Sponsiello, M., & Gallego-Arrufat, M. J. (2016). Ethnographic approach to second life in education: a focus on technological difficulties. *Ethnography and Education*.
<https://doi.org/10.1080/17457823.2015.1089181>

Ethnographic approach to Second Life in education

This paper moves from the data collected during an ethnographic research conducted in Second Life, focused on the observation of different technological difficulties in educational experiences. The main research interests focused on the social dynamics of educational experiences in Second Life and the opportunity to develop a proper research methodology. The main goal is to evaluate the educational experience in such a particular context through the stories of participants, therefore the most appropriate methodology for researching the subject has been considered to be ethnography. As result of the research, it is observed that an appropriate use of the available tools and the adoption of innovative teaching strategies can promote the improvement of the educational experience in online worlds. This paper suggests interesting elements from the analysis of the data collected, which may help to adopt an innovative point of view on ethnographic research in an online world in education.

Keywords: word; ethnographic research; participant observation; second life; virtual world

Introduction

The spread of online worlds has led researchers and teachers to conduct experiments with various methods of investigation, mostly of them already being used for the analysis of similar educational situations offline (Bowers, Ragas, & Neely, 2009; Esteves, Fonseca, Morgado, & Martins, 2011; Ho, 2010; Ketelhut, Nelson, Clarke, & Dede, 2010; Mallan, Foth, Greenaway, & Young, 2010). Interest is often focused on the analysis of educational effectiveness, in terms of results achieved and effective teaching

solutions (Bowers et al., 2009; de Freitas, Rebolledo-Mendez, Liarokapis, Magoulas, & Poulouvassilis, 2010; Hansson, 2005; Ketelhut et al., 2010) thus, it often happens that the cultural background of the educational experiences, the social dynamics that can be observed within the context analyzed (Beaulieu, 2004; Boellstorff, 2009; Edirisingha, Nie, Pluciennik, & Young, 2009; Hudson-Smith, 2002, 2002; Jones, 2006; Richardson & Swan, 2003) are likely to fade into the background, in favor of the attention to the effectiveness of the educational situation, the results obtained as demonstrated by specific evaluation activities. Yet the experience of learning in such unusual contexts as immersive online environments opens up new opportunities for research with a more comprehensive gaze on the educational experience as a whole.

From the beginning, the aim of the inquiry has been the interpretation of the meaning of the initiatives observed for those who have experienced them, through the analysis of the particular context in which learning takes place and the study of how participants interact, socialize, carry out the experience and elaborate it in and for everyday life.

Ethnographic research was undertaken in Second Life over the period September 2010 - May 2011 and it was conducted with the aim of identifying the significant elements of some learning (and teaching) experiences designed in an immersive online environment. Cultural aspects of the educational experiences in Second Life and observable social dynamics have been examined, through an ethnographic methodology that has been adapted to the context and purpose of the study. This research is therefore a proposal for interpretation of learning experiences through the stories of the protagonists (researcher, teachers, students) in order to reflect on the socio-cultural elements that characterize educational events within an online world. Different traditional, but properly adapted, tools have been used: participant

observation, field notes, individual and group interviews, conversation transcripts, photographs, audio and video recordings (Boellstorff, 2010; Guimarães Jr, 2005; Hine, 2000, 2008, 2005; Murthy, 2008; White, 2009; Fitzsimons, 2013).

The initiatives chosen for participant observation had very different characteristics: some of the courses consisted of online and offline meetings, other courses were taught entirely online; some of the initiatives were selected in the university, others were identified between the informal programmes offered within Second Life by users for users. Among the experiences carried out in Italy there were formal and informal courses; foreign experiences (conducted in the United States and in Hong Kong) were formal initiatives exclusively. These are the figures of the research: for a total of 37 lessons observed, 31 ethnographic notes were produced and 33 transcripts collected, seven teachers and 49 students were interviewed.

This article will present some of the data collected during the research, related to the technological and methodological issues encountered.

Following the reflections about the three-dimensional environment as an element of significance in the learning process proposed by different previous studies (Edirisingha et al., 2009; Ketelhut et al., 2010; Mallan et al., 2010; Omale, Hung, Luetkehans, & Cooke-Plagwitz, 2009; Pereira, Martins, Morgado, & Fonseca, 2009; Schroeder, 2002; Tu, 2000), in this research attention has been paid to the interaction of participants with the environment, the difficulties encountered in accessing and carrying out the educational experience and the impact of the educational initiative on their daily in-world relationships and on the interaction with the environment itself. It is interesting to note that in some situations the difficulties encountered turned into useful and profitable opportunities that lead to positive outcomes; sometimes, instead, the expected

difficulties simply did not occur or constituted in any case an insurmountable obstacle as imagined.

While acknowledging that technological problems exist and that on some occasions actually make it difficult to spread the use of the immersive environment for online education, this paper aims to bring out the responsibilities of a proper educational planning on the creation, management or solution of different problems, as observed or reported in the context of the ethnography carried out.

Knowing the environment

During the research it has been observed that prior knowledge of the environment is an element of strong impact on in-world experience. Initially, this was noted in the relationship between the researcher and the participants: the researcher who already knows the online environment is able to move easily and better within it - thus overcoming any delays due to difficulties of interaction or (often unavoidable) problems in the system, knows what and where to look for, knows where to go and how to actively participate in various initiatives (Fitzsimons, 2013). Knowing the environment can facilitate integration in the group, as the researcher can easily become a point of reference and support for the rest of the group, in case of technical difficulties or simple questions and curiosity about the online environment.

So, a teacher who wants to undertake an educational activity in an online world should first have a thorough understanding of the environment, in order to facilitate the process of leadership and not inhibit the learning process through minor technical difficulties. Knowing the environment also means taking account of the inevitable technical difficulties that may be encountered and designing the educational initiative in a flexible way, consistent with the possibilities offered by the environment. The

constant reference to situations and experiences from everyday life, for example, facilitates the contextualization of knowledge learned in the world, however it is not necessary for the reproduction of real situations to be highly accurate: students confirm that they have the feeling of being part of a class even in those situations where there are no specific references to physical environments, they perform tasks and activities in-world and show ease in detecting connections between what they observe in-world and their experiences of everyday life.

It is likely that a researcher who does not know the environment can become aware of new and unusual aspects more easily, which might otherwise go unnoticed: a similar condition is not recommended to the teacher, because it may undermine the success of the experience. A thorough knowledge of the environment in which the course takes place is therefore an important requirement, but it is also reasonable to assume that the conditions are not always present (time, first of all) to learn in depth how the system works before launching an initiative. Lack of knowledge of the system can lead to a moment of difficulty, but this can then result in an opportunity for knowledge sharing and mutual learning of the system, thanks to work carried out in a collaborative way. For example, the freedom to create objects within the world allows teachers to freely customize their educational content, adapt them to the medium, and engage students in the creation of educational materials: this is an important aspect that should not be underestimated, especially given the frequent difficulty of creating an object or a simple application in-world.

Usually the skills needed for the production of an item to be used in-world are limited, thanks to an interface that facilitates the creation of objects, a large *library* of pre-built objects and an open community willing to share. It may happen, however, that complex objects or specific applications require skills beyond the daily experience of an

online world: in these cases to involve the students themselves in the creation of their own teaching materials proves to be a useful solution. It is useful from many points of view: not only as an aid to the work of the teacher, but also as an interesting learning experience that involves all the participants, and helps to strengthen the relationships and the spirit of cooperation in the group.

Sometimes it happens that, due to the lag of the system, avatars do not respond immediately to commands or the system struggles to load the interface: this situation usually occurs in the first minutes of the lesson, when all the participants gather at the designated location and wait the arrival of everyone. Before the beginning of a lesson, for example, a similar situation occurs: the students log in and start to take their places on the benches arranged in a circle; one of them, Barney, has problems with the connection and, although present, his avatar is not visible to everyone; a new student, Mitchell, arrives and tries to sit on the same bench as Barney, but since there are no more places available, he ends up being sat on the Barney's legs. Barney laughs of the incident and after his first comments soon those of other students and the teacher arrive, all amused by the scene they are witnessing.

[13:34] Barney: i hope ur comfortable

[13:34] Konan: lol thats [Mithras] he is sitting on top of u

[13:34] Barney: [Ram] i'm here just can't see me lol

[13:34] Konan: lol

[13:35] Mitchell: there is nothing wrong with someone sitting on top of someone

[13:35] Barney: i know lol

[13:35] Barney: oh yeaaaa

[13:35] Konan: lets play where did shanae go? haha

[13:35] Barney: shut up

[13:35] Konan: lol [Barney]....

The relaxed atmosphere that characterizes the minutes before the beginning of the lesson helps everyone to live this situation with extreme levity. Similar events can be transformed into valuable opportunities for interaction among the participants, because

sharing moments of relaxation allows for strengthened ties, lower barriers, and learning to know each other.

Technological hurdles observed (or missing)

From the students, several comments collected concern difficulties encountered during the experience. Realisation of not knowing how to move and how to act in Second Life, not being familiar with the environment or not being able to easily control the avatar has a negative impact on the learning process, some students soon starts to feel overloaded.

[02:49] Kimono: i think to sum up the problem i had with SL is that since i am not familiar with SL and most of the features of it, it takes away quite some time from the lecture

[02:50] Kimono: just need time to get familiar with it

[02:51] Kimono: but getting familiar to SL and attending class at the same time, is quite distracting

[02:51] Kimono: like feeling overloaded

From this excerpt it emerges that the problems encountered appear solvable, since they are due to a normal initial difficulty, easily surmountable with the proper knowledge of the environment: it is advisable to spend, possibly, a few meetings on the practice of the environment, before the actual beginning of learning activities.

Even if for a few students, another distraction is the customization of the avatar, as it takes a long time (spent to find the desired shapes for the face and body, clothes, etc.); the majority of students, however, find the task easy and addictive, and the comments of the students are actually enthusiastic with regard to the experience as a whole.

During some group interviews, students report having had some difficulty in attending classes, because of a lack of knowledge of the online environment, or other connection problems that forced students to log out and log into Second Life all the time. Beyond the normal initial difficulties that require just a little practice in the

environment, the most frequently encountered problems concern the technological field: it often happens that the computer instruments used by students are not good enough to permit the course of the lesson to run smoothly; other times problems are due to general difficulties using Second Life. Here are some excerpts from the conversations collected:

[14:11] Nicola: my audio doesn't work

[14:12] Nicola: I hope I won't lose other information

[10:38] Christian: therea's client crashed again... she had a comment to that.

[10:38] Christian: she was typing it out and boom

...

[10:57] Barbara: my avatar is wierd looking again, must b the server im on.

The most frequent problems relate to the audio, the login process, the environment loading or the Internet connection. Beyond the occasions where the problem is related to a software malfunction - where it is possible to intervene in a very limited way - on some occasions, when the hardware issues affect few students, the difficulties can be easily managed: students often ask the teacher or classmates for help and within minutes the situation is resolved, other times the resolution of problems takes time and causes the reorganization of the timing of the session.

For example, during a field trip led by a student, the teacher points out the difficulties encountered due to a malfunction of the audio system of the student (in the course observed field trips were an integral part of the curriculum: the teacher had asked all the students to organize and conduct an in-world field trip so that everyone could introduce some interesting islands to companions, experience leadership on a particular occasion and deepen their knowledge of the environment):

[19:44] Irix Ladybird: isn't [Grace]'s field trip?

[19:44] Dolphina Questi: She said she liked the Egyptian history

[19:46] Irix Ladybird: but we are doing a tour by ourselves

[19:46] Irix Ladybird: I thought she would have guided us

[19:47] Dolphina Questi: Yes, she doesn't have a mic., and it just doesn't seem to work without the leader having a mic.

[19:47] Irix Ladybird: ok I see

[19:48] Irix Ladybird: so she avoided talking ;)

[19:48] Dolphina Questi: She hasn't had sound all semester.

[19:49] Dolphina Questi: It makes it very hard to include her in class.
[19:49] Irix Ladybird: that's a problem, right
[19:49] Dolphina Questi: yes, it's hard to lead the class without a mic and hard to type everything to her as well.
[19:50] Dolphina Questi: She said she was OK with it, but gets left out a lot.

It is evident that such a problem entails many difficulties, especially when the lesson is expected to be conducted by voice: the teacher explains that she found the management of the lesson difficult, because he had to write down everything she explained, and also that it was hard to include the student in the group. As a result of the issue of Grace, her field trips was not conducted as the others, because, as the same teacher, the field trip " just doesn't seem to work without the leader having a mic". As a result, all participants visited the land by themselves, and she could not experience the organization and management of a field trips, like the others did.

The teacher of another course had to face a similar audio problem, and she showed herself immediately willing to help. The teacher is caring and attentive for most of the time, although some moments of class, such as traveling to other destinations, do not appear managed with due attention: after having explained to everyone how to use the teleport the teacher moves, leaving the students by themselves: those who fail to use the teleport do not have an expert to ask for help. Lisa quickly solves the problem by sending a personal teleport to the students left behind, but this situation entails a bit of confusion and a waste of time. Instead, to wait until all students have teleported (actual conduct of another teacher) may be the best solution.

This first example already makes clear the responsibility and the centrality of the teacher in the management of difficult situations. The most serious situations, in fact, involved the teacher: on some occasions it has been observed, for example, that a cursory check of the instruments to be used in class caused serious delays and difficulties that could compromise the entire lesson.

Other difficulties have been observed, only partially related to the technological aspect but more connected to the consideration of the online environment in its own terms.

During the interview with a teacher an interesting issue emerges: in past editions of her course, some students showed hesitation or reluctance to the idea of experiencing a new environment and they changed their minds about the world after attending the course; in some cases, however, this has not happened and some students dropped out of the course just because of the environment chosen for the lessons

Also the experience reported by another teacher has to do with the initial difficulty to accept an online environment so different from the everyday experience of the net; in the situation told, the confidence in the teacher, who everyone already knew thanks to earlier offline initiatives, helped the students to accept the proposed environment.

The experiences told by the teachers are actually confirmed by the interviews conducted with the students. In their experiences there is often the initial prejudice of those who have negative views on the environment, mainly caused by lack of knowledge of the medium, rather than supported by founded justifications: the online world just seems strange, unusual, populated by perverts or people who want a moment of total escape from the real world. Users are reluctant when they do not know what to expect from the environment, what kind of people there might be, and which situations they may find themselves in (Yoo & David Huang, 2011). Then, when they get to know the world, they also change expectations and judgments about it; the students who do not express negative prejudices about Second Life anymore, but who appear curious about it, center the discussion on the people populating the world, at times emphasizing the characteristics of the online behaviour of people in comparison to offline situations:

Marianne: I am used to people. In fact, I like SL for how "real" people are. Even though they use avatars and look, usually, completely different than in RL. Their "insides" and real opinions are better portrayed. They are not afraid to be who they really are.

Other kinds of difficulties come from the perception of the presence of people intended as social pressure.

The sense of presence deriving from the online meeting for some students is considered a further difficulty, expressed in terms of *peer pressure*. In this case, the presence of other classmates is defined as a social pressure in the online environment, perceived and described with a negative connotation; this is, however, the only case in which the presence of the other is described as a negative aspect of the experience.

In the experience told by a teacher, Second Life plays the role of mediator in communication that relieves the tension of a traditional classroom situation, allowing students to express themselves with greater ease. In this perspective, a key role is played by the communication vehicle chosen to interact with others. In the experience of a teacher, textual chat is the only vehicle of communication in the context of class: the teacher choose to lead the whole class by chat because she thinks that it facilitates the participation in the discussion. The risk was the management of communication in the case more parallel discourses developing, therefore it was expected to observe confusing situations. It is observed instead, that the possibility to intervene by chat during the lesson does not constitute a disturbing element in the conduct of the lesson, that in fact goes on without interruption. It frequently happens that more parallel discourses arise, but these coexists without causing excessive difficulties for the students. On the contrary, they also intervene with hilarious jokes or comments that do not strictly relate to the lesson, and then resume the class discussion immediately afterwards, without any problem:

[10:39] Maali Beck: your example, [Demetria]

[10:40] Maali Beck: actually demonstrates that
[10:40] Maali Beck: your employees are in a dialectical tension
[10:40] Maali Beck: they want to do well for both supervisors
[10:40] Maali Beck: however, they have to stay on their toes to remember which supervisor
[10:41] Maali Beck: asks specific tasks from them
[10:41] Maali Beck: in a way, they are put in, what we refer to as a double-bind
[10:42] Demetria: hmm...gottcha
[10:42] Maali Beck: you've all probably heard the phrase, "damned if you do, and damned if you don't"
[10:42] Maali Beck: same idea here
[10:42] Christian: you mean marriage?
[10:42] Christian: lol
[10:42] Maali Beck: lol
[10:42] Barbara: lol
[10:42] Maali Beck: Chris!!
[10:42] Maali Beck: don't make me get out my pillow!
[10:42] Maali Beck: hahaha
[10:42] Christian: ducks to avoid being hit by the pillow AGAIN.
[10:42] Maali Beck: lol
[10:42] Maali Beck: Terry, do you have an example?

As observed in one of the courses, the use of different environments (Second Life and Moodle), while constituting an element of dynamism in the conduct of the lesson, does not bring any change in the design of teaching, as it appears to be a mere virtual reproduction of a traditional lesson. During the two-hour lesson, the teacher alternates moments of traditional classroom in Second Life and moments of collaboration through forums and group activities on Moodle; he actually simply transfers to the online world the typical model of a traditional classroom, which allows for interaction and communication with students in a more direct and immediate way (in its meaning of "without (semblance of) mediation") compared to other online environments for asynchronous communication.

Although the management of activities in the different environments of the lesson may seem complex, there are no difficulties observed in the interactions: the teacher requires continuous feedback from students on any difficulties, misunderstandings, and the possibility to continue with the lesson at the end of the

collaborative activities required, the students who respond, by chat or voice, are always very numerous and show no difficulty in asking for clarification or intervening actively in peer interactions. Despite the fact that the lesson takes place without evidence of significant problems, it is believed that the use of Second Life as a mere instrument for synchronous communication does not exploit the full potential of the medium.

From technology to methodology: the role of the design of teaching

Several problems do not concern the technology: in fact, often they relate to the ability to manage time and commitments, the need for frequent technical support for the management of activities and the need to find funding to support the initiative after the first months or the first year. In the case of a large class (consisting of 21 college students), for example, the teacher has decided to divide the class into two smaller groups: if on the one hand, this choice certainly facilitated the management of the class, it inevitably required a greater time commitment from the teacher.

Other times, the problems are of a methodological nature. From ethnographic notes taken during a non-formal lesson:

It appears to be very difficult to follow the lesson, when it is conducted by voice and without any other visual support... sometimes it seems that teachers are just reading a text...

The medium in which the action takes place is an environment potentially rich in educational opportunities, but teachers often end up transposing into the new medium class models typical of traditional situations. Bringing together students in a three-dimensional online environment simply to convey content, without any graphical support or methodological solutions adapted to the context, leads to situations of low participation and effectiveness.

When talking about the educational environment, it is also necessary to take into consideration that the concept of environment may refer to different media or online solutions adopted for the course. In a situation observed, for example, the diverse environments in which the lesson takes place clearly emerge: the teacher has transposed in Second Life the traditional teaching model, which included a face-to-face lecture interspersed with moments of online collaboration in environments such Moodle and with specific software for the creation of collaborative maps. In Second Life there is therefore a similar situation, where the levels of mediation are even more: first, the physical environment in which participants are located and from which they log in to Second Life; secondly, the class environment in Second Life and, finally, the Moodle platform that hosts some of the collaborative activities. The three environments are easily discernible in the observation of the situation and affect in different ways the behaviours and interactions of the class, as highlighted by some excerpts of conversation among the participants. Most of the students, as well as the teacher, log in from home with the exception of some students logged in from a university computer laboratory, where another lesson is being held. One of these students informs the teacher about this situation asking him to speak loudly, because they might not otherwise be able to hear his voice. This is an example of the importance of the place chosen for connection, the presence of other people in the same place is obviously a disruptive factor and makes it difficult to communicate in-world, as well as causing interference in the communication in class and the attention devoted to the lesson.

Another interesting aspect of the same initiative relates to the architecture of the environment built in Second Life: it is the exact replica of the offline classroom. The need to reproduce the architecture of the physical classroom with such precision in a virtual environment, where the space and the architectural possibilities have no

restrictions is not clear. To force students to move in a small space is likely to become counterproductive to teaching and learning, because it causes difficulties in the movements of the avatar and in every kind of interaction with the environment.

Transposing the physical spaces to a digital environment involves indeed the need to take into account the characteristics of the environment: the ability to fly, or to teleport, as well as the space occupied by the avatar (or the minimum and maximum size the avatar can assume) should be aspects to take into account in the design of an educational environment because they can greatly affect the lived experience; the ability to view web pages, to interact with different objects or applications without moving or exiting the world, could prove to be useful instruments for educational purposes, if used and exploited in coherence with the goals.

It is also interesting to observe the different attitudes of some teachers toward students.

In one case, the teacher asks students to fill in the Second Life profile as one of the first activities to be performed in the online world, this is also used by him for the management of the dual identity of each student; in several later occasions the teacher does not seem to have difficulty in recognizing his students even when they intervene by voice.

Instead, the teacher of another course uses a different method: having prepared a classroom in Second Life identical to that offline, he asks students to sit in the same position they occupy in the offline class, in order to identify students with more ease. It must be recognized, moreover, that this becomes necessary because almost all of the avatars (16 of 18) do not show any kind of customization, and the result is that the entire class is composed of only four types of avatars: the distinction of students is in this case impossible.

In the different initiatives observed, various collaborative activities have been noted: in some courses they are collaborative project works for the final evaluation, in other cases the collaborative activities are a regular feature of each lesson, albeit being conducted largely on Moodle.

In some cases, however, students refer to having problems in the organization of collaborative activities. In several group interviews complaints have emerged on the aspect of collaboration: sometimes the expectations of the students have not been reflected in the organization of teaching, sometimes what is missing is the effective management of the division of labor in a group, as evidenced by this excerpt of a group conversation:

[10:00] Diamond: Our group is pretty much going the same way. Lumen and I are the only two who seem to be willing to work together

[10:01] Maali Beck: at least you can share the workload

...

[10:01] Philip: Ours is going slow... but at least it is started now

...

[10:02] Philip: I am hoping to have the first draft up today or tomorrow for them to look at

[10:02] Maali Beck: you've compiled everyone's work already?

[10:02] Maali Beck: very good!

[10:02] Philip: Uh... I wouldn't say compiled, exactly

[10:03] Philip: LOL

[10:03] Maali Beck: no?

[10:03] Maali Beck: that's the point, everyone contributes

[10:03] Maali Beck: it's compiled into one document

[10:03] Philip: I know.

[10:03] Maali Beck: ok

[10:04] Philip: I think the way this is going to go is we start with one document... and then we each add to it.

In some situations, it emerges that the group atmosphere, and the spirit of the class is conveyed by the social interactions that take place, rather than being facilitated by the environment in which they occur.

The observation conducted in a course particularly highlights focus on the communicative aspect, which significantly contributes to the definition of the

educational experience; some means of communication and some educational choices partly differ from other experiences observed and are worthy of further investigation. Classes are held in a friendly environment that recalls domestic situations and are conducted primarily via text chat; constant participation by the students is also required:

[10:16] Maali Beck: *I'll give each of you a minute to think of an example*
[10:16] Maali Beck: *then, we'll go around the room and you can share your example w/ the roup*
[10:16] Barbara: *I ok*
[10:17] Maali Beck: *who's ready?*
[10:17] Brandon: *almost*
[10:17] Giovanna: *i can go :)*
[10:17] Maali Beck: *ty, [Giovanna]*
[10:17] Maali Beck: *please;*

The teacher stimulates the response of those who have not written anything, neither an answer or a comment:

[10:32] Maali Beck: *Terry, do you have an example?*
[10:33] Terry: *um*
[10:33] Terry: *so many to choose from*
[10:33] Maali Beck: *you can think a bit longer if you wish*
[10:33] Maali Beck: *[Demetria]? How about you*
[10:33] Terry: *thank you*
[10:33] Maali Beck: *yvw*
[10:34] Demetria: *um...i think i may. i came in the middle of things, but i think i have one*
[10:34] Maali Beck: *great!*

In addition, given the lack of a mutual gestual feedback and the difficulty in managing movements and expressions of the avatar, the teacher adopts a personal communication strategy to improve the interaction with her students: she *silently* intervenes in the conversation, still providing feedback about her attention and participation: she translates her gestures in text, and describes her behavior, thus enriching interaction with the information that would otherwise be missing:

Maali Beck waves
Maali Beck swats Chris
Maali Beck nods
Maali Beck listens to BB
Maali Beck smiles

*Maali Beck: Maali Beck is concerned that Chris has a day care in his home
Maali Beck's jaw hits the floor!!
Maali Beck thinks Chris wishes he had that padded room.*

The decision to set up an informal classroom, along with great attention to the aspect of communication and interaction detach the experience from any direct references to traditional educational models. Despite this, the dynamics observed here do not appear very different from those that occur in a traditional classroom setting, although conversation in the group is conveyed exclusively through writing. Indeed, the use of writing actually facilitates the work of the teacher in the management of the participation of all students and allows them to overcome the difficulties in the use of voice. A lesson conducted in Second Life with the use of voice can make the classroom environment similar to a traditional one for teaching strategies adopted (incentive for participation, student involvement, question and answer, etc.), but at the same time it makes it more difficult to control the interventions of the students: identifying who is speaking in large classes can become a difficult task.

Conclusion

In this complex environment, the educational researcher must answer to challenges from his role as educational ethnographer, to interact correctly with both teachers and students participants (Parker Webster & Marques da Silva, 2013; Fitzsimons, 2013). The observations conducted in-world have allowed us to reach a thorough understanding of the different elements implied in an educational experience in-world, that has been graphically represented in the following figure (Figure 1).

Figure 1 near here

One of the elements that characterize the educational experience is definitely the class environment, with its limitations and possible difficulties, but also with countless opportunities to catch.

Technological difficulties are the main obstacle to the proper conduct of educational initiatives in-world, but, as has been observed through the data presented, a thorough knowledge of the system often allows users to find quick solutions to some of the technological hurdles that may occur.

Secondly, the attention of the teacher in facilitating interaction in-world is an essential feature for the success of the educational experience, as it is nourished by the interaction between the participants: collaborative relationships are the essential basis for the success of a course.

Finally, this article has tried to highlight the importance of proper organization of the educational activities in-world as a key element that ensures the success of the experience. An appropriate organization, in fact, not only avoids many difficulties that might be encountered when designing an educational experience in-world, but it also lays the foundation for an easy resolution of any difficulties that may occur.

References

- Beaulieu, A. (2004). Mediating ethnography: objectivity and the making of ethnographies of the internet. *Social Epistemology*, 18(2-3), 139–163. doi:10.1080/0269172042000249264.
- Boellstorff, T. (2009). Method and the Virtual: Anecdote, Analogy, Culture. *Journal of Virtual Worlds Research*, 1(3). Retrieved from <https://journals.tdl.org/jvwr/article/view/471/429>
- Boellstorff, T. (2010). A typology of ethnographic scales for virtual worlds. In W. S. Bainbridge (Ed.), *Online worlds: Convergence of the real and the virtual* (pp. 123–133). London: Springer. doi:10.1007/978-1-84882-825-4_10.

- Bowers, K. W., Ragas, M. W., & Neely, J. C. (2009). Assessing the Value of Virtual Worlds for Post-Secondary Instructors: A Survey of Innovators, Early Adopters and the Early Majority in Second Life. *International Journal of Humanities and Social Sciences*, 3(1), 40–50.
- De Freitas, S., Rebolledo-Mendez, G., Liarokapis, F., Magoulas, G. D., & Poulovassilis, A. (2010). Learning as immersive experiences: using the four-dimensional framework for designing and evaluating immersive learning experiences in a virtual world. *British Journal of Educational Technology*, 41(1), 69–85. doi:10.1111/j.1467-8535.2009.01024.x.
- Edirisingha, P., Nie, M., Pluciennik, M., & Young, R. (2009). Socialisation for learning at a distance in a 3-D multi-user virtual environment. *British Journal of Educational Technology*, 40(3), 458–479. doi:10.1111/j.1467-8535.2009.00962.x.
- Esteves, M., Fonseca, B., Morgado, L., & Martins, P. (2011). Improving teaching and learning of computer programming through the use of the Second Life virtual world. *British Journal of Educational Technology*, 42(4), 624–637. doi:10.1111/j.1467-8535.2010.01056.x.
- Fitzsimons, S. (2013). Ethnographic Immersion in the Virtual Field. *Ethnography and Education*, 8(2), 162–176. doi:10.1080/17457823.2013.792506
- Guimarães Jr, M. J. L. (2005). Doing Anthropology in Cyberspace: Fieldwork Boundaries and Social Environments. In C. M. Hine (Ed.), *Virtual Methods. Issues in Social Research on the Internet* (pp. 141–156). Oxford-New York: Berg Publishers.
- Hansson, T. (2005). English as a Second Language on a Virtual Platform—Tradition and Innovation in a New Medium. *Computer Assisted Language Learning*, 18(1–2), 63–79. doi:10.1080/09588220500132332.
- Hine, C. M. (2000). *Virtual Ethnography*. London: Sage Publications Ltd.
- Hine, C. M. (2008). Virtual ethnography: Modes, varieties, affordances. In N. Fielding, R. M. Lee, & G. Blank (Eds.), *The SAGE handbook of online research methods* (pp. 257–270). London: Sage Publications Ltd.
- Hine, C. M. (Ed.). (2005). *Virtual Methods. Issues in Social Research on the Internet*. Oxford-New York: Berg Publishers. doi:10.4135/9780857020055.n14.

- Ho, C. M. L. (2010). What's in a question? The case of students' enactments in the Second Life virtual world. *Innovation in Language Learning and Teaching*, 4(3), 275–275.
- Hudson-Smith, A. (2002). 30 Days in ActiveWorlds – Community, Design and Terrorism in a Virtual World. In R. Schroeder (Ed.), *The social life of avatars : presence and interaction in shared virtual environments* (pp. 77–89). London: Springer-Verlag.
- Jones, D. E. (2006). I, avatar: Constructions of self and place in Second Life and the technological imagination. *Gnovis, Journal of Communication, Culture and Technology*, 6, 1–32.
- Ketelhut, D. J., Nelson, B. C., Clarke, J., & Dede, C. (2010). A multi-user virtual environment for building and assessing higher order inquiry skills in science. *British Journal of Educational Technology*, 41(1), 56–68. doi:10.1111/j.1467-8535.2009.01036.x.
- Mallan, K., Foth, M., Greenaway, R., & Young, G. T. (2010). Serious playground: using Second Life to engage high school students in urban planning. *Learning, Media and Technology*, 35(2), 203–225.
- Murthy, D. (2008). Digital Ethnography: An Examination of the Use of New Technologies for Social Research. *Sociology*, 42(5), 837–855. doi:10.1177/0038038508094565.
- Omale, N., Hung, W.-C., Luetkehans, L., & Cooke-Plagwitz, J. (2009). Learning in 3-D multiuser virtual environments: Exploring the use of unique 3-D attributes for online problem-based learning. *British Journal of Educational Technology*, 40(3), 480–495. doi:10.1111/j.1467-8535.2009.00941.x
- Parker Webster, J., & Marques da Silva, S. (2013) Doing educational ethnography in an online world: methodological challenges, choices and innovations. *Ethnography and Education*, 8(2), 123-130. doi:10.1080/17457823.2013.792508
- Pereira, Â., Martins, P., Morgado, L., & Fonseca, B. (2009). A virtual environment study in entrepreneurship education of young children. *Journal of Virtual Worlds Research*, 2(1). Retrieved from <https://journals.tdl.org/jvwr/article/view/406/459>

- Richardson, J. C., & Swan, K. (2003). Examining social presence in online courses in relation to students' perceived learning and satisfaction. *Journal of Asynchronous learning networks*, 7(1), 68–88.
- Schroeder, R. (Ed.). (2002). *The social life of avatars : presence and interaction in shared virtual environments*. London: Springer Verlag.
- Tu, C. (2000). On-line learning migration: from social learning theory to social presence theory in a CMC environment. *Journal of Network and Computer Applications*, 23, 27–37. doi:10.1006/jnca.1999.0099.
- White, M. L. (2009). Ethnography 2.0: writing with digital video. *Ethnography and Education*, 4(3), 389–414. doi:10.1080/17457820903170176
- Yoo, S. J., & David Huang, W.-H.-. (2011). Comparison of Web 2.0 technology acceptance level based on cultural differences. *Educational Technology and Society*, 4(14), 241–252.

Figure 1. Model of educational experiences in online world from an ethnographic approach (Source: Authors).

Ethnographic approach to Second Life in education

Final paper – accepted

María-Jesús Gallego-Arrufat, PhD

Faculty of Education. University of Granada. Granada, Spain

Marta Sponsiello, PhD

Scuola IaD. University of Rome Tor Vergata, Rome, Italy

Corresponding author

Maria-Jesus Gallego-Arrufat. Faculty of Education. Campus of Cartuja, s/n. 18071

Granada (Spain)

Telephone: (34)958243978; Fax: (34)958248965. Email: mgallego@ugr.es