

Transfer of Physical Classroom Techniques to the Virtual Classroom During A Practice Supervision Course

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Since summer 2010, we teach a practice supervision course at the Berlin School of Economics and Law. The students were distributed across different countries with all sessions taking place in a virtual world, with additional support by a learning management system (Moodle) and blogging software (WordPress). In our research, which is part of a larger project focusing on improvement of further education in small and medium-sized enterprises, we wanted to find out to which extent advanced group activities can be transferred to the virtual realm. We find that not only can most group-based activities be transferred but that some complex techniques such as role playing, work even better in the virtual classroom than in the physical one.

1. Introduction

At the Berlin School of Economics (BSEL), one of Germany's largest business schools, we have recently begun to teach courses full-time in a virtual classroom located in the virtual 3D world of Second Life.

Like other business schools, an increased emphasis on internationalisation and an increased exposure of businesses to a global market fuels a strong interest in virtualising services and teaching across the board. Both undergraduate students and businesses expect the university to keep abreast with modern forms of communication

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and enable learning at a distance without turning into an online university. In practice, this means that lecturers, departments and curriculum designers need to look at those electronic teaching environments that provide the greatest added value.

At BSEL, there is an increasing number of courses whose students spend two semesters abroad followed (or preceded) by a practice internship of one semester - hence they study at our school without being able to physically attend seminars for three consecutive terms in total. During the practice term they are supposed to complete a practice supervision course of four hours per week. In the past, this course was taught in block-seminar fashion over a couple of weekends as a physical seminar. With many of the current courses of study, this model is no longer feasible because of the different and often far-flung locations of the students. Also, the block seminar did not actually provide supervision in the sense of ongoing coaching to students during the internship. Therefore, at the beginning of 2010, we began to experiment with a different course that would run every week but take place on our school's new virtual campus in Second Life.

Besides the virtual world, these supervision courses were supported also by an open source learning management system (Moodle) and by open source blogging software (WordPress). All three of these are the most widespread tools in their respective fields. For our initial enquiry, we were interested only in the virtual reality part of the course taught at BSEL - partly because the use of learning management software and blogs has already been fairly well researched, while the use of virtual worlds in project management and company training has not. Our rather simple specific research question was if physical classroom group activities, especially more complex ones, like role playing, could be transferred to the virtual classroom and which ones would survive the transfer more or less successfully.

In the remainder of the paper, we present first research results to this question and indicate directions for future research. This research took place in the context of a larger research project, Intercomp SME 2.0, that investigates ubiquitous project management methods in small and medium-sized enterprises (Birkenkrahe and Scholl, 2009).

2. Methods

During the summer term 2010, we accompanied a practice supervision course of seventeen (17) graduate students in a Bachelors' program "International Business Management", who worked in different locations across Europe. The program is geared

towards providing the students with more than the average amount of international experience. The course was taught by one of us (M.B.). Its point of presence consisted of weekly meetings in the virtual 3D world Second Life where BSEL occupies two islands for virtual teaching purposes (Birkenkrahe, 2010). The weekly meetings lasted 90 minutes each and took place over a period of eighteen (18) weeks. In addition, the students were asked to write weekly blog posts (using WordPress blogging software) to report on their experiences during the internship. Course materials, discussion forums and exercises, usually in the form of preparations for the virtual classroom sessions, were also made available online using a Moodle platform. While we already have experiences using blogs and learning platforms, this was the first course taught at the school using an interactive virtual 3d environment. The data presented and discussed in this paper were gathered by one of us (A.G.) as part of her dissertation, which was focused on developing marketing activities for virtual teaching (Gallo, 2010; Plagemann, 2010). The students were asked to fill in anonymous online surveys during the first and the last week of the course. Both surveys offered the opportunity for free responses as well.

Our investigation can be classified as Participatory Action Research (PAR) in the sense of Freire (Brydon-Miller, 2003), with a noted, explicit emphasis on the fact that both test persons and researcher were part of the same community and giving rise to an “action-reflection” sequence of research learning. The course participants were informed about the purpose and nature of the investigation before and kept informed during and after the research data were obtained.

3. Results

The purpose of this course was to support the participants in their industry practice internships. To do this, a number of topical areas formed the basis of the curriculum, including skills like: communication with superiors, team members and customers; giving and getting feedback; presenting in front of a team; role playing conflict situations; analyzing conflicts, developing and implementing solutions in the work place.

Before the start of the course, each student was asked to register him- or herself independently in Second Life and create their own avatar. During virtual classroom sessions, the student would be present via his or her avatar.

In their internships, the students worked mostly in projects, usually in the position of the inexperienced team member (though there were a few exceptions). In the course of their internships, which would typically last six months, they experienced a number of issues that we've already mentioned above, and that are typical for project management group issues. The following story was shared by one of the participants and shows the level and character of problems:

“My team leader told me to create an Intranet page on a special topic. For the content, I needed to contact the member of another department. When I approached him, he insulted me for no apparent reason and made it impossible to work with him. Afterwards, I talked to one of my team mates, who told me that this guy was known for his irrational behavior and his bad social competence. I wish someone had (a) warned and talked openly to me and (b) that I knew how to behave in such a situation.”

This is not unlike situations in project management at large, because whoever works in a project team, usually relies on other people's information and collaboration. The issues of open information sharing and conflict resolution are also touched upon by this short example. It is even relevant to the company training situation above, because there are no boilerplate, standard solutions: nobody could tell this person what to do or not to do without closer examination of the people involved and the prevalent local work place culture. At the same time, having a model of process, or even a process plan, to work from, or to work through, will certainly be an advantage.

The various interventions carried out with the course participants were all geared towards helping them manage situations like the one described.

Figure 6 below shows a screenshot from a virtual classroom session where one of these interventions, or tools, was used: role play. The picture shows also a number of other supporting tools which were all brought into play in order to ease *immersion*² and make the virtual classroom look more like a real classroom (except with invariable weather conditions).

²Immersion is the process of “losing yourself in the environment” so that you experience your *avatar* (your electronic representative in the virtual world) as an extension of yourself. It is an important difference between work in interactive virtual 3d worlds and general (2-dimensional) computer-supported work, such as e.g. computer-guided learning programs or distance communication tools like Skype or Adobe Connect.

Fig. 6, screenshot: Class meeting in the virtual classroom in Second Life: role play.



These tools included: a scheduling board connected to a public Google Calendar, a picture viewer (in the background), or (not visible) a shared media wall - a shared online workspace - where avatars can access any browser-based application, such as Google Docs, Etherpad, Slideshare etc. Using these tools, we effectively transported group work into the virtual space: during class hours, students (or rather, their avatars) would be distributed into group where they worked on texts, discussed, solved small problems and presented them afterward in the large group.

Though the students were initially confused (not having had any previous 3D experience, they needed a learning period of about two weeks), they quickly adapted to using these tool as avatars.

They also realized the importance of having a portfolio of different methods at their hand to manage virtual communication. And they experienced firsthand that more and more of work life is carried out, not just supported, by virtual means. One student said:

"I think it can help to improve the communication skills because on the job most meetings will be virtual and it is nice to get an impression how it works and eventually what can go wrong."

The figure also shows a small stage used for a role play (Blatner and Blatner, 1997). We mention the role play here because among the many different training methods that one can use in a real room, role play is beyond doubt one of the most complex involving representatives, improvisational and communication skills. At the same time, when the role play succeeds, it can be a superb intervention and training method.

In the real classroom, role play is often difficult because participants untrained in or unused to self expression, feel embarrassed. Interestingly, in two role play sessions carried out in the virtual world, we found that participants accept the play without difficulty and with great results: the resulting role play situations were lively, the discussion rich, with many more students engaged than in a standard teaching format.

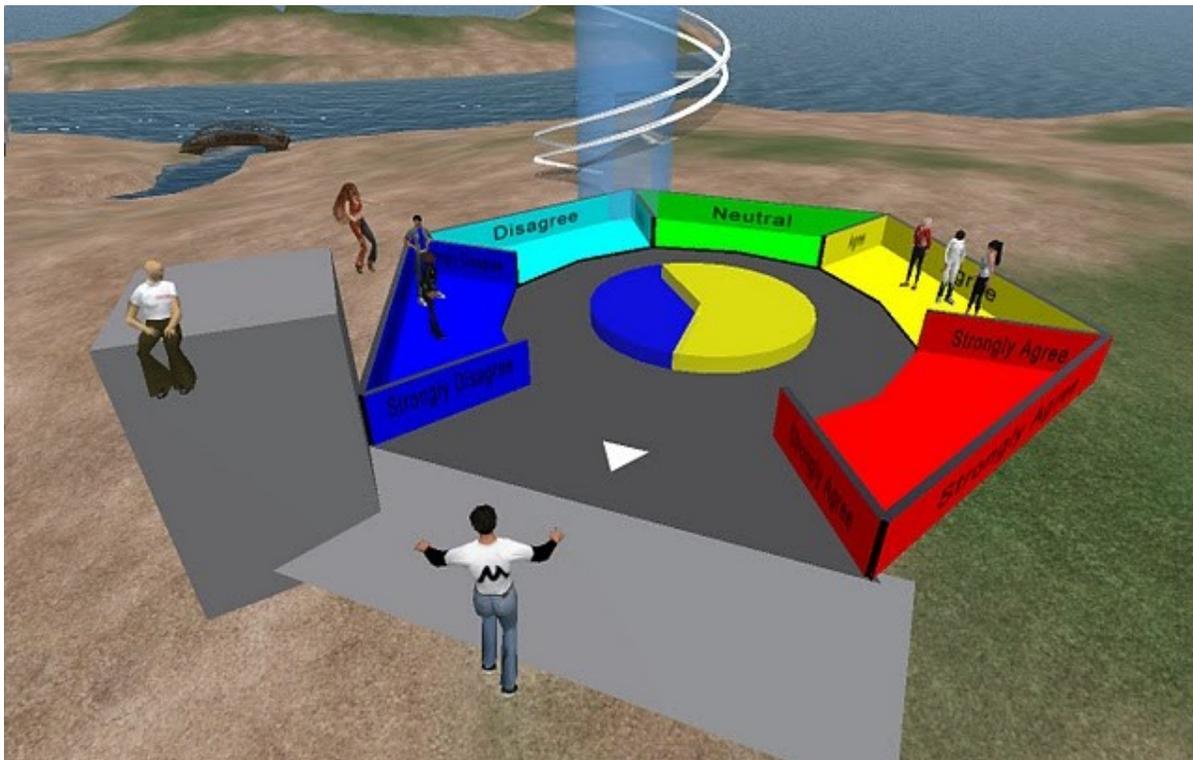
Faced with the need to support participants of an internship supervision course, who were mostly engaged in project work, at a distance, we chose an interactive 3D virtual world environment to emulate a virtual classroom situation. In order to engage the participants and further their learning experience, the use of mixed media and multiple modes of communication was necessary and was seen as important by the participants to reach the learning objectives. With regard to more complex group interactions, such as role plays and group work, we found that everything that we'd normally have done in a real classroom, worked in the virtual world as well. Role plays in particular worked better than in the real classroom, judging from the participants' reactions (Gallo, 2010).

Regarding the teacher's side, we found that effective virtual teaching does not require a totally different didactic approach: to engage the students, essentially the same methods can be used that any experienced teacher would use in the real classroom. To establish immersion, however, and to eliminate the frustration that comes from not being able to use, thorough training of the tools and training of the ability to operate the avatar, are absolutely necessary. Once immersion has set in, teacher and student, or team leader and team members, or trainer and trainees, will no longer feel many of the restrictions that they are used to expect from computer-supported training.

Another tool that we used has no equivalent to a real world tool: the so-called "opinionator" is a structure where avatars can "vote with their feet" by moving into the corner of the object that corresponds to a particular question - the result of the survey is then instantly visually displayed using colors (see Fig. 7). The opinionator was judged by the students as a very attractive means of giving and organizing feedback. It was used to close the sessions in the virtual world with a sample question related to the topic of the session. Often, the students would ask for additional questions to be able to "play" longer with the opinionator.

In a short movie filmed after the end of the course, several of the tools employed during the course, were introduced by the avatar of the teacher ([Birkenkrahe, 2011](#)).

Fig. 7, Opinionator - a virtual world object used for instant surveys and feedback.

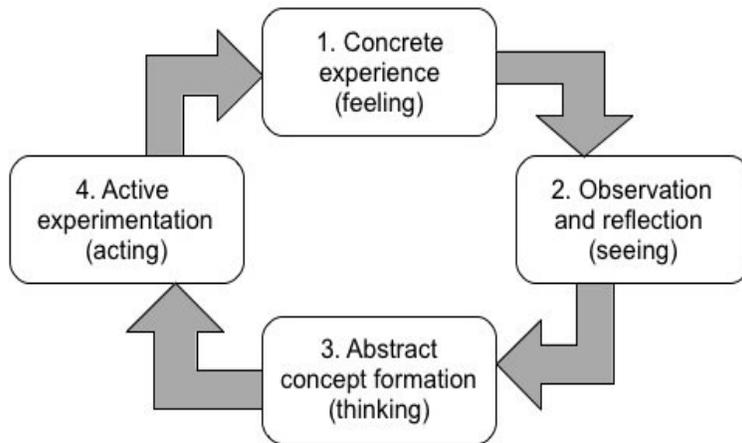


4. Discussion

Our investigations during the practice supervision were meant to test our assumption that most of the group processes used in a systematic way during real classroom sessions (such as group work, role play, discussion etc.) could be transferred to an interactive 3D virtual world. We found this assumption to be true under certain conditions: immersion and interactivity. This is in line with observations made by others (Love et al, 2009; Richardson et al, 2010). To achieve immersion, students need to be trained properly in the new virtual environment. Immersion is both cause and effect: by learning to use their avatar as an extension of themselves, they are further immersed, and by being more immersed, they can make better use of the virtual environment for learning. We've found that it is beneficial to offer the students a number of different modes of learning and group communication. This is known from company training settings, where building an atmosphere throughout the training seems to be an important part of the training success, we note that it is easier to build such an atmosphere from scratch, and to control it, in a virtual world (Bartle, 2003).

Overall, we confirm that good learning follows a learning cycle - one prominent example of such a cycle, the “Experiential Learning Cycle”, has been proposed long ago by Kolb (Kolb, 1984; Kolb et al, 1999, see Fig. 8), which is focused on the individual or the group, not on a particular product or process and which has been shown to describe learning well in real companies (Habermann et al, 2005).

Fig. 8, Experiential Learning Cycle (Kolb, Boyatzis, Mainemelis, 1999)



Interestingly, this cycle can also form the basis for an explanation of what we observed in the Practice Supervision situation around the onset of participant immersion: the creation of the avatar and its first steps include the “feeling” phase. Virtual classroom activities allow “*seeing*” and “*thinking*” even in a group. Finally, a multitude of e-learning tool, accessible to the avatars inside the virtual world allow to create an *interactive* environment for the students, which is considered one of the key issues for online and especially 3D learning (Kapp and O’Driscoll, 2010).

5. Conclusions

We find that group activities that support student dialog and team work during a graduate-level practice supervision course can be transferred from the physical classroom to the virtual classroom populated by avatars - this includes less complex³ activities such as presentations and more complex ones like group discussion, working

³ We use the more precise term “complex” rather than “complicated” as defined by Dörner (1997), involving polytely, interdependency of variables, time dynamics and inaccessibility of parts of the system.

on results in a small group and then bringing them into the larger group etc. We further find that a highly complex activity such as role playing (e.g. of difficult situations) works better in the virtual classroom using avatars than in the physical classroom.

Our teaching in interactive virtual 3D environments underline the necessity to vary multimedia and suggest that it would be possible to approach “ubiquity” of training in the context of projects by using virtual 3D worlds for teaching and learning purposes. We have identified the need for these environments to offer interactivity and immersion - two requirements that are also relevant in the company training context. Our future research will focus on the needs of specific departments of our business school and on the possible offerings of virtual teaching. More specifically, we will build small teaching applications for virtual teaching for project management, human resource management, strategic management and others expert groups. These applications will then be used in the context of regular classes to facilitate a transition between physical and virtual teaching, with an emphasis on doing those activities in the virtual world that work best there.

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