based on the result of this research, the following are the recommendations for other researchers, English teachers, curricula designers and stakeholders.

1. Stakeholders should consider implementing WELL in the educational

- system in a well-prepared way.
2. Stakeholders should train the teachers to use WELL efficiently in the classroom.
 3. Curricula designers should include WELL in the textbooks and make them a basic part of the learning process.
 4. Other researchers are encouraged to study the effect of using WELL on other skills and for other grades.
 5. More research should also be conducted on the criteria and limitations of using WELL.

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