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Research Article

Analysis of Student Views on Foreign Language Learning in Second Life Environment[1]

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Abstract

The aim of the present study is to assess the views of participants about the learning environment and the problems experienced in that environment by designing a three dimensional learning environment in Second Life (SL) virtual world. The study, designed as a case study, was conducted with 24 volunteer students registered to foreign language courses for 10 weeks in Ege University, Faculty of Education during 2011 – 2012 academic year, where the volunteers participated in five different main activities. Personal Information Form was used to determine demographic features, computer literacy and English proficiency of the students in the study. Furthermore, Feedback Form and SL Learning Experience Survey were used to collect the data regarding the views of participants about the activities and medium. In addition, semi-structured interviews were conducted to obtain general views of participants on the application. Study findings demonstrated that the participants found SL environment interesting and entertaining and the activities beneficial for themselves to overcome their timidity in verbalizing in foreign language. It was also conceived that participants experienced difficulties in speech with the application due to various reasons and encountered different technical problems. However, the participants stated that SL could be used in several different fields in addition to foreign language education, provided that frequent issues encountered such as in-

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campus access and sound problems could be avoided. At the end of the study recommendations for the future applications and research based on study findings were presented.

Keywords*: Virtual world, Second Life, foreign language instruction, problems encountered in virtual worlds.*

Introduction

Today, English is among the most frequently used foreign languages with a high demand from learners (Fang, 2012; Jacobsen, 2015; Liao, 2012; Nepomuceno Reyes, 2014). As stated by Verikaite (2008), there are three important stages of language learning; instruction of presentation behavior, explanation of new material, and application and test. Various technologies are utilized in these stages of language instruction. A historical analysis of language instruction would demonstrate significant developments. The efforts in 1960's to realize speech experience in language instruction as a result of the use of computer technologies have advanced into more developed dimensions with the recent advances in technologies (Seferoğlu, 2005). In this period, several software had emerged and these new software have been frequently used in foreign language learning in personal computers. In the period that lasted until 1980's, the desired success was not achieved in foreign language instruction (Torut, 2000). In 1980's, multimedia software were presented to the users that utilized CD technology and thus, more developed interactive media were provided (Butler-Pascoe, 2012; Felix, 1998). In 1990's, with the development of Internet technology, diverse tools were developed and used for purposes of language instruction. As interaction, which is very important in language instruction, increased in Internet environment, several education institutions started to utilize Internet technologies (Butler-Pascoe, 2012; Pufahl, Rhodes, & Christian, 2001).

Efficacy of individuals in verbal communications is an essential goal in foreign language instruction (Payne & Ross, 2005; Zhang & Mi, 2010). Several studies reported that conventional instruction methods were insufficient to reach that goal. Thus, the interest of educators to include multi-user virtual media in conventional classrooms or to replace conventional classrooms with multi-user virtual media have continuously increased (Dickey, 2005; Dieterle & Clarke, 2007; Foreman & Borkman, 2007; Lim, Nonis, & Hedberg, 2006; Roussou, 2004). It could be argued that the above tendency has increased the significance of virtual worlds in education (Vogel et al., 2008). Virtual worlds such as Second Life, World of Warcraft and There could be given as examples of virtual worlds. One of the media used for foreign language instruction in virtual worlds is Second Life (SL). SL, designed by Linden Labs in 2003, albeit being perceived by some as a gaming environment, is in fact a three dimensional virtual world where there are no levels or tasks like computer games (Rymaszewski, 2007). SL

is a 3D online virtual environment where users use an avatar to interact with other users in an artificial environment (Inman, Wright, & Hartman, 2010).

Several education-instruction institutions created educational areas on SL and conducted educational-instructional activities. Educators prefer SL because they could design the education environment they desire and control the time and space with this tool (Vogel et al., 2008). Previous studies reflected that SL was used for instruction of several languages. For instance, studies investigated whether SL activities contributed to self-confidence, motivation and verbal communication skills of Spanish learners (Hislope, 2009; Jauregi, Canto, de Graaff, Koenraad, & Moonen, 2011; Ortega et al., 2010; Wehner, Gump, & Downey, 2011). In addition to Spanish, there are studies in the literature on English as a foreign language education in several countries using SL (de Jong Derrington & Homewood, 2008; Peterson, 2012). In addition to Spanish and English, Kaplan-Rakowski (2001) conducted a study where seven different activities were planned and applied to students who were learning German. Furthermore, other studies were also conducted to investigate the role of SL in learning grammar (Milton, Jonsen, Hirst, & Lindenburn, 2012; Sweeney et al., 2011). In a study by Deutschmann, Panichi and Molka-Danielsen (2009), participation of students in the conversation in SL for two verbal efficacy classes was scrutinized. On the other hand, Liou (2012) researched the role of SL in computer-aided language instruction in Taiwan.

Among the studies conducted on SL in Turkish literature, Esgin, Pamukcu, Ergül and Ansay (2012) investigated the effect of educational use of SL on student achievement and motivation. On the other hand, Bezir, Çukurbaşı and Baran (2011) presented a design process of activities developed on foreign language instruction using role playing technique in SL environment. They investigated activities conducted and student views about the environment. Furthermore, it was observed that the potential of educational potential of SL was also investigated (Baran, Çukurbaşı, Çolak, & Dogusoy, 2012).

Literature review demonstrated that researchers studied on voice calls in different languages, primarily in English and Spanish, but also in German (de Jong Derrington & Homewood, 2008; Deutschmann et al., 2009; Jauregi et al., 2011; Liou, 2012; Milton et al., 2012; Sweeney et al., 2011; Wehner et al., 2011). Study findings demonstrated that SL environment was considered useful by the participants since it was close to real life (Childress & Braswell, 2006; Deutschmann et al., 2009; Iqbal, Kankaanranta, & Neittaanmäki, 2010), it increased student

motivation (Wehner et al., 2011), improved language skills of the students (Liou, 2012; Ortega et al., 2010), affected students' participation and loyalties positively (Deutschmann et al., 2009; Peterson, 2012), and provided feedback capabilities (Kaplan-Rakowski, 2011). Furthermore, studies showed that SL had a comprehensive and student-centered structure (Peterson, 2012) and students found the environment as entertaining (Liou, 2012; Peterson, 2006) and useful (de Jong Derrington & Homewood, 2008; Kaplan-Rakowski, 2011; Sanchez, 2009). In addition to all these advantages of SL, certain Internet connection and hardware problems were experiences in related studies as well (Bezir et al., 2011; Hislope, 2009; Liou, 2012).

Although, instruction of English as a foreign language is compulsory in all educational levels in Turkey (Kirkgöz, 2007), several studies reported that English education was inefficient in acquisition of proficiency in speech by the learners (Bekleyen, 2007; Tok, 2009). It was observed that the students experienced language and auditory problems. Although reading and writing skills of learners improve, their verbal skills remain deficient (Bekleyen, 2007). Tok (2009), on the other hand, reported that students are generally late in learning the language and it is important to apply the language in daily life when learning languages, learners of English as a foreign language should try talking English both in the classroom and in different situations with different people outside the classroom.

SL medium was selected due to the problems experienced in foreign language learning and the text and speech possibilities the software provides in language instruction. In applications conducted with SL, it was observed that views of the participants on the medium were never investigated in depth along with the experienced problems. This situation is similar to the situation in Turkey. It was observed that especially the studies conducted in Turkey were insufficient quantitatively. Thus, in detail studies are needed to comprehend the topic in detail. In the present study conducted for this purpose, it was aimed to analyze views of the participants on SL used in foreign language education and the problems experienced in this process in depth and in conjunction. The objective was to answer following research questions based on the abovementioned aim:

1. What were the views of participants on the activities conducted in SL environment during foreign language instruction?
2. What were the views of participants on the problems they experienced in SL application?

Method

Design

The present research was designed in the qualitative research method of case study. Glesne (2012) defined case study as a method that requires in depth study of a phenomenon. Selected case includes connected working components of a limited system. The researcher decides what would occur within these limitations. In this context, views of the participants on SL used in foreign language education and the problems experienced in this process are analyzed in depth, the case is limited with the sample determined by the researcher and voluntary students.

Study Context and Participants

For implementation of the study, Ege University Faculty of Education was selected with convenience sampling. Convenience sampling is a purposeful sampling method that is used in investigation of easily and inexpensively accessible situations (Patton, 2005). After the faculty of education was selected as the study field, criterion sampling method was used for selection of the participants. In this sampling method, attention was paid on situations that meet certain predetermined significance criteria (Patton, 2005). Thus, a presentation on SL medium was given by the researcher to all students registered in foreign language courses in seven different departments at Ege University Faculty of Education during 2011 – 2012 academic year. Although 60 students that attended the presentation volunteered for the study, 24 participants who had available technical facilities participated in the study voluntarily. To meet technical compatibility criteria, the participants were asked to install and test SL application, identify their Internet and computer speeds and note whether their Internet connection was continuous and unlimited. Fourteen participants who met the required criteria were female and 10 were male. Twenty-two participants were Computer Education and Instructional Technology and two participants were Science Teaching undergraduate students. The ages of participants were between 10 and 22. To keep the names of the participants confidential for ethical purposes, nicknames were used, but in the present study, they will be quoted as K1 (Participant 1), K2 (Participant 2) and so on.

Data on self-perception of participants in English were collected with Personal Information Form. In a four-degree level scale, it was observed that the participants perceived their efficacy

in reading mostly as 2 (n = 10) and 3 (n = 8), in writing again as 2 (n = 12) and 3 (n = 9), in listening as 1 (n = 8) and 2 (n = 11), and in speaking as 1 (n = 12) and 3 (n = 8). It could be observed that the participants were generally considered themselves at middle level in reading and writing skills, and at low level in speaking and listening skills.

Personal Information Form data provided the status of the study group on using computer facilities to develop their English. It was determined that study participant students rarely used their computer to study English (n = 10), however, 23 out of 24 participants "completely agreed" (n = 6) and "agreed" (n = 16) with the statement that "I utilize the facilities provided by the computer to improve my English." The technologies that participants used for learning English were books (n = 5), serials (n = 3), songs (n = 3) and Internet sites (n = 2), respectively.

To determine the participants' knowledge level on SL, Personal Information Form was used to ask them questions on their general knowledge on SL. Out of those who responded the question, 14 marked the response "agreed" and 2 selected "completely agreed.". Two more questions were posed to these 16 participants on for how long and for which purpose they used SL. It was understood that these participants started to use the application after the orientation training during the last ten or fourteen days. Furthermore, the responses of participants for the question on the reasons for using SL demonstrated that 7 participants used the software to improve their English and 2 participants used the software out of curiosity and interest.

Data Collection Tools

Personal information form

Personal Information Form developed by Jee (2011) to collect demographical characteristics of participants such as age, gender, department, their general level of computer use and the level of their use of SL environment. The questionnaire was translated into Turkish by three English instructors from College of Foreign Languages and a Turkish Literature branch teacher and a language validity study was conducted. Two pilot schemes were conducted for Turkish version of the form. Initially, the questionnaire was applied to nine students attending College of Foreign Languages who were proficient in English. After the questionnaire was translated to Turkish, it was retranslated to English and applied to the same students after 10 days. Responses were compared with Kappa test and assessed by a measurement and assessment specialist and

a education programs and instruction expert, and as a result, it was concluded that Turkish version of the questionnaire was usable. In addition to age, gender and departments of the participants, there are eight additional questions to collect information on foreign language levels of the students in the demographical information section of the form. Following the demographical information, 12 questions on general computer use of the participants, level of the use of computers for English education, level of knowledge on SL and the purpose of using this medium were posed to the participants. All questions included in the questionnaire aimed to determine pre-activity participant profiles.

Second Life Learning Experience Questionnaire

SL Learning Experience Questionnaire developed by Jee (2011) was used to determine the views of students on the activities they participated. In the first section of the questionnaire, there are 21 items that are graded between "I completely disagree" and "I completely agree.". In the second section of the questionnaire, there are five open ended questions on the activities liked, difficulties experienced and recommendations about the application. The questionnaire was translated to Turkish by three English instructors from College of Foreign Languages and revised by a Turkish Literature branch teacher. After translation to Turkish, the questionnaire was translated back to English by language experts and compared to its original version. The questionnaire was evaluated by two field experts who authored studies on 3D virtual world, a measurement and assessment expert and an education programs and instruction expert and the Turkish form of the questionnaire was deemed usable after their approval.

Feedback form

The feedback form developed by Jee (2011) and included nine Likert-type items and four open ended questions was used to determine the problems the participants experience in activities conducted in SL medium. The form was translated to Turkish by three English instructors from College of Foreign Languages and revised by a Turkish Literature branch teacher. After translation to Turkish, the questionnaire was translated back to English by language experts and compared to its original version. The questionnaire was evaluated by two field experts who authored studies on 3D virtual world, a measurement and assessment expert and an education programs and instruction expert and the Turkish form of the questionnaire was finalized. In the first section of the questionnaire, there are 9 five-point Likert-type items that are graded

between “I completely disagree” and “I completely agree.”. This section included questions that reflected general views on SL and activities. In the second section, there are four open ended questions. Open ended questions asked the participants the tasks they completed comfortably in SL activity and the tasks they experienced difficulties with and their views on the activity and recommendations for future activities. Recommendations of the participants were recognized when organizing the activities conducted later.

Interview form

Interview form, prepared by the authors, was used to obtain detailed opinion of the participants about the application. When preparing the interview questions, views of two field experts, a measurement and assessment expert, and an education programs and instruction expert were consulted. Interview form included 13 open ended questions. Interviews were conducted face to face. Participants were reached using e-mail and phone calls and appointments were set up for interviews at whenever and wherever appropriate for the participants. Participant consent was obtained for recording the interviews.

Video recordings

Activities realized in SL environment were recorded with Camtasia 7.1.1 software including sound and vision. The researcher utilized different angles to observe all actions conducted in the activity environment. The duration of activities conducted in SL were 135, 84, 83, 66, 83 and 50 minutes (total 501 minutes), respectively and sizes of the same were 60.1, 40.9, 33.7, 44.2, 40.1, and 22.5 (total 241.5) gigabytes.

Application Process

As could be observed in Figure 1, the application started with a 21 slide presentation that provides information about the present study given to all students that attends Foreign Language I and II courses in all departments in Ege University, Faculty of Education. In addition to information about the study, topics such as SL specifications, activities that would be conducted in SL and the rights of the participants were also covered in the presentation. After the presentation, volunteering students were asked to install SL application in their computers and provide information on the specifications of their computer and their Internet access speed. E-

mail assistance was provided for students who installed but failed to run the SL application. Students who experienced problems in SL environment were left free to quit the study throughput the process. Before the application, two exercises were conducted with participating students in two separate occasions. These orientation sessions lasted for 60 minutes in average and information on the medium and the study were provided for the participants during orientation.

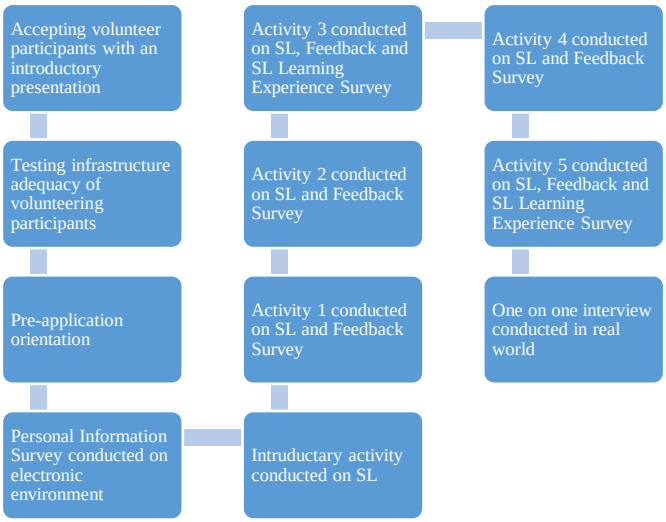

Figure 1. Application Process and the Steps of this Process

Application was started on the second week of March 2012 and conducted for eight weeks. In this process, introduction and five activities were conducted in SL environment. In activities conducted in SL environment after the first introductory activity, topics such as greeting, acquaintance, asking the time and the date, narrating a job someone does were scrutinized. In the second activity, topics such as discussing an experienced problem, narrating a sad event such as an accident or illness, and narrating a positive event were included. In the third activity, placing an order and making a proposal topics were scrutinized. A telephone conversation, buying medicine at a pharmacy and check-in at the airport were the topics of the fourth activity. In the fifth activity, a trip was narrated, certain tasks were planned and a request was made for a business need. In all abovementioned activities, an English instructor from the College of Foreign Languages also took part in addition to the author. English instructor acted as the activity manager and decided when to start and end the activities and participated in all dialogues of participants related to English. Furthermore, the instructor was introduced to the participants as an American teacher to make the activities more interesting for the participants. Selection of the instructor who speaks English as a foreign language was based on the fact that

the English proficiency levels of the participants were low and the view that an instructor who speaks the same native language as the participants would be more beneficial. This view was supported by Medgyes (2001) who stated that foreign language teachers that do not teach their native language would better understand and assist the students and Blasing (2010) who stated that students felt higher anxiety when interacting with others who spoke their native language on SL. The author participated in all activities along with the instructor and recorded all voice communication activities in video and sound. The author played the role of the assistant to resolve the technical problems that the participants and the instructor experienced during activities. In addition to the author, the owner of the SL island where the application was performed also participated in the activities and intervened in the technical problems directly. Topics covered in the study were selected from daily events sections in "Everyday Expressions" conversations unit selected by course teachers at the faculty of education departments. As could be observed in Figure 1, feedback forms were applied to the participants after each activity and SL learning experience forms were applied to the participants after the first three and the last two activities. At the end of the process, real life interviews were conducted with volunteering participants.

Data Collection and Interpretation

Inductive content analysis was used to analyze data collected with feedback form, SL learning experience survey and in the interviews in the present study. Content analysis is a method where the data is summarized and interpreted with descriptive analysis and subjected to a deeper process (Yıldırım & Şimşek, 2011). Thus, concepts and themes that could not be identified with descriptive approach could be determined. The themes related to the items and questions in data collection tools were determined and utilized in coding qualitative data. To determine the themes, initially the interview recordings were transcribed. Since the data collected with other data collection tools were already in the data processing software, these were not processed. In the next step, transcribed statements were transferred into word processing software and statements were read sentence by sentence and different colors were assigned to these statements to create draft codes. Draft codes were transferred to electronic tabulation software and responses given by each student for each draft code were inscribed in the related cell in the table as could be observed in Figure 2. The actual codes were retrieved as a result of this step and these main codes were grouped under specific themes.

During the coding process, interview transcripts of each participant was thoroughly read twice and codes were reexamined during a three-week period to establish the codes and themes with inductive analysis. In quantitative analysis process, data collected with personal information form, five feedback forms and two interview forms were analyzed using frequencies. These frequencies were used to support obtained themes.

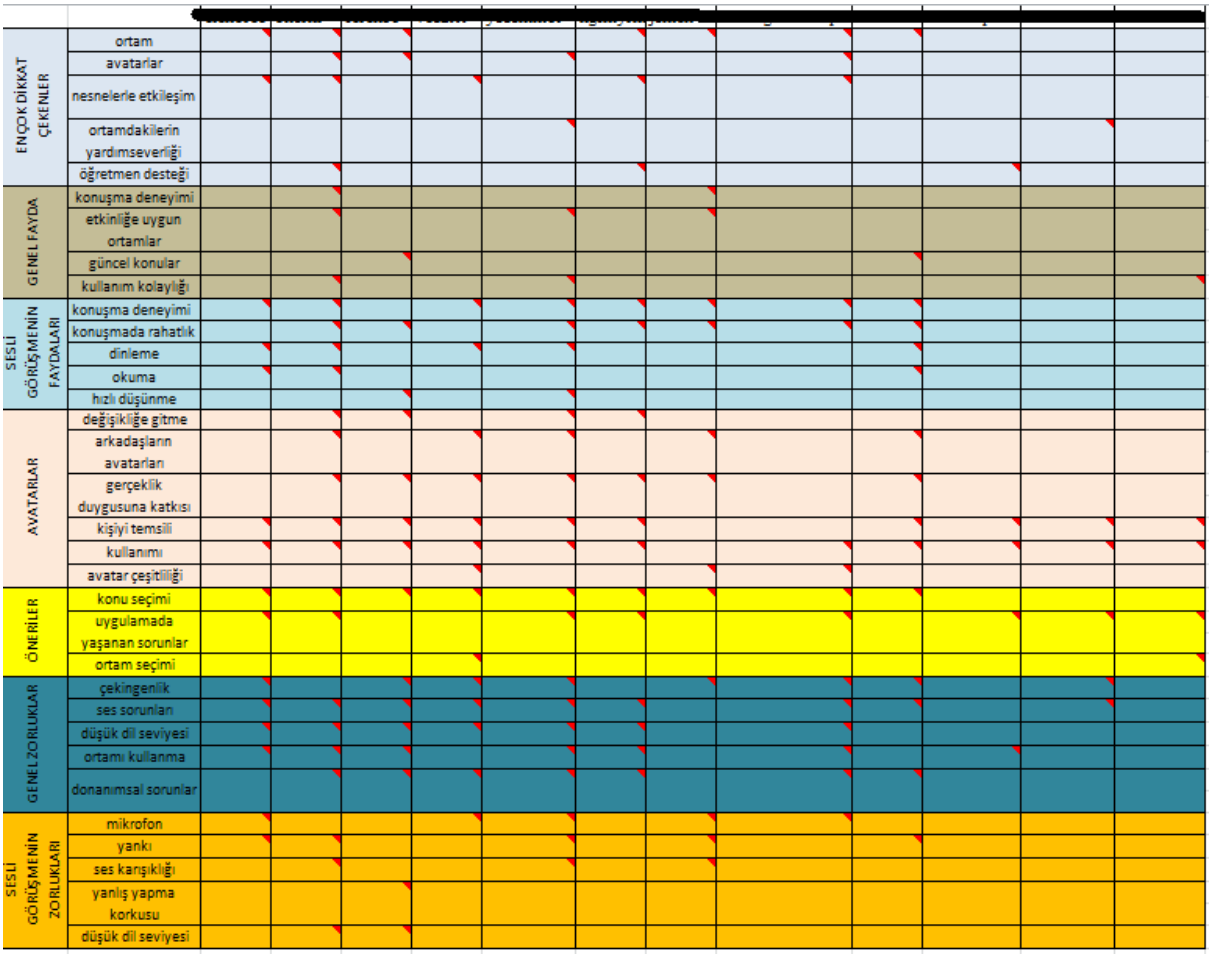

Figure 2. Analysis of Qualitative Dataset

Validity and Reliability Measures

Validity in qualitative research is observation of the researched phenomenon as is and objectively (Kirk & Miller, 1986). Validity is scrutinized under two topics; internal and external validity. Merriam (2013) calls internal validity as trustworthiness as well and defines the concept as the compliance between the data and current reality. External validity is accepted as transmissibility in the literature and defined as the degree of applicability of study results on different situations (Merriam, 2013). Several measures were implemented in the present study

to provide trustworthiness and transmissibility. To provide trustworthiness, the author participated in all activities conducted within the context of the application and attempted to maintain long-term participation principle. These applications and findings were described in detail. In addition, interview data collected during the study and findings obtained at the end of the process were presented to the participants and they were asked to confirm these data and findings. In addition to trustworthiness, study participants were described in detail to provide transmissibility.

Merriam (2013) defines reliability as capability to recreate study findings and states that it could be referred to as consistency in the literature. To establish reliability that could be divided into two as internal and external reliability in research, several measures are taken. The following measures were implemented in the present study to provide internal reliability:

- Data collected in the study were presented to the reader using direct quotes without any interpretation and related interpretations were presented separately.
- The author defines the theoretical framework and conducted the data analysis within this framework.
- Data analysis processes were approved by another expert with respect to the process and findings in addition to the author.

In addition to internal reliability, the following measures were implemented in the present study to provide external reliability:

- The role of the author was described in the study.
- Sound recordings of the face to face interviews were played for the participants of the interviews to provide participant control. Furthermore, these interviews were recorded with a sound recording device for storage purposes.
- In addition to interview findings, other research findings were also controlled by a different expert and presented for the approval of participants.

Ethical Principles and the Role of the Researcher

Required permissions to conduct the applications in the study were obtained from the institution where the study was carried out and participants were informed about the application and their

consent were also obtained. Similarly, during the interviews conducted with the participants, their wishes and approval were prioritized. Furthermore, real names of the participants were omitted from the study and participant nicknames were coded and these codes were used in the paper. In addition, when application screenshots or the screenshots of theme creation process where participant nicknames are visible were needed to be used in the paper, the participants were informed that their nicknames will be blacked out before use.

Similar to other qualitative research types, the primary data collection and analysis tool in case studies is the researcher himself (Merriam, 2013). In the present study, the researcher participated in the application and played the role of the primary data collection tool as well. The researcher was the "participating observer" in the application. Although the researcher who plays the role of participating observer primarily acts as the observer, interacts with the participants to a certain degree (Glesne, 2012). Since the researcher in the present study is not a foreign language expert, a foreign language expert and the owner of the island where the applications were conducted and also a foreign language expert were also participated in the applications, accompanying the researcher. In addition to the island owner, the researcher also provided assistance for the students when they experienced technical problems. To preserve the spontaneity of the environment, the process was not interrupted and the researcher rather played a role of a guide in the environment. Furthermore, the applications recorded by the researcher in video and sound were backed up in two different electronic media to prevent data losses.

Findings and Interpretations

In the present section, research data obtained through the data collection tools are presented and interpreted. As could be seen in Figure 3, the findings include two main topics; feedbacks of the participants about the SL environment and problems they experienced in the SL environment. These main topics also contained subtopics as could be observed in the related figure.

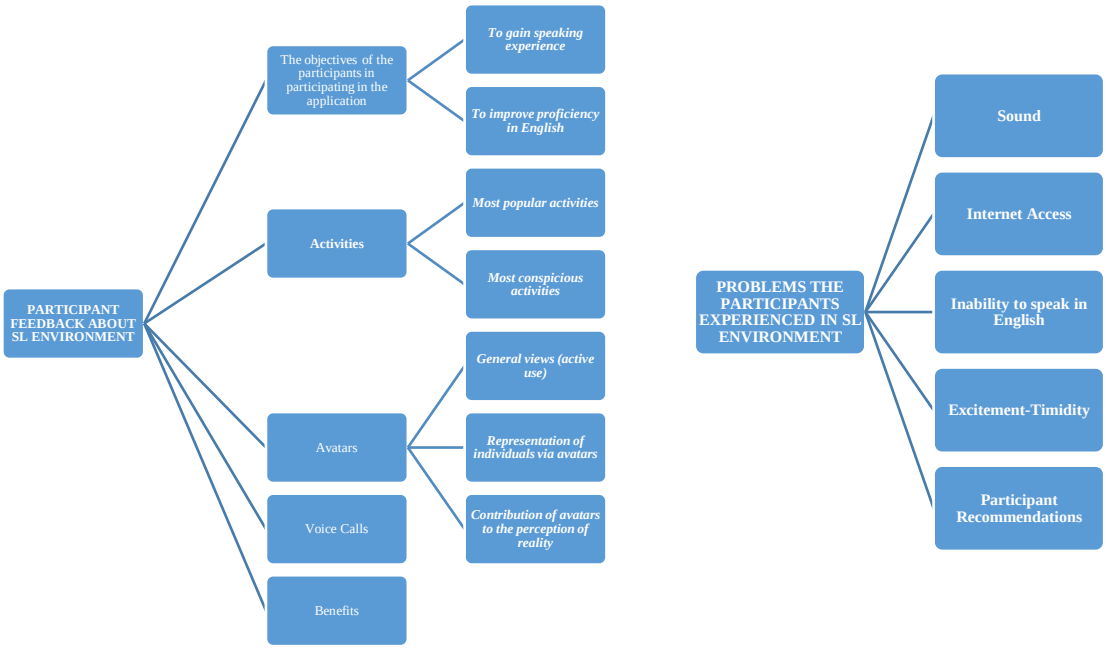

Figure 3. Main and Subtopics Related to the Findings

Participant Feedback on Second Life Environment

Questions were posed to the participants to determine their views on the use of SL application in foreign language instruction with respect to the first research question of the study. Responses obtained from feedback forms and SL Learning Experience Questionnaire were analyzed with descriptive and content analysis methods and content analysis was used to analyze interview data. The themes and codes obtained as a result of the abovementioned analyses are listed below:

The Objectives of the Participants in Participating in the Application: Study participants stated that they participated in the study to gain experience in speaking and to improve their proficiency levels in English. Related analyses are presented below:

To gain experience in speaking

Three students who participated in the study stated that they participated in the study to improve their experiences in speaking. They expressed these views as follows: *"…We are trained in grammar in English, but we do not have the opportunity to practice our speech. I wanted to participate for this reason in the beginning [K20]", "…In theory, we know a lot of stuff in*

English, but we could not speak, for example, when we meet a tourist. It was the same in SL in the beginning, but then we got used to it [K8]".

To improve level of proficiency in English

Two students stated that they participated in the study to improve their proficiency in English. The participants expressed that *"…I speak/write faster and better now [K7]", "…It guided me in learning English better [K24]*".

Activities: Participants' views on activities were divided into two groups; most popular and most conspicuous activities.

The most popular activities

It was observed that the participants liked the ordering activity the most. It could be stated that this activity was popular because the selected activity environment was suitable for the topic and high level of interaction was maintained throughout the activity. K24 stated that (s)he liked the activities of giving directions for addresses and making a proposition. Another participant expressed her/his opinions as follows: "*The activity of narrating a trip was good. I liked talking about a nice place I visited [K12]*".

The most conspicuous activities

When the participants were asked what were the elements that attracted their attention the most during applications, five students stated that the activity environment attracted their attention the most. Certain student responses were as follows: "*The environments created in SL [K12]", "…Visually 3D spaces [K20]*". K18 and K10 stated that the presence of different islands and the ability to teleport between them attracted their attention.

Avatars and several motions made with avatars were also the center of attention for the participants. Two participants stated that they found the movements of avatars, one participant the avatars themselves and another stated that (s)he found the avatar of the English teacher attractive. K21 said that being able to dive into the water with the avatar was interesting. Three participants found being able to interact with the objects in the environment interesting. K7 said riding a jet ski and a peer flying the helicopter were interesting. Participants expressed the following views on avatars:

"*... It was nice to fly and look at the environment from above." [K13]*

"... The fact that avatars did what I wanted to do; walking, running, flying..." [K24]

It was observed that the participants found their conversations with the English teacher interesting. Three participants stated that they found one on one communications with the English teacher, the individual attention paid by the English teacher and the English teacher comprehending their half-comprehensible statements interesting. One participant said that "*It was nice for the English teacher to understand the half-comprehensible English we spoke [K17]*".

In addition to conversing with the English teacher, it was observed that being able to speak in turns during applications and being able to converse with their peers were attractive for the participants. K18 and K24 confirmed this fact. On the other hand, two participants stated that they found the benevolence of the individuals in the environment impressive. K24 said that their peers were helpful, while another participant said that "*The friendliness of volunteering individuals affected me very much. The same goes for their willingness to teach [K3]*".

It was found in the study that 10 participants had positive views on SL activity based on ease of use, feeling relaxed and attractiveness of the application when compared to the classroom. Certain statements of support are as follows: *"...You cannot find the environment available in SL in the classroom. While the environment in the class is monotonous, it changes continuously in SL [24]", "...I was in a horizontal position in all activities [K20]*". On the other hand, certain participants stated that they considered the classroom environment more positive: *"...We were able to express ourselves better in the classroom since we were face to face [K7]", "It was good, but I think that when we spoke to each other in the classroom face to face, the teacher was able to understand our emotions reading our mimics [K18]*". K20 stated that (s)he enjoyed the face to face conversations in the classroom, however (s)he was comfortable in SL as well. The participant stated the following on the issue:

> *"The class has a particular fun since it is face to face. In a face to face conversation one needs to pay attention to behavior, gestures and mimics, but in SL, this is not necessary. For instance, I was in a horizontal position during all activities." [K20]*

Avatars: The views of the participants about avatars were examined under three topics: general views, representation of individuals by avatars, and contribution of avatars to the perception of reality.

General views (active use)

It was observed that the study participants were able to use the avatars easily. Six participants agreed, four participants disagreed with the statement "I tried to use my avatars as much as possible during the activity" and one participant was indecisive. Similarly, four participants agreed with the statement "I participated actively in activities thanks to the avatars," while two participants were indecisive. Responses to both statements demonstrated that the participants thought that they actively participated in the activities by means of their avatars. Participants stated that there were several avatars with different types and this diversity created a chance of selection. Some of their statements are sampled below:

"Since there are several choices, there are quite different avatars." [K20]

"There are avatars that address everyone's taste." [K8]

"There were certain types of avatars. Some were crazy." [K21]

Representation of individuals by avatars

Ten participants presented views on representation of individuals by avatars. Six of these participants stated that their avatars did not represent them. K13 and K24 explained the reasons for the fact that their avatars did not represent them as the presence of numerous types of avatars and the fact that they were not interested in the appearance of their avatars. Some of these views are as follows: *"My avatar does not completely represent me. Finally, there are so many different people on the world. No one could be limited by ten avatars [K13]", "No, it does not yet represent me. Because I did not deal with its dresses, etc. yet [K24]*". Two study participants stated that their avatars represented them. K12: *"...It represents. I tried to make it look like me as much as I could when I created it*".

Contribution of the avatars to the perception of reality

Seven participants expressed views on the effect of reality created by avatars on individuals. Two of these participants said they considered the speech of avatars realistic: "…When I saw

the images my perception of reality was altered. When dancing, their movements were identical. It was interactive [K13]", "…It was quite realistic to hear a human voice when they were speaking [K8]". Certain different views on the contribution of avatars to the sense of reality are as follows:

> *"…It was not much realistic for me, finally we were in a virtual World back then… It was realistic though to hear the speech when compared to writing." [K12]*

> *"Avatars move their lips when talking, but it is not completely realistic… It is better than normal voice recording though." [K21]*

Voice Calls: Nine participants stated that voice calls contributed to their speech experiences. Furthermore, it was stated by the participants that it provided a relaxed form of communications especially those who were timid in talking. A participant said *"…We hardly had a setting where we could speak in English, but we had plenty of chances in SL [K13]*". K10 and K12 said that they overcame their fear of speech, their self-confidence in speech improved and they were comfortable when speaking. On the other hand, K7 and K12 expressed hat voice calls helped them in learning the correct pronunciation of the words. Six participants noted that voice calls provided the opportunity to listen as well as speaking. Two of these views are as follows:

> *"Especially the fact that we used our own voices made us both hear our own voice and facilitated our communication with other friends." [K24]*

> *"... It is more comfortable than writing. You only push a button and talk. It provides one on one communications in a rather short period of time." [K10]*

Four participants stated that voice calls were beneficial in improving their vocabulary. It was considered that the fact that participants heard different words during the activities was effective on this response. K13 and K10 stated that the voice calls were beneficial for grammar. Three participants expressed that voice calls had an effect on reading. K1 argued that (s)he benefited from voice call activities in writing. The fact that voice calls were considered beneficial for reading and writing skills, which are not expected to be related to voice calls, is considered to be related to the fact that certain participants preferred text-based chat instead of speaking during the activities. Participants' views showed that voice calls were effective on overcoming fear of speech, providing speaking experience, learning the meanings of the words, and listening and interactions.

Benefits: Three participants stated that they have benefited from the SL applications. These participants indicated that the fact that the activities were conducted in environments which were related to the course topics was beneficial for them. One participant supported this view by saying: "*It is better when we conduct the activities related to the topic we handle in the class in environments that are related to the subject. For instance, it is better to be in that environment when ordering something compared to the classroom [K13]*". Two participants stated that the fact that the topics covered in the activities were similar to daily life and beneficial for daily life was an achievement for them: "*These were useful activities in daily life [K10]", "…Activities were better than the ones we have to use in daily life [K18]*". K13 and K24 stated the following on the benefits of the application for them:

> *"...We saw the setting, it was nice, it widened our horizon…" [K13]*
>
> *"It altered my perspective on English. I thought it was impossible for me to speak in English. I realized that if I put an effort, I could do it. I was not using English in daily life. Now I watch serials and movies, I listen to music. I would like to participate to such an application again." [K24]*

One participant mentioned the significance of hearing. The participant indicated that hearing is important in learning languages and the present application could be beneficial for this purpose. Another participant stated that the difference of the application was a big achievement for her or him: *"…The environment in which we communicated was not monotonous like the classroom and let us move (talking, walking, etc.) more freely…" [K24]*

It was observed that the participant generally liked the application and found it useful, entertaining and didactic. It was considered that good general planning of the applications and the locations that were chosen for the activities were effective on the fact that the majority of the participants had positive views about the application.

Problems Participants Faced in Second Life Environment

Data obtained from feedback and SL learning experience surveys applied after the activities and interviews conducted with the participants at the end of the application were used to respond the second sub-problem of the present study. Descriptive analysis and content analysis methods were utilized in the analysis of abovementioned data. Based on the analysis results, the problems that participants faced were scrutinized under the themes of sound, Internet access,

insufficiency in speaking English, excitement – timidity, and participant recommendations about the application.

Sound: According to the study findings, nine participants stated that they experienced at least one problem about sound. K13 and K10 said that they experienced echo problems the most: *"...There is a sound problem. The voices echo. We lost sound on and off. I did not understand anything from what people said for this reason [K13]*". In addition to these participants, four others also stated that they had the problem of sound cutoff. Participants indicated that they were not able to hear and comprehend what was said completely due to sound cutoff problems: *"…The sound was on and off. Due to the sound, it was difficult to understand what the other person said… [K21]", "…Also I am having problems in hearing the voice of the teacher [K3]*". One participant argued that this problem disappeared in time. Four participants stated that they experienced sound problems due to the microphone. Two of these participants stated the following: *"…The fact that microphones caused static sounds [K24]", "I did not experience hardware problems, only I had to buy a new microphone since the microphone of my laptop was broken, in the beginning I had trouble in adjusting the volume of the microphone [K8]*". Two participants considered that two individuals speaking at the same time created problems. These views were expressed as follows by the participants:

> *"... I could not understand when the other person's voice was not clear." [K21]*
>
> *"Since we did not see each other, sometimes we spoke altogether at the same time. "Nobody was able to make sense of what was being said." [K24]*

It was observed that the participants experienced problems in adjusting the volume, microphone and leaving the button on when their counterpart was speaking during voice calls in SL, however, they have resolved these problems in time.

Internet Access: It was observed that participants experienced various Internet access problems in the application. These were slow connection speeds, disconnections, inability to access the SL environment from the campus and power outages. It was observed that these problems affected the participation of students in the application. Participants stated the following on the issue:

"Images were loading slowly. I do not know exactly if that was due to Internet, but the display is not too good." [K13]

"I could not participate in two activities due to Internet, and another two due to my own chores." [K21]

Insufficiency in Speaking English: According to study findings, seven participants stated that they experienced problems in the application due to their low level of knowledge in English. These participants indicated that they had problems in comprehending and participating in conversations and thus, felt stressed. Some participant views supporting abovementioned angle are presented below:

"... Some friends were not speaking much. The teacher was not able to get responses to the questions he asked. This was a problem." [K13]

"I had problem in comprehending the teacher and was not able to participate in conversations." [K7]

Excitement–Timidity: Eight participants mentioned that they experienced excitement, timidity and fear of making mistake in the study: *"…The first week we were not able to speak, we were excited. We had the fear of saying a wrong world… [K10]", "…In the beginning I was timid, but after a while, I got rid of it [K8]*". One participant stated that (s)he preferred to write slowly on text-based chat when (s)he could not speak and this made the other party wait longer. In the application, it was observed that participants who were timid and excited had problems in completing the activities. It is considered that the problems the participants experienced with speech could be due to the fact that they were new in the environment and had little experience in verbal English.

Participant Recommendations: A review of participant recommendations on the application would demonstrate that their recommendations concentrated mostly on topics that could be chosen for applications. Two participants stated that selecting a course related to the department could improve the interest. One said: *"…If it was a class related to the department, interest and participation could be improved. There was not much interest for English [K13]*". On the other hand, K7 said it would be helpful not to stay on one topic during the application process. Three participants stated that the application could be more productive in verbal courses. Participants stated the following on the subject:

"...It could be used for conversations in Turkish class." [K21]

"…One on one course instruction in verbal courses would be more beneficial." [K7]

"It would be more comfortable to use it in verbal courses."[K18]

Four participants stated that the application would be more successful when subjects that everyone could be active in would be selected. K13 argued that the application could be useful in different activities such as dance and swimming, while K24 argued that it could be more useful in the fields of science and technology. Two participants proposed interesting topics and daily affairs could be selected. One of these participants said *"The subjects that would be discussed should be determined before the application and these should be topics that are of interest for all. That way all can discuss [K12]*". Participant K24 stated that it would be useful to conduct the activities in different environments: "*I do not like virtual environments that much. I would feel better if we do our discussions in SL in open fields, forests, mountains or seas*".

Participants also had recommendations about the problems experienced in the application. Five participants indicated that individuals should take turns when speaking, because the voices were mixed with each other: *"I think that individuals should take turns in speaking, otherwise those who comprehend what is said response and the rest experience no improvement [K7]", "It could be solved by those that would not talk turning off their microphones. The sound is mixed up." [K1]*

Participant K13 argued that it could be useful to conduct the activity and implement the examples after the course was instructed in real life. The same participant considered that it would be beneficial to write down all conversations in English and Turkish. It could be argued that this response was related to the fact that the participant was not able to comprehend the conversations that took place in voice calls. Similar to the views of this participant, K20 proposed that English language activity applications should be conducted with more advanced students and conversation activities should be used more in applications. K12 recommended that the application could be used for activities designed for introduction with different individuals. Participants also made recommendations about hardware problems they experienced. K13 stated that Internet connection must be speedier for the applications to be

more conducted more efficiently. K12 and K3 indicated that in-campus access should be given for the application.

Result, Discussion and Recommendations

During the present study, it was observed that the participants liked the foreign language instruction activities conducted on SL and followed these activities with interest. The most popular activities among the participants were ordering and narrating a place which was previously visited. It was observed that the activities were beneficial for the participants in gaining speech experience. Parallel to the findings in the present study, Jauregi et al. (2011) reported that activities and environments which are similar to daily life attracted more attention. Furthermore, Deutschmann et al. (2009) indicated that letter-perfect and realistic elements affected the commitment of the students to the environment positively.

In the application, participants mostly found the unlimited place and space, ability to interact with the objects available in the environment, movements and mimics that the avatars were able to do and the fact that the activities were conducted in related environments interesting. Similarly, in a study by Peterson (2012), it was reported that avatars used for language instruction encouraged the participants. Furthermore, avatars give a feeling of reality to the individuals and reflect the experiences closer to reality (Iqbal et al., 2010; Sanchez, 2009). Moreover, avatars affect the sense of presence of the participants and allow them to merge into the environment (Chung, Shearman, & Lee, 2003; Yee & Bailenson, 2007).

The participants found SL activities more different and interesting when compared to courses instructed in classroom. This finding was parallel to the findings by Koenraad (2008). Furthermore, the findings that conversations in the SL environment reduced the anxiety levels of the participants and increased their motivation were consistent with the findings in a study by Wehner et al. (2011). It was observed that the participants did not experience the problems they had in classroom environment in SL and they were more relaxed about this issue. This finding was similar to the study results by Bezir et al. (2011).

Participants stated that the English teacher comprehended them rather easily and tolerated their mistakes in an understanding manner. Furthermore, they indicated that the teacher guided them

perfectly in several activities. This finding was consistent with the finding reported by Medgyes (2001) that especially a teacher who spoke the same language with the students would understand their problems and could guide them with adequate techniques for the instruction of the target language. It was observed in the study that the participants were also had good communication with their peers in addition to the English teacher. Previous study results reported that SL promoted the communications and social interaction between users (Deutschmann et al., 2009; Mansour, Bennett, & Rude-Parkins, 2009).

It was observed that the participants experienced problems in speaking in English in the application. However, the participants stated that they considered the speaking experience in the environment important and their self-confidence in speech improved as a result of voice call activities. Self-confidence and motivation affects both each other and verbal skills in foreign language instruction (Chen & Lee, 2011; Cook, 2001; Soozandehfar, 2010; Stroud & Wee, 2006; Woodrow, 2006). Similar to these findings, studies in the literature reported that SL reduced the level of anxiety, increased motivation and developed individuals' verbal skills (Bezir, Çukurbaşı, & Karamete, 2011; Kaplan-Rakowski, 2011; Ortega et al., 2010; Sweeney et al., 2011).

It was observed that the participants predominantly experienced sound problems in SL environment. Another significant problem was the restriction of SL access in the campus. These results were consistent with the findings of other studies in the literature (Dudeney & Ramsay, 2009; Hislope, 2009; Sobkowiak, 2012).

As a result, it was observed that SL environment was generally liked and found useful in learning English by the participants and improved their verbal skills. If problems due to sound and Internet access could be resolved in the future, it was considered that educational use of SL will be more popular. Based on the data collected during the study, recognition of the following recommendations could be beneficial for the researchers in similar applications that would be conducted in SL environment:

- In future applications, implementing a pilot scheme would remove factors that limit the applications such as the lack of technical requirements and students would be able to conduct more applications and thus, the lack of experience will be minimized with pre-research applications.

- To maximize participation in further studies, the application could be considered as a part of the course and a curricula where the results would affect the grades of the participants could be designed.
- To maximize the student motivation in future applications and to increase the awareness of faculty on the advantages of the SL environment, inclusion of instructor faculty members in the application could be considered.
- In future applications, similar environments to locations that are important in foreign language instruction could be designed in SL environment and could be used in the applications.

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