# 27 Sharing a Top Manager's Experience with the Next Generation: The Use of Electronic Discussions and Short Video Fragments in Teaching

**S.M. Dopper, E. Sjoer, W. Dik, F.A.B. Lohman*, M.J.J.M. van de Ven†**

Delft University of Technology, The Netherlands
S.M.Dopper@tbm.tudelft.nl
E.Sjoer@tbm.tudelft.nl

*TLO Holland Controls b.v., Papendrecht, The Netherlands

† Erasmus University Rotterdam, The Netherlands

## Abstract

This paper presents an effective educational method to transfer managerial knowledge to students. This method consists among other of online discussions between small groups of students and video clips of lectures. The set-up of the course and the ICT-tool used in the course were evaluated for two years through a questionnaire among the students. The results show that the applied e-learning concept is highly appreciated and serves as an effective tool to exchange knowledge.

**Keywords:** Teaching methods, online discussions, video clips, managerial knowledge.

## 1. Introduction

In recent years, the use of ICT in higher education has increased enormously. However, in many cases the application of ICT tools is still limited to making available learning materials via the Internet. Although this has certain efficiency benefits like information being accessible at any time and place, ICT is not really integrated into the educational process. With respect to students' learning process, more benefits of ICT in education may be achieved when ICT has an explicit place in the course.

In this paper the set-up of a newly developed course is presented, based on a well thought-out blended learning concept. The challenge was to make the most of the available ICT facilities, in a situation that students and teacher meet each other face tot face weekly. Furthermore, the lecturer of the course is a former top manager, whose aim is to transfer practical knowledge. This knowledge is not written in books. Finally, next to objectives with respect to content, one of the aims of the course is learning to form your own opinion and share it with others. Therefore, the course was designed from a constructivistic learning concept. How do you transfer a top manager's practical knowledge to students, benefiting from the possibilities of ICT optimally?

The experiments in this course are part of a large project executed at the faculty of TPM, Delft University of Technology. One of the subprojects of this faculty-wide project, called IMAGO, consists of researching the functional use of ICT in education. A few selected instructors implemented ICT in their courses in an innovative way (Herder 2002a, 2002b, Van Daalen 2001, Sjoer en Brakels 2001, Sjoer en Dopper 2002, Brakels et all 2001, Van Daalen et all 2002).

One of these instructors is Professor Wim Dik, a former top manager, who was recruited to teach the elective course "Management of ICT oriented organizations". Professor Dik worked almost 40 years as a manager, 24 years of which with Unilever ("old economy") and the last 12 years as chairman and CEO of KPN, the Dutch post and telecom operator ("new territory"). Furthermore, he was active in politics and served as a minister for foreign trade. He now shares his ample experience, supported by clear management theory, with the next generation.

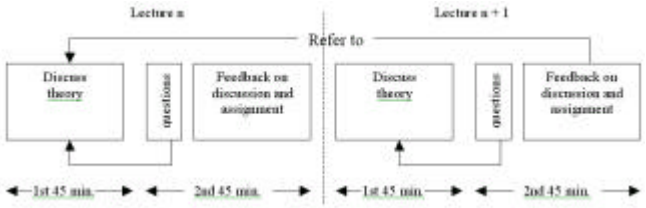
"Management of ICT oriented organizations" was taught for the first time in the year 2000, and for the second time in the Fall 2001. The course focuses on organizations where ICT plays a dominant role as a product or as a means, for example Internet, e-commerce, digital media, and mobile communication. Due to the fast developments of ICT these organizations have to cope with mergers, break-ups, fast technological developments, higher quality demands etc. In order to react quickly and adequately to the developments, management must have insight in the important fields of decision-making and the ability to formulate adequate strategies.

ICT-tools, like video-clips and electronic discussions are integrated into this course. The next section describes the set-up of the course. The way the course is taught will be explained together with the choices that have been made, relative to the chosen learning concept. The course was evaluated by means of a questionnaire among students for both years. The results of these questionnaires, concerning the use and the appreciation of ICT-tools within the course

set-up, will be presented in the third section. Finally, we will draw conclusions in section 4.

## 2. Course set-up

The course consisted of 12 weekly lectures of 1,5 hour each. In each lecture a main topic was highlighted. In the first 45 minutes of the lecture theory concerning this main topic was discussed. The second 45 minutes were meant for questions and discussion about the theory and for feedback on electronic discussions and assignments. Figure 1 shows a




schematic view of the course set-up.

Figure 1: course set-up

Between the lectures students worked in groups of four persons on case based assignments. The assignments had to result in a document of around 2 to 3 pages, in which they had to discuss the main topic of that week's lecture. The assignments had to be turned in electronically within a few days, so the professor could come back to them the next lecture. Furthermore, after each lecture the teacher formulated a provoking statement about the central topic of the lecture, which was posted on the electronic discussion board of Blackboard, a digital learning environment. Each group had to react on this debatable statement and on one reaction of another group at least.

For example, students had to react on statements like:

- UMTS-frequencies should be given away for free.
- The merge between HP and Compaq is doomed to fail

Participation in the electronic discussions about statements was compulsory for groups. The professor did not participate in the electronic discussions, but screened the reactions on a statement and selected those contributions that are important for further elaboration in the classroom. The remarkable things the professor picked out of the electronic discussions were brought forward in the next lecture.

To summarize, half of the lecture time (the second 45 minutes) is spent on giving feedback on the assignments and the group contributions to the electronic discussions. This increases the interactivity of the lectures. By stimulating students to discuss in groups about the topics addressed in the lectures, peer learning will evolve (Dillenbourg, 1999; Knowlton, 2000; McCombs, 2000). Together, students process the information of the lecture and give meaning to it. They form their own opinion and share it with others. Students attend the lectures well prepared and can truly contribute to the discussion. By coming back explicitly on the group work during the lectures, students feel that their opinion is taken seriously, which can be very motivating for students.

# Video clips

In addition to the lectures, the assignments and electronic discussions, the course was enriched with video fragments. After each lecture, the professor and his assistant teacher went to a separate room to summarize the lecture on video camera. This resulted in six short video fragments of two to three minutes each. These video clips were put on the Blackboard site of the course in order to be available for students right away (see figure 2).


Figure 2: video clip about empowerment on the Blackboard site of the course

The lectures consisted of a mix of practical examples and managerial experiences of the professor, combined with management theories and current information from articles. The professor did not use any slides. The lectures were very appealing due to many anecdotes. However, it can be hard for students to get the main point out of those lectures. Therefore, the video clips were made to summarize the highlights of the lecture. We have chosen for video clips, because they are livelier compared with a summary in text or slides. Students hear the professor's intonation when explaining the main points of the lecture. The video clips are short, because students do not want to watch complete lectures on video (Verhagen, 1992, Collis & Peters, 2000). Finally, the professor also benefits from making the video clips, because he is forced to explain the main ideas of the lecture.

It took around two hours to make the six video fragments. In order to make one good video clip, the professor and his assistant teacher had to shoot approximately 1,5 to 2 video fragments. However, after recording a few video clips, the time needed to make the video clips was reduced considerably.

# 3. Results

## 3.1. Evaluation method

In both years, the course was evaluated by means of a student questionnaire, filled in after the course. The evaluation took place before students got their grade, so student's results did not affect the answers on the questionnaire. The questionnaire consisted of 32 questions, 23 of which were closed and 9 were open questions. For both years the same questionnaire was used. In the first year, 52 students attended the course and 40 students completed the questionnaire. In the second year, 53 students attended the course of which 41 filled in the questionnaire. This means exactly the same response of 77% in both years. Not all respondents answered all questions; in case of missing values only the unambiguous answers were taken into account.

In order to find out whether there were significant differences in scores between both years we carried out a t-test. Judging by a significance level of 0.025 (p-value) no significant differences were found between the two years of study. Consequently, the data for both years were combined.

Next to the questionnaire, one interview is held with the teaching assistant.

In this section we will focus on the results with respect to time spent on electronic learning environment (3.2); the role of video clips in the concept (3.3); electronic discussions (3.4) and finally, the feedback given during lectures (3.5).

## 3.2. Time spent on electronic learning environment

In our questionnaire we asked students to estimate the total time they had spent on the course in hours and the time they had spent on working with the electronic learning environment. Students indicated that they spent an average of 30% of the total time on working with the electronic learning environment.

## 3.3. Video clips

Students are positive about the video clips. 85% said that they had watched half of the video clips or more; 49% had even watched all video fragments. On a scale from 1 to 5 (1 = not useful, 5 = useful) 92,5% considered the video clips useful (27,5%: 4, 65%: 5). In the questionnaire we asked students what role they would prefer for the video clips in this course, i.e. as an addition to lectures, alternate: sometimes lectures, sometimes video clips, or as replacement of the lectures. Figure 3 shows that students have a clear preference for video clips as an addition to lectures. This probably has to do with the fact that the teacher in this course is a charismatic top manager, whose lectures contain practical cases and examples to illustrate management theories. The teaching assistant declared in the interview that the lectures are indeed very appealing for students, but that the core of the lecture was hard to identify. Consequently, when the teacher summarizes the highlights of the lectures on video, video clips have additional value for students.

Quoting from the questionnaire when asked for advantages of the video clips:

- The video clips can be watched as often as you want.
- The video clips contain the most important aspects of the lecture, so they are a good help for preparing the exam
- The video clips present a lively, short and clear summary of the lectures

Some of the disadvantages mentioned were:

- Slow Internet connection at home
- Not possible to ask questions, video clips are not interactive
- Eventually you are going to transfer the video clips into text anyway

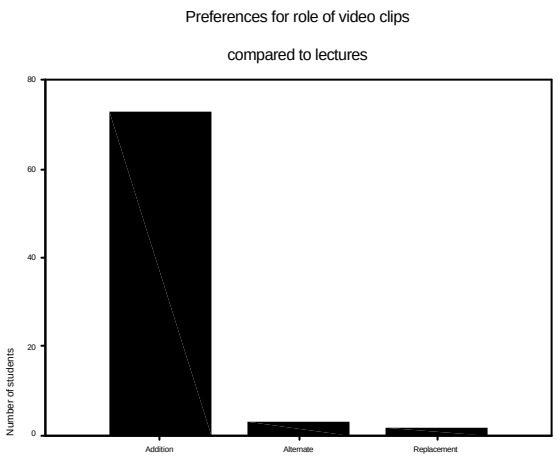



Figure 3: student's opinion on the role of video clips in this course.

Reusability of the video clips

In the first year of the course, the teachers had to put a lot of time and effort in making the video fragments. However, in the second lecture series it turned out that almost all video fragments could be used again. Together with the positive results concerning the video clips, one can conclude that making the video clips can be considered a good investment.

## 3.4 Electronic discussions

Students reacted positively to questions that are related to electronic discussions. 87,6% of the respondents indicate that they found the electronic discussions useful (4 or 5 on a scale

from 1 to 5). Furthermore we asked students whether they considered it useful to get to know the opinion of other groups and to react on the opinion of other groups. 87,4% appreciated getting acquainted with the opinion of other groups, and 79,8% found it useful to react on the opinion of other groups.

Besides the electronic discussions, the course set-up also provided for face-to-face discussions about the statements and the assignments. 85% of the respondents indicated that they discussed statements as well as assignments face to face within their own group. In our questionnaire we asked students what kind of discussion they consider to fit best in this course, electronic discussions or face-to-face discussions. Results show that 24% consider electronic discussions to fit best in this course and 41% think face-to-face discussions fit best. 32% of the respondents filled in both options, i.e. electronic discussions and face-to-face discussions. Apparently, a large number of students found it difficult to choose, probably because of the fact that both methods have their own advantages.

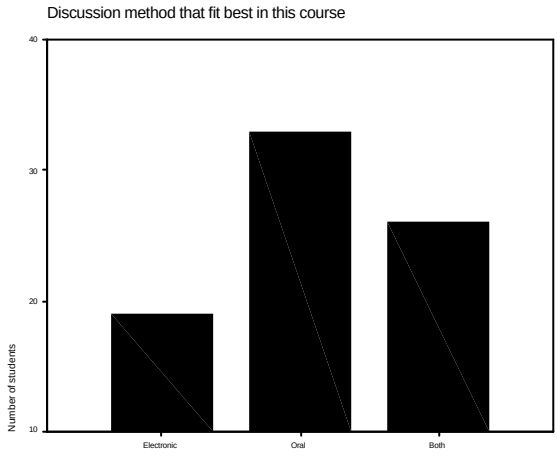



Figure 4: student's opinion about the discussion method that fit best in this course

Students, who had a preference for electronic discussions, explained their answer with quotes like "electronic discussions are time and place flexible; you do not have to be present". Students, who considered the face-to-face discussions to fit best, added an explanation like "face-to-face discussions are more efficient to form a group's opinion, because every body can react right away". Finally, students who have chosen both options stated that they considered both discussion methods to fit well in the course, because they are supplementary. Face-to-face discussions suit for forming a group opinion and electronic discussions fit best for discussions between groups.

### 3.5. Feedback during lectures

Another important element of the course is the feedback on group work provided by the professor during the lectures. The feedback was the link between the electronic learning environment and the classroom environment. The feedback stimulates students to attend class well prepared, which may have a positive effect on the interactivity of the lectures.

Students really appreciated the feedback on assignments and discussions during the lectures. 79% considered the feedback of the professor on assignments useful (4 or 5 on a scale from 1 to 5). 67% feels the same about the feedback on electronic discussions (4 or 5 on a scale from 1 to 5). A possible explanation is that it can be very motivating for students that their opinion can be discussed in class. They feel that their opinion is taken seriously and they are also brought in touch with other opinions.

Just like the video clips and the electronic discussions, the lectures were also highly appreciated by the students. 95% of the respondents considered the lectures useful (4 or 5 on a scale from 1 to 5), and the most stimulating component of the course (80%, N=66). This probably counts for the fact that the teacher is a good narrator; the lectures were very lively, contained a lot of appealing examples and were really interactive.

## 4. Conclusions

In this paper we presented a well thought-out learning concept in which ICT played a significant role. The central element of the course set-up consisted of lectures to which the other elements, i.e. video clips, electronic discussions and case based assignments were strongly related. The objective was to really integrate the lectures with new technology.

Results show that students highly appreciated all aspects of the course. The course is well structured and the electronic learning environment is indeed integrated in the course. This is due to the fact that half of the lecture time is used for giving feedback on student's assignments and contributions to electronic discussions. The video clips refer to a real lecture, and were available soon after the lecture. The electronic learning environment is more than just an information medium.

The course set-up seems to be effective to teach managerial knowledge and expertise. We consider the concept to be applicable to subjects other than "Management of ICT oriented organizations". The concept is appropriate for sharing practical knowledge and experiences with students. It would be very interesting to try out the concept in comparable settings. An unknown variable in the success of the course, and more specifically in the success of the video clips is still the teacher. It would be interested to find out whether the video clips would have the same impact with another teacher in another setting.

In the second year of the course, the results were as positive as the first year. Furthermore, the professor and his teacher assistant had to spend far less effort in preparing the course. The most important time-saver was the video clips, because they could be used again in the second year of the course.

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