TOWARDS BEST PRACTICES IN CONTINUING EDUCATION AT THE IVPV – GHENT UNIVERSITY (BELGIUM)

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ABSTRACT

The Institute for Continuing Education at the Ghent University (IVPV) offers courses in the framework of Life Long Learning. Courses include exercises, homework and projects. Through examinations/projects a certificate issued by the Ghent University can be obtained.
Combining Life Long Learning with a full time job in an environment where accessibility to courses due to traffic congestion is severely hindered posed a challenge to the IVPV. Since 5 years now, the search for best practices for offering course content is constantly continuously going on.
The success of the large scale inter-university IT1 course in 1998-2000, using live ISDN-videoconferencing, persuaded the IVPV to organize other courses taking into account the remarks of students and industrial partners.
Taking up current 'best practices', a renewed course framework was set up for a new IT course (IT2) based on streaming video lessons on CDs where participants were tightly kept into a study rhythm in order to avoid 'free lunch' behaviour, ("guided" streaming video courses). An in-house system for streaming video, with emphasis on animation and interaction, has been developed. In 2003, the IVPV started a new type of e-learning course based on IT2 but with maximum flexibility/freedom for participants ("free" streaming video courses). The search for best practices continues. Some courses are therefore given through "blended learning".

KEYWORDS

Life Long Learning, e-learning, blended learning, best practices, streaming video

1. INTRODUCTION

The basic mission of the IVPV is to provide 'delta'-learning: i.e. to bridge the gap between the knowledge of employees in industry and young graduates, by providing courses on demand of the industry.

One of the early continuing education programmes, coordinated by the IVPV, was a large-scale programme in Information Technology (IT1), jointly presented by the 4 main Flemish universities (Ghent, Leuven, Brussels and Antwerp) from 1998 to 2000, using massive ISDN-videoconferencing at 384 kbps (6 ISDN channels) [1, 2]. The target of this programme was to train a new generation of IT-professionals by the year 2000. In twelve sites, for 417 hours, two times a week, 3 hours of interactive videoconferencing were set up in the evening, completed by 87 hours of hands-on exercises for 1145 participants in Flanders and abroad. IT1 can be seen as a first attempt of the IVPV to bring education by distant learning. The positive evaluation of the IT1course stimulated the IVPV to continuously search for best practices in offering education by distant learning.

2. SEARCH FOR BEST PRACTICES IN CONTINUING EDUCATION

2.1 Video-conferencing?

In the follow-up of the IT1 course, a scientifically based evaluation of the complete educational programme among the participants was carried out to gather information about the effects of the video-conferencing framework as such. More detailed data can be found in [4], but the main results were as follows:

- well known obstacles of videoconferencing remain: too static, little interaction, no 'classroom feeling',..
- limited quality of the image together with a good sound quality was not seen as a real problem;
- real-live animation of the videoconferencing (animated PowerPoint slides + mouse interaction) was considered as highly beneficial to enhance the learning behaviour;
- possibility of bridging time and space was seen as a main advantage;
- accompanying electronic discussion forum (Majordomo) was highly appreciated.

All this resulted in an overall satisfaction degree of 79%.

Following those assessment results, a fundamental discussion took place with representatives from industry in Flanders in order to define the framework for the second issue of the programme (IT2, 2000-2001). The conclusion was that the main idea of the videoconferencing was all right, but that the necessity for people, working in industry under high pressure, to be lively present at fixed times was impracticable, and that a swing to more asynchronous learning was highly desirable.

2.2 "Guided" streaming video on CD?

The modified framework for the IT2 course was designed as follows:

- the lessons have been recorded digitally on CD or DVD in a "streaming video" format which:
    - keeps in any case the animation of the slides (building up slides / mouse movements);
    - enhances possibly the image quality (audio quality was satisfactory);
    - maximizes the amount of lectures per disc;
- the interactive electronic discussion lists have been extended with more features;
- a minimal live interaction with teachers / assistants was safeguarded;
- participants were tightly kept into a study rhythm in order to avoid 'free lunch' behaviour, therefore we speak about "*guided*" streaming video lessons.

In the Streaming Video framework, the lecturer prepares the lecture in PowerPoint, and cuts it into 'paragraphs' of 5 to 15 minutes. Animations (slide transitions…) are used, following some basic rules about fonts, picture sizes… The lecture is recorded in a multimedia studio, mouse/cursor movements are freely used to clarify the lecture. The 'paragraph' is captured from the computer output (vga…) together with an image of the lecturer's face, picked up by a professional video camera. The studio technician mixes the computer output with the teacher's image in real-time, resulting in one digital signal recorded onto a digital Dvcam tape.

An important aspect of this recording system is that – starting from slides used in old-style lectures – the extra workload is kept to a very strict and acceptable minimum. We postulated that the time spent for the preparation should not exceed the lectures time.

The IT2-course was composed of 5 modules with identical layout:

- preliminary videoconference for first contact with the lecturer;
- distribution of the relevant CD sets;
- 'home study': a number of weeks for asynchronous learning by the student;
- lab exercises on Saturdays at the university to perform guided hands-on training on PCs
- one live feedback session: where students could forward final questions / remarks to the professors;
- time for project work and final preparation time for the examination;
- the examination: written exams, PC-exercises, projects depending on the content of each module.

Table1: summary of the calculated course load of 34 weeks at 11 hrs/week

	Theory		Lab exercises	Feedback	Project / study	Total hours	Number of weeks
	Videoconf.	Home					
Hours	18	95	51	15	202	381	34 (11 hrs/week)

As in the IT1-course, the department of communication sciences of the Ghent University carried out an evaluation [5]. The inquiry dealt with all aspects of the course (including content and teaching skills of the lecturers). Only the results on the course format as such are presented below.

Table 2: summary of evaluation of CD supported education

(Legend: ++ Fully agree /+ Agree /0 Neutral/- Disagree/ -- Fully disagree)

Attitude towards CD supported education.	
This kind of education bridges distance as well as time. It's a solution for the mobility problem.	++
This kind of education gives me enough opportunities to ask questions in a direct and interactive way	+
This kind of education stimulates interactivity and contacts among the students of the course	0
This kind of education stimulates interactivity and contacts with the teachers	-
This kind of education implies a very isolated situation for the students of the course	0
The personal freedom as far as time management is concerned (following own rhythm to study, and choosing moments which fit you the most) is definitely a strong advantage of this kind of education	++
This kind of education is a weak substitute for the traditional way of 'live contact'-education	--
I would prefer a 'live teacher' to CD-supported education	-
The CD has no added value as compared to a videotape	--
One needs a high dose of self-discipline to finish a course given in a CD-supported way	+
CD supported education is only interesting when it goes together with a sufficient degree of and possibility to interactivity and asking questions (discussion fora, short term-answered e-mails)	++

The evaluation shows an overall satisfaction degree, which was also confirmed for the other aspects. The course format is an ideal way for people with a busy professional job: to bridge time and distance; to keep the liberty to follow his/her own rhythm and to determine his/her own study moments; to have interaction possibilities among each other and with the teachers.

Participants commented on some aspects as follows:

- although a rhythm has been imposed, one needs a good dose of self discipline;
- interactive exercises on the CDs would be desirable in future;
- although many contact moments were foreseen, there was some feeling of isolation, also because the step to go onto the discussion forum is too high for some people;
- freedom to study the CDs when and how you want, but you have to study them nevertheless…;

One respondent summarized: "*The advantage of personal time management and the solution for the mobility problem is more important then the lack of personal live contact with the teacher. There are still the lab sessions to communicate with experienced people*".

2.3 "Free" streaming video lessons on CD and electronic learning platform?

In May 2003 the IVPV started a course "Environmental Management", based on the structure of IT2 but with more freedom for the participants. They can start at any moment and in min. 6 month to max. 3 years the certificate can be obtained. Contact days and exams are organised twice a year. There is an electronic learning platform on Internet for discussion and communication and for the compulsory exercises. Actualisation of content is performed on the learning platform. Because of this greater degree of freedom for participants and teachers we speak of "*free*" streaming video lessons.

The first evaluation results are positive but all students state they underestimated the workload and the necessary self-discipline.

In view of future courses, we screened the market for new commercial streaming video products. Communication specialists evaluated these products and our in-house streaming video system was pointed

out as being the best one. Although the other products consume the available bandwidth economically and provide a better image quality, they all used static images (e.g. jpeg encoded PowerPoint slides) as learning material. The animations and cursor movements, especially in technical courses (with many figures and schemes), is very important to catch the attention of the students. Recently we tested a commercial product (Screenwatch) that meets our needs and results in a better screen quality (less loss) and lower production cost.

2.4 "Free" streaming video lessons on CD and electronic learning platform?

Is the described method of video lessons on CD for e-learning the best method for all courses for Life Long Learning? Depending on the content, some courses require a more direct contact between teacher and students (ex. Classes where managerial aspects are discussed). We came to the conclusion that for some courses specific parts (with high technical content) can be offered through streaming video on CD or on the electronic learning platform, whereas other parts are better given in the classical way with direct interaction between teacher and student (blended learning). The practical exercises on PC are given in PC-classes at the university, mostly on Saturday. In all courses an electronic discussion board should be available.

3. CONCLUSION

At the IVPV, distant learning is part of a "larger" "learning" experience. In the search for best practices in continuing education, the IVPV tested and improved different methods for distant learning. Efforts were made to adapt the delivery system to best motivate and meet the needs of the participant, in terms of both content and preferred learning styles. E-learning, as major part of distant learning, makes use of a network for delivery, interaction, or facilitation. Even if the bandwidth is still far from ideal, E-learning provides a new set of tools that adds value to all the traditional teaching and learning experiences and processes.

Distant learning is not the magic bullet and it certainly is not a "*one size fits all"* approach and will never replace "live" group dynamics. The added value consists in the extra "personal" guidance of the students.

The objective is to reach a fully integrated, easily transferable and adaptable system that contains the complete cycle of an electronic learning process: registration, monitoring, coaching, evaluation, discussion forums, documents, workbooks, self-tests, referrals, streaming 'live' courses, contacts with the teachers, practice sessions, … i.e. an ideal environment for asynchronous learning within the framework of continuing education programmes.

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