World Journal on Educational Technology: Current Issues

Virtual worlds for collaborative learning: Arab EFL learners' attitudes

Yousif Alshumaimeri*, Professor of TESOL, Department of Curriculum and Instruction, King Saud University, Saudi Arabia

Amani Gashan, Department of Curriculum and Instruction, King Saud University, Saudi Arabia

Ebrahim Bamanger, Ph.D. Candidate, Curriculum and Instruction, King Saud University, Saudi Arabia

Abstract

In the Arab world, there is a lack of research investigating the use of virtual games to support learning English as a foreign language (EFL). The aim of this study was to examine EFL learners' attitudes towards the integration of the Second Life virtual game as a collaborative instructional tool. A descriptive inquiry method was followed, and data gathered using a questionnaire that had been tested for validity and reliability. Forty-one undergraduates, enrolled in two computer-assisted language learning classes, at a school of education represent the study sample. Findings indicated that the majority were in favour of using virtual worlds as collaborative learning contexts. Moreover, it is recommended that further studies consider a qualitative design that makes use of in-depth observations and interviews to explore learners' attitudes about the integration of this technology in an EFL context.

Keywords: English as a foreign language, attitude, collaboration, **S**econd Life, virtual world.

* ADDRESS FOR CORRESPONDENCE: **Ebrahim Bamanger,** Ph.D. Candidate, Curriculum and Instruction, King Saud University, Saudi Arabia. *E-mail address*: ebra1982@hotmail.com / Tel.: +0-000-000-0000

1. Introduction

Computer-assisted language learning (CALL) shows great potential for learners of any age because of the capacity to present contextualised signs through audio, visual content, animation and other kinds of multimedia. Thus, knowing how learners collaborate while using technology tools to learn foreign languages is a crucial issue.

One source that foreign language learners can use to engage with native speakers is through online digital games. Recent research on the use of online digital games as they relate to second language acquisition theory reports some positive results, specifically in massive multiplayer online role-playing games (Blake, 2011; Kongmee, Strachan, Montgomery & Pickard, 2011; Palmer, 2010; Peterson, 2010; 2011; 2012; Sykes & Reinhardt, 2013; Sylv**e**n & Sundqvist, 2012).

It is increasingly important to create a collaborative learning environment for learners, as noted by Howe and Strauss (2003) that the current generation is team-oriented. There are also many reports describing the tendency of teens to socialise in groups of more than two, which explains their enthusiasm for and attraction to different kinds of social network media such as YouTube, Facebook or Twitter (Howe & Strauss, 2003). Therefore, Howe and Strauss (2003) recommend that instructors in higher education start planning to meet students' expectations for collaborative learning environments such as group activities, collective assignments and projects. Johnson, Smith, Levine and Haywood, (2010) suggest integrating games that feature collaborative playing, such as massively multiplayer online games to establish a collaborative learning space. They also report that digital games are useful not only for collaborative learning but **also** can be applied to a variety of learning contexts.

When building contexts for language learners to enact their target languages, it is recommended that these contexts not be restricted by formal expectations and not governed by hierarchical order (Oldenburg, 1989). To this end, the Second Life **(SL)** virtual game is a perfect setting because every participant can collaborate equally with other members of that virtual society (Gillen, 2009) and help to create interpersonal relationships. Boulos, Hetherington and Wheeler (2007) argue that virtual worlds offer their users a place to relax and navigate through remote environments, experience new cultures and create learning communities.

In the EFL context, research has shown that SL has positive effects on learning. Stevens (2006) and Cooke-Plagwitz (2008) indicated that SL has the potential to enhance language instruction as participating students engage in a collaborative learning journey with others across the globe, increase their verbal language ability and cultural awareness via goal-driven communication with native users of the target language and are exposed to authentic language forms. In addition, there is an increasing research emphasis on supporting the use of gaming to implement learning forms that encourage communicative skills building (Gale, 2011). Moreover, Vickers (2007) argues that when SL is used, it creates constructive opportunities for communication among the participants. In addition, in a study examining the SL experiences of American undergraduates enrolled in Turkish language programmes and those of Turkish EFL undergraduates, Balcikanli (2012) found that participants viewed SL as an authentic environment to build communicative skills.

Silva, Correia and Pardo-Ballester (2010) described a teaching program**me** to train instructors to use SL, noting that this teaching practice has given them the opportunity to be part of a collaborative work that led to a better understanding of how someone may utili**s**e a virtual context in teachers education and language learning. Similarly, Andreas, Tsiatsos, Terzidou and Pomportis (2010) indicated that SL is a virtual instrument that can be utili**s**ed to increase students' learning collaboration and Liang (2011) demonstrated that the collaboration feature available in virtual games can aid foreign language learning. In addition, Peterson (2012) examined the task-based interaction of EFL learners in SL, noting that the environment and tasks improve collaborative interaction and peer-scaffolding regarding vocabulary and correction in a supportive atmosphere. Istifci, Lomidazde and Demiray (2011) argued

that SL could provide a context for students and teachers to communicate beyond time and space limits, although Antoniadou (2011) found that EFL student teachers experienced difficulties in collaborative educator training activity in SL as a non-institutional environment.

Currently, there is too little data on the role and efficiency of SL (Aydin, 2013), especially in the Arabic context, which make it difficult to compare the results to the findings on a global scale. The exploration of the **SL** game as a collaborative tool in language learning is in its infancy in the Arabic context, with the only previous research (Aldosemani & Shepherd, 2014) a qualitative study focused on the cultural use of the game.

1.1. Research questions

This study was guided by the following overarching questions:

1. Do Arabic EFL learners hold positive attitudes regarding the use of the SL game as a collaborative language learning tool?
2. What are the Arabic EFL learners' attitudes regarding the use of the SL game efficiency as a collaborative language learning tool?

1.2. Significance of the study

The current study explores Arab EFL learners' attitudes toward the use of the SL game as a language learning tool. It may provide insights about teaching the target language by moving away from books, texts, films or other non-interactive means to direct interactive encounters with native speakers of English.

The study may also be useful in enlightening EFL instructors in the Arabic context regarding the feasibility of the SL virtual game as a collaborative learning context. In addition, it is hoped that the findings of this study would give decision-makers a clear picture of the incorporation of digital games in language learning in order to further develop language learning and to raise the level of EFL teachers' ability in using these innovative instruments.

2. Research methodology

2.1. Population and Sample

The target population for this study consisted of 44 undergraduate university students taking a CALL course at the College of Education, King Saud University. There were 32 students in one class and 12 in another, ranging in age from 19 to 23 years old. The study sample was the total population as the total number of the students who take the CALL course at the University is 44. They were enrolled in the "Teacher Preparation Programme" majoring in English and were selected to participate in the current study to collect data regarding the use of the SL game in education and specifically in language teaching. With three students absent, 41 students successfully completed the questionnaire.

2.2. Data collection instrument

This descriptive research incorporated a quantitative survey instrument to accomplish the objectives of the study. The questionnaire was built to explore the use of the SL Game in the teaching of English as a foreign language (EFL) as a collaborative learning tool. The instrument was designed by the researchers after reviewing previous studies. Each item was measured on a five-point Likert-type scale. The participants were asked to respond to each item as: (1) strongly disagree, (2) disagree, (3) not sure, (4) agree, (5) strongly agree, in which a higher score means stronger agreement.

The questionnaire consisted of six items designed for evaluating the use of SL Game as a collaborative tool. The questionnaire was further reviewed by five specialists in the field of language teaching and curriculum for clarity and ensured the content validity. The researchers conducted a pilot study in which the instrument was administered to a sample of students in order to detect any problems related to the instrument and its use.

2.2.1. Validity and reliability

Cronbach's Coefficient Alpha test was used to check the internal reliability and consistency of the questionnaire. According to Lim et al. (2003), Cronbach's alpha is one of the most frequently used approaches to verify internal consistency and reliability. The questionnaire achieved an overall alpha of 0.785 and so the reliability was considered acceptable. Pearson product-moment correlation was used, as well, to calculate the median stability coefficient. The Pearson correlation coefficient was found to be positive and significant at (sig = 0.01 level), (0.880), which is regarded as a high value.

2.3. Procedure

SL was the virtual game used in this study. The researchers asked the participants to join the game via http://secondlife.com/ or https://join.secondlife.com/ to explore the game by navigating through it and learning the basic functions of SL, such as walking, flying, teleporting, communicating and object building. The students were taught how to upload images, how to take snapshots and how to buy items. Every week, the participants were asked to do some tasks such as relocating to an English-speaking country, meeting a native speaker of English or gathering some cultural information of an English-speaking country.

Later, they were given the questionnaires to give their responses. The surveys were distributed by hand to the students and, after a sufficient amount of time to complete it, the questionnaires were then collected.

2.4. Data analysis

The collected data were analysed using the SPSS (Statistical Package for Social Sciences) program. Descriptive statistics were computed to summarise the participating samples' perspectives. In the analysis process, the mean, frequency and the percentage for each item were calculated, as well as the standard deviation. Then, the findings of the collected data were presented to answer the research questions.

3. Results

To explore Saudi EFL learners' views regarding the use of SL to enhance collaboration, participants' answers were calculated and are presented in Table 1.

Table 1. Frequencies, percentages, means and standard deviations of the participants' responses

Statement	Strongly Disagree		Disagree		Not sure		Agree		Strongly Agree		*M*	SD
	F	*%*	*F*	*%*	*F*	*%*	*F*	*%*	*F*	*%*		
I feel that SL game-based learning reinforces teamwork and collaboration.	0	0	2	4.9	8	19.5	22	53.7	9	22	3.93	0.78
I think using SL game can develop social negotiation skills.	0	0	0	0	13	31.7	21	51.2	7	17.1	3.85	0.69

I believe SL allows learners to work together to solve problems.	0	0	3	7.3	11	26.8	21	51.2	6	14.6	3.73	0.80
I discuss the meaning of the new words in the game with my friends.	0	0	1	2.4	6	14.6	23	56.1	11	26.8	4.07	0.72
I enjoy talking to the other participants in the game.	1	2.4	3	7.3	10	24.4	13	31.7	14	34.1	3.88	1.05
When I do not know how to complete a task, I ask other players.	0	0	4	9.8	8	19.5	19	46.3	10	24.4	3.85	0.91

As can be seen from Table 1, the highest mean score (4.07) was for the fourth item, 'I discuss the meaning of the new words in the game with my friends'. More than half (56.1%) of the participants agreed and 26.8% strongly agreed with this statement although one participant showed disagreement regarding this statement. The findings showed that the first statement, 'I feel that SL game-based learning reinforces teamwork and collaboration', was in second place, with a mean of 3.93, as more than three-quarters either agreed or strongly agreed.

The fifth item in the list 'I enjoy talking to the other participants in the game' was in the third place (*M* = 3.88), where almost two-thirds either agreed or strongly agreed about the interesting social nature of the game. A slightly smaller mean (3.85) was recorded for the second and sixth items, in a tie for the fourth place. This indicates that most of the study's sample agreed that using the SL game can develop social negotiation skills and when they do not know how to complete a task, they ask other players.

The lowest score was for the third item, 'I believe SL allows learners to work together to solve problems', with a still reasonably high mean (3.73), and more than half of the participants (51.2%) agreed that the game could increase problem-solving skills through learning.

4. Discussion

The participating Arabic EFL learners expressed generally positive attitudes towards the use of the SL game as an effective tool for collaboration. This finding is consistent with those of several previous studies (Andreas et al., 2010; Cooke-Plagwitz, 2008; Liang, 2011; Stevens, 2006; Vickers, 2007).

More than 80% of the participants indicated that they could discuss the meanings of new vocabulary in the game with their friends and more than three-quarters thought that SL game-based learning reinforces teamwork and collaboration. In this line, Gale (2011) pointed out that games facilitate activities that are part of collaborative learning, such as social, communication and peer activities.

Almost two-thirds agreed or strongly agreed about the interesting social nature of the game. As a justification of this, it seems that this virtual life game has the potential to enhance foreign language learning because learners can collaborate with native speakers of the language globally, develop better oral ability and cultural awareness via purposeful communication and have access to authentic language learning settings. Silva, Correia and Pardo-Ballester (2010) note that such experiences offer participants the opportunity to engage in a collaborative effort to understand how they can use this virtual environment in language learning.

The majority of the sample thought that using SL can develop social negotiation skills and when users do not know how to complete a task, they may ask other players. This finding is supported by Peterson (2012) who examined the task-based interaction of EFL learners in SL. He noted that the supportive environment of SL and tasks improves collaborative interaction and peer-scaffolding

regarding vocabulary and correction. In this study, more than half of the sample expressed agreement that the game has the potential to enhance their problem-solving related skills when they navigate through the game and overcome obstacles using the target language. It is obvious that social virtual world games provide rich, interactive, three-dimensional collaborative spaces where learners can meet and interact. Learners who choose to play the game in a foreign or second language are exposed to target language input in a context-rich environment in which they can interact freely with native-speakers and other language users.

5. Conclusion

Ideally, this paper will contribute to the body of knowledge regarding the use of virtual game-based instruction. It gathered valuable information in terms of using this virtual social game to support collaborative learning.

Forty-one undergraduates, who were enrolled in two CALL classes at the College of Education, King Saud University, voluntary participated in the study and completed a quantitative questionnaire. The questionnaire was designed by the researchers, and its validity and reliability were ensured. Cronbach's coefficient alpha test was used to check the internal reliability of the questionnaire and a Pearson product-moment correlation was used to calculate the median stability coefficient. The collected data were analysed using SPSS and descriptive statistics were computed to summarise the participants' responses as the mean, frequency, percentage and standard deviation for each item.

The findings showed that the participants held positive attitudes towards the utilisation of SL as a collaborative instructional tool and most agreed that utilising this virtual game enhances collaborative language learning behaviours. In general, the results were in line with those previously conveyed in studies related to the integration of online games in language learning. Participants' responses indicated that this sample of Arab EFL learners in favour of the collaborative nature of this virtual game.

Based on the findings of the current study, it is recommended that EFL students be encouraged to utilise virtual games to engage with English language users around the world to experience collaborative learning opportunities. In addition, EFL instructors may create learning tasks that require learners to interact with other language speakers in virtual games. The researchers suggest replicating this study in the Arabic context with different level of students, especially those in Saudi Arabia, to learn more about their perceptions and attitudes toward using this kind of virtual game. Another research suggestion is to conduct experimental studies to investigate the effect of incorporating the SL game to teach various language skills. Moreover, the authors recommend that future research should consider in-depth qualitative studies, such as in-class observations and in-depth interviews, to investigate EFL learners' beliefs about the integration of this technology in the instructional context.

References

Aldosemani T. & Shepherd, C. E. (2014). Second Life to support multicultural literacy: Preservice teachers' perceptions. *Tech Trends, 58*(2), 46–58.

Andreas, K., Tsiatsos, T., Terzidou, T. & Pomportis, A. (2010). Fostering collaborative learning in Second Life: Metaphors and affordances. *Computers & Education, 55*(2), 603–615.

Antoniadou, V. (2011). Using activity theory to understand the contradiction in online transatlantic collaboration between student-teachers of English as a foreign language. *ReCALL, 23*(3), 233–251.

Aydin, S. (2013). Second Life as a foreign language learning environment: a review of research. *Turkish Online Journal of Distance Education (TOJDE), 14*(1), 53–63.

Balcikanli, C. (2012). Language learning in Second Life: American and Turkish students' experiences. *Turkish Online Journal of Distance Education (TOJDE), 13*(2), 131–146.

Blake, R. J. (2011). Current trends in online language learning. *Annual Review of Applied Linguistics, 31*, 19–35.

Yousif, A., Amani, G. & Bamanger, E., (2019). Virtual worlds for collaborative learning: Arab EFL learners' attitudes. *World Journal on Educational Technology: Current Issues. 11*(3), 198-204.

Boulos, M. N. K., Hetherington, L. & Wheeler, S. (2007). Second Life: an overview of the potential of 3-D virtual worlds in medical and health education. *Health Information & Libraries Journal, 24*(4), 233–245.

Cooke-Plagwitz, J. (2008). New directions in CALL: an objective introduction to Second Life. *CALICO Journal, 25*(3), 547–557.

Gale, M. (2011), *Gameplay in higher education: The use of serious games vs traditional instructional methods in learning* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (UMI No. 3464449)

Gillen, J. (2009). Literacy practices in Schome Park: a virtual literacy ethnography. *Journal of Research in Reading, 32*(1), 57–74.

Howe, N. & Strauss, W. (2003). Millennials go to college: executive summary. *American Association of Collegiate Registrars and Life Course Associates.*

Istifci, I., Lomidazde, T. & Demiray, U. (2011). An effective role of e-learning technology for English language teaching by meta-communication actors. *Turkish Online Journal of Distance Education, 12*(4), 201–211.

Johnson, L., Smith, R., Levine, A. & Haywood, K. (2010). Horizon Report: K-12 Edition. Austin, Texas: *The New Media Consortium.* Retrieved from http://www.nmc.org/pdf/2010-Horizon-Report-K12.pdf

Kongmee, I., Strachan, R., Montgomery, C. & Pickard, A. (2011). Using massively multiplayer online role-playing games (MMORPGs) to support second language learning: action research in the real and virtual world. Retrieved from http://nrl.northumbria.ac.uk/279/1/kongmee%20iverg%20paper2.pdf

Liang, M. Y. (2011). Foreign lucidity in online role-playing games. *Computer Assisted Language Learning*, 1–19, Retrieved from http://www.tandfonline.com/doi/full/10.1080/09588221.2011.619988

Oldenburg, R. (1989). *The great good place.* New York: Marlowe.

Palmer, D. S. (2010). *Second language pragmatic socialization in World of Warcraft* (Doctoral dissertation). Retrieved from http://linguistics.ucdavis.edu/pics-andpdfs/ DISSERTATION%20Soares.pdf.

Peterson, M. (2010). Massively multiplayer online role-playing games as arenas for second language learning. *Computer Assisted Language Learning, 23*(5), 429–439.

Peterson, M. (2011). Digital gaming and second language development: Japanese learners' interactions in an MMORPG. *Digital Culture and Education*, *3*(1).

Peterson, M. (2012). Learner interaction in a massively multiplayer online role-playing game (MMORPG): a sociocultural discourse analysis. *ReCALL, 24*(03), 361–380.

Silva, K., Correia, A. & Pardo-Ballester, C. (2010). A faculty mentoring experience: learning together in Second Life. *Journal of Digital Learning in Teacher Education (International Society for Technology in Education), 26*(4), 149–159.

Stevens, V. (2006). Second Life in education and language learning. *TESL-EJ, 10*(3). Retrieved from http://tesl-ej.org/ej39/int.pdf

Sykes, J. & Reinhardt, J. (2013). *Language at play: Digital games in second and foreign language teaching and learning*. New York: Pearson Education.

Sylven, L. & Sundqvist, P. (2012). Gaming as extramural English l2 learning and l2 proficiency among young learners. *ReCALL, 24*(03), 302–321.

Vickers, H. (2007). Second Life education gets real: new methods in language teaching combine virtual worlds with real life. Retrieved from http://www.avatarlanguages.com/pressreleases/pr3_en.php