SECOND LIFE USERS' PROFILES AND VIEWS ABOUT EDUCATIONAL POTENTIAL OF SECOND LIFE: A CASE OF TURKEY

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ABSTRACT
This study aims to reveal Second Life (SL) residents' profiles, first hand experiences, opinions about SL and its potential as an educational environment. The members of 14 Turkish Island in SL answered a questionnaire including Likert-type, open ended and multiple-choice items and participated in interview sessions. Researchers collected 118 questionnaires and interviewed with 10 users. The results showed a general picture about the Turkish SL user profile. They agree on SL potential about providing better communication with people. Also, they keep their SL character in line with the one they have in real life, while changing their physical appearances. Many active SL users in this study do not have an apparent thought about the applicability of SL in education and most of them are not willing to participate in its educational applications in SL. This study concludes by offering suggestions to practitioners about how to use SL in e-learning.
Keywords: Second Life, social learning theory, e-learning, multi user virtual environments.

INTRODUCTION

Second Life (SL) has been one of the most popular social focused -general purpose- virtual worlds since its launch in 2003. However, it is not a game focused -purposeful- virtual world such as World of War Craft (Wagner & IP, 2009). SL presents its members a 3D virtual environment that users live in an avatar, which is a graphical image of the residents in this virtual world. The members can visit islands, purchase clothes, and construct furniture. Midura and Dede (2010) reported that SL and similar virtual environments have potential to enable people to achieve various important tasks such as doing experiments virtually, experiencing collaboration in virtual environments and adjusting their responses to the actions of other users. SL differs from other Multi-User Virtual Environments (MUVE) due to its open architecture which promotes Web 2.0 features of interaction and collaboration among users.

Second Life and Education

Although SL was not expressly developed as a learning environment, its potential for supporting learning has been recognized in many research studies (Inman, Wright & Hartman, 2010; Baker, Wentz & Woods, 2009; Bowers, Ragas & Neely, 2009; Atkins & Caukill, 2009; Deutschmann & Panichi, 2009; Helmer & Learning Light, 2007). Atkins and Caukill (2009) portray SL as offering "a unique environment for situated and experiential learning by providing for the creation of authentic tasks in an immersive environment" (p.81). A wide variety of subjects such as architecture, language, business, engineering, computer science, physics, law and science have been taught by using SL. Similarly, a review on research on using SL in K-12 and higher education showed that SL may be used as a constructivist tool (Inman, Wright & Hartman, 2010). Similarly, Franklin (2011) stated that learning in SL has meaningful since it let designers create problem based learning environments. Childress and Braswell's (2006) view about the potential of virtual environments such as SL and

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other MMORPGs was that they offer learning activities imitating the real-world learning experiences which are able to available owing to face-to-face interaction. Moreover, Wagner and IP (2009) stated that SL positively contributes students' perceived value of learning in a course designed as an action learning environment.

Teaching strategies that incorporate e-learning techniques are thought to be most valuable when they are situated in a theoretical perspective informed by practical results. The results of qualitative or quantitative research on learning in SL can therefore benefit from the application of theoretical foundations from the field of educational science. Januszewski and Molenda (2008) recommend that the field of instructional technology use reflective practice and authentic environments grounded in appropriate learning theory. The importance of SL for instructional technology was expressed by Cheal (2007) as "where it stands in the continuum of learning methodologies from lecture to active/experimental/problem-based/constructivist learning" (p.207). The practical results of this study were therefore showed in the frame of Bandura's social learning theory which can be seen as appropriate for SL with its convenient nature that is neither constructivist nor behaviorist. As Bandura (1997) stated observational learning in the social learning theory, which is encouraged in SL along with behavioral aspects such as imitation and behavior modeling of social learning theory (Wood, Bruner & Ross, 1976 cited in Smith & Berge, 2009).Furthermore, human potential is a factor in learning. As noted by Bandura (1999), "people have the power to influence their own actions to produce certain results" (p.154) and human control of the environment can be imposed, selected or constructed (Bandura, 1997). Smith and Berge (2009) identified three common aspects of social learning theory: observation of other learners for accomplishing learning; imitating the behaviors of encouraging others; and integration of the former two points with the aid of experiences (Foster, 2006 cited in Smith & Berge, 2009). Smith and Berge (2009) also supported the potential of SL as an example of social learning theory in action, but with some elements that have no applicability in real life. Moreover, interactions among individuals in SL compensates for the weaknesses encountered in the process of observing, as noted in social learning theory (Smith & Berge, 2009).

Second Life and E-learning

In recent years, higher education institutions have given high value to e-learning since its potential of reaching students at different locations. Specifically in Turkey, there is a big competition of offering online degrees among higher education institutions (Latchem, Simsek, Cakir Balta, Torkul, Cedimoglu & Altunkopru, 2009). According to Inman, Wright and Hartman (2010) 23 out of 27 SL studies were conducted by higher education faculties, or in higher classrooms or with higher education students (p.55). The preferences of 6504 students from four different universities according to their choice of the type of learning environment while attending any graduate program were explored. They preferred respectively blended programs (56%), traditional programs (32%) and online programs (12%) (Baran, Kilic, Bakar & Cagiltay, 2010). The most important reason not to prefer online education is that the students' willing to be involved in a learner community. That is, they think that e-learning has limitations on learner-learner and learner-instructor interaction (Gulbahar, 2010). However, SL can be thought of as an e-learning medium that can be used to support learner-learner and learner-instructor interactions as evidenced by tacit knowledge acquisition and dissemination among SL members. SL has also been considered as an e-learning tool which encourages communication, virtual teamwork and creativity in three-dimensional context that cannot be easily simulated in formal educational environments (Zhu, Wang & Jia, 2007; Wagner & IP, 2009). Mansour, Bennett and Rute-Parkins (2009) explored the perceptions of the e-learners on SL and indicated that SL affects learners in a positive way especially for the social interaction in their online experiences. They also remarked that learner-learner interaction was encouraged with the aid of SL in e-learning activities; the learners motivate each other to finalize the given task.

The purpose of the study

Second Life's significant user capacity and features have inspired several researchers to investigate its educational value (De Lucia, Francese, Passero & Tortora, 2009). Unlike other studies where SL is used as an e-learning environment, this study does not attempt to prove any ideas. Instead, it seeks only to describe the situation available to SL users in Turkey. In brief, this study aims to reveal Turkish SL residents' ideas about SL and their first hand experiences to SL. Specifically, this study presents; 1) The characteristics of active Turkish SL residents; 2) Their activities, and future plans in SL, and 3) Their thoughts about the value of SL as an educational medium.

METHODOLOGY

Participants

A total of 149 Turkish SL users responded to the online questionnaire. However the data of 31 participants were excluded as they had not responded most of the questions. Among 118 participants 43.2% (n = 51) were female while 56.8% (n = 67) were male. 44.9% (n = 53) were employed, 27.9% (n = 33) were students, 10.2% (n = 12)

were employers and 5.1% (n = 6) were unemployed. The remaining 11.9% (n = 14) selected the opinion 'Other' for the occupation field in the questionnaire.

In addition, semi-structured interviews were conducted with 10 interviewees from this sample. They were purposefully chosen to obtain in depth information about SL participants. Since, the participants were not willing to share their personal information and thoughts, the trust that the researchers built among participants is the main criterion during the data collection process. In addition, if the researchers found a qualified interviewer they asked her/him other friends who would be willing to participate to this study. The profiles of the interviewees are given under nicknames in Table 1. The nicknames were given by researchers.

Table 1: The profiles of the interviewees

Nickname	Gender	Age	ID in Real Life	ID in SL
Duru	Female	30	Employee	Island CEO
Bora	Male	35	Instructor	Academic researching simulations. Had many studies on these media. Not an active SL user
Irmak	Female	39	Stylist, TV broadcast supervisor	User, Researcher
Emrah	Male	35	Software operator, Team leader, Academic	Trainer, Island Manager, Production & Shops (Furniture,etc.), Design, Museum Founder
Ismet	Male	47	Employee	Island owner
Erkin	Male	27	Student	DJ, Island Manager, Design (Former) Shop Owner
Selim	Male	21	Employer Graphic designer	Island design, Advertisement, Stylist, Shop Owner
Aslihan	Female	38	Employer Graphic designer	Island design, Advertisement, Stylist, Shop Owner
Vega	Female	57	Housewife	Fashion designer (wedding and evening dresses, etc.) Owner of 10 to 20 famous chain shops
Buse	Female	41	Housewife	User

Instruments and Procedures

This study was implemented in the fall term of 2009. The researchers logged into the SL environment by creating their avatars and began to perform like other users in this environment. They gathered information from other users about their usage of SL (teleporting, searching, and clothing). In this way, the researchers were able to learn how to create and improve their avatars from experienced users (Figure 1). These avatars were subsequently used to administer the questionnaire and to conduct interviews with the selected participants.

Figure1. The avatars used in the study

Instruments

In this study, two different instruments were used to collect data. First, an online questionnaire was designed to determine the general views of SL users. Second, semi-structured interviews were conducted with the active SL users.

1. *Online Questionnaire*: The questionnaire consisted of 14 questions. The first two multiple choice questions were related to the personal information while five multiple choice questions were concerned with Internet, Facebook, MSN, Twitter and SL use amount of users. Three multiple questions were related with the number and gender of avatars. Two Likert type questions were related to user opinions about SL and educational activities in SL. Three open-ended questions were related to participants' opinions about SL, what they were doing in this environment, the value of SL for formal education, educational activities that can be presented in SL.
2. *Semi-structured Interview*: The interview consisted of three different parts. In the first part, the researchers asked the users about their personal information and avatar choice. In the second part, the participants were asked about their use of Web 2.0 technologies and the Internet. Finally, they were asked about their opinions about SL, specifically what they were doing in SL and their views on its educational use.

Procedures

The questionnaire data were gathered *via* the Internet from active users. To maximize the participation of active users, the researchers placed explanatory notices on the Facebook pages of Turkish SL user group. The purpose of the study was also advertised within SL and users were invited to complete the questionnaire. SL users were given the option of completing the questionnaire on the researchers' website or by responding to a "notecard" communication sent to them by the researchers.

The interview sample was deliberately selected so as to try and access the opinions of a diverse group of SL users. The researchers purposefully tried to identify active users to interview. As the users were in different cities in Turkey, the interviews were carried out in different media. The oral interviews took 18 minutes on average. Five interviewees participated in oral interviews conducted on the Internet *via* Skype and SL. Four of the interviewees expressed their time limitation for oral interviews and they preferred to put down the interview questions in writing. One participant who was living in the same city as the researchers agreed to be interviewed face-to-face.

Data Analysis

In the data analysis, the researchers analyzed Likert-type and multiple choice questions by a spreadsheet software. They also used content analysis technique while analyzing the data came from semi-structured interviews. During the analysis, the researchers first organized all the data, transcribed and controlled for any misunderstandings transcribe. Then, the researchers generated the codes and themes from the data. The researchers coded the data separately and then compared the results for ensuring the consistency.

Validity and Reliability

Expert opinions technique was used to ensure the validity of the data collection instruments. Based on their opinions, the questionnaire and semi-structured interview schedules were re-organized; some new items which seemed necessary were added while some others were removed. The qualitative data were audio-recorded and then transcribed. In addition, the field experience of the researchers and their effort to clearly introduce themselves and the aim of the study to SL users made it possible to obtain more reliable data from them. The results of the questionnaire, interviews and overall observations of the researchers were cross-checked for the purpose of triangulating the data prior to finalizing the findings of the study.

FINDINGS

Characteristics of Turkish Second Life Users

Internet, Web 2.0 Technologies and Second Life

The results showed that most of the participants (n = 77; 65.3%) used the Internet for more than 6 hours daily. The participants were also asked about average hours they spent on using SL, Facebook, Twitter, and MSN per day; most of them (n = 79; 67%) responded that they used Facebook 0 to 3 hours daily while 21 participants (17.8%) were not registered on Facebook. On the other hand, most participants (n = 109, 92.4) stated they had no Twitter account. Furthermore, most of the participants expressed they are using MSN for an average of 0-3 hours daily (n = 58; 49.1%), while some of them (n = 12; 10.2%) had no MSN account. Two of the participants explained their views as:

> The Internet is my life! As soon as I get to work I boot my computer and login to SL, Twitter, Gmail and Facebook. I am online at work for almost eight hours every day. When I am at home, I log into Facebook with my Iphone. I check what has been written. I can say I'm online for about nine hours a day, without exaggeration (Emrah)

For time spent in SL, it was found that most participants (n = 36; 30.5%) stay logged in for 0 to 3 hours daily. However, there were some extreme users who used SL for nine hours or more (n = 20; 17%). One user stated:

> I have been an SL user for three years. There were times I stayed logged in with no sleep. You can make your dreams come true in SL. You can disguise whatever you want and satisfy your secret desires. Some users don't respect others. That's why we are in SL. So you may wonder why we are still there. We are so addicted to the damn game that you feel empty when you are out, it's like loneliness (Buse)

Number and gender of avatars

Approximately half of the SL avatars, or personas, of the online questionnaire participants (43.2%; n = 51) were female while 56.8% (n = 67) were male. Only three participants had an avatar of the opposite sex. A considerable ratio of the participants had a second avatar (41.5%; n = 49). The gender distribution of the second avatar was 49% (n = 24) female and 51% (n = 25) male. 7.6% of participants (n = 9) reported that they had changed the gender of their avatar at least once.

The gender of interviewees was the same as that of their avatars (five male, five female). Six of the interviewees had a second avatar. Some opinions from users about their second avatars and gender change are given below:

> The first one was XXX. But I also have a YYY avatar. A second account registered to all my groups and islands as an owner. When you're banned from a group where you're an owner, it is impossible for you to come back as an owner. So there is a spare owner to deal with necessary arrangements (Aslıhan).

> I once started a female avatar to see how other users treat ladies. It was rather an avatar I used for trial purposes. Then the account was closed.
> *(Selim)*

Appearance and character of avatars

The participants were asked whether there were differences between their appearance and character and that of their avatars in SL. This question was answered by 81.4 % of the participants (n = 96). Some users noted differences only in their appearance; others mentioned differences only in terms of personality, while others voiced differences in both. The number of users who stated that their *character* in real life and in SL are the same was greater than those who said they are different (f_{same} = 43; 76.8% – $f_{different}$=13; 23.2%). However, the number of users who said that their appearance in SL is different from their appearance in real life was greater (f_{same} = 12; %19.7 – $f_{different}$ = 49; %80.3). Some participants expressed their choices as follows:

> To tell the truth, I tried to make my avatar look the way I did when I was younger. The character is slightly different but I think this difference is considerable. My avatar looks sexier than me. I have no relationships in real life but I do in SL. The clothes are similar to real life but thanks to virtual life, I can use strange things in SL. (Buse)

> The character of my avatar is the same as my real character. When it comes to appearance, of course the physical features we desire can be seen in our avatar. You're always young, beautiful and smart in SL. For example, although I'm a petite woman, my Avatar is 1.70 (meters) tall and has the body shape of a super model (Vega)

> Well, let me tell you that my new avatar looks like me. I'm bald, I have no hair on my head, and neither does my Avatar. I have a stubble beard. But my previous avatar didn't look like me. It was similar in character but wasn't like me in appearance (Erkin)

Activities and Future Plans in Second Life

Available activities in Second Life

The majority of the participants (f = 144; 60.2%) preferred to join entertaining activities which including travelling, chatting, meeting people, resting, shopping, getting a tattoo, having a party, musical activities, dancing, playing games & sports and flying. In addition, a group of participants were using SL for business purposes (f = 61; 25.6 %) such as real estate, management, disc jockeying, scripting, software programming and

web design. There were also participants using SL for entertainment (f = 14; 5.8%), learning different languages (f = 10; 4.2%) and getting to know different cultures, and for educational purposes (f = 5; 2.1%). The participants who use SL for educational purposes were questioned deeper and it was found that they were using SL for examining university level research and for conducting general research. Furthermore, some users submitted general statements as a response to the question what they were doing in SL. These general responses were categorized as "I utilize all the opportunities of SL" (f = 4; 1.7%) and "I use SL to satisfy my curiosity" (f = 1; 0.4%). Parallel to questionnaire data, most of the interviewees also mentioned that they used SL for business purposes (f = 7) and for entertaining activities (f = 6). Some interviewees also explained their activities on SL as follows:

> I am a fashion designer in SL. I mainly design wedding and evening dresses. The number is not stable but I have 10 to 20 shops in general. I have built a famous brand. Courtesy of SL, after the age of 50, I found myself in the fashion design world, to which I used to be a perfect stranger. This contributed substantially to my life both materially and spiritually. (Vega)

> I meet my friends, explore new places, and generally wander in SL. But the most important thing for me is to meet different people, of course worthy people. I mean everyone has a value but I prefer those who can help on my issue. I meet with them. (Irmak)

> I try to travel and see different places. It's helpful in terms of foreign languages. I have opportunity to explore the imagination of different people (from online questionnaire).

Plans for the future

The results showed that most of the participants wished to join business-oriented activities (f = 24; 20%). They expressed an interest in activities such as creating a new brand, starting a business, and being a disc jockey. A similar number of participants also sought to join educational activities (f = 23; 19%) including tutoring, helping and supporting people, receiving language education, conducting research and receiving technical education. Some users also wanted to try all of the activities available in SL (f = 21; 17.2%) while others wished to use SL just for entertainment (f = 16; 13.1%). Users reported that they would like to create new things (such as cupboards, desks, etc.), own an island and build houses (f = 13; 10.5%) and socialize with other people (making friends, chatting, establishing groups and getting married) (f = 12; 9.5%) in SL. Finally, a smaller number of users stated that they were in SL for entertaining activities (f = 8; 7%), political activities (f = 2; 1.5%), experiencing sexuality (f = 1; 0.8%) and joining a group therapy (f = 1; 0.8%). Similar to the questionnaire data, seven of the interviewees indicated that they were interested in joining business related activities while six said they would like to join educational activities as well. The interviewees stated their opinions as:

> The educational activity I particularly want is a graphic design course. I think the medium is quite suitable for that. (İsmet)

> I am considering a group therapy, for example for addicted people. In real life, when you join a group you are taken into a twelve-step program. I mean you do not give your name but you see each other. However in SL it is impossible for participants to recognize each other. There is no risk of being recognized. It is just like speaking behind curtains. It can be useful in such cases. (Emrah)

> Lecturers at universities should obligate their students to participate in SL by informing their students about the existence of such an environment and telling them that they can make reasonable amounts of money out of SL. (Erkin)

Evaluation of SL and educational value of SL

User opinions about Second Life

The majority of the users (n = 91; 77.2%) said that *it is fun to use SL* while a considerable proportion of the users were uncertain whether *using SL makes me improve myself socially* (n = 44; 37.3% partially agree/partially disagree). An equal number of users agreed (n = 37; 31.3%) and disagreed with this statement (n = 37; 31.3%). The number of users agreeing that *SL made me communicate better with people* (n = 48; 40.6%) was greater than the number of users who chose the option partially agree/partially disagree for this idea (n = 44; 37.3%). Additionally, most of the participants (n = 71; %60.2) mentioned that *(not knowing) foreign languages hinder using SL*.

Table 2: The user opinions about Second Life

Items	Strongly disagree		Disagree		Partially agree/partially disagree		Agree		Strongly agree	
	N	(%)	N	(%)	N	(%)	N	Ratio (%)	N	(%)
It is fun to use SL.	5	4.2	1	0.8	21	17.8	37	31.4	54	45.8
Using SL makes me improve myself socially.	15	12.7	22	18.6	44	37.3	21	17.8	16	13.6
SL makes me communicate better with people.	10	8.5	16	13.6	44	37.3	28	23.7	20	16.9
(Not knowing) foreign language(s) hinder the use of SL.	43	36.5	28	23.7	29	24.6	11	9.3	7	5.9

Participants' responses were illustrated as follows:

> SL has helped me to enhance my relationships with my team, understand young friends, speak their language and investigate their world (Aslıhan)

> As I don't speak English at an advanced level, I've had difficult times with English media. I cannot deny this. For example, we had some preparations to protest the prime minister of the country X. The prime minister X had an office in SL and we opened banners and things. I do not know what was said about us there. I felt uncomfortable there, in fact. It was 2007 I guess. I do not know what was said and written at the time. I did not like being in that situation. (Erkin)

User opinions about educational activities in Second Life

In order to determine the opinions of users about educational activities in SL, two propositions were presented for their consideration. A large number of participants could not decide whether *it is a good idea to use SL in the educational process* (n = 46; 39% partially agree/ partially disagree). On the other hand, user number who agree (n = 39; 33%) and disagree with this idea (n = 33; f = %28) were similar. The majority of the participants (n = 61; 51.7%) did not agree with the statement "*I would like to join various educational activities formed in SL"* while 26.3% of the participants stayed neutral. Only 24% (n = 26) of them said that they wanted to join an educational activity.

Table 3. User opinions about educational activities in SL

Items	Strongly disagree		Disagree		Partially agree/partially disagree		Agree		Strongly agree	
	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
It is a good idea to use SL in the educational process.	19	16.1	20	16.9	46	39	14	11.9	19	16.1
I would like to join various educational activities in SL.	26	22	35	29.7	31	26.3	22	18.6	4	3.4

User opinions about the capacity of Second Life in formal education

SL users' opinions were obtained about the educational levels they consider most appropriate to educational activity in SL. Users stated that SL is appropriate for primary, secondary, university and adult education. The largest number of the users thought that the educational activities in SL are generally suitable for university level (f = 65; 41.2%). Moreover, some users think that educational activities in SL are suitable for adult education (f = 41; 26.7%), secondary education (f = 37; 23%) and primary school education (f = 15; 9%). Similarly, interviewees expressed that educational activities in SL are convenient for all educational levels but particularly appeal to students at university level and in adult education.

> Most of the islands of SL, as I know, are not accessible for underage. They say there is another grid for them. One may think that it's too complicated for children. On the other hand, they can adapt it very quickly. Do you know who have the biggest problem for adapting virtual environments? People whose ages varying between 35 to 55. It's very hard to make them accept or try. They resist learning. They find it difficult. (Emrah)

> Actually, we can use all of them; we can use SL at all levels. But I don't want to take my children directly into SL because you can control web content only to some extent. (Aslıhan)

User opinions about possible educational activities in Second Life

The participants were asked about their preferences concerning which educational activities might be possible in SL. Most of them replied that it could be used for tutoring certain courses (f = 45; 48.4%) such as technical and vocational training, foreign languages, social sciences, science education, architecture and builder- programmer training. In addition, some users noted that training related to daily life would also be possible (f = 23; 24.8%) such as special education, human affairs, sex education and healthcare. The users also listed distance education, applied education, training provided by experts, group work, travel and observation type training (f = 10; 10.7%). While some participants argued that no education would be possible in SL (f = 6; 8.6%), others claimed that any kind of educational activity would be possible (f = 7; 7.5%). Another group of users accepted that some training is possible in SL but they did not propose any examples (n = 20; 16.9%). At the same time, 19.4% of the users (n = 23) did not explain their views for this question. Similar to questionnaire data, most of the interviewees (n = 8) stated that it is possible to provide technical training, foreign language education, social sciences and science education, architecture and builder programmer training via SL. Some interviewees explained their the opinions as:

> Graphic designer training could be given here, for instance. I think it is very suitable. Apart from that, since it is graphic based, visually oriented education and training should be given I guess. (İsmet)

> Generally speaking, my English is enough when I am abroad or at work. Of course if I had much better English, I would do more things. As a matter of fact, SL is also a good platform to improve your English. (Aslıhan)

> There are numerous educational activities related to this. There are even symposiums on using SL for education. I think the main question is not 'what' it is; but 'how' educators will use it. (Bora)

DISCUSSION

After the idea of using Web 2.0 technologies entered in our vision, it seemed more likely that we would begin to encounter more active and interactive learners. As the popularity and the number of users in SL increase every day, a question arises as to whether or not it is applicable in educational platforms. Calongne and Hiles (2008) pointed out SL is a successful application of Web 2.0 that has the potential of enhancing our e-learning environments, particularly in terms of knowledge sharing in experimental, problem based and constructivist learning environments (Cheal, 2007). This was also supported by Wagner and IP (2009), SL has the advantage of being socially focused. SL provides users high level of interaction with other members owing to capability of moving their avatars. Similarly, learners in SL are able to make their tacit knowledge structure more explicit, owing to their ability to discuss it with other learners and by sharing this explicit knowledge with them (Wagner & IP, 2009). In recent years, there is a serious increase of the research studies on use of SL in education (Keskitalo, Pyykkö, & Ruokamo, 2011; Edirinsingha, Nie, Pluciennik & Young, 2009; Warburton, 2009). However, in these studies, the sample of SL learning environments designed by the research team was not real users of SL. Moreover, they were sign up SL on the implementation step of the research. In this respect, Turkish SL residents' first hand experiences and their opinions about the use of SL in education are a significant topic to investigate.

Characteristics of Turkish Second Life users & activities and future plans

This study found that almost all SL users prefer to present different physical appearances from the one they have in real life while still retaining their real life character in SL. Physical appearances, beliefs and language, which are some of the issues investigated in this study, may be important factors to increase socialization among the SL community. Socialization, which allows for opportunities such as observation, imitation of behavior and modeling, is the most distinctive feature of SL when compared to other Learning Management Systems (LMS), multimedia or Web 2.0 technologies which often are used to support e-learning (Smith & Berge, 2009). Verbal coding and observed events play an essential role in observational learning especially for the pace and long-term retention of behavior. Moreover, a verbal behavior has a more important role in the cognitive process than a visual one (Bandura, 1969). Mansour, Bennett and Rude-Parkins (2009) highlighted that utilizing learning environments provide opportunity to not only see others but also express their nonverbal behaviors which is a significant factor to enhance e-learners' perception of the quality of interaction.

In terms of educational value, two viewpoints can be discussed while considering design possibilities for e-learning. First, physical appearance selection opportunity in SL might remove physical appearance

disadvantages of learner in classroom. Therefore, introvert learners may turn to be more active e-learners in a SL environment. The isolation and loneliness experiences of learners as an obstacle for learning were indicated in the literature (Löfström & Nevgi, 2007). Second, chance of changing avatars' character and physical appearance in SL might give e-learning adapters to use SL for role playing. Higher education began to require students to explore and articulate the others' viewpoints. Therefore, SL appears to have a big potential to be used as an online role playing environment (Inman, Wright & Hartman, 2010; Wills, Leigh & IP, 2011).

The findings also showed that SL users prefer to attend the activities which allow them to move their avatars actively. They expressed that these kinds of activities take their attention. Hence, e-learning designs should include these kinds of activities like role playing and future studies might explore effective online role playing design possibilities in SL. Moreover, the learning context may be enhanced with the various designs which could not be possible to actualize in real classroom settings. According to Mansour et al (2009), providing e-learners a communication environment which enables more realistic face-to-face interaction with others should be the focal point for designers and educators of the online courses. Furthermore, it is apparent that users are willing to attend activities related with learning a second language. In the literature, there are many research studies explored the potential of SL as a learning medium for language learning (Wang, Qi Wang, Hunt, Fikis, Nguyen & Page, 2010; Samur, Dannenberg & Evans, 2010; Li, 2006) and many people started to use SL for these kind of purposes. According to results of this study *not knowing a second language* could discourage SL users from communicating internationally. Given that SL provides unlimited opportunities for learners to interact with each other verbally, SL instructors employ all of the strategies which social learning theory proposes.

Evaluation of Second Life and the educational value

The main result of this study is that many active SL users do not have specific thoughts about the applicability of SL in education, or most are not willing to participate in the educational activities that are readily available. The results showed that most of the SL users were ambivalent about the educational applications in SL. This might be a consequence of not encountering educational applications in SL/perceiving SL as an educational setting and the common sense of SL is not designed for educational purposes. This finding is in opposition to some previous ones in the literature which support the use of SL in education (Helmer & Learning Light 2007; Calongne & Hilles, 2008; De Lucia, Francese, Passero & Tortora, 2009). This study showed that most active SL active users are more interested in the entertainment feature than its educational potential. Similarly, Baran (2010) found that university students were not ready to embrace the use of social networking tools in formal education as the primary aim of these technologies was not education. People use social networking tools generally making new friends and maintaining existent relationship (Mazman & Usluel, 2011). However, our results also showed that there exist a considerable number of users who have a positive attitude towards the educational use of SL and are willing to participate in educational applications. The response we obtained might be a result of special characteristics of the Turkish community in SL. Since they are generally adult users with a high level of education and are employed in various occupations, they may not identify a personal need for education in SL. Adults are generally known to prioritize education opportunities where the knowledge so obtained is directly applicable to their occupation or work situation. Therefore, this type of adult SL members should be presented with learning opportunities that are perceived to be directly relevant to their real lives. Another study revealed that SL students' perceived value of learning was high when the environment was designed according to action learning principles. That is, students passing the process of planning, action, experience and understanding and experiencing real life skills perceived value of learning in SL (Wagner & IP, 2009).

According to the results, most SL users agreed with the idea "SL makes me communicate better with people". This idea can be concluded that SL may reduce learner-learner distance in e-learning in addition to reducing teacher-learner distance (De Lucia, Francese, Passero & Tortora, 2009). As mentioned before, this study does not attempt to prove an idea about SL. Instead it opens a window to its use and potential from a Turkish point of view. If SL is to be used in e-learning, it should be remembered that SL is a recent innovation for e-learners and requires time and diffusion strategies for adaption to educational use. The main suggestions arose from this study is that the experiences of the users could be increased to disseminate the applicability of SL as an educational environment. According to results, active SL users were also using Web 2.0 technologies frequently; the designers can provide combination of these applications. Especially, SL could be a solution for introverted students who were not able to express themselves adequately in classroom. The main limitation for this study is the narrow participant number. This study may be replicated with a wider group of people from Turkey and beyond. In addition, international comparisons may be beneficial for examining possible similarities and differences among countries, education systems and e-learning communities and applications. Additionally, foreign language learning in SL differences between Turkish students and students from different cultures could be explored by using SL as a learning medium.

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