

# Developing EFL Interactional Competence among Secondary School Students Utilizing Second Life Applications

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## Abstract

There is a lack of research investigating the use of virtual worlds to support learning English as a foreign language. This study investigated the effectiveness 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' interactional 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 interactional competence checklist, a pre and a post EFL interactional competence test, 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 interactional competence. Findings of paired samples t-test indicated a statistical significant difference between the mean scores of the participants in the pre and post tests of the EFL interactional competence components in favor of the post test at the (0.01) level of significance. It can be concluded that using Second Life applications is effective in developing EFL interactional competence among first year secondary students.

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

## استخدام تطبيقات "Second Life" لتنمية الكفاءة التفاعلية فى اللغة الإنجليزية كلفة أجنبية لدى طلاب المرحلة الثانوية

### ملخص

تهدف الدراسة الحالية الى تنمية الكفاءة التفاعلية فى اللغة الإنجليزية كلفة 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 وتم اعداد قائمة بالمهارات اللازمة لتطوير الكفاءة التفاعلية فى اللغة الإنجليزية كلفة أجنبية، و اختبار قبلى و اختبار بعدى للكفاءة التفاعلية فى اللغة الإنجليزية كلفة أجنبية، و مقياس أداء متدرج لتقدير أداء الطلاب فى اختبار الكفاءة التفاعلية. واشتملت الدراسة على مجموعة واحدة كمجموعة تجريبية تم تطبيق أدوات الدراسة عليها قبليا و بعديا وتم اعداد برنامج لتطوير الكفاءة التفاعلية وتطبيق الأدوات والمعالجة التجريبية باستخدام تطبيقات "Second Life" وقد أشارت نتائج اختبار "ت" لدلالة الفروق بين متوسطى درجات طلاب العينة فى الكفاءة التفاعلية 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" ذات فاعلية فى تطوير الكفاءة التفاعلية فى اللغة الإنجليزية كلفة أجنبية بين طلاب المرحلة الثانوية.

**الكلمات المفتاحية:** العالم الافتراضى، الكفاءة التفاعلية، تطبيقات "Second Life"، طلاب اللغة الإنجليزية كلفة أجنبية

## Introduction

Interactional competence is considered the heart of communicative competence that EFL learners should master. Communicative skills are important to learn a foreign language and are major aims of teaching English as a foreign language (EFL). Interaction in EFL is a fundamental but also a complex process. Interaction is dynamic and always co-constructed and is shared between speakers. The involved speakers are pro-active and re-active simultaneously. The growing role of the communicative approach emphasizes the greater role of interaction (Galaczi & Taylor, 2018).

Interactional competence includes a range of various skills for using language to attain social aspects and know when, how, and with whom to engage in conversational activities (Celce-Murcia, 2008). According to Young (2019) interactional competence is non-monologic and is characterized by emphasizing on forming of discursive practices by all learners rather than one learner. In addition, Hall et al. (2011) indicated that interactional competence includes the knowledge of specific social communicative contexts which their goals are realized and the relationships between participants are accomplished. Celce-Murcia (2008) described interactional competence as the "hands-on" aspect of language which supports interpersonal interaction to achieve successful situated communication in the target language.

Interactional competence manages the way that participants communicate together through the interactional resources that participants created together. The interactional resources identify the knowledge that participants demand within the interaction which relies on the moves of other participants. Moreover, these resources depend on

the discursive practice in which participants are engaged (Dings, 2014). Therefore, developing interactional competence requires changes in the individuals' interactional practices over the time. These changes can be achieved through participation in various social speech exchange situations (Nguyen, 2019).

According to Zhai and Wibowo (2023), interactional competence involves a kind of collaborative asymmetric interaction between learners which is produced in the conversations and is derived from two perspectives: sociolinguistic-interactional and psycholinguistic-individualist perspectives. The sociolinguistic-interactional perspective emphasizes the appropriateness and the effectiveness of the learners' utterances in various social situations. On the other hand, psycholinguistic-individualist perspective focuses on the individual's fluency, pronunciation, variety of grammar structures, and lexical resources.

Since the interactional competence has a great importance in the process of language acquisition, several studies had been made to investigate the effect of different methods and approaches on developing learners' interactional competence such as Watanabe, (2016); Darmajanti, (2017); Abdelkader, (2019); and Sato and Crane, (2023).

Watanabe (2016) explored the effect of engaging learners in an interactional routine in EFL classrooms on developing their interactional competence over time. The findings assured that using appropriate language choice, turn-taking strategies, and taking on different social roles and patterns of participation, increased the participants' interactional competence.

Darmajanti (2017) examined the effect of classroom interaction among Indonesian adult learners and native speakers of English using the communicative approach on developing learners' interactional competence. The findings revealed that using communicative language teaching and interaction with native speakers affected the learners' interactional competence positively.

Abdelkader (2019) investigated the effect of effects of vocabulary instruction on developing students' interactional competence. The results indicated that there is a relationship between vocabulary instruction and vocabulary learning moderated by interactional competence and that the interaction effect between vocabulary instruction and interactional competence on the students' vocabulary learning was highly significant.

Sato and Crane (2023) conducted a study to investigate the effect of engaging students in discursive practices on developing their interactional competence. The findings indicated that participants were motivated in the discursive practices and could develop their interactional competence. Moreover, participants worked as active participants in this learning community, and could improve their English abilities.

In the new millennium, teaching the English language no longer depends on the teacher and the printed book alone, as the massive technological revolution greatly affected the educational process and produced many attractive technological educational tools. These tools extended learning outside the classrooms. Virtual worlds are considered as one of the latest technologies that are used in the learning/teaching process.

Porat et al. (2023) pointed out that virtual worlds are immersive three-dimensional environment which are accessible for more than one user at the same time and are described as shared, simulated spaces, whose users represented as avatars. Battal and Tasdelen (2023) stated that virtual worlds are shared, simulated spaces which are used and designed by their inhabitants who are represented as avatars.

Various educational theories offer different perspectives on learning goals, learning process, roles of teacher and learners, and the process of transferring knowledge. Constructivism assumes that learning is an active process and learners should construct the information through the presentations and comprehensions of the reality. Moreover, learners link the new information with their prior knowledge to build subjective mental representations (Fosnot, 2013). Social-constructivism stresses that learning can occur in the social contexts. Moreover, knowledge is constructed in a social context and the process of sharing knowledge and perspectives then leads to constructing understanding by learners together (Amineh& Davatgari, 2015). Virtual worlds applications support social constructivism as these applications offers unlimited opportunities to interact in social contexts and create knowledge through these interactions (Loke, 2015).

At the end of the eighties, Brown, Collins, and Duguid stressed the importance of practicing acquired knowledge in real life situations. Performing activities in authentic interactive real-life situations enables learners to interpret the acquired knowledge and skills rationally and meaningfully (Huang et al. 2016). Hamman-Fisher and McGhie (2023) identified the main characteristics of situated learning theory as:

constructing knowledge collaboratively, articulation of multi roles and perspectives, authentic and expert performances, engagement in authentic activities, utilization of scaffolding and coaching strategies, reflection, and evaluation of learners' own learning. Therefore, virtual worlds applications fit with situated learning as these applications provide learners with realistic contexts that lead learners to think and act as they are in real life situations.

Experiential learning theory has a different view of the learning process. Experiential learning stresses that knowledge is created through the transition of experiences (Kolb& Kolb, 2018). According to Chan (2023) experiential learning can be categorized into three sections: Learning by doing, learning through observation, learning through abstraction. Learning by doing means that learners can learn through hands-on tasks and activities. Moreover, learning through observation means that learners can learn by observing people and how they do things. Learning through abstracting means that learners can learn by watching visuals, listening to verbal symbols, or reading visual symbols. Virtual worlds applications support experiential learning as these applications stressed experience and exploration rather than recall strategies (Knutzen, 2019).

There are many virtual worlds applications which are varied in terms of open-source or ownership. Second life applications are of the most preferable ones (Mantziou et al., 2018). Warburton (2008) pointed out that the virtual environment of Second Life applications has various features since it allows:

- Numerous users to participate at the same time in a shared space.

- Participants to interact with each other and with objects in a 3-D environment.
- Participants to represent themselves in a personable 3-D representation which is called "avatar".
- Participants to create complex objects and environments, combined with graphics and the rich immersive experience.

Learners in Second Life applications can implement a plenty of real-world activities, ranging from conducting a professional meeting to visiting garden or parks for entertainment (Wang & Burton, 2013). Therefore, Second Life applications users have total freedom and flexibility to perform and create their virtual lives. Second Life applications can help language instructors hold virtual classes to simulate real-life situations such as checking in at hotels or having lunch at a restaurant. Learners represented in their avatars can practice the target language with natives and other avatars all over the world without incurring travel costs (Canto et al., 2014; Lee & Gerber, 2013).

In addition, Second Life applications provide learners with opportunities to practice task simulation, collaboration and exploration that can enhance negotiation of meaning, develop interaction among learners and reinforce motivation and engagement (Wigham & Chanier, 2015). Second Life applications have multiple methods of communication between learners. These include local text chat that enables everyone to see the messages, instant messages that enables only recipient to see the messages, voice chat that enables users to record messages by their voices (Kuznetcova & Glassman, 2020). Besides, the open-ended virtual environment of Second Life



applications enables learners to navigate the space by walking, running, flying teleporting, and exploring variety of communities. Therefore, this environment reinforces engagement, learning autonomy, and the sense of interaction (Deutschmann & Panichi, 2013).

Cunningham and Harrison (2011) identified four areas that Second Life applications can support the educational process: *Communications and collaboration; Representations and simulations; Scaffolding, and Professional development:*

#### *Communications and collaboration*

Second Life applications provide various means for effective communication. Text chat and voice chat allow users to exchange information and communicate together. Besides, notecard displayers can be interesting means for communication as these displayers can present texts, videos, audios, and links (Guzzetti& Strokrocki, 2013; Monova-Zheleva& Tramonti, 2015)

#### *Representations and simulations*

The environment of Second Life application enables learners to conduct 3-dimensions presentations. These presentations have two features: first, learners can present their understanding of the purpose of summative and formative assessment. Second, learners can present their ideas through several sources such as videos, audios, and models (Chau et al., 2013; Warburton, 2008).

#### *Scaffolding*

Second Life applications support learners' investigations, inquiries, and engage them in immersive learning experiences. Second Life applications provide learners with well-scaffolded tasks, group presentations and experimentation (Domingo& Bradley, 2018).

### *Professional development*

Second Life applications provide learners with several authentic activities such as discussions, debates and reflections. Learners can be provided with effective professional development through engaging them into online courses, seminars and presentations of lesson plans (Vasileiou& Paraskeva, 2010).

Several studies had been conducted to investigate the impact of using the virtual environment enabled by Second Life applications on the language learning/teaching process from various aspects such as Peterson, (2012); Canto& Jauregi, (2014); Jehma, (2020).

Peterson (2012) focused on the impact of integrating the virtual environment of Second Life applications on developing learners' interactions. Findings revealed that using the virtual environment, tasks, and collaborative activities are beneficial in developing participants' interactional competence in various social contexts.

Canto and Jauregi (2014) examined the effect of using Second Life applications to enhance learners' oral interactions. Results indicated that participants exchanged social and cultural meaning spontaneously while engaging together in the virtual environment.

Jehma (2020) examined the effect of using 3-dimensional virtual world enabled by Second Life applications on developing EFL learners' communication skills. Results showed that using Second Life applications have a positive effect on developing learners' communication skills and that applying Second Life applications in classrooms is highly recommended.

## Context of the Problem

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

The problem was identified through reviewing literature and related studies. In light of the literature review, it was evident that students' interactional competence level is low and there is a need to improve it (Khater, 2008; Abdalla, 2018).

Reviewing literature, it can be concluded that few 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' interactional competence such as Canto and Jauregi (2014) and Chen (2018). In Egypt there is a paucity in studies indicating the use of virtual worlds generally such as Saqr (2020). Therefore, in the light of this lack and novelty of literature this study aims to investigate the effects of using virtual world and whether it might have fruitful effects for students to demonstrate their interactional competence development.

## **Statement of the Problem**

Although interactional competence for EFL students is fundamental to master the language, students' level at the secondary stage in interactional 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 interactional 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 interactional competence required for EFL secondary students' stage?
- 2- How can virtual world-based program be used for developing EFL secondary stage students' interactional competence?
- 3- What is the effect of using Second Life applications as a virtual world-based program on EFL secondary students' interactional 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 interactional 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 provide appropriate amount of information when interacting in social contexts.
- Helping students interact with each other and exchange ideas collaboratively.
- Enhancing EFL students' interactional competence.
- Helping students comprehend and produce speech with various genres.
- 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 interactional competence necessary for the EFL secondary stage students.
- Providing teachers with a new technology for developing interactional 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 improve students' interactional competence.

### 4- Researchers:

The present study may provide researchers with

- A checklist of EFL interactional 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' interactional competence.
- Guidelines upon which further activities may be used to motivate students to develop their interactional competence.
- Encouraging students 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 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 interactional competence checklist required for first year secondary school students.
- 2- A pre and a post test to measure students' EFL interactional competence before and after the treatment and a rubric to score them.
- 3- A program based on some virtual world applications (Second Life) to describe in detail the steps to be followed to develop EFL interactional 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 interactional competence.

#### **a-The EFL interactional competence checklist**

Reviewing literature and related studies on interactional competence, a list of skills that illustrate the interactional competence was prepared. The list included three skills. The checklist of the interactional 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 interactional Competence Tests**

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

**Table (1) Test description table of the interactional competence**

<b>Skills Illustrating interactional Competence</b>	<b>Questions</b>
<i>1- Provide appropriate amount of information when interacting in social contexts</i>	<ul style="list-style-type: none"> <li>• Students were asked to read a situation and role play with their partners.</li> <li>• Students were asked to complete a conversation and then role play with their partners.</li> </ul>
<i>2- Manage the conversational rules (turn-taking rules, repair, fillers etc.).</i>	
<i>3-Comprehend and produce speech with various genres.</i>	

### **Validity of the EFL interactional competence tests**

#### ***Face Validity***

The initial form of the tests was submitted to a number of EFL staff members specialized in EFL curricula and methods of teaching (N=9) to estimate the validity of the EFL interactional 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	*.٣٢٢
2	**٠,٦٩٢
3	**٠,٧٨٨

\* Correlation is significant at the 0.05 level

\*\* Correlation is significant at the 0.01 level

### **Reliability of the EFL Interactional Competence Tests**

Using Statistical Package for Social Sciences (SPSS) program (version 18), Cronbach's alpha, Guttman's, and Inter-rater reliability were used to estimate the EFL interactional 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 the test items.

### **Inter-rater reliability**

The EFL interactional 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.

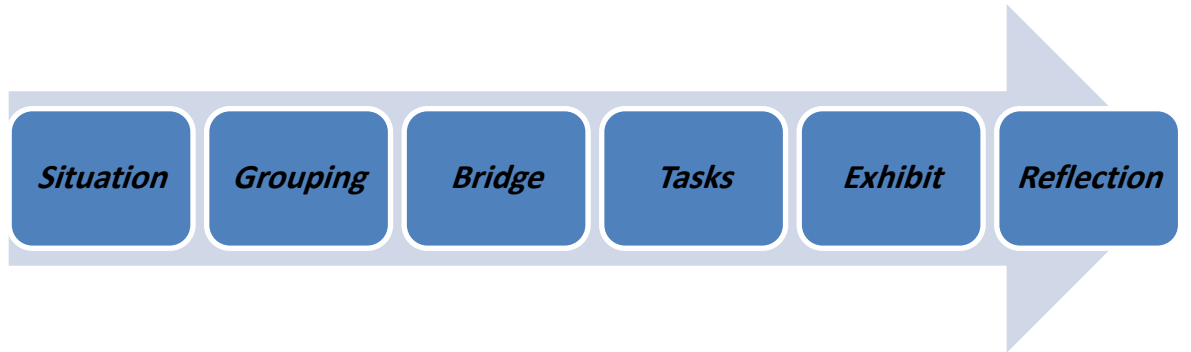
Besides, computers, internet and portable internet router were used during the implementation.

### **The program of using Second Life applications for Developing Interactional Competence**

The implementation of the program consisted of 20 sessions to illustrate the skills underlying the interactional 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 interactional 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 CLD model (Scott, et al. 2010)**

### **Situation**

Students were motivated and encouraged to use technology and virtual worlds. They were trained to sign up to make an account on Second Life applications and choose their avatars and were provided

with an introduction about the main objectives of the session (such as such as turn taking rules, repair and fillers, etc.). Various materials related to the topic were presented (such as videos, audios, presentations, etc.) and 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 displayers such as: *When people meet for the first time, what do they say? when you meet someone you already know, what do you say?* Students discussed the questions with each other using voice chat and sent feedback and they were guided to use the various sources of Second Life 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. 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 applications 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 at this factory? Have any of you ever wanted to become an engineer? Why? etc.* Students were assigned to individual, pair or group work task such as role playing a situation, debates, problem solving, etc. Students performed the assigned tasks. Moreover, 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 and they performed different educational games at Cypris village such as Mystie Slade's (Missing Words)', 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 and they 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 interactional competence.

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

Measurement	N.	Mean	S.D	Df.	t-value	Sig.
Pre-test	12	٥,٠٨٣	٠,٩٩٦	11	١٧,٩٨٣	0.01
Post- test		٨,٥٨٣	1,٠٨٤			

The previous table shows that there is a statistically significant difference between the mean scores of the study participants in the pre and post tests of the interactional competence components in favor of the post assessment, where the t-value is (١٧,٩٨٣) which is significant at the (0.01) level. This improvement is illustrated in the following figure:

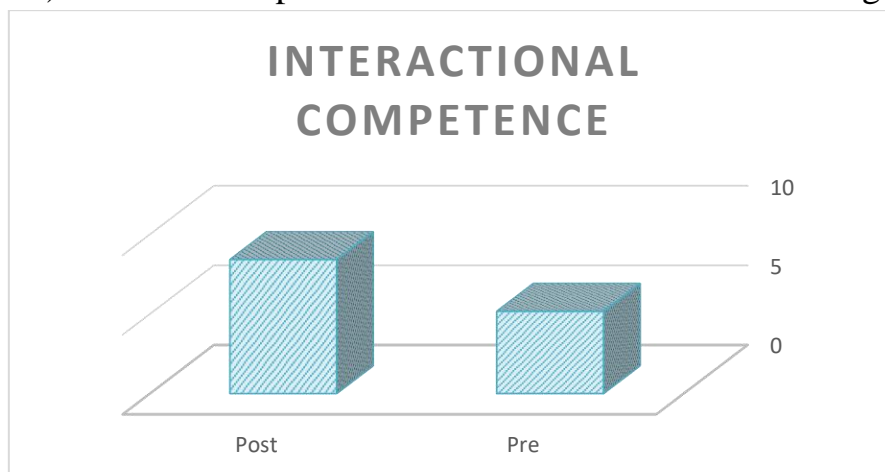


Figure (2) The difference in the mean scores of the study participants in the pre and the post tests of the interactional competence components.

### **The Effect Size of Second Life applications on the EFL Interactional Competence**

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

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

$\eta^2$  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 ( $\eta^2$  value) for EFL interactional competence reached 0.967) which shows that the total effect size of Second Life applications on improving students' EFL interactional competence is high since it was greater than 0.14 (Abou - Hatab & Sadek, 2010).

### **Discussion and Interpretation**

The main aim of this study was to investigate the effect of using Second Life applications on developing first-year secondary stage students' interactional competence. The findings showed that Second Life applications can be an effective teaching and learning technique that could engage EFL learners in a spontaneous interaction and enhance their interactional competence. The virtual learning environment enabled by Second Life applications had positive impact on achieving the required learning outcomes.

The findings of the pre and post-tests pointed out that participants' interactional competence had been positively affected. This was clear in the amount of information they can provide when interacting in social situations, their production of speech in various genres and their ability to manage various conversations. The implementation of the program was composed of twenty sessions. The various skills were illustrated to help participants to practice tasks and activities via Second Life applications actively. Analyzing the results of the pre-post tests

indicated that participants' interactional competence was developed and that the participants interacted actively and positively to the program.

The intervention of technology is one of the most important reasons for such fruitful results. Second Life applications provided a forum where participants were engaged in negotiation of meaning at their own pace. Using Second Life applications helped participants express themselves freely without anxiety and fear of making mistakes and even without any interruptions of others' speech. This sense of security helped participants to accomplish their activities and interact freely with each other. One of the participants expressed that "*Interacting via Second Life became a source of my pleasure.*"

The visual and immersive environment included in Second Life applications strongly took a part in the participants' improvement. It provided the participants with multiple chances to interact and communicate. Second Life applications enabled participants to access multiple virtual places, (such as gardens, parks, hospitals etc.) interact with digital artifact, use avatars to communicate with each other and with the teacher. Moreover, Second Life applications provided a chance for more informal communication between participants and the teacher as participants did not communicate face-to-face with the teacher.

In addition, this improvement may be related to the multiple kinds of interactions in Second Life applications between the participants and their avatars, avatars and their environment, and between participants and the teacher. Participants'

interactions through their avatars with the virtual environment itself affected the participants' learning experience. Before the implementation, it was noted that participants were unable to understand some social situations and could not interact effectively. For example, participants could neither use a request for assistance nor interact appropriately in the situation:

*Participant 1: hello, please a thief was stolen me my money.....need help*

*emm I need you to help me*

*Participant 2: I do not know who you are*

*Participant 1: you know me I was a friend*

*Participant 2: sorry, I can not.*

As the above script shows, participants could not provide an appropriate amount of information when interacting in the social context. Participants lacked the knowledge of the conversational rules and could not comprehend appropriately. In addition, participants were not able to construct grammatical structures correctly. Second Life applications provided the participants with a friendly, and contextually relevant opportunity to interact with each other, with the teacher and with native speakers. Participants could teleport to different countries and cities around the world and met different people that affords the participants to interact in realistic, authentic, and relevant contexts such as offices, shops, hospitals, and classrooms.

By using carefully designed simulation experiences, Second Life landscapes made a way to the observation and assessment of learning. Interacting with and through the environment of Second Life applications enhanced accidental learning and provided participants with



authentic opportunities to interact actively. The architecture of rooms, buildings, objects, places and also the relevant furniture and all aspects of decoration might facilitate the interaction generally and helped participants to be engaged. Moreover, the instructions which were provided by the teacher explicitly and were fixed around the participants everywhere using the notecard displayers helped the participants to be more confident, developed their responses actively and further expanded their interaction.

Several turns later, and after various activities enabled by Second Life applications, the conversation changed, and participants were more able to manage the rules and provide sufficient amount of information related to the social situation:

*Participant 1: Hello Malak, I am Kenzy your Egyptian friend.*

*Participant 2: Hello Kenzy, how are you?*

*Participant 1: I am fine, thank you. I was wondering if you might be able to help me.*

*Participant 2: What is the problem?*

*Participant 1: I am on a holiday in London and someone stole my money. Can you put me up for a few days.*

*Participant 2: Ah, I am sorry for hearing that, but I live in a one-bedroom apartment.*

The above dialogue shows the participants' interactional competence improved. It is noticeable that the participants could expand the dialogue and add more relative information. Participants used correct grammatical structure, phrasal verbs and expressed requesting assistance and refusing politely. Participants became more active in practicing real-life social situations.

Another important reason for this improvement of interactional competence may be due to the whole range of interactional affordances that are offered by Second Life applications such as the text-based chat, voice-based chat, instant messages, avatar gestures (laughing, nodding, clapping, etc.). These communicative affordances helped participants to interact actively. Thus, the participants' interactional competence improved because of using Second Life applications. This result is compatible with that of Du (2020).

### **Conclusion**

The Findings of this study indicated that using Second Life application as a virtual environment had positive effects on developing EFL interactional competence among first year secondary students. Moreover, the participants could provide appropriate amount of information when interacting in various social situations, manage the conversation rules effectively and produce speech with various genres. 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.
- Investigating 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' interactional competence, it would be good to conduct studies for other language skills such as reading, writing, listening etc.

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