



EXPERIENCES IN TEACHING INTERNATIONAL BUSINESS WITH BUSINESS SIMULATION GAME

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Abstract: The purpose of this article is to introduce the experiences gained in teaching a business simulation game in a web-based learning environment via a multi-cultural pilot course. In the pilot course the students were instructed to actively gather their comments and thoughts and formulate a report discussing their learning experiences. After the pilot course the teachers' experiences of e-learning were collected, and the student feedback was analyzed. The business simulation game proved to be a good learning model for reaching a comprehensive understanding of strategic business decision-making. The pilot course also demonstrated that the basic elements of e-learning like flexibility, sense of community and usage of the modern technology are important. In the multi-cultural groups the formation of a common working culture is important for gaining the benefits of e-learning.

Keywords: business teaching, simulation game, e-learning

Short name: Teaching business with a simulation game

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Introduction

Business studies consist of a variety of subjects, all touching one corner of the business functions; accounting, marketing etc. In order to give the students a comprehensive picture of how these areas influence one another as well as the total company or organization, simulation games have been found as a useful method. In order to gain the best learning experience of a simulation game, the students should already possess understanding of each of the business areas at least to some extent.

The web-based technologies of today offer a wide range of alternative tools and learning environment choices to support teaching and learning. Simulation games utilize information technology in order to give a realistic picture of the operational environment, and in combination with web based architecture they virtualise the learning environment even more. This article discusses the usage of a web based business simulation game as the learning environment for an international group of business administration students. The theoretical part includes perspectives of web based learning environments and the challenges of virtual teams. It highlights various

perspectives of virtual learning environment, such as the technology, ability to reach the students, work loads, flexibility, tasks, feedback, supervising, and sense of community and learning results. In the empirical part we discuss the experiences gained from a pilot course and also the prospects for the future enhancements.

1. Teaching framework

1.1. Technology

Learning and teaching environment possibilities have developed dramatically with the introduction and rapid expansion of internet based tools and systems. The student base has changed; there are more and more students who return to school to enhance their knowledge, and students who cannot attend the traditional classroom-related learning environment. Fig. 1 represents the perspectives of virtual learning environments [1] in condensed form. Their demand for the education channels provides not only the basic need for virtual learning but it is also an increasing educational channel for the traditional students. [2]

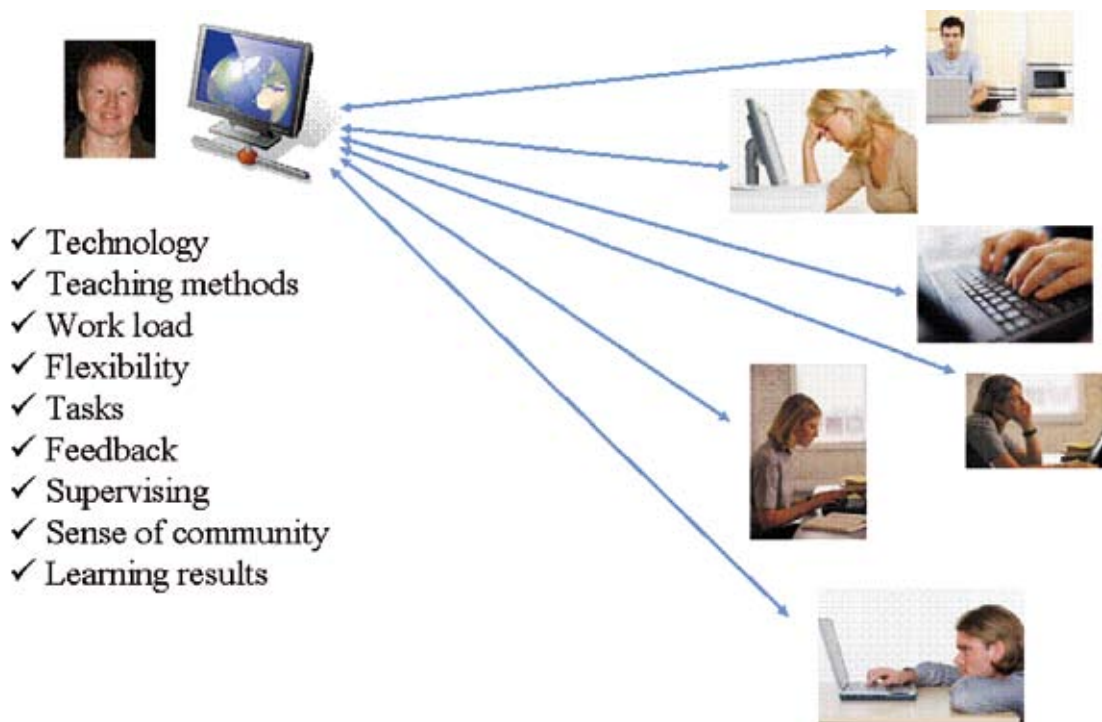


Fig. 1. Perspectives of virtual learning environments. Adapted from Ref. [1]

Also other competencies should be provided to ensure that the members get over the first threshold of operating in a virtual environment. These competencies include the knowledge of the needed technological tools and systems, but not to be forgotten that the technology is not enough to ensure good learning experiences in the virtual teams. Educational organizations should remember not to over-emphasize the technology, but remember the methodological approaches required to fully utilize the technological tools. [3]

4.2 The wide range of tools that can be utilized in the web based learning environment offers not only alternatives

but also become challenges for the teachers. In order to select the most suitable tools the teacher needs to be familiar with them and to know their advantages and disadvantages. Wrong tool choice can be harmful to the learning. The teacher also needs to make sure that the students possess the usage knowledge of the selected tools. [4]

1.2. Teaching methods

Virtual learning environments offer new dimensions for studying in groups and societies that are not physically

in the same location. Teachers of today can no longer rely on their traditional one-way teaching methods, as the world of learning and teaching has changed to be an interactive society. Delivering the learning message is not enough for the students, and the concept of learning has fast evolved to be a collaborative, two-way process, integrating the students more into the learning situations. This constructive theory implies that the learning takes place in the interaction between the students, the teacher and whole environment, and is claimed to provide a deeper level of learning than the traditional one-way learning message transfers. [5] [2]

Inclusion of modern technological tools and virtual, web based systems and learning environments creates challenges for the teachers, and the teaching environment is becoming more and more complex. Also the requirements of the students representing the younger generation are higher in regards of the alternatives, freedom of choice of place and time as well as the level of convenience of studying. In addition to specifying the learning objectives from an academic perspective, the teachers of today need to include the perspective of team-based, collaborative learning in their courses. [3] [5] [2]

1.3. Work load

The virtual learning environment is often perceived as free, easy and entertaining. Especially those students who are familiar with the most current web technologies, usually tend to have a shorter concentration span and they prefer visuals over the written information. Also the ability to choose the time and place to study may sound misleadingly easy, when instead it requires more self-discipline and proactive input than the passive information-pushing mode. Collective knowledge building is based on the activity of the students and study teams, which may cause higher work load than traditional individual learning with ready-made materials. [4]

Work load nature differs in the virtual learning from traditional setting. Instead of studying the given material, the students need to search for the materials and information, generate input based on their findings and collectively build learning materials. Problem-based and resource-based methodologies have paved the way, but did not include the aspect of student-built content. [4]

The work load of the teacher has the same challenges as that of the students. It is a false belief that a virtual course demands less working hours than a traditionally organized course with lectures. Careful preparation in designing the course structure, activities, timelines, feedback, tasks etc. may be very demanding, especially if the teacher is not familiar with virtual teaching. Actually the course design is far more important than the selection of tools and technologies. The approach should be student-oriented instead of teacher-oriented, which turns the traditional setting upside down. Self-discipline is required also from the teacher, and the students demand constant virtual presence of the teacher in different interactive forms. [4]

1.4. Flexibility

Web based education environments promote anytime, anywhere learning possibilities. An increasing number of students (especially the ones working at the same time) welcomes this opportunity to personally decide

and plan how and when to study. Time and place related flexibility also brings challenges for the team-building and collectiveness as well as requires self-organizing skills from the students. These issues have been discussed in other chapters of this article, and have close relationship with the flexibility.

There is another aspect to flexibility; when knowledge is built collectively as a result of the input of all participants, the final outcome can be very different from course to course. The teacher can influence this via constructive feedback, but also has to accept the fact that the learning results cannot be specified beforehand as strictly as when using traditional teaching approaches.

The results from the pilot course showed that the more the students worked in groups, the better results they obtained. During the group discussions the collective understanding of the business strategies developed faster than with students working alone. However, the pilot course included students who were not able to participate in live group discussions. For them the flexible structure offered a virtual possibility to be an active member of the course.

2. Organizing and operating the simulation game

2.1. Tasks

Being an active and connected member requires self-discipline, and this should be emphasized by the arranging organization in the very beginning. The virtual teams need clear definitions on what is expected from them in the areas of roles, responsibilities and rules for the team and to each of its members. Well-specified tasks, activities and timelines support the teams' progress, and constant feedback is required from the teacher to monitor and encourage the teams. Special attention should be paid to those students who are the least interactive in order to make them more active members of their team. [3]

It is not enough to define the tasks related to the content and substance of the course. In a virtual learning environment the communication between students and teams is a vital form of generating knowledge and enhancing learning. Therefore the teacher needs to include a clear specification for the communication in the form of tasks including timelines. It is also important to organize the course materials in a logical and clear way in order to avoid confusion. [3] [6]

2.2. Feedback

As learning in a virtual environment is an interactive process, feedback from the teacher cannot be over-emphasized. The feedback should encourage the hesitant students, guide students searching for the way to proceed and help the students feel they can complete their tasks. Successful feedback reduces: i) the distance between the students and the teacher when it is not too formal and rigid; ii) mistrust and insecurity when it is supportive and positively-formed; iii) the feeling of remoteness and distance when it is frequent and prompt [6].

In an e-learning environment the feedback should be seen more as an interactive task to enhance learning. The learning does not involve the students, but in a student-oriented methodology with collective knowledge building, the teacher is also a learner. Another important issue to discuss is the feedback between students. The teacher

should encourage the team members to give feedback to the input of their fellow students in a constructive way. As the knowledge is built from the collective input, a discussion-oriented communication should be emphasized. [4]

2.3. Supervising

Supervising a virtual student group requires at least as much attention from the teacher as a group studying in a traditional classroom environment. Supervising is not only a task for the teacher, but also for each student. With constant communication the learners can monitor the progress of other students and teams. [3]

With continuous supervising the teacher also shows respect and consideration towards the students, their progress and achievements. This kind of encouragement is necessary for the students to remain motivated. Supervising should also be about cooperation of the teacher and the students instead of being a form of control. [4]

2.4. Sense of community

The physical distance also creates challenges, as the feeling of belonging to a community is important for the participants. The usage of multiple teaching methods and web based systems in combination supports the group building and the sense of belonging. Face-to-face contacts are a very important addition to the virtual study communities, and should be arranged whenever possible and feasible. [3]

In order for the virtual team to be productive, the input from all members is required. The physical distance poses a challenge for keeping the communication alive in a constant mode, especially for those members who do not feel to be a part of the team. This highlights even more the importance of the team building activities and the development of good social ties within the virtual teams and communities. A key task for the teacher is to increase the collective identity instead of encouraging the students to target for individual achievements. [3]

When studying in a virtual team, it is important that the members get to know each other in more ways than just a name or a user id. This could be facilitated by face-to-face situations, but also with informal activities in the virtual communities, such as chats, discussion forums and voice-enabled meetings (Skype, Webex etc). Good team building is seen to enhance the learning and knowledge building inside the teams, and the arranging organization should support this activity by developing competencies in social and technological areas. It is important to consider the interaction between students, as the learner-learner communication is an important source of individual learning. [3]

3. Experiences and learning results from the pilot course

The simulation game consists of a case company operating in global mobile phone markets, so the products are familiar and interesting for the students. Teams of 3-5 students form a company, and the teams compete against each other in a common, global market. Decisions are made in areas like demand (predictions), production, pricing, R&D, logistics and finance. The teams can see how their decisions influence their company's financial

situation, but only after each game round is over, the outcome of that round is shown.

The software itself does not require complex skills, but the teachers should of course possess comprehensive knowledge of the business environment and its areas. We also found out that it is useful to play the game at least once through several rounds in order to get acquainted with the playing process. As each round has some specific market conditions, it is easier to guide the students, when the teacher knows what to expect.

Today's students are familiar with web based tools, so the user interface did not require any teaching as such. Adjusting the timing for the game requires some practicing for the teachers, and after the pilot course we realized that in the beginning we should have used more practice rounds, explained the connections between different decision-making areas and gone through the practice round results more thoroughly. The importance of classroom sessions was clearly seen, as it provided an opportunity for the students to get to know the game environment and the other team members. This supports the literature findings, which show that the combination of face-to-face and virtual learning brings the best results.

As a game can never represent the real world perfectly, some compromises have to be accepted. Some decision-making areas may seem as oversimplified, while others may seem as overemphasized. The game in question is a strategic simulation game, so long-term decisions like R&D are highlighted more than daily operations. The variations of students background education and experience brings both a challenge here as well as an opportunity; some students and teams might need more attention in areas that are not familiar for them, while the opportunity lies in the collaborative learning in teams with different knowledge based members.

The idea of the game is that each student makes their own decision set, and the team decides whose decisions are finally accepted as the team's decisions for each round. One of the main outcomes was that the students were able to work in multicultural teams effectively. The competitive aspect of the game gave additional motivation to the student teams. Having different level of activity within the groups gave the teachers a task of motivating the silent individuals and thereby ensuring an equal level of participation of all team members. Some teams worked via physically joint sessions, some only worked via the virtual platform. This did not seem to provide big differences in the results – bigger differences seemed to be between active and passive teams regarding collaborative working.

In the end of the game one team was announced to be the winner according to the specific criteria of the game. However, the students had to analyze their decisions; where they succeeded, what they could have done differently. The analyses was formed into a report and presented in a final seminar. This provided the students with understanding of the corrective actions which would have been needed for improving their results. According to the feedback from the teams, analyzing the results and the impact of the teams' decisions created the biggest learning experiences. It also showed that some teams had a clear strategy throughout the whole game, while others adjusted their decisions based on the previous round's results. Severe set backs of some teams forced the teams to make dramatic changes in their decisions, and the teams found this also an educational situation.

Conclusions

Encouraged by the positive experiences of this simulation game, we will proceed with it. In order to widen the experience we have started co-operation with our partner schools from other countries, and are targeting to a common simulation game with teams from different countries competing in the same virtual market. There are various alternatives in setting up this co-operation – the extreme being a simulation game including teams consisting of participants from different countries. Regardless of the set-up the challenges of working in the virtual learning environment are the same as with the pilot course – the distance and cultural differences of each participating school bring an extra level of complexity.

The experiences have enforced our belief that the importance of face-to-face start should be emphasized. In a co-operational implementation of several schools this means that teachers of each school have to be involved and committed to guide their students and teams to the game.

In order to gain wider understanding of the advantages and disadvantages of different e-learning models, more experience-based research is needed. Comparable studies from various business games and e-learning platforms should be done to get deeper knowledge and more comprehensive view of best practices in this field. The demo version of the business simulation game used in this article can be found from Ref. [7].

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