



## THE INTRODUCTION OF A VIRTUAL CLASSROOM INSTRUMENT AT THE OPEN UNIVERSITY OF THE NETHERLANDS

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### Summary

*In 2006 the Open University of the Netherlands started running trials with the so called virtual class. A virtual classroom is a set of tools for delivering classroom-like sessions, live over the Internet. The virtual class was used to replace face-to-face tutorials in the study centres. Since 2006 more than 20 pilots have been carried out involving more than 25 tutors and more than 200 students. The aim of those trials was to find out if the virtual classroom would be a suitable alternative for f2f-meetings and if so what would be the best way and the best didactical approach to set up a virtual classroom.*

*In this paper we present the findings of the pilots, the selection process of the virtual classroom product and we give recommendations on using the virtual classroom in distance teaching. how it affects our pedagogical model and how we can get more students and tutors to use it.*

### Introduction

In 2006, the Open University of the Netherlands (OUNL) started running trials with a so called virtual classroom. A virtual classroom is a combined set of tools for conducting classroom-like sessions live over the Internet. Since 2006, more than 20 pilot projects have been carried out, involving more than 25 tutors and over 200 students. We intended to use the virtual classroom as a replacement for face-to-face (f2f) tutoring sessions, which are normally organised in our study centres located across the country. The questions we asked ourselves were: Is the virtual classroom a suitable alternative for f2f meetings and, if so, what is the best pedagogical approach to use and the best way to organise it's use?

All pilots were organised in a project that was positioned directly under the OUNL central board, and in which most faculties participated. We investigated several virtual classroom instruments in order to come to a first selection of promising candidates. In the end, two instruments were closely investigated in our trails: first LearnLinc from Ilinc and later on Eluminate Live! Academic version from Elluminate. All pilots were

evaluated extensively. Our findings indicate that the virtual classroom is a valuable addition to our educational offerings.

In this paper we will describe what a virtual classroom is, why we choose to implement it and how we came to our selection of an instrument. We will also report on our findings from pilot projects and our recommendations on how to use a virtual classroom instrument in distance education settings.

### What is a virtual classroom?

A virtual classroom is an instrument for conducting live classroom-like sessions over the internet. In it, students and tutor(s) can communicate using voice, video, chat and whiteboard tools. They also have facilities like application sharing, polling, breakout sessions and quizzes. It allows the tutor and students to participate in real time lessons and discussions. Students can ask questions, draw on the whiteboard, and participate in breakout sessions. (Almost) everything that can be done in a real classroom, can be done in a virtual classroom. Moreover, the whole classroom session can be recorded and made available for review afterwards.

In Figure 1 we present a screen shot of the virtual classroom instrument Elluminate Live!.

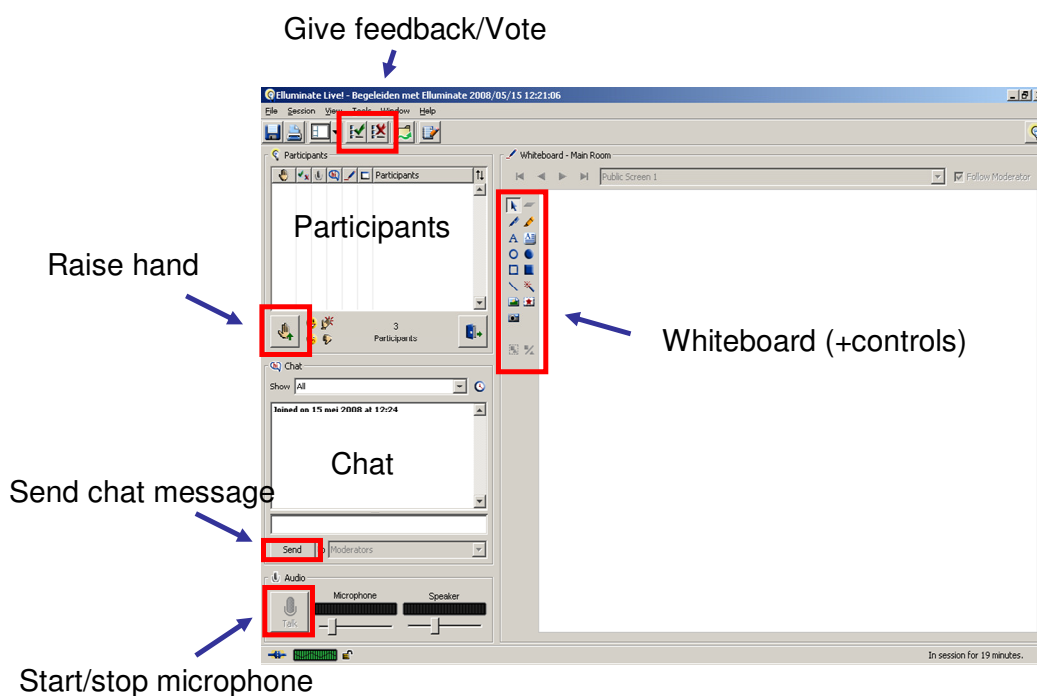


Figure 1: screenshot of an empty virtual classroom in Elluminate Live! (student view), indicating some interaction functions.

### Why we considered using a virtual classroom?

The main pedagogical model of the Open University of the Netherlands aims at supporting self-directed learning. OUNL students study independently, in their own time and at their own place and pace, using course materials specifically developed to

support self-directed learning. Contacts with tutors are limited and in most cases take place through e-mail or in discussion groups. OUNL organises f2f meetings in study centres for most introductory courses, but to a far lesser extent for regular courses. These f2f meetings offer the students a sense of connectedness: they get to know each other and their tutor and get immediate feedback on questions and problems.

The attendance at f2f meetings has always been a problem within the OUNL, as their nature collides with the model of supported self-directed learning. Students can start and complete their courses at any time and are not part of a defined cohort of students. So f2f meetings usually do not match with the individual pacing of the student. Furthermore, special need students or students who live or work abroad can't join these meetings. F2f meetings often are not very efficient as student numbers are too small to cost effectively organize the sessions in more than a very limited set of study centres. This means that most students have to travel quite far in order to attend a meeting.

In an effort to retain the advantages of f2f meetings but at the same time come to terms with their disadvantages, it was decided to investigate the opportunities a virtual classroom could offer.

### **Pilot projects with the virtual classroom instrument**

In 2006, a first experiment with a virtual classroom took place in a course on Chemistry (Corvers, 2006). This experiment was considered successful and subsequently it was decided to start pilot projects to extend the number of courses that used the virtual classroom in order to establish whether it would be fruitful to implement the virtual classroom for University-wide use.

The aim of the piloting phase was to answer the following questions:

- Is the virtual classroom an alternative for the f2f-meetings in the study centres? And if so, under which conditions?
- How do we go about implementing a virtual classroom solution for University-wide use?
  - o Which software should we use?
  - o Which pedagogical model(s) should we adopt?
  - o How many students can be involved in virtual classroom sessions?
- How do we support students and staff in virtual classroom use?

During 2007 and 2008 more than 20 pilots took place throughout all six faculties of the OUNL. The tutors all took part on a voluntary basis. In most pilots small groups of students participated, varying from 4 to 15 persons. The virtual meetings were not compulsory, so students could choose whether they wanted to participate or not. In half the cases meetings took place through the virtual classroom, while in the other half also parallel f2f meetings were organised. The pedagogical approach in the meetings was roughly the same as in the f2f meetings: short presentations, asking questions and discussing issues.

In the 2007 pilots we used the software from ILinc, but in the 2008 pilots we used Elluminate Live!. Most of the time we did not use the video facilities. We found it's use too cumbersome and besides that, the audio signal became more difficult to hear when video was used simultaneously. We evaluated all pilots using questionnaires and interviews.

### **Results of the pilots**

Overall, the students were very positive about their experiences. They thought the virtual classroom an efficient alternative for the f2f-meetings, as they did not have to

travel to the study centres and as the sessions were more frequent and not as long as the regular tutoring sessions. They felt that their involvement was comparable to regular sessions, some even said they felt more involved as they got more opportunities to actively participate. They also liked the opportunity to view session recordings after the meeting. When asked if they would prefer online meetings to real live meetings, the students were still a bit hesitant. Most of them would prefer a mixture of both, specially in situations that require much interaction and discussion. The tutors were very enthusiastic about the experience of online tutoring. None of them has stopped using the virtual classroom since. But at the same time they were a bit disappointed by the number of students that attended the online sessions.

Students and tutors alike reported that they thought of the virtual classroom as a suitable alternative to f2f-meeting. For both, the meetings were much easier to organise and available at a much shorter notice than f2f-meetings. It also emerged that the possibility of organising shorter but more frequent meetings worked much better than one long f2f meeting in one or two study centres (mainly because of the reduced travelling time). The virtual classroom is not more effective than f2f teaching but it is certainly more efficient. Certainty within the smaller groups of students during the pilots, there was enough opportunity for interaction. Students experienced the same amount of involvement and they did not feel it was more difficult to stay attentive. All tutors who participated in the pilots decided to go on using the virtual classroom after the pilot period ended.

But students and tutors all still felt that the virtual classroom should be a supplement to f2f meetings and not a total replacement. They missed the direct communication, the meeting over coffee and the general chitchat which makes learning fun. In the beginning tutors felt very insecure when using the virtual classroom and they certainly felt exhausted afterwards. But after some sessions they got used to the specific requirements on communicating and keeping track of interactions in the virtual classroom.

### **Selection of the virtual class instrument**

In order to select a virtual classroom instrument we developed a list of specifications based on the needs of tutors, students and educational experts: we scored potential candidates on educational use, user friendliness, features and administration. For educational use we looked at the way different teaching activities were supported, such as discussion, workshops, group work, assessments etc. User friendliness was assessed by examining the installation procedures, the features of the integration into our Virtual Learning Environment (VLE) and the availability of training materials for students and teachers. For features we looked at the availability of Voice over Internet (VoIP), presentation tools, whiteboard tools, application sharing, public and private chat, feedback tools, document sharing, polling and quizzes. We also looked at how the system should be installed/administered, the way students and tutors were authorised for use and the licence fees.

We initially looked into a whole range of virtual classroom instruments and assessed them using the list of requirements. After the first round in our elimination process, two commercial products were tested extensively in the pilots. Finally we decided to choose for Elluminate Live!, mainly based on quality of audio, extensive feature set, support for multiple platforms, automatic reconnection features and low bandwidth requirements,

### **Recommendations on how to organise and use the virtual classroom instrument**

*When to use a virtual classroom?*

We have experimented with the virtual classroom for more than two years now and we can confidently say that the virtual classroom is a powerful tool to use as a replacement for traditional teaching sessions such as workshops and structured discussion. We even had some experience with structured role play and this also worked very well. Supporting group work and free discussion is a bit more difficult, as it requires more student/tutor experience and feeling-at-ease in using the virtual classroom. We expect that all involved will become more comfortable in using the tools and as a result it will become much easier to use them in a less directive and restricted way.

The virtual classroom is technically well suited for lectures, but teachers have to be aware of the fact that boring lectures become even more boring when you listen to them on the computer. When bored, the temptation to grab a quick cup of coffee or to check your email becomes hard to resist. As Niall Sclater (2008) says on his weblog: 'Online synchronous teaching is not about lecturing at people - it's about involving your class continuously in a whole host of different ways'.

Group size should not be too big, certainly not in the beginning when tutors and students are not used to the tool. We worked with groups of 8 to 15 students and that seems a manageable size. A virtual class session should also be fairly short. One and a half hour is an absolute maximum, otherwise attendance is too exhausting for both the tutor and the students.

#### *Preparations to make*

The first teaching session in a virtual classroom feels the same as first-time teaching in a real classroom. Tutors feel insecure and therefore it is important that they are well acquainted with the software and are well trained. It is important that the tutor has had some hands-on experience before facing the students. It really helps to use two pc's, one showing the student perspective and the other the tutor's perspective or to work with one or two colleagues. Specially for the first session we recommend having an experienced colleague around who can point out things or take over when you forget something.

A virtual classroom session requires good preparation. Tutors should have a scenario of their lesson available and upload all the required materials to the classroom before the students enter the session. It is a bit more complicated to improvise during a virtual classroom session than it is in a real classroom, especially for the inexperienced tutor. One should also be aware that everything proceeds at a bit slower pace than in a normal classroom setting.

Furthermore, the students who participate in the virtual classroom should be well prepared and instructed. Not only technical preparation is important, students should also be aware of the basic 'etiquette' to adhere to in a virtual classroom. They should know how to ask a question, how to let the tutor know you have left for a minute to go to the bathroom, how to avoid interruptions from family members who enter their study or from their telephones. And what policy is used for students coming in late. We recommend new groups to first organise an informal session to discuss 'rules and regulations'. For example, students have to be made aware that individual technical problems will not be addressed during the session but that they will be helped as soon as possible afterwards. If part of the lesson is interrupted due to individual problems, the students who have can attend normally will perceive the whole interruption as a waste of time.

#### *Training and support for tutors and students*

Several training sessions for tutors were organised. Each tutor who contemplates using a virtual classroom is offered to participate in an introductory virtual workshop. After

s/he decides to set up a real virtual class a f2f tutorial is organized in which the tutors learn how to set up the classroom and how to use it in their role of session moderator. However, even after the training some tutors still feel insecure about conducting a virtual class all by themselves, so for help and support during the first few sessions we always provide backup from someone from the Online support project. Pilot use also shows that in the first sessions tutors preferably choose a very simple session plan and only afterwards start using more advanced functionalities. That is when they prefer additional support.

All the participating students receive an instruction on how to prepare their pc's. Each student is offered an individual 30 minute test session, during which the audio communication facility is tested and a short instruction is provided.

Students and tutors alike appreciate the training and support. What's more: every new OUNL lecturer or tutor is obliged to attend the extensive virtual classroom training as part of the OUNL 'teaching qualification program'.

### *Interactions*

It is advisable to encourage interaction in the virtual classroom and to consider how you will interact with your students. There is a whole range of tools available in the classroom but it is important to decide in advance which tools you are going to use. We felt that using polls and quizzes and then presenting the results to the whole group were a very powerful way of interacting with the students and to keep their attention. Evaluation results verified this notion. Although chatting might be distracting in the beginning, it gives the tutor a very effective insight into the class' mood even if you only glance at the chat from time to time. You can always decide to do act on it or not.

A tutor should also be aware that students find it hard to concentrate after about 30/40 minutes of attendance. You won't see them yawning, but they will. So have regular coffee breaks and let students use those breaks to chat among themselves.

### *Recordings*

Students appreciate the fact that the virtual class can be recorded and made available via the VLE for later use. Students use it for revision or to make up for a class they missed. Just make sure that, in accordance to privacy laws, students agree from the onset of the session that the class will be recorded.

## **The Open University of the Netherlands and the virtual classroom**

The Open University has decided to make the virtual classroom available in all courses and all faculties. We have chosen to implement the tool Elluminate Live! and are now in the process of making it available in our central VLE. All tutors and lecturers will be trained in its use. We are also investigating possibilities of using the virtual classroom as a conference tool for other business processes such as staff meetings or board meetings or international collaborations. Moreover we are developing a policy on the use of the virtual classroom and on the combination of the virtual classroom with f2f tutoring.

Now in the final phase of the project, we are also setting up some experiments with larger groups and with new pedagogical approaches.

## **Literature**

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