

Using Second Life Applications to Develop EFL Linguistic Competence among Secondary School Students

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Abstract

The use of virtual worlds applications has been growing as a method to facilitating foreign language acquisition. Existing literature adopting virtual worlds has investigated the efficacy of various applications (e.g., *Active Worlds*, *Quest Atlantis*). However, few studies have explored the potential effects of using Second Life applications in the language learning process in the Arab world. This study investigated the impact of using Second Life applications (Second Life, Second Life Educational, and Second Life APK (Second Life version for Mobile and Android) applications) on EFL students' linguistic competence. The study followed quasi-experimental one- group pre-posttests design. Participants of this study were some of first year secondary school students (n=12) in one class at Al-Shoban Al-Muslemeen Secondary school Benha Educational Administration El-Qulubia Governorate during the first semester of the academic year 2022-2023. The instruments and materials of the present study included an EFL linguistic competence checklist, a pre and a post EFL linguistic competence tests, and an analytic rubric for scoring and analyzing students' performance and a program based on Second Life applications to describe in detail the steps to be followed to develop EFL linguistic competence. Findings of paired samples t-test indicated a significant difference between the mean scores of the participants in the pre and post test of the EFL linguistic competence components in favor of the post test, at the (0.01) level of significance. It can be concluded that using some Second Life applications is effective in developing EFL linguistic competence among first year secondary students.

Key Words: *Virtual world, Linguistic competence, and Second Life applications, EFL students*

استخدام تطبيقات "Second Life" لتنمية الكفاءة اللغوية في اللغة الإنجليزية كلغة أجنبية لدى طلاب المرحلة الثانوية

ملخص

تهدف الدراسة الحالية الى تطوير الكفاءة اللغوية فى اللغة الإنجليزية كلغة أجنبية لدى طلاب المرحلة الثانوية من خلال استخدام تطبيقات "Second Life" وكانت عينة الدراسة مكونة من مجموعة من طلاب الصف الأول الثانوى و عددهم ١٢ طالبة بمدرسة الشبان المسلمين الخاصة ادارة بناها التعليمية محافظة القليوبية بالفصل الدراسي الأول للعام الدراسي ٢٠٢٢-٢٠٢٣ واشتملت أدوات ومواد الدراسة على قائمة بالمهارات اللازمة لتطوير الكفاءة اللغوية فى اللغة الإنجليزية كلغة أجنبية، و اختبار قبلى و اختبار بعدى للكفاءة اللغوية فى اللغة الإنجليزية كلغة أجنبية، و مقياس أداء متدرج لتقدير أداء الطلاب فى اختبار الكفاءة اللغوية. واشتملت الدراسة على مجموعة واحدة كمجموعة تجريبية. وتم اعداد برنامج لتطوير الكفاءة اللغوية وتطبيق الأدوات والمعالجة التجريبية باستخدام تطبيقات "Second Life" وقد أشارت النتائج باستخدام اختبار "ت" لدلالة الفروق بين متوسطى درجات طلاب العينة فى الكفاءة اللغوية فى القياسين القبلى و البعدى الى وجود فروق ذات دلالة احصائية عند مستوى ٠,٠١ بين متوسطى درجات الطلاب فى القياسين القبلى والبعدى لصالح القياس البعدى ولذلك يمكن استنتاج ان استخدام تطبيقات "Second Life" ذو فاعلية فى تطوير الكفاءة اللغوية فى اللغة الإنجليزية كلغة أجنبية بين طلاب المرحلة الثانوية.

الكلمات المفتاحية: العالم الافتراضى، الكفاءة اللغوية، تطبيقات "Second Life"، طلاب اللغة الإنجليزية كلغة أجنبية

Introduction

Linguistic competence is one of the most significant components of communicative competence. The acquisition of the linguistic competence allows students to construct and understand sentences with ease and in a short time. Learners should be linguistically competent to be able to communicate effectively and convey messages in a way that is easily understood by various audiences. Linguistic competence involves the ability to communicate and comprehend effectively through the language.

In the twentieth century Chomsky, one of the most effective linguists, introduced his ideas about language that linguistic knowledge is propositional which is explicitly opposed to the behaviorist philosophy (Coliva, 2018). Chomsky argued that the ideal speaker-listener is the one who has full mastery of the spoken language in the various situations. Besides, every speaker should have grammatical competence to be able to present the knowledge of the language (Jeong, 2018).

Chomsky pointed out that linguistic competence is the unconscious knowledge of grammar that helps learners to produce and understand language (Denham& Lobeck, 2013). Understanding the utterances' literal meaning is the main frame of this knowledge of the language code (Wahyuni et al., 2014). Moreover, Chomsky differentiated between competence and performance as two types of linguistic ability. Competence is related to the learner's capacity to produce a language, while the term performance is used to describe the actual production of a language as a result of psychological processes (Collins, 2007)

Linguistic competence involves the word formation and vocabulary (lexicon), pronunciation (phonology), and sentence structure (syntax). Based on the needs of a certain communication process, learners should utilize various grammatical structures and vocabulary to be able to communicate effectively and to be clearly understood. Therefore, linguistic competence serves as the basis for other communicative language competences in the process of language acquisition (Varpe, 2018).

Linguistic competence is related to the ability to produce and understand an unlimited diversity of a novel, and a grammatically accurate sentence. Consequently, linguistic competence underlies the utilization of creative rule-based language and language learning (Bagaric& deijunivoc, 2007). Moreover, linguistic competence refers to the knowledge and ability of learners for the appropriate use of a language in the communicative situations (Wahyuni et al., 2014).

Linguistic competence involves the knowledge of lexical items and of rules of morphology, syntax, semantics, and phonology (Obeso, 2015). According to Budikova (2020), it is related to learners' ability to and knowledge of using different resources of language to construct well-structured messages. Linguistic competence includes the sound system and the lexicon as well as the grammar. In other words, Linguistic competence is linked to five main components: phonetics (articulation of sounds correctly), phonology (sounds patterning), morphology (words formulation), syntax (sentences formulation) and semantics (words and sentences interpretation) (Varpe, 2018; Abdulrahman & Abu-Ayyash, 2019).

Since the linguistic competence has fundamental importance, many studies focused on the low level of the learners' linguistic competence. Dobakhti and Khorrami (2020) conducted a study to examine the effect of using focus on form approach via Dictogloss technique to develop university students' linguistic competence. The results indicated the superiority of focus on form approach via Dictogloss technique. The findings revealed significant effect of the dictogloss treatment on the linguistic competence of the learners.

Alrajhi (2021) investigated the impact of the long-term exposure to gaming on the development of undergraduate students' linguistic competence. The results revealed that participants had positive learning outcomes from their accumulative gaming experiences, although accumulative gaming has greater potential for the development of receptive skills rather than productive skills in the target language.

Abdelwahab (2021) examined the effect of using content and language integrated learning (CLIL) to improve English majors' linguistic competence and critical cultural awareness. Results indicated

that the treatment helped students improve their linguistic competence and their critical cultural awareness.

Allam (2022) investigated the impact of using gamification-based strategy on enhancing EFL students' grammatical competence. Results revealed that gamification-based strategy was effective in developing EFL secondary stage students' grammatical competence.

Berezenko et al. (2022) investigated the effectiveness of using the communicative approach to study grammar structures to upgrade the university students' linguistic competence in order to achieve the proficiency level in real communication. Findings showed that communicative approach has positive effects on developing students' linguistic competence.

Nowadays, technology has been a fundamental part of our lives. The new generation has grown up in light of the successive advances in technology. It is one of the most important drivers of both social and linguistic advances. Among the advanced technologies, virtual world is one of the most attractive technologies for learning and language acquisition. The virtual environment not only includes images, videos, audios but it also produces an immersive environment that can engage learners in an authentic experience.

Virtual world is an environment that offers a simulated reality and behaves the way that real life does (Hollebeek et al., 2020). According to Li et al. (2022) virtual worlds are multiple dimensional virtual reality-based spaces in which learners symbolized by avatars can interact with each other real time.

Various theories stand behind virtual worlds and have been used to illustrate using virtual world in the teaching/learning process. Chen (2010) pointed out that the various potentials of this technology can support constructivism. Learners in constructivism learn through their various attempts to solve different problems. There are two schools within the constructivist theory: personal constructivism and social constructivism. Personal constructivism assumes that knowledge is constructed in the learner's head; this assumption is aligned with Piaget theories (Vrasidas, 2000). Social constructivism assumes that knowledge can be constructed socially in the practice communities

through social interaction (Vygotsky, 1978). Virtual world environment supports the view of social constructivism. Loke (2015) pointed out that virtual worlds provide learners with multiple opportunities to interact in social contexts and create knowledge through these interactions.

Situated learning theory is another theory currently used to explain the experiences of virtual worlds in the learning/teaching process. Situated learning emphasizes that learning takes place in the action of daily situation and that learning is an output of a social process (Stein, 1998; Hedegaard, 1998). Therefore, Dawley and Dede (2014) suggested that applying situated learning theory to virtual worlds can provide a realistic context that helps learners to think and act as they would in real life situations.

Besides, experiential learning is a modern theory that circles learning in doing, sensing, observing, reflecting, thinking and planning. Experiential learning emphasizes the active learner and the reflexive observation of learners (Sharlanova, 2004). Thus, Knutzen (2019) pointed out that virtual worlds emphasize experience and exploration rather than recall strategies.

Second Life applications are one of the well-known virtual world applications. It has been firstly produced as an objective-oriented game by its creator Philip Rosedale. Nevertheless, it has been improved and developed into a user created environment that can produce a collaborative environment (Meadows, 2007). Second Life applications can provide learners with social environment that allows them to interact, play and create content that cannot be accomplished in real life (Bennett& Peachey, 2007).

According to Cunningham and Harrison (2011) there are four main areas that Second Life applications can support educators to create suitable learning environment: *Communications and collaboration; Representations and simulations; Scaffolding, and Professional development.*

Communications and collaboration

Second Life applications can support the active collaboration between learners beyond the multi means of expressions, communications, dialogues, negotiations, and finally the deep learning

(Alloway et al., 2013). Wigham and Chanier (2015) indicated that Second Life applications provide learners with one of the most effective means to communicate which is “Chat”. It can simply enable learners to exchange information and communicate with others not only via text chat but also voice chat. In addition, using notecard displayers can be considered as one of the most interesting options for communication in Second Life applications as it can present texts, links, images, videos, and audios (Guzzetti& Strokrocki, 2013; Monova-Zheleva& Tramonti, 2015)

Representations and simulations

The virtual environment of Second Life applications provides learners with 3-D representations that enable learners to customize the learning materials easily and in different styles (Chau et al., 2013). Cunningham and Harrison (2011) pointed out that presentations via Second Life applications have two important aspects. First, materials and various ideas through videos, audios, narrations, and models. Second, Second Life applications provide learners with opportunities to represent their understanding of the purpose of summative and formative assessment. Moreover, Second Life applications provides a unique opportunity for the creation of simulations that imitate real life objects and events. These simulations offer an effective way for learners to practice various activities and tasks (Warburton, 2009).

Scaffolding

According to Campbell and Cameron (2016) scaffolding in the virtual environment of Second Life applications supports learners’ investigations, and inquiries and engage them in the learning experiences. Second Life applications can engage students in well-scaffolded tasks, group presentations, immersion software and experimentation. Besides, Second Life applications provide scaffolding for the type of knowledge that learners should build (Domingo& Bradley, 2018).

Professional development

Second Life applications are used to enter expert, discussions, online courses, seminars, and presentations of lesson plans. Moreover, Second Life applications provide efficient professional development that provide various authentic activities to help learners to be active such as teamwork, discussions, product and project development, research, reflection, demonstrations, and modeling (Vasileiou& Paraskeva, 2010).

Due to the multiple capabilities and benefits that Second Life applications offer for the learning/teaching process; some studies have been conducted to investigate its effects such as Kastoudi (2012); Kruk (2014) and Quintín et al., (2016).

Kastoudi (2012) investigated the effectiveness of the nature of the virtual environment of SL on learners' interactions and vocabulary acquisition. Findings showed that a great number of meaningful interactions and small but fundamental quantities of learning of vocabulary occurred.

Kruk (2014) investigated the effectiveness of using online activities and a browser-based virtual world enabled by Second Life applications in teaching the second conditional in English. The results revealed that the experimental group benefited from the treatment with the benefits being visible not only immediately after the treatment but also after four and eight weeks later.

Quintín et al. (2016) examined the impact of role-playing games enabled by Second Life applications on the oral practice of linguistic and discursive competences. The findings indicated that this type of experiences is understood as a favorable practice for the development of the oral proficiency of students.

Context of the Problem

Although increasing linguistic competence of EFL secondary students has been considered as a major concern of teaching English as a foreign language, students' linguistic competence level is still low. Moreover, the directives of the Ministry of Education for general secondary schools for the school year 2013-2014 indicated the importance of developing students' linguistic competence.

The problem was identified through reviewing literature and related studies. In light of the literature review, it was evident that there

is a need to improve their linguistic competence (Mohammed, 2021; Abdel-Wahab, 2021& Allam, 2022).

Reviewing literature, it can be concluded that few systematic attempts have been made to investigate the effect of using virtual worlds in the field of language learning such as: Hislope (2009); Castillo (2016) and Guzel and Aydin (2016) . The results of these studies suggested that language instructors should consider including virtual worlds with English language paired with native English speakers as part of their language instructor.

In addition, there are few studies that had been made to investigate the effects of using virtual worlds on developing learners' linguistic competence such as Labinska et al. (2021). Specifically, in Egypt there are few studies indicating the use of virtual worlds generally such as Saqr (2020). Therefore, in light of this paucity and novelty of literature this study aims to investigate the effects of using virtual world and whether it might constitute benefits for students to demonstrate their linguistic competence development.

Statement of the Problem

Although linguistic competence for EFL students is fundamental to master the language, students' level at the secondary stage in linguistic competence is low. Thus, the present study aimed at investigating the effectiveness of using Second Life applications as a virtual world applications for developing EFL Linguistic competence of secondary stage students.

Questions of the Study

The present study was an attempt to answer the following questions:

- 1- What are the components of linguistic competence required for EFL secondary students' stage?
- 2- How can virtual world-based program be used for developing EFL secondary stage students' linguistic competence?
- 3- What is the effect of using virtual world-based program on EFL secondary students' linguistic competence?

Hypotheses of the study

In the light of the reviewing the literature and related studies, the following hypothesis was formulated:

“There is a statistically significant difference between the mean scores of the study participants in the pre and post tests of the EFL linguistic competence components in favor of the post test.”

Significance of the Study

The present study will be significant to:

1- EFL Secondary stage Students:

- Motivating students to construct a range of grammatical structures correctly.
- Helping them interact with each other and exchange ideas collaboratively.
- Enhancing EFL students' linguistic competence.
- Allowing students to use one of the most advanced applications that enable them to communicate and interact freely.

2- EFL Teachers:

- Providing them with a checklist of EFL linguistic competence necessary for the EFL secondary stage students.
- Providing teachers with a new tool for enhancing linguistic competence.
- Providing teachers with up-to-date information on a possible way of conducting real-life situations.

3-Curriculum planners:

This study sheds lights on one of the newest technology tools that can enhance students' linguistic competence.

4- Researchers:

The present study may provide researchers with

- A checklist of EFL linguistic competence necessary for the EFL secondary stage students.
- A new dimension to the current literature from a wide variety of perspectives, the positive and negative sides of using virtual worlds to develop students' linguistic competence.

- Guidelines upon which further activities may be used to motivate students to enhance their linguistic competence.
- Encouraging them to use virtual worlds in their research.

Delimitations of the Study

The present study was delimited to the following:

- 1- First year students (n=12) of El-shoban El-Muslimeen Schools, Benha Educational Administration, El-Qualubia Governorate during the first semester of the academic year 2022-2023.
- 2- Three skills illustrating interactional competence required for first-year secondary school students.
- 3- Using Second Life applications (Second Life, Second Life Educational, and Second Life APK (Second Life version for Mobile and Android).

Participants of the Study

Participants of this study were 12 first year secondary school students in one class at Al-Shoban Al-Muslemeen Secondary School, Benha Educational Administration El-Qulubia Governorate in the study in the first term of the school year 2022-2023.

Instruments and Materials of the Study

To achieve the purpose of the study, the following instruments were developed and used by the researcher:

- 1- An EFL linguistic competence checklist required for first year secondary school students.
- 2- A pre and a post tests to measure students' EFL linguistic competence before and after the treatment and a rubric to score them.
- 3- A program based on some virtual world applications (Second Life applications) to describe in detail the steps to be followed to develop EFL linguistic competence.

Duration of the Implementation

The implementation was of twenty sessions that continued over eight weeks with three sessions per week and each session was about 90

minutes. An orientation session was prepared as the first session and the rest of sessions were for developing and consolidating EFL linguistic competence.

a-The EFL linguistic competence checklist

Reviewing literature and related studies on linguistic competence, a list of skills that illustrate the linguistic competence was prepared. The list included five skills. The checklist of the linguistic competence was submitted to a panel of jury members specialized in curricula and methods of teaching English (N=9) to determine the importance of each skill according to its appropriateness, omit any unnecessary skills, and to suggest any modifications.

b- The EFL pre and post EFL Linguistic Competence Tests

The main purpose of the pre and post EFL linguistic competence tests was to determine the effectiveness of using Second Life applications in developing the EFL linguistic competence among first year secondary school students.

Table (1) Test specification table of the linguistic competence

Skills Illustrating Linguistic Competence	Questions
1- <i>Construct a range of grammatical structures correctly.</i>	Students were given six pictures and asked to tell the story that the pictures show. Thus, this item measured the students' ability of using a wide range of appropriate and correct grammatical structures. Students were given 10 sentences and asked to choose the correct grammatical structure.
2- <i>Use the appropriate language in certain real- life situations.</i>	Students were asked to read some situations aloud and to respond to those situations.
3- <i>Produce sounds (consonants/vowels) correctly.</i>	Students were given six pictures and asked to tell the story that the pictures show. Through this item the students were assessed on producing consonants and vowels correctly.

4- <i>Use some idioms correctly.</i>	Students were asked to read some situations aloud and to respond to those situations using idioms.
5- <i>Use adequate range of vocabulary and structures</i>	Students were given 10 sentences and asked to choose the correct word that makes the sentence meaningful and sensible.

Validity of the EFL linguistic competence tests

Face Validity

The initial form of the tests was presented to a number of EFL staff members specialized in EFL curricula and methods of teaching (N=9) to estimate the validity of the EFL linguistic competence tests. The test items were checked concerning the suitability of the test items for first year secondary stage students, the time adequacy, clarity of the test instructions and items, and appropriateness of the test for the students' language level. The jury members approved the test it is in its initial form.

Internal Consistency

Pearson correlation coefficient between each item of the test and the total score was calculated to estimate internal consistency. Table (2) presents these correlations.

Table (2) Pearson correlations between the scores of the test items and the total score of the test

Item No.	Correlation
1	* , ٣٩٧
2	** , ٥٦٢
3	** , ٤٧٠
4	* , ٤٤٤
5	** , ٧٤٠

* Correlation is significant at the 0.05 level

** Correlation is significant at the 0.01 level

Reliability of the EFL Linguistic Competence Tests

Statistical Package for Social Sciences (SPSS) program (version 18), Cronbach's alpha, Guttman's, and Inter-rater reliability were used to estimate the EFL linguistic competence test reliability. Cronbach's Alpha coefficient reached (0.687) and Guttman reached (0.641). These values are acceptable reliability coefficients, and their relative decrease may be due to the small number of tests items.

Inter-rater reliability

The EFL linguistic competence tests were corrected by two raters. The first rater was the present study researcher while the second was another researcher* at Benha Faculty of Education. Using Pearson correlation coefficient, the correlation coefficient between the estimation of the two raters was (0.966) which is significant at the (0.001) level. This proved a high positive correlation between the two raters.

Facilities and Equipment Used in the Implementation

Some equipment and facilities were used during the implementation. There were 12 virtual reality glasses which were used to provide participants with more immersive virtual reality experiences. Besides, computers, internet and portable internet router were used during the implementation.

The program of using Second Life applications for Developing

Linguistic Competence

The implementation of the program consisted of 20 sessions to illustrate the skills underlying the linguistic competence. The sessions followed the stages of teaching using the constructivist learning design model (CLD) to engage the learners in making their own meaning and knowledge.

Stages of Teaching Using Second Life applications

According to Scott, et al. (2010) Constructivist Learning Design model (CLD) was used for developing students' EFL linguistic competence. CLD model offers a six-stages framework for learning, teaching and assessment. The following figure illustrates the stages of the model:

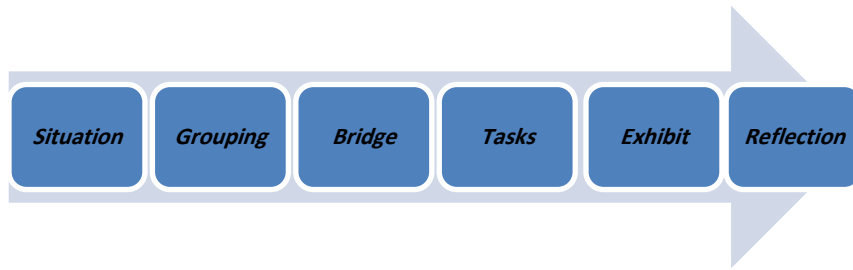


Figure (1) Stages of teaching using Second Life according to the CLD model (Scott, et al. 2010).

Situation

Students were motivated and encouraged to use technology and virtual worlds and they trained to sign up to make an account on Second Life applications and choose their avatars. Students were provided with an introduction about the main objectives of the session (such as introducing different kinds of verb tenses, producing vowels and consonants correctly, etc.). Moreover, various materials related to the topic were presented (such as videos, audios, presentations, etc.). Students were invited to the target spots in the landscape (such as: Reuters bureau, Coca-Cola Pavilion, A free garden with flat screen TV, DELL Corporation, etc.).

Grouping

Students were invited to teleport to an open garden (*such as Pea Garden, Sernity Garden, etc.*). Teacher guided some questions based on the provided materials and explanation using notecard displays such as: *What did you do last summer? What shape is the earth? What about your daily routine?* Students discussed the questions with each other using voice chat and sent feedback. New vocabulary and phrases were presented using notecard displays such as *agency, correspondent, editorialist, press, etc.* Students were guided to use the various sources of Second Life to find out the meaning of difficult vocabulary or phrases such as online dictionaries, websites, Cypris Village, etc.

Bridge

Students' prior knowledge was activated before introducing them to the new subject matter and they were actively engaged in discussions and activities such as “Hot chair” game, role playing, debates, and discussions in order to construct knowledge. In addition, students were

encouraged to share their thinking, expectations, and information together via Second Life voice or text chatting.

Tasks

Students were invited to teleport to various locations in Second Life according to the objectives such as Reuters bureau, Pizza Hut, DELL, etc. Students had time to find out the place and explore it. Teacher discussed some questions about the target spot such as *Who works for a news agency? Have any of you ever wanted to become a journalist? Why? etc.* Students were assigned to individual, pair or group work task such as role playing a situation, debates, problem solving, etc. and they performed the assigned tasks. Teacher monitored the learning process and helped students to brainstorm their ideas using local chat or voice chat. Students' performances were recorded and were sent to the teacher.

Exhibits

Students were asked to present in public what they have learnt, and they responded actively to questions raised by teacher and their classmates about their presentations. Students were asked to teleport to Cypris Village where they could practice the target language and interact with native speakers. Students performed different educational games at Cypris village such as Mystie Slade's 'Grammar test (Tense)', Phrase Invaders, etc.

Reflection

Students had various opportunities to think critically about their own performances and they were encouraged to reflect on their learning using the rubric. Students self-assessed their performances and assessed their peers using the rubric. Students reflected on their classmates' performances.

Findings

Table (3) shows the participants' mean scores, standard deviations (S.D), t-value, and level of significance in the pre and post tests of the EFL linguistic competence.

Table (3) the difference between the mean scores in the pre and post tests of the participants in the EFL linguistic competence components

Measurement	N.	Mean	S.D	Df.	t-value	Sig.
Pre-test	12	9.167	1.749	11	4.290	0.01
Post- test		191.333	1.497			

It is clear from table (3) that there is a statistically significant difference between the mean scores of the participants in the pre and post assessment of the EFL linguistic competence components in favor of post assessment, where the t-value is (4.290) which is significant at the (0.01) level of significance. Therefore, the hypothesis of the study was supported. This difference is illustrated by the following figure:

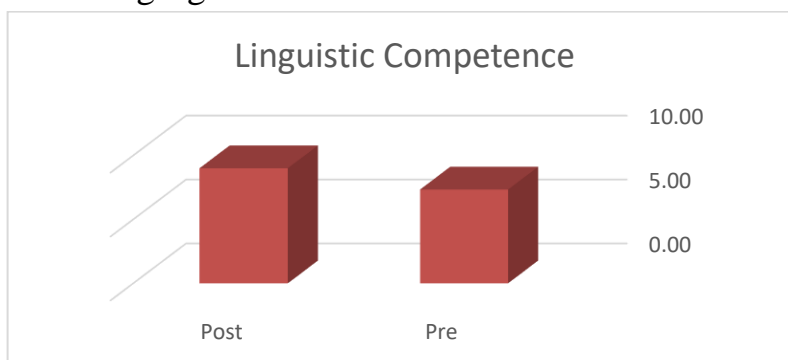


Figure (2) The difference in the mean scores of the study participants in the pre and the post tests of the linguistic competence components.

The Effect Size of Second Life applications on the EFL Linguistic Competence

The total effect size of Second Life applications on developing the first-year secondary students' EFL linguistic competence was calculated using the following formula:

$$\eta^2 = \frac{t^2}{t^2 + Df.}$$

η^2 is the total size of the approach.

t is the value of t -test.

Df is the degree of freedom.

The total effect size of Second Life applications (η^2 value) for EFL linguistic competence was calculated as illustrated in the following table:

Table (4) The total effect size of second life (η^2 value) for EFL linguistic competence

t-value	Df.	η^2
4.290	11	0.625

The previous table shows that the total effect size of Second Life applications on improving students' EFL linguistic competence is high as η^2 (0.625) was greater than 0.14 (Abou -Hatab & Sadek, 2010).

Discussion and Interpretation

The aim of the current study was to investigate the effect of using Second Life applications on developing first-year secondary stage students' linguistic competence. The findings indicated that Second Life applications seemed to be beneficial teaching method. The virtual learning environment enabled by Second Life applications had significant effects on achieving the required learning outcomes. Participants were more motivated to work at their own pace.

The findings of the pre and post-tests pointed out that the participants reacted positively to Second Life applications. This was noticed in their use of different grammatical structures, selecting the appropriate vocabulary, interacting actively, using idioms, and their accurate pronunciation. Technology is considered as one of the most important factors that led to this fruitful result. Second Life applications allowed participants to choose and design their avatars which represent their own personalities. Moreover, Second Life applications enabled participants to create their environments and offer them a sense of place and context that motivated participants to develop the required skills. The participants highlighted the engaging and unique nature of Second Life applications as the main factor, in their view, for increasing their motivation and made learning more interesting. A participant indicated that "*Second Life applications helps me to explore worlds and new places I would never be able to explore in my real life, it was very interesting.*"

The virtual environment of Second Life applications could address diverse learning styles and offered individualized learning experiences. The immersive environment encouraged the participants to represent

their performances visually and orally. Besides, there was considerable variation in the authentic activities that enabled participants to explore common situations that they may face in their own real life such as visiting a hospital and taking on the role of a patient and a doctor to improve their accuracy and fluency, exploring a museum and practicing various communication skills, going shopping to interact and practice interpersonal skills, visiting Cyper Village and interacting with natives and ESL learners and many other spots that facilitate practicing language effectively. A participant expressed pleasure for interacting with natives via Second Life applications “*it was incredible to meet American while setting at my classroom*”.

Using Second Life applications helped participants to construct a range of grammatical structures correctly and to enhance their pronunciation. It should be mentioned that the majority of participants had a good background in grammar structures and how to use it in writing while experiencing difficulties in applying those rules orally in different life situations. Therefore, the virtual environment contributed positively to encourage participants to apply the grammatical structures actually and correctly.

Various opportunities to practice the language by meeting in Cypris village were provided via Second Life applications. Participants attended various lessons in Cypris village (such as: English Lesson Time, Practice Grammar, Learning Vocabulary, etc.) that provided them with practice times and interacting with natives in various forms such as discussions, organized activities and chats. This may be an important reason for the participants’ linguistic competence improvement.

Before the implementation participants were asked to use some pictures and tell a story about it. Participants could not use some grammatical structures orally correctly, used limited range of vocabulary, did not use any idioms and could not use the appropriate language in certain social situations:

Participant 1:

Once upon the time, one sailor had a tripat the sea.Some thing wrong happenedin the boat. The boat was down....the sailor got lost for amonth after a month he return home.

Participant 2:

In the past,one sailor went to fishing..... in his small boat. The boat wasnot good and there wasa storm the sailor was..... lost.....some peoplefind the boat and the sailor.....they help himto go back.

The above example show that the participants were not able to utilize grammatical structure correctly, they use simple sentences, could not extract the events of the story, and could not use a wide range of vocabulary. The use of various materials enabled by Second Life applications such as educational videos and audios, the corrective feedbacks by the teacher, independent tasks, and the various online educational sources (such as dictionaries and Cypris Village) contributed strongly to motivating participants and engaging them in the learning process.

After practicing various activities and tasks, participants could develop their performances, use various grammatical structures correctly, pronounce sounds and vowels correctly, use some idioms appropriately and expand the events:

Participant 1:

There were several stories of people who have been lost at sea upon the time...one story is that of a famous sailor who sail for an island in the ocean...the engine of the boat died suddenly...and despite of all his efforts and tries, he could not complete his the rest of the way....he was lost... he was hopelessly lost...

Participant 2:

Once upon the time there was an old sailor who had a small boat.... One day he decided to go to fishing....everything was not so good for

sailing...suddenly, the clouds became gray, the waves were very high and then it was raining cats and dogs ...the old sailor was lost...

Second Life applications' affordances could raise and maintain the participants' motivation and contribute to invest more attention to master pronunciation and grammatical structures. Playing various videos and audios via Second Life applications helped participants to pronounce correctly by helping them to imitate natives and identify various idioms and how it can be used. Moreover, feedbacks that participants got during their interaction may be an important factor for improving participants' linguistic competence as it allowed participants to modify their language output. These results are consistent with those of Kastoudi (2011), Guzel and Aydin (2016), and Chen (2018).

Conclusion

The Findings of this study indicated that using Second Life application as a virtual environment had positive effects on developing EFL linguistic competence among first year secondary students. In addition, participants could use a wide range of grammatical structures correctly, produce appropriate language in various social situations and utilize idioms correctly. This can be due to the immersive environment enabled by Second Life application, authentic activities, various materials and interacting with natives.

Recommendations

Based on the results of the study, the following recommendations are presented:

- Second Life application provides an educational environment free of fear and threatening that can motivate learners. Therefore, it is recommended to be used in the learning/teaching process.
- Students should be given enough time to explore Second Life application and to understand its nature.
- Second Life application provides various opportunities for practicing authentic activities which is recommended for language acquisition.

Suggestions for Further Research

In view of the results of the present study, the following suggestions are recommended for further investigation:

- Examining the effects of using virtual worlds applications on developing students' EFL communicative competence by conducting a larger-scale randomized study with a diverse sample.
- Exploring the students' perceptions of using virtual world in the learning process by conducting interviews with the participants or other instruments.
- Investigate the long-term effects on using virtual worlds applications in the learning process by conducting a follow-up study one year after the implementation of using virtual worlds applications.
- Since Second Life applications proved to be effective in developing EFL learners' linguistic competence, it would be beneficial to conduct studies for developing other language skills such as reading, writing, speaking, etc.

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