

## **SECOND LIFE AS A FOREIGN LANGUAGE LEARNING ENVIRONMENT: A Review of Research**

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### **ABSTRACT**

The purpose of this paper is to present a review of research on Second Life (SL) as a learning environment within English as a foreign language (EFL) context, as research on its use within EFL learning is relatively new. T

he study is categorized into four main sections. Introduction section introduces the rationale of the paper and SL. Next section reviews the studies on Second Life in EFL learning, and focuses on the effects of SL on affective states, interaction and communication in SL, collaborative and autonomous learning in SL, sharing culture in SL, engagement and participation in SL, some other issues and drawbacks.

Third, the study compares SL usage in Turkish EFL context to its use in a global scale. Last, the study concludes that there has been a serious lack of research on the use of SL, as current literature reflects how SL might more readily be utilized as EFL learning environment.

Finally, the study ends with recommendations for teachers and researchers.

**Keywords:** Second Life, English as a foreign language, learning environment.

### **INTRODUCTION**

Within English as a foreign language (EFL) research, Second Life (SL) – an online virtual world that enables its users to interact and communicate with each other through their avatars – has emerged as a language learning environment although how SL can be used more effectively as an EFL learning environment still remains as an unanswered question.

This paper aims at reviewing various studies on SL to answer the above-mentioned question, recommending for further research on its role and efficiency within EFL learning, presenting practical recommendations to help teachers use it in learning practices, and suggesting some specific solutions to SL creators and developers. The studies reviewed have been categorized into three sections:

- introduction that explains the rationale of this review and brief information about SL; (2) SL as an EFL learning environment that involves sub-titles such as the effects of SL on affective states, interaction and communication in SL, collaborative and autonomous learning in SL, sharing culture in SL, engagement and participation in SL, some other issues and potential drawbacks;
- research in Turkish EFL context; and
- conclusion and recommendations for teachers, researchers, and program developers.

Before presenting a review of these studies, SL needs to be described. SL, as mentioned above, is an online virtual world that provides interaction and communication among its users, namely residents, through their avatars. It was developed by Linden Lab and launched in 2003 with its free programs and viewers that allow residents to explore the world, meet other users, socialize and participate in individual and group activities, and create services and properties with others. In other words, SL offers an online virtual community that is being created by its residents in which they can own land and build houses, and either rent or reside in them (Oxford & Oxford, 2009). In addition, SL constitutes open social space designed as a simulation of *life*. That is, residents can select their gender, design their own clothing, and modify their behaviors based on locations and other participants (Sadler, 2007). As a final note, as explained in its terms of service, only people aged over 16 can participate in SL.

## **SECOND LIFE IN ENGLISH AS A FOREIGN LANGUAGE LEARNING**

In a general sense, Stanley and Mawer (2008) use the term *serious game* to refer to the games used for training, advertising, simulation or education. They claim that SL shows a great potential for education. To speak more specifically, Gillen, Ferguson, Peachey and Twining (2012) analyze the use of virtual artefacts, the particular qualities of the literary practices and cognition perspective on multimodal literary practice. Results indicate that the characteristics of the community enhances opportunities for learning such as expressing authentic and collaborative approaches to learning, willingness to help and express appreciation of others' achievements, participation across diverse communicative domains and the creation of a supportive atmosphere.

In the context of EFL, research shows that SL has positive effects on learning. To begin with, as Stevens (2006) and Clarke (2005; Cited in Cooke-Plagwitz, 2008) mention, SL has a potential for language learning. They underline that SL has the potential to change language teaching and learning, as learners can collaborate with other students from around the world, gain oral, and cultural proficiency through interactions with native speakers, and experience authentic learning conditions. Moreover, for Vickers (2007), if SL is used with online teaching methods, it constitutes a communicative, immersive and practical experience within interactive learning. As an example, in a quasi-experimental research, Wang, Calandra, Hibbard and McDowell (2012) report the effects of an experimental EFL program in SL on college students' EFL learning, and suggest that SL influences positively the learning process.

### **Effects of Second Life on Affective States**

Studies explore that SL has considerably positive effects on EFL learners' affective states, attitudes, motivation and anxiety, while high-intermediate learners have neutral attitudes towards learning in SL. To begin with, Wang and Shao (2012) aim at using SL to assist EFL learning. For this purpose, EFL learners in China are assigned to develop a Chinese version of SL.

In the study, it is found that SL constitutes a motivational tool. Regarding motivation and anxiety, Wehner, Gump and Downey (2011) research for the effects of the use of SL on the motivation of foreign language learners in an undergraduate Spanish course by comparing the use of SL as a part of instruction and the section participated in traditional curriculum.

The findings reveal that the use of SL in foreign language instruction lowers anxiety and increases motivation to learn a foreign language. Yet, it should be noted that the mentioned study is limited to Spanish as a foreign language.

In another study, Balcikanli (2012) reports SL experiences of American college students learning Turkish as a foreign language, and of Turkish EFL students at college level. Results indicate that SL provides a less threatening learning environment.

Moreover, Ho, Rappa and Chee (2009) examine the design and implementation of an innovative technologically mediated intervention for argumentation pedagogy. For this purpose, they design research that involves integrating the SL and web-based scaffolding through a customized structured argumentation into a language-based curriculum at the pre-university level. They state that SL motivates learners for thinking and consolidation.

Similarly, Peterson (2010; 2011) finds that the consistent use of the transactional and interactional strategies increases motivation and interest, and that it is beneficial to enhance motivation.

In terms of self-regulation, Blankenship (2010) investigates the potential use of SL for pre-service teachers seeking endorsement in teaching English as a second official language, their developmental progressions regarding knowledge transfer and self-regulation and the interactions for instances of amplifications and reductions of pedagogic practices through collaborative dialogue. Results demonstrate that SL has a positive potential that enables self-regulation.

Regarding the attitudes towards learning in SL, Antoniadou (2011) reports the contradictions stated by student-teachers who engage in telecollaboration with transatlantic peers via SL during their initial training in teaching EFL. Results show that student-teachers have positive attitudes towards the implementation in the classroom. In another study, Jee (2010) compares low and high-intermediate English as second language (ESL) students' interactions in task-based synchronous computer-mediated communication within three kinds of tasks: A jigsaw task, a decision-making task, and a discussion task in SL.

The findings indicate that low-intermediate students have positive attitudes towards their learning experience. Yet, it should be noted that Jee's study (2012) was conducted in the ESL context, and that high-intermediate learners show a more neutral attitudes towards their experience in SL.

### **Interaction and Communication in Second Life**

Research has indicated that SL can positively affect interaction and communication among EFL learners. For instance, in an exploratory case study, Peterson (2010) examines the synchronous interaction of intermediate level EFL learners in three seventy-minute chat sessions in SL. He notes that a high degree of participation is achieved in the context and tasks within a learner-centered interaction.

He also states that learners overcome initial difficulties to produce coherent target language output in the use of transactional strategies such as the use of split turns, time saving devices, addressivity, upper case and quotation marks, and interactional discourse management strategies such as the use of politeness and keyboard symbols.

In other words, Peterson (2010) emphasizes that SL is beneficial to collaborative target language interaction, and improves face to face interactions (Peterson, 2011).

Istifci, Lomidazde and Demiray (2011), first, underline the role of meta-cognition in foreign language learning and teaching, then, highlight that SL is very beneficial in foreign language learning and teaching as it creates a platform for students and teachers to interact in a context without boundaries of time and distance.

Similar to the findings reached in the studies above, James, Hirst and Lindenburn (2012) investigate the vocabulary learning in SL, and find that learners improve their speed of language interaction and their fluency. Moreover, Liou (2012) aims to explore how SL can be infused into a computer assisted language learning course for college students through the task design that involves orientation of SL, pedagogical activities, peer review and SL tour, and suggest that SL is an authentic environment that provides interaction, immersion and communication.

Jee (2010) also finds that the low- and high-intermediate ESL students engage in several forms of interaction during the pre- and post-task periods in SL, whereas Balcikanli (2012) notes that learners regard SL as an authentic interactional environment with native speakers of target languages. Last, Andreas, Tsiatsos, Terzidou and Pomportis (2010) find that the transferability of the Jigsaw and Fishbowl collaborative learning techniques to the SL to assess the applicability of SL for collaborative learning develops communication.

### **Collaborative and Autonomous Learning in Second Life**

Research results indicate that SL has powerful effects on collaborative and autonomous learning among EFL learners, while only one study shows that EFL learners experience difficulties in terms of collaboration.

To begin with, Silva, Correia and Pardo-Ballester (2010) describe a technology mentoring experience that aims to teach two faculty members to use SL, and note that this experience allows them to engage in a collaborative effort to understand how they can use this virtual environment in a teacher training program and language learning.

In the above-mentioned study, Andreas et al. (2010) also note that SL is a virtual tool regarding learner collaboration. Furthermore, in an explorative case study, Liang (2011) examines the types of foreign language play SL and the sources of its contextual support. The author discovers that collaborative and competitive role-play facilitates foreign language play. In addition, Wang, Song, Stone and Yan (2011) report the results dealing with the collaboration between two universities in the United States and China which explores various facets of EFL learning within SL.

They conclude that synchronous and asynchronous communication provides international research collaboration. On the other hand, Antoniadou (2011), as mentioned before, finds that EFL student-teachers experience difficulties in telecollaborative teacher training activity in SL as a non-institutional environment. In terms of autonomous learning, Peterson (2012) examines the task-based interaction of EFL learners in SL. He notes that the environment and tasks improve collaborative interaction and peer-scaffolding regarding vocabulary and correction in SL as a supportive atmosphere. Moreover, he states that SL provides valuable opportunities for language practice and autonomous learning.

### **Sharing Culture in Second Life**

This section explores the relationship between foreign language learning and culture by which the uses and meanings of language are shaped and dictated (Aydin, 2012).

Yet, it should be stated that a limited number of studies have been conducted on the issue. As an example, depending on Cultural Historical Activity Theory and Heyward's model of intercultural literacy, Diehl and Prins (2008) explore the construction of cultural identity and development of intercultural literacy. They find that SL enhances intercultural literacy. They also note that the participants in the study use multiple languages, make friends, increase their awareness of cultural perspectives, have open and receptive mind towards new viewpoints, and construct cultural identities by using and changing their avatars.

In the above-mentioned study, Wang et al. (2011) report that synchronous and asynchronous communication allows to share the culture and language. Balcikanli (2012) also states that SL provides a cultural competence environment for EFL learners.

Last of all, Jauregi, Canto, de Graaff, Koenraad and Moonen (2011) conduct a case study in SL that aims at exploring the application and assessment of the design principles for task elaboration, interaction kinds, the specific affordances for enhancing interaction, and the role of condition anonymity in modeling virtual interaction.

They find that the tasks developed for SL help the pre-service teachers explore virtual words and gain insight into the creation of tasks for virtual worlds. More importantly, they note that SL contributes to the enhancing participants' effective intercultural communicative competence.

### **Engagement and Participation in Second Life**

As Peterson (2011) underlines, SL is beneficial to engagement and participation of EFL learners. As an example, in a qualitative study, Teoh (2012) examines the potential of simulations in SL in a teacher training program, and finds that SL can be used as an educational tool for the engagement in learning. Deutschmann, Panichi and Molka-Danielsen (2009) conduct an action research in which two oral proficiency courses are held in SL.

Depending on the experience of the first course, they redesign another course to improve student activity regarding oral participation. Then, they analyze the recordings from each course to measure participation in terms of floor space, turn lengths and turn-taking patterns. They find that task design involving authenticity and collaboration directly affect learners' participation and engagement, and suggest that technical and social initiations into SL are the two important factors that should be organized and conceptualized in the course design. In another study, Deutschmann and Panichi (2009) examine how supportive moves made by the teacher encourage learners to engage with language and the types of linguistic behavior regarding student involvement.

For this purpose, they compare the first and last sessions of an online oral proficiency course for doctoral students in SL in terms of floor space, turn-taking patterns, and supportive moves such as back-channeling and elicitors.

They find that teachers' supportive linguistic behavior increases gradually learner engagement from the first session to the second one. Last, as presented before, Ho et al. (2009), conduct a design research that involves integrating the SL and web-based scaffolding through a customized structured argumentation into a language-based curriculum at the pre-university level, and conclude that students find the experience engaging, innovative and imaginative.

### **Some Other Issues**

This study has been also focused on some other issues such as learning space, learning tasks, critical thinking, editing, argumentation, vocabulary and story-telling in the EFL context. To begin with, in their study mentioned above, Andreas et al. (2010) note that SL develops learning space awareness, whereas, as Oxford & Oxford (2009) notes, learners can practice target language via activities that are difficult to organize in traditional classroom environment.

In terms of learning tasks, Wang and Shao (2012) note that SL constitutes an appropriate learning task, whereas Jauregi et al. (2011) underline that tasks developed for SL help the pre-service teachers explore virtual words, and gain insight into the creation of tasks for virtual worlds.

Last, as Ho et al. (2009) claim, the design research involved integrating the SL and web-based scaffolding makes learners engaging, innovative and imaginative whereas SL allows for constructive feedback from peers, and provides opportunities for critical thinking, editing and argumentation.

Dramatically enough, fairly limited studies have been conducted on the effects of SL on macro language skills and the areas of vocabulary and grammar knowledge. As an example of those limited studies, in their study investigating SL as a vocabulary environment, James et al. (2012) find that SL is poor, and offers little opportunity for lexical growth, while Oxford and Oxford (2009) emphasizes the importance of vocabulary by using visual cues in SL.

Last of all, Xu, Park and Baek (2011) examine the effects of undergraduate students' writing for digital storytelling on writing self-efficacy and flow in SL, and finds that digital storytelling in a virtual learning environment is more effective than digital storytelling off-line when compared.

### **Some Potential Drawbacks**

Research shows that technical problems, costs, difficulties in investment and lack of creativity are some of limitations that make difficult to utilize SL as a language learning environment. First of all, as Ho et al. (2009) note, SL brings also some problems regarding internet connection, time lag and constraint, update requirements, learners' unfamiliarity, time constraint, requirements of roles, and space for exploration within the virtual environment. Cost constitutes another problem.

For instance, Rogerson, Nie and Armellini (2012) investigate the incorporation of three learning technologies, voice-based discussion boards, e-book readers, and SL into a language teacher training program. They find that SL requires a steep learning curve for learners and tutors alike, incurs higher development costs, and has a lesser impact on the learner experience.

Third, according to Cooke-Plagwitz (2008), SL requires a considerable investment of time and energy on the part of foreign language educators. Moreover, its educational possibilities are limited only by the imaginations of its creators.

Furthermore, issues on gender and age involve another problematic area. For instance, for Sykes, Oskoz and Thorne (2008), representations of violence and gender create difficulties in terms of the implementation of SL in the educational setting. In addition, as Barkand and Kush (2009) highlight, although at least 300 universities around the world teach courses, and conduct research in SL, it has been very limited in use for K-12 education due to age restriction.

Research indicates that other problems related to SL as foreign language learning environment are mismatches relating to different conceptions of pedagogy and curriculum, difficulties in tasks, neutral attitudes towards learning in SL and problems regarding vocabulary gaining. To begin with, Grant and Clerehan (2011) explore the virtual world assessment practices of a lecturer.

They conclude that the complexity of the tasks influences the learners' ability to complete assessment, and that learners expect more explicit directions from their teacher. Last, they also state that there may be mismatches relating to different conceptions of pedagogy and curriculum. As Antoniadou (2011) states, student-teachers have difficulties in telecollaborative teacher training activity in SL as a non-institutional environment. Moreover, Jee (2012) finds that high-intermediate learners show more neutral attitudes towards their experience in SL. Last, Hirst and Lindenburn (2012) find that SL is poor and offers little opportunity for lexical growth.

## **RESEARCH IN TURKISH EFL CONTEXT**

As is true on a global scale, only two studies appeared on utilizing SL as an EFL learning environment. As mentioned before, Istifci et al. (2011) find that SL creates a platform for students and teachers to interact in a context without boundaries of time and distance.

In addition, in his previously mentioned study examining SL experiences of American college students learning Turkish as a foreign language and of Turkish EFL students at college level Balcikanli (2012) finds that both groups perceive SL as an authentic interactional environment.

Currently, there has been too little data on the role and efficiency of SL in Turkish EFL context, which makes difficult to compare the results to the findings on the global scale.

## **CONCLUSIONS AND RECOMMENDATIONS**

From this review of limited studies on SL as a foreign language learning environment, several conclusions can be drawn:

- **First, the utilization of SL as an EFL learning environment enhances learners' motivation level regarding thinking skills and consolidation, lowers their anxiety, attracts their interest in learning, and creates a positive potential that enables self-regulation. Furthermore, SL causes positive attitudes towards the implementation in the classroom and learning experiences.**
- **Second, SL affects positively interaction and communication among EFL learners. Speaking more specifically, SL facilitates learner-centered interaction, the use of transactional strategies, interactional discourse management strategies and face to face interactions. SL is also beneficial to create a platform for student-teacher interaction, and to improve learners' speed of interaction and fluency, immersion and communication. In addition, SL is an authentic interactional environment that improves the interaction between native speakers of target languages and foreign language learners.**
- **Third, SL has powerful effects on collaborative and autonomous learning among foreign language learners. In other words, SL helps learners to engage in a collaborative effort to understand the use of this virtual environment in teacher training program and language learning, provides advancement in learner collaboration in role-play activities, elicits enhancement the collaboration among learners from different universities and countries, develops international research collaboration, and improves collaborative interaction and peer-scaffolding regarding vocabulary and correction strategies.**
- **Fourth, SL enhances cultural identity, intercultural literacy, increases learners' awareness of cultural perspectives and intercultural communicative competence, and provides a cultural competence environment.**
- **Fifth, SL is beneficial to engagement and participation of foreign language learners. That is to say, SL as an authentic and collaborative learning environment that enhances participation and engagement, supports and encourages learners to engage with language and linguistic behavior regarding learners' involvement, and makes them innovative and imaginative.**

- **Sixth, SL develops learning space awareness, allows a learner to practice target language via activities that are difficult to organize in traditional classroom environment, facilitates having constructive feedback from peers, constitutes appropriate learning tasks, and provides opportunities for critical thinking, editing and argumentation. Last of all, SL as a virtual learning environment creates an effective storytelling atmosphere.**

**On the other hand, SL also constitutes some serious problems.**

- **First, technical and financial problems such as slow internet connection, time lag, update requirements and higher costs make the use of SL in EFL learning difficult.**
- **Second, learners' unfamiliarity, the need for accomplishing the requirement of roles and exploration within the virtual environment and time constraint constitute some other problems, whereas teachers have difficulties regarding the investment of time and energy as they have no role on the imaginations of learning environment.**
- **Third, gender creates difficulties in terms of the implementation of SL as a language learning environment, whereas the utilization of SL in foreign language learning is not possible for school children under 16 years old. Fourth, there are mismatches between curriculum and learning activities in SL. Last of all, learners experience difficulties in telecollaborative activities in SL as a non-institutional environment and in lexical growth, as well as high-intermediate learners have no positive attitudes towards learning in SL.**

**As a review of these studies, this paper offers some recommendations on using SL as foreign language environment. First of all, as SL enhances learners' motivation, lowers anxiety, causes positive attitudes towards EFL learning and enables self-regulation, it can be stated that SL presents opportunities to solve problems learners' affective states in the EFL learning context. Second, SL can be used to enhance learners' engagement and participation in EFL classes. Moreover, SL is an ideal and effective environment for communication and interaction among EFL learners.**

**Thus, learners can have the possibility of improving their language skills and of increasing their intercultural literacy. In addition, SL can be used as a means of collaborative and autonomous language learning environment. Namely, the above mentioned potential of SL as an EFL learning environment should be channeled into learning practices and research. Second, target groups should be highly sensitive to the potential problems related to SL.**

**In other words, school administrators, policy makers and financial supporters should have the responsibility of the construction of infrastructure at institutions to solve technical and financial problems. Teachers also need to be trained in terms of the use of activities and practices that are used for EFL in SL for comprehensive understanding and using virtual words. By this way, it is possible to increase the learners' awareness of familiarity, to motivate their students to participate in those activities and practices, and to help them explore and manage their time. Third, Linden Lab, the creator of SL, should be open and sensitive to program developers', teachers' and learners' needs and requests. For instance, Linden Lab can develop consistent modules that work within the limits of language programs, and pay attention to the ideas of creative and imaginative teachers and learners. Moreover, Linden Lab can permit learners under 16 to access in SL for educational purposes under the control of their teachers, and work cooperatively with curriculum developers to minimize the mismatches between activities and language programs.**

In conclusion, much more research on SL as an EFL learning environment is warranted, as it is obvious that the effects of SL on EFL learning have not been explored sufficiently yet.

For example, there is a strong need to examine some overall issues such as pronunciation, basic language skills, vocabulary, grammar, discourse, language functions and structures, language awareness, language varieties and students' needs. In other words, after the contextualization of research on the above-mentioned issues, it will be possible to investigate more specific issues.

Moreover, teachers should evince more interest in the use of SL within EFL context. That is, teachers should focus on developing approaches, techniques, strategies and tactics to help their students use SL to enhance EFL learning.

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