
INCREASED INTERACTIVITY TO REDUCE DROP-OUT RATE ON DISTANCE LEARNING PROGRAMS

THE CASE OF BLEKINGE INSTITUTE OF TECHNOLOGY, SWEDEN

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Reduced Drop-out rate as a Financial Risk in Distance Learning Programs

Interaction lies at the heart of all education. E-learning is no different. Previous research has shown that the amount of student interaction is likely to improve the distance-learners' educational experience, e.g. Andrusyszyn et al, (1999), and Wright et al, (2000). There is a number of different interactions to consider in education from a pedagogical perspective: Since Moore (1989) defined (1) interaction with the content, (2) interaction with the instructor, and (3) interaction with the students, an additional new fourth dimension has been added by Bouhnik, Dan and Marcus, Tali (2006), named *interaction with the system*, the interaction with all of the new computer technologies. New and more difficult technology can be a reason for students to drop out, but it can also be a reason for them to stay. It is all a question of what technologies are used and how.

As e-learning programs are constantly being developed and universities have become more financially depended upon these programs, the reduction in drop out rates has become an increasingly important issue.

Previous research by Kearsley and Lynch (1996) showed a drop out figure between 20 and 30% in distance learning courses. Experience with free education programs like the one given by BTH in Sweden suggests that this figure may be as high as 50%.

Experience at BTH so far also seems to suggest that drop out rate on full time programs is higher than that of part time. The reason may be that students overestimate their own potential contribution to the course on full time, realizing it is more work than they first thought.

This case study will be limited to the experience made at the School of Management (MAM) at BTH, predominantly with their MBA programs. MAM has been giving distance courses over the Internet for five years, and video-conference support on some courses for almost as long. So far each teacher has been using the technological platform and pedagogic he or she feels most comfortable with. Due to this policy many teachers have refrained from using high-interactive solutions like videoconferences and streaming. As the schools management has become more aware of the correlation between drop-out rate and interactivity, there has been a push towards more interactive solutions and more teacher-training in new technologies.

Starting in September 2007 all MBA courses will employ video lectures. This has already given a signal as to what staffs are in the need of more training. Previous experience has also showed that not all teachers are comfortable being online so often, and many are slow to answer mails. Many students feel frustrated when they are not met with the same degree of interactivity. Much of this interactivity is also related to what technological platforms the university is using.

IT platforms used at MAM

MAM is currently using three IT platforms for its distance education; IDENET, LUVIT and MARRATECH. All of these are Swedish made.

IDENET is a basic billboard solution developed internally at BTH. Its great advantage is that it is easy to use and that it is reliable.

LUVIT is developed at Lund University. In addition to functions mentioned on IDENET LUVIT has the possibility for all logged in users to post their own messages and to chat, but it has no video/audio solutions.

MARRATECH is developed at Luleå university of Technology in northern Sweden. It is a conference system provider. The teacher and student decide on a virtual room to enter, where sound, video and documents are uploaded, recorded and distributed, all in real time.

Each of these software adds a little bit extra. Some of the criticism has been the inconvenience of using so many different software solutions. To simplify there has been a wish to move over to using only one software, which should have all of the functions covered by the above mentioned systems. Such a purchase is now under investigation. One possible supplier is the Norwegian firm It's Learning.

So far it has been up to each teacher what platform is used, depending on what he or she feels comfortable using. The result of this has been a wide selection of technological solutions. This may have been convenient for the teacher, but less so for the student, who has had to learn a number of software. When the student has to learn new software this has taken away much valuable time from him or her which could otherwise have been used for studying actual courses. Teachers on their side are not reluctant to change systems they are familiar with.

According to Peter Blasche, Media Educationalist at BTH, LUVIT is the most used platform at BTH today. BTH started using LUVIT in 1999. Support is given by a centre called the Learning Lab located at BTH. If no new software system is being purchased soon a new contract is to be negotiated for the next three years. What made BTH decide to select LUVIT was that they thought the company was listening to their needs. This is still the most important criteria for a renewal of the contract, Blasche remarks.

As usually is the case with such systems there are both satisfied and dissatisfied users, often depending on whether or not they have used another platform before and have gotten used to that one. This makes the new platform more difficult in their eyes. The development of platforms have moved so quickly the last couple of years that there are many suppliers of the same services today, Blasche says. What could have been done better is that the institution should have decided upon which platform should have been the official one. This could have led to a quicker integration of use of the platform at the whole university, Blasche thinks: "If we have had a bigger common discussion first we would have come even further than we are today".

Another software which has been highly successful so far is Marratech. The product sold to educational institutions is called the Marratech Manager. Sales of this product the last 3-4 years has increased by 320%, says Conny Ericsson, Marratech Sales Manager. Of this 65% is sold outside of Sweden. Their biggest educational customers are Högskolan i Dalarna, Luleå Tekniska Universitet, KTH, NTNU, Monash University, Kansas Board of Regents, and Frankische Akademie. Largest non-academic customers are FMV, OMX, Maanmittauslaitos, and VGR. Their biggest competitors are Sametime, Breeze, Arel, Microsoft, and H.323. Their strongest advantage, according to Conny Ericsson, is that the company offer "Real Time Collaboration where all participants can do the same thing at the same time". You can also activate a Moderator tool if you want to limit the access for some participants. The software is easy to use and deploy.

Their biggest challenge for the future is Integration with other video/audio solutions, making it easier for users to buy and find other users. They also want to make Improvements on how to collaborate in the Whiteboard.

The move to video recordings and more interactive systems

Much of the goal with IT solutions for distance education both from user and a producer view is to create a full and realistic classroom environment. This puts ever greater expectation on interactivity. It is thought that if distance learning platform become too static, then students are not learning as much as they could have in a non-distance program. Another way to define this pedagogic challenge is how to simulate the quality contact between teacher and student with the use of software and IT technology.

There are indications that students sometimes will prefer the IT solution to the personal contact. Research has confirmed that college students prefer using electronic means to seek help from instructors if they can choose¹. The same study found that seeking help from instructors via electronic means, particularly e-mail, was

¹ See Kitsantas, Anastasia Chow, Anthony (2007).

more effective than seeking help in person or by telephone². Early research has also confirmed that students prefer to use e-mail because it allows them to engage in a private dialog, and gives them ample time to construct a question³. Students want help in real time. For this need e-mail may even be a bit slow, and IP Phone solutions may be preferred, e.g. SKYPE. The problem with these IP Phone solutions is that the teacher risks having to repeat the same answers to different students. To avoid repetition of messages Billboard solutions are often preferred instead. Here the students can also ask each other, and everyone can see the answers. It serves the same function as a Frequently Asked Questions (FAQ) Site on the internet. Activity can be encouraged in class by making postings mandatory, and or by including an assessment of their quality as part of the participating grade. The teacher can choose whether or not to take active part in these discussions.

Previous research has shown that students will not feel as dumb if they can ask each other questions instead of having to ask officials⁴. This seems to suggest the need for student privacy in between them selves. The study of Kitsantas and Chow showed that students in distributed and Webbased Distance learning courses would report feeling less threatened to seek help than students in more traditional learning environments⁵.

On the teachers' side there has been some hesitation as to the use of video recordings. There are several and different reasons for this. E.g. there are discussions as to the pedagogical purpose and results of this form of teaching and the idea to be filmed and distributed on the internet. There are also copyright questions connected to this. Many teachers will feel the same way for recorded lectures as they do for written material; that it should be protected and preferably sold.

To help with in this situation there has been a recent shift from video recordings to streaming, e.g. with the use of pod casting. In streaming the students can not save the file, but only view it from a specific location on the internet which is controlled by the administrator. For a solution like MARRATECH steaming has caused much problem as there is no such function on this software. A way to go around this problem has been to record what is being played up on the screen using yet another software, e.g. Camtasia Studio. Others find this solution to be very complicated, having to start and run two different software at the same time. This discovery has instead pushed forward the demand for more integrated solutions.

Conclusion

Some of the major challenge as is concerned software is the speed with which new technology is developed. It is improbable that there will ever be one lasting solution for all needs in distance education. Instead the teaching Institution has to set its own realistic goals for the use of new technology in distance education. Factors to consider are:

- What is the state of the Art; and what are other institutions using?
- What resource allocations are needed to introduce the new technology, including teachers' training?
- For how long can we expect to profit from this change in technology?
- How do we implement the new system most efficiently? (E.g. implementation over summer, running parallel systems for a while in case of break down)

The risk so far has been that the ambition level has been set too low and that the solutions selected has not led to the interactivity requested by students. Demands by students are going to be a result of the experience they gather with the use of other software solution outside of the university. They are going to know pretty well what is the State of the Art. This experiencing is going to define their expectations and need.

One of the parameters which are to decide new technological platforms to implement should be based on higher interactivity. The experience with too low interactivity at MAM seems to suggest at higher

² Idem

³ See Keefer, J. A., & Karabenick, S. A. (1998).

⁴ See Ryan, A. M., & Pintrich, P. R. (1997).

⁵ See Kitsantas, Anastasia Chow, Anthony (2007).

drop-out rate. This is particularly a problem for universities and educations which charge a lower or no student fees and tuition (low exit barrier).

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