

HELSINKI SCHOOL OF ECONOMICS (HSE)  
Mikkeli Business Campus  
Bachelor of Science in Business Administration



## RESEARCH ON THE POSSIBILITY OF USING WEBCASTING TO ENHANCE UNIVERSITY LEVEL EDUCATION

Case study: Mikkeli Business Campus

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International Business  
Bachelor's thesis  
Supervisor: David Atkinson

Date of approval: 24.5.2004

HELSINKI SCHOOL OF ECONOMICS  
Mikkeli Business Campus

ABSTRACT OF  
BACHELOR'S THESIS

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**Title of thesis: Research on the Possibilities of Using Webcasting to Enhance University Level Education. Case Study: Mikkeli Business Campus**

Date: **24 May, 2004**

**Degree:** Bachelor of Science degree program in Business Administration

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### **Objectives**

The objective of this study is to analyze the possibilities of using webcasting as an educational tool in the Mikkeli Business Campus.

### **Summary**

An extensive literature review examines the current and future trends in education. Distance education and the use of synchronous educational tools were identified as the most important areas of current development in the educational field. Due to the fast pace of development in the field, only the most recent literature was used. This is also why some issues presented in this research might already be obsolete in a few years. The Mikkeli Campus was chosen as a case organization to test the findings that were made in the literature review. An empirical study in the Mikkeli Campus examines the attitudes of students and professors towards distance learning and webcasting. A total of 64 replies were received from about 165 people who got the questionnaire. Of the replies 47 were from students and 17 from professors.

### **Conclusions**

The results coincide with those trends found in the literature review. The empirical study indicates a positive attitude of students and professors towards the possible use of webcasting at the Mikkeli Campus. From the total replies that were received, a staggering 95% evaluated webcasting having *some possibilities*, *good possibilities* or *definitely worthwhile* chances of being used as an educational tool in Mikkeli. Only three people regarded the possibilities as very small or non-existent. The results from the empirical study as well as the literature review support the use of webcasting to enhance education in Mikkeli.

**Keywords:** Distance learning, webcasting, e-learning, online learning, virtual classroom, distance education, web based learning, learning portal

**Language:** English

**Grade:**

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Bachelor's Thesis

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# 1 INTRODUCTION

## 1.1 Background

*Education in the 21st century promises to be very different from anything that has gone before it. The future classroom will have the technology to accommodate a combination of both in-class and distance learning audiences. (AlHashim et. al 2003.)*

Distance learning is one of the fastest growing sectors of education that has been getting a lot of attention over the last years. Several University projects, including the Finnish Net University, have been a recent topic in education. Distance learning is simply the process of teaching and learning without a personal contact between the instructor and the student. The history of distance learning goes back over a hundred years. The long history of distance learning has been accompanied by numerous changes; the changes have been very radical after recent developments in information technology. The latest developments that have taken place in the field have been so significant, that they can be called, without hesitation, an educational revolution (Lockwood & Gooley 2001, 1). The sheer number of books, articles and journals that have been written about the subject goes to exemplify this. Computers, networks and high-speed Internet connections have made the revolution of distance learning possible, which started as basic correspondence courses in the 19<sup>th</sup> century. Online learning, web-based learning, virtual learning and e-learning are just a few of the new buzzwords that are being used when referring to today's distance learning. New methods and techniques are being developed all the time, but while the Internet has proved to be an effective medium for the dissemination of flexible learning materials, it has so far lacked the capacity to support the complex human interactions and richness of the classroom experience (Lockwood & Gooley 2001, 76). One of the new technologies that claim to provide a solution to this problem is *webcasting* (see section 2.1 for definition). This research uses the Mikkeli Business Campus as a case to evaluate whether webcasting could be used in making normal classroom education better for both students and professors.

According to the Finnish Ministry of Education, building and sustaining an information society is one of Finland's main tasks in the 21-century. This is underlined in the National strategy for education, training and research for 2000–2004. The guidelines drawn in the strategy state that the best way to increase knowledge in Finland is by using computer and information technology in education and research. According to the Ministry of Education this means that technology should not just be implemented to conventional teaching methods, but a totally new educational culture should be created. The strategy points the development of new teaching and learning methods as an important part in the development of this new culture. According to the strategy, the environment for developing new teaching and learning methods is suitable for new technological innovations such as webcasting.

Experts in the field predict that the future of distance learning is going to be computer and Internet based. There are numerous web based educational platforms that claim to offer the best value for educational institutions (see Piskurich 2003; Lockwood & Gooley 2001; Jolliffe et. al 2001.) In this new situation it is important to bear in mind that it is the students who ultimately evaluate how well each type of education suits their learning style. Students are the ones who are on the receiving end of the education and they are the ones who can analyse the suitability of these tools and their efficiency to make good on their promises. Professors and teachers are also important in giving their assessment on how the educational goals are being met. They can compare how classes that have received different type of education succeed academically compared to each other.

## **1.2 Purpose and Extent of this Research**

The purpose of this research is to examine the possibilities of webcasting in enhancing education through distance learning at university level and whether or not it is possible to reproduce the same learning experience as in normal classroom education. Webcasting has not yet been used in the

Finnish educational system. In order to determine the possibilities that webcasting technology has to offer in a university setting, a case organisation is selected. In this research, the Mikkeli Business Campus of The Helsinki School of Economics is used as a case organisation and the research limits itself to analyse only this situation. Experiences from other educational organisations are used as sources of information to illustrate the way webcasting and distance learning have worked. The educational situation of the Mikkeli Business Campus is discussed in detail and an alternative way of conducting teaching through the use of new computer technology is sought.

There are two main questions this research seeks answers to. The first one refers to whether it is worthwhile for educational institutions to invest in webcasting. To support the claims made in this research, benefits of webcasting compared to conventional educational methods are discussed. The second question deals with the opinion of potential users about the webcasting concept, as they are the ones who ultimately evaluate how suitable it is for the purpose of enhancing education in the Mikkeli Business Campus. This research does not imply that webcasting should be used to replace conventional classroom education, but rather it should act as a tool alongside it. The information acquired is used for analysing the possibilities of using webcasting in university level education. Still, because of some very specific characteristics of the Mikkeli Business Campus, which are discussed in section 3.1, it has not been attempted to extend the conclusions of this study directly to other educational institutions, even though generalizations could be made in many cases. This means that the necessities of each case must be analysed case by case and the webcasting configuration to be used in each case must be tailored according to the needs and characteristics of each individual educational institution. This has to be taken into account when the results of this research are applied into other situations.

The field of distance learning is full of terms and concepts that need to be clarified in order to limit to the scope of this research. In general, distance learning can be divided into two categories called Synchronous and Asynchronous learning. Synchronous learning refers to learning that happens in real-time, is led by an instructor and in which all the participants are logged on at the same time. Asynchronous learning on the other hand is more or less self-paced and participants

can access information at different times. (Israelite & Dunn 2003, 255-268.) This research concentrates only on Synchronous learning, as it is closer to a face-to-face educational situation.

As distance learning has started to move into and to take advantage of information technology, new innovations such as learning portals have become more and more popular. A web portal is a site on the Internet that provides a comprehensive entry point for a huge array of resources and services. Portals typically contain news, free e-mail services, search engines, online shopping, chat rooms, discussion boards and links to other sites. A learning portal is a site that offers learners or organizations access to learning and training resources. Operators of learning portals are often called providers, aggregators, or hosts. (Piskurich 2003, 8.)

One derivative of distance learning is blended learning. It is a combination of e-learning with face-to-face instructions, and other normal classroom educational techniques. Blended learning can include reading assignments, special projects, writing and other such activities that take distance learning a step further than merely using a learning portal. The difference between the two is that learning portals usually provide all the material needed to complete the course with interaction between students and the lecturer being limited to e-mail or discussion forums. Blended learning includes face-to-face discussions and a need for more material than that which is provided online. (Piskurich 2003, 8)

### **1.3 Empirical Data**

Theory cannot surpass the importance of empirical data, especially in a research such as this one. When evaluating their effectiveness, both distance learning and conventional classroom education are subject to personal opinions that determine how well they suit different people. It is invaluable to notice that everyone does not feel comfortable using computers to reproduce the classroom experience. In order to evaluate the possibilities of using new computer technology to produce a virtual classroom it is important to conduct a thorough research of how the end users view its

potential. In this research, the Mikkeli Business Campus of the Helsinki School of Economics is the organisation that is used to collect this information from. Both professors and students were asked to answer a questionnaire (see Appendix A) and send it back by e-mail.

#### **1.4 Structure of this Research**

The attractiveness of webcasting is evaluated in a university setting. This research is structured in such a way that the reader can follow and understand the terms used as easily as possible. Today's distance learning is so full of different techniques and teaching tools that it seems that even the professionals have difficulties with all the terminology and definitions that are around. The main Synchronous teaching tools are discussed in order to give an overview on how distance learning has evolved in the last few years. The research goes on to describe the Mikkeli Business Campus and identifies what flaws exist in the current teaching situation that can be improved by using new teaching tools. The works of Nevgi & Tirri (2003), Blake et. al. (2003), Lockwood & Gooley (2001) and the works in the volume edited by Piskurich (2003), form the backbone of this research. The information given in their works is the newest and most up to date that is available on the subject of distance learning and webcasting. This research also relies on the technical and marketing information provided by GoodMood, a Finnish webcasting service provider. GoodMood offered their assistance in establishing a framework for this research as well as arranging the layout for the empirical part. The last part of this research is reserved for discussion about the possibilities of webcasting and distance learning in other universities and for appendixes.

## **2 DISTANCE LEARNING THROUGH THE WEB**

### **2.1 Defining Distance Learning and Webcasting**

Technically, distance learning is any educational program in which the predominant communication mode between teacher and student is not conducted face-to-face. This definition is gradually changing as advances in technology have greatly expanded what is possible, not to mention what is increasingly expected. Modern distance learning initiatives are starting to offer sophisticated interactive multimedia content, supported by electronically empowered processes such as chat rooms and online collaborative workgroups.

Looking historically at how distance learning has evolved, there are three distinct phases into which it can be divided. According to scholars, the first phase which goes back to the beginning of the last century, was correspondence courses, where educational materials and student teacher interaction was conducted through mail. Because of the structure of correspondence courses, student teacher interaction was very slow and inflexible. Even after telephone consultations were added to the courses, interaction was still quite limited. The next phase in the development of distance learning started when technology advanced enough to allow television and radio to be included in education. Video and audio recordings allowed students to see and hear lectures, without having to be present in the classroom. The drawback of this form of education is that communication is still only one way. Students could not interact with the teacher, which limited the possibilities of this technology. The development of sophisticated computer and Internet technologies has allowed a complex form of interaction between teachers and students that has led to other forms of distance learning becoming obsolete. A totally new way of producing and distributing pictures, video clips, sound, and graphics have made learning and teaching interactive. (Nevgi & Tirri 2003, 13-15.)

Live collaborative learning is one of the most prominent areas of growth in the distance learning industry. Collaborative learning is a form of education where both the students and professors are

working at their own desktops. At a designated time the lecture starts. The teacher can change and edit the material that is shown, control visuals and texts. Video and audio recordings are used to make the presentation livelier (Masie 2003, 414). Webcasting can be used to create a collaborative learning environment, as it provides the means to set up virtual classrooms using desktop computers to bring people from different locations together, enabling them to participate in the same lecture.

## **2.2 From Online Learning to Webcasting**

Development of new synchronous distance learning tools has been one of the most important developments in Internet based learning. Virtual classrooms and other new techniques are allowing professors and participants to come together in a dynamic and live environment where interactive education can take place. One of the new buzzwords in Internet technology that is used to explain the updated and upgraded delivery of content is rich media.

*Rich media is a complex combination of high quality video and audio clips as well as animations and graphics. Webcasting is a medium for accessing and distributing rich media across the Internet. In basic terms webcasting is the use of sound and moving images through a network system i.e. via the Internet. Through the use of effective new compression algorithms, the quality and accessibility of video feeds has improved remarkably (Fink 2003, 192).*

Another factor helping the implementation of new synchronous communication tools has been due to the huge increase in computer and Internet connection speeds. Webcasting is also less expensive than traditional teleconferencing (Dvorak 2001). Because of this advantage, webcasting is becoming popular among different types of organisations (Meckbach 1999). Adding additional features such as slideshows, discussions and feedback options can enhance the total webcasting experience. End-users only need a PC with a web browser and a network

connection. The software does not require any installation or configuration to the computer. The basic idea behind webcasting is to allow people to be in live contact with each other using the Internet and taking advantage of technology to bring people across the globe together. People that are scattered in different locations can actually interact in real time through the use of a webcasting platform. It is important not to confuse webcasting with teleconferencing or other technologies. Teleconferencing is already an old technology and also harder to operate than webcasting. Easy operation makes webcasting a more powerful tool than teleconferencing (Harri Lehti 2004). It can also enable a broader variety of courses to be offered, since many institutions can co-operate by sharing courses, and help finance the development of course material and other products.

Webcasting is usually conducted as a live presentation. The audience, which may be located on the other side of the world, may participate in the presentation. People participating in a live webcasting are able to submit online questions, add commentaries to the presentation or discussion, or participate in other forms. Webcasting doesn't have to occur live. It can also exist e.g. as archived recordings. It is also possible to store the original presentation for later use, which makes it an ideal tool for educational purposes. Students are able to access lectures and go through them as many times as needed. Webcasting has not been used for teaching purposes in Finland, but it has been tested in some universities abroad. According to a research concentrating on evaluating the effectiveness of webcasting in the Berkley University in California (Lawrence et. al 2001), the primary use of webcasting is to study for examinations. Students report that they watch webcasting lectures because they did not understand material presented in lectures, because they wanted to review what the instructor said about selected topics, because they missed a lecture, and/or because they had difficulties understanding the speaker. In 2002 the Berkley University offered 14 courses that were conducted through webcasting and had over 4000 students enrolled in them. During one semester, these courses were played back over 15 000 times per month. An overwhelming majority of the students that were interviewed felt that lecture webcasting improved their learning experience (90%). Post-survey results indicated that students watched lectures through webcasting because it was convenient both as a replacement for missed lectures (51%) and as a study tool (47%).

One of the most useful ways in which webcasting can be used in education is the virtual classroom format. The virtual classroom is a synchronous format of live presentations that allows students to follow lectures through computers. In the presentation the screen is usually split into at least four separate components depending on the needs of the instructors and students. One quarter of the screen can be reserved for live instruction, and another one for graphics such as PowerPoint slides. The two remaining quarters can include live or chat interaction between instructor and student and a notebook for taking notes. The virtual classroom is the most versatile form of webcasting. Fink believes that because webcasting and the virtual classroom are able to produce such a high-quality learning environment, they have become an attractive alternative for normal education. With virtual classrooms, organisations can bring together large groups of people to interact and learn in a highly collaborative e-learning environment while dramatically reducing travel, facilities, and telecommunications costs. (Fink 2003, 191-208.)

### **2.3 Internet and Computer use in Finland**

Webcasting, as well as other computer based learning tools, requires a basic knowledge of computers in order for people to be able to use them. According to a research that analysed distance learning (Boldic 2003) Finland is one of the leading countries in computer and Internet use. In the spring of 2002, 75 per cent of all Finns were able to use a computer, whether at home, work, school, or somewhere else. This frequency decreases with age, though. Most people under the age of 20 had access to a computer and only a small fraction had no access. The research also found that women have more frequent access to a computer at work than men. More than half of the Finns (52%) are considered frequent users of the Internet, which means that they use the Internet at least once a week. Using the Internet is more common to young people than to elderly people. Education correlates with the use of the Internet as well: the more highly educated are using the Internet more frequently. Students are the leading group in the use of the Internet in Finland.

In 1999 the Finnish Ministry of Education published the National Strategy for Education, Training, and Research in the Information Society for 2000-2004. One of the goals laid out was the founding of a Finnish Virtual University. The plan concluded that it was time to join together several virtual study projects that individual universities were working on as well as research networks to provide people with more flexible studying opportunities and to strengthen networking in research. The Finnish Virtual University is actually a co-operation of several universities, business enterprises and research institutes. Students can take courses relating to their degree programs in the virtual university while enrolled in a real university. At the moment, everyone who is studying at university level can take advantage of the Finnish Virtual University, which makes the number of potential students over 150 thousand. The Finnish Ministry of Education, which funded the project with about 8.4 million euros a year for the years 2000-2003, is keen to sponsor the virtual university. The virtual university also receives funds from the European Social Fund which provides 1,5 million euros for the project for the years 2001-2004. The main campus of the Helsinki School of Economics is developing its own Helsinki Business Campus project to support online education. (Boldic 2003)

### **3 CASE MIKKELI**

#### **3.1 Defining the Case Situation**

In order to analyse the potential of webcasting in university level education and to concentrate the scope of the research, a university had to be selected and to be taken as a case for detailed study and collecting of primary data. The Mikkeli Business Campus of The Helsinki School of Economics was chosen because of its relatively small size and ideal structure.

The Mikkeli Business Campus operates as a separate unit of the main university. The campus started operating in 1989. Back then the campus offered only a BBA program, and this academic curriculum was completely separate from that of the main school. The program was not a Finnish university degree, but an international degree and all students majored in international business. In 2001 the campus was incorporated to the main school, and the program was changed into a BScBA program, which is a lower Finnish university degree. The first BScBA class is graduating from Mikkeli in 2004.

The Mikkeli Business Campus is a unique university campus by Finnish standards. Unlike most universities, Mikkeli offers a program that runs all year round and students only have a total of four weeks of vacations during the entire year. Studying takes place in intensive three-week modules during which students are supposed to concentrate thoroughly on one subject. Class sizes are relatively small, usually only around thirty or forty students. Because of the specially organized academic calendar, studying in Mikkeli is labor intensive.

Universities in Finland usually have a considerably large permanent staff working during the academic year. In Mikkeli there is only a small permanent staff, and almost all of the professors and other lecturers are brought to Mikkeli from around the world. There are 16 three-week modules in a calendar year. There are usually 4 to 6 different courses offered in one module. This means that the Mikkeli Business Campus has to get about 65 professors to teach each year as

some teach more than one course a year. Most of the professors come from abroad, with the majority of them coming from the USA. They have to be flown in, given suitable accommodation, and of course be paid for their academic work.

This brings us near to the central point of this research. Because of the special nature of the academic curriculum in question and the fact that professors have to be flown in from distant locations, other ways of organizing the tuition in Mikkeli are sought in this study. New computer technology, such as webcasting, claim to provide organizations such as the Mikkeli Business Campus an effective way to deliver education comparable to traditional face-to-face teaching in classroom.

## **3.2 Identifying Different Alternatives**

Because of the nature of this research, it only analyses synchronous computer-based educational tools. The focus is on evaluating whether webcasting, a synchronous educational tool, offers something that is different from other similar technologies. In order to shed light on the question of which technique is optimal for the case organization, several leading synchronous computer-based communication tools are discussed. The goal is to find out which of the alternatives for conducting education is best suited for the Mikkeli Campus. The most important alternatives are discussed in the section below. Continuing running the campus as before is the first alternative that is presented, which is followed by an introduction on computer-based synchronous tools.

### **3.2.1 Continuing as Before**

One of the alternatives to choose as a strategy for teaching is to continue operating as before. This means that there would be no changes in the way courses are conducted. The Mikkeli Campus has worked for over ten years and people who have graduated have been satisfied with the program. Even assuming the high costs derived from operating the teaching with visiting

professors, the system has been able to function properly. One of the advantages of the Mikkeli curriculum is that students have a good opportunity to establish good relationships with professors around the world. It is not sure how conducting courses through webcasting could influence this. In other words, there is a chance that using webcasting could damage the way students and professors form good relationships. Using computer based distance learning might encourage forming only superficial relationships between people because of the lack of real face-to-face interaction even though tools such as webcasting have been credited for being interactive with live video feed and communication. The ways in which learning is affected by synchronous distance learning tools have been researched, but the way these tools affect the formation of social relationships has not been researched as extensively.

Another very important fact that has to be taken into consideration is that even with the most sophisticated instruments and computer software, something can always go wrong. With an intensive course structure that works in intensive three-week modules, there is no room for mistakes. In normal classroom education if something does not work properly, the professors have a chance of replacing it or improvising in other ways to deliver the education. For example a professor might use PowerPoint slides as a visual aid in his or her lecture. If the computer that was to be used to deliver the slides cannot be used there is no real problem because the computer slides can be replaced with overhead slides or paper handouts. If the entire lecture is supposed to be conducted using computers, there is no way to work around computer problems. Another thing is that students and professors know how classroom education works and feel safe with the familiar setting (Kalliala 2002). The risks of using computer aided distance learning are real. Continuing to operate in the same ways as before, Mikkeli will protect itself from the potential risks of synchronous distance learning, but it will also limit the possibilities that it has to offer.

### **3.2.2 Videoconferencing and Teleconferencing**

Videoconferencing can be used as a synchronous educational tool in distance learning and is one of the alternatives the Mikkeli Campus could use. Videoconferencing uses either the Internet or telephone lines to connect different locations together. The difference between videoconferencing and webcasting can best be understood by thinking of videoconferencing as being a one-to-one type of solution. Each participant in a videoconferencing session has to form a simultaneous connection with all the other participants, while in webcasting participants are not dependent on the other participants, but can access the session through a server. Teleconferencing works much in the same way as videoconferencing. Webcasting is a one-to-many way of distributing information. Information that is sent in a webcasting event is streamed through a network server from where the audience is able to access it, without having to connect each participant individually. (Harri Lehti 2004.) This is actually one of the biggest drawbacks of videoconferencing as well as teleconferencing as all participants must individually make contact with each other. This may be very hard and may not even work. Because of the hardships in getting the conference to work, it is being replaced by new techniques such as webcasting, where people don't have to individually contact each participant, but everything is done through a central Internet platform that connects everyone automatically together. Videoconferencing through telephone lines was possible already in the beginning of the 1990's, but through technical advances made in the late 1990's it became common to conduct it using the Internet. Videoconferencing is best suited when there is a relatively small audience of 8-10 participants (Harri Lehti 2004). Most Finnish universities own videoconferencing equipment, but because it is relatively hard and complicated to use, it has never received great popularity. This is one of the biggest problems with distance learning material. Expensive equipment is often bought but hardly ever used (Kalliala 2002, 96). Until recently, videoconferencing was an expensive luxury. Over the past few years, however, three significant developments have taken place. Firstly, developments in videoconferencing software have led to a far greater range of low cost products. Secondly, hardware costs have fallen, and finally, international standards have been agreed on which ensure that standard compliant systems can communicate. That combination of events has opened the potential of videoconferencing to a far wider range of users.

### 3.2.3 Web Conferencing and Webcasting

Because of the confusion that has risen from the numerous terms relating to computer technologies, webcasting is often used to mean web conferencing, another alternative for conducting distance learning. Webcasting in its simplest form is the broadcasting of live or pre-recorded programs sent from one location to many viewers in very much the same way as a TV broadcast. Web conferencing on the other hand is closer to a face-to-face meeting in which the audience members can interact with each other and the presenter. The latest development in webcasting has been to add the interaction dimensions of web conferencing in order to develop a product that is better than videoconferencing. In fact, with the latest enhancements, webcasting is looking more and more like web conferencing, which is the reason for the mix-up in the definitions. In a broader sense, webcasting has been able to acquire the best parts of web conferencing, and made it a standard feature for itself.

The key benefit of webcasting should be that it allows a new dimension of interactivity between people, but in the way most webcastings are conducted, there is not much of that. It is not uncommon that the webcasting event is not much more than a live video feed with Power Point slides running on the side. Adding small features such as a chat room or an attached discussion board alone are not enough to make the experience much better. The way to make a good webcasting event is by allowing interaction to take place. All the features that are available should also be used, having them lying around doesn't guarantee a good result. If a questions and answers section is included in the webcasting, people expect that each question will be answered. If they are not, users are easily dissatisfied. (Heller Report 2002, 1.) Some companies such as GoodMood have been able to overcome the problems webcasting has traditionally had. The product that GoodMood has developed is called WIP, which stands for Webcasting Information Platform. It is the only software at the moment that combines webcasting, web conferencing and videoconferencing together in one package. They have developed a system in which interaction between people is conducted through the use of microphones and ear sets. This allows freedom of choice for users as well as possibilities of combining different technologies together. WIP can be used for webcasting lectures to hundreds of students or as a one-to-one videoconferencing.

(GoodMood 2004.) Responding to questions can be done individually or to the whole class, depending on the importance of the question. It is also possible to ask for clarification on subjects that have been left unclear, which can be answered after class as a private conversation.

The effectiveness of webcasting can be observed through its use in organisation training. Alexander (2002) observed that traditional asynchronous courses that have been set up on networks for in-house education in two organisations, Avanade and FileNET, failed to make people read the information presented online. His findings suggest that people are tempted to not read information that is provided on the net, as they tend to see it as boring and time consuming. The problem is in giving too much freedom to people to organize their own learning schedules. Experiments with webcasting have led to different conclusions. Alexander's findings in the two organisations imply that using webcasting is different from just throwing something up on the Web for people to read when they have time. Webcasting courses are events that cannot be put off, and the amount of people watching can be monitored. It is possible to trace who has not seen the presentation, which has resulted in more people paying attention, and consuming the information.

### **3.3 Choosing The Best Alternative**

The decision of which medium of teaching would best suit the Mikkeli Campus is not a straightforward question. Webcasting is the technology of the moment and it has received a lot of praise during the last few years. According to the claims of numerous people, it is the best medium to organise synchronous distance learning at the moment (see Lawrence et. al 2001). Classroom education still remains the most widely used form of education, but at the same time new technologies to enhance and provide more cost effective ways to deliver education are being sought. At the moment it seems that the best way to organise education, if an educational institution finds distance learning a viable alternative, is a combination of both webcasting lectures and normal classroom education. The following section of this research deals more thoroughly with what distance learning has to offer.



## **4 AVAILABLE TECHNIQUES IN EDUCATION**

### **4.1 Distance Learning Compared to Classroom Education**

One of the big questions relating to distance learning is how effective it is in comparison with normal education. In the case of the Mikkeli Campus it's extremely important to evaluate how well webcasting could be used to replicate the classroom experience on a desktop computer. Tom Russell (1999) has made one of the most interesting researches on the effectiveness of distance learning. In his research he studied 355 different cases and analysed the correlation between good education and the medium through which the course was offered. His research concluded that there was no correlation between the two, but that there were signs that interactive knowledge and information technology were often associated with better quality courses. It is important to bear in mind that in Russell's research, only 40 of the 355 studies specifically included computer-based instruction. Further studies conducted by The University of Tennessee's Physician Executive MBA program studied students who took coursework online and those who participated in normal classroom education. The results supported the findings of Russell's research and found no significant difference between the academic successes of the two groups. (Blake et. al 2003.) Everyone does not agree with Russell's findings, but his work is still considered as one of the groundbreaking researches in the field. The truth in the debate on which medium is best for the delivery of courses lies deeper than in a simple choice. It is important to recognise that there are good and bad courses independent of how they are delivered: there are bad classroom courses and for certain bad online courses. The question is how to make more good courses.

The distance learning landscape has changed a lot since Russell's research as it was completed prior to the blossoming of courses using the Web. Today, computer based distance learning is becoming even more popular and improving at the same time. Gill Plimmer argues that online learning is no longer second best compared to classroom education. He argues that a couple of years ago, it was still important to study in the classroom in order to get a degree worth having and

that courses conducted through distance learning were considered second rate at best. According to Plimmer distance learning at the moment can no longer be considered second rate as knowledge about effective learning has become more available and it has had direct effects on online education. (Plimmer 2004.)

## **4.2 How Physical Presence Affects Learning**

The biggest challenge that distance learning faces is the problem that arises from limitations of physical contact that students and professors have in this type of education. Teaching has been conducted throughout history between students and professors who have met face-to-face at the same time. This has led to the formation of strong beliefs and assumptions on what is considered proper and effective education. Because of this kind of prejudices, distance learning has always been seen as inferior to face-to-face education. The lack of physical presence is considered the biggest problem with distance education. (Nevgi & Tirri 2003, 14,21.) People fear that distance learning will diminish the positive attributes of the classroom such as informal meetings with professors, socializing with peers and the general soaking up of the academic culture. Others even fear credits given for Web courses could dilute the highly cultivated brand names of prestigious universities. (Forelle 2003.) Marcel Cohen, a director of distance learning at Imperial College, points out that the reason why distance learning has been seen as second rate compared to normal education has been that only second-rate universities have offered it. He believes that as soon as top universities start offering distance learning courses with the same stringent requirements as in classroom education, the level of distance learning will rise. (Plimmer 2004.) The change seems to have arrived, since many of the most prestigious universities in the US as well as in Europe are beginning to offer degrees online or incorporate them into their curriculum. These universities include Harvard University, Brown University, MIT, Cambridge and Stanford University that offer a Master of Science degree in engineering online (Forelle 2003).

Physical presence has been a key ingredient of classroom education and that is why some professionals such as Brooks strongly believe that all impersonal Internet courses with no face-to-face exchange are unlikely to succeed (Brooks 1997, 37). Technological advances as well as increasing demands of good education have forced educational institutions to invest in tools that are able to overcome the limitation of physical presence in distance learning. Technologies like webcasting have been specifically developed to overcome this kind of limitations.

It is good to recognise that it is not enough that the students are able to see a video-feed of the professor. David Lustig (2003) is right on the mark in saying that if you have computer based distance learning, it has to be interactive or many of the students will just be sleeping with their eyes open. It is not enough to get people to stare at a computer screen for 45 minutes in a row, if they are not learning anything. One of the advantages that web-based distance learning is credited for is that it allows students to independently select the material they find useful without any contextual constraints (Kaynama & Keesling 2004).

There has been a clear shift in attitudes over the last ten years. Tootoonchi et. al (2002) refers to an earlier study conducted by Hennessey and MacDonald in 1993 that studied what MBA students found as the most important factors affecting good teaching. In this study students rated the usage of audiovisual aids in education as the second least important factor. Today, the use of audiovisuals in education is more a requirement than anything else. For example, all courses taught in the Mikkeli Campus take advantage of audiovisual aids. Webcasting and online presentations allow you to assemble large audiences on the Web without sacrificing the important benefits of real-time, face-to-face interaction, communication and learning. Webcasting can be used in various online learning initiatives such as product launches and demonstrations, large and remote lectures, and executive broadcasts (Singh 2003, 119). In the future, as video and audio feeds will be streamed over large and effective networks, students can benefit from being in a single virtual classroom although they may be dispersed geographically in different places. The principal of the Imperial College, Mr. David Bregg sees as one of the key benefits of modern distance learning for students the fact that they can see and follow the lectures as many times as needed, even at their own bedrooms (Plimmer 2004).

### **4.3 Personal Skills Affecting Education**

Good quality and high technical reliability are vital features of computer-based distance learning, but they are not enough to provide a reasonable or best work environment. In computer based distance learning as well as in normal classroom education, lack of student interest and bad learning capabilities as well as poor planning of the course can become barriers for education. Barriers for education can occur because of the student as well as because of the structure of the educational curriculum. (Nevgi & Tirri 2003, 38.)

More important than the medium of the education is the attitude of the teacher towards the subject matter. Liz Pape credits the success of the Maynard virtual high school to the competent teachers who she believes are the key to their success (Malone 2004). An important characteristic of an effective teacher is enthusiasm. Good teachers care about and take an interest in what they teach and transfer the same positive feeling to their students. On the other hand, bored and uninterested teachers convey their boredom to their students. Students fail to be inspired if the teacher who knows more about the subject than they do does not find it engaging. This is a serious problem when developing distance-learning courses. (Tootoonchi et. al 2002.) In order for them to be successful, it is important that the professors are dedicated enough to conduct the course through webcasting. Professors, who view distance learning and webcasting as a poor alternative will not be able to conduct courses in a way that students would benefit from the education. Negative feelings towards webcasting would transmit through the course resulting in a bad experience for all participants. Some professionals argue that regardless of what professors believe, Internet based education is going to be used in the future (Brooks 1997, 29).

Other problems with computer based distance learning are computer illiteracy and lack of communication techniques, which limit the possibilities of students to take full advantage of computer-based synchronous learning (Nevgi & Tirri 2003,38). A similar problem is also present

among the students, as some of them may still suffer from a certain amount of technophobia, finding it intimidating to work with computers. Other technical problems may include poor connections and connection outages (Blake et. al 2003.)

#### **4.4 Teacher –Student Interaction**

The major difference between computer-based distance learning and normal classroom education is that it allows students and professors to interact without the limitations of time and place. Students can follow the lectures at home and the professor can be in his own university across the world (Nevgi & Tirri 2003, 43). When students are in a personal environment, such as at their own desk at their own home, they tend to have a feeling of safety and comfort that can lead to increased participation and retention. (Blake et. al 2003.) Kevin Oakes (2002) explains why he believes synchronous distance learning has been able to grow so rapidly and what has been the reason why students are also embracing it:

*“One reason synchronous e-learning will continue to gain in popularity is because it mimics a format most of us are comfortable with - the traditional classroom or instructor-led training, which thrives on real-time interaction.”*

Others (see Kalliala 2002) believe that even though computer-based distance learning gives possibilities to a complex form of interaction between students and professors, it will still be a long time before it will provide a surrounding that is capable of producing such enthusiasm as is possible in normal classroom education. The debate over the effectiveness of new distance learning tools continues at the same time as technology is changing very rapidly. Some professionals (Brooks 1997) believe that there is still material that requires face-to-face instruction and that there are courses that should never be conducted through distance learning. However, with the new technology that has appeared in last years including webcasting, the participation of

the students in the lectures has increased in such a way that students can be very active giving feedback and asking questions from the teacher during the lecture. That situation approximates very closely to the face-to-face situation of conventional classrooms. Educational professionals such as Brooks and Kalliala also have strong opposition. Some predict traditional education, as we know it, may be disappearing (Blake et. al 2003). Blake backs himself by the words of world famed management guru, Peter Drucker, who offered this comment about online education:

*"Universities won't survive. The future is outside the traditional campus, outside the traditional classroom. Distance learning is coming on fast."*

Drucker's comments might be a little exaggerating. There are more moderate views that seem to take a more realistic approach. Gill Plimmer believes that distance learning is not a threat to normal classroom education. He believes that normal classroom education is not getting replaced, but that many universities will favour a blend of off-line and online courses, where students will also spend time on campus. (Plimmer 2004.) There is evidence that more and more universities are investing in distance learning and putting courses online. Shea and Boser (2001) report that in the past few years, 70 percent of American universities have put at least one course online, and estimates say that by 2005 that may grow to 90 percent. Even today, there are 300 colleges and universities in the States offering over 12,000 courses by mail (Pritchard-Becker 2001). There are clear signs that as universities keep on updating their computer hardware, it will become increasingly common to offer courses online. The number of courses that are still offered by mail show that there is still a need for distance learning, and that people are willing to use it to gain education. The educational and training industry is only just beginning to develop effective models for applying Internet technology to do its work (Kanahele 2003, 209). Some of the strongest pressures for changes in higher education are coming from students. A growing segment of working, self-motivated students want to acquire skills that they feel are useful and also want to be able to choose how they will learn those skills. (Aggarwal 2000, 17).

## 4.5 Economical Issues and Future Technologies

One of the problems with higher education is that it is extremely expensive and distance learning offers a reasonable solution for reducing the costs (Anderson 2004). Of the many positive features that are attributed to distance learning, cost effectiveness is probably the main reason why universities are starting to acquire distance learning tools (Blake et. al 2003). The fact that higher education is expensive has led to a considerable amount of research on different ways of lowering the costs of higher education making universities less expensive. Especially governments are investing time and money in developing IT based educational programs to tackle this problem. (Finklenstein et.al 2000, 20.) The Finnish Net University is one of the projects set up by the Ministry of Education to provide less expensive education. Universities and other educational institutions are finding that expanding their programs with Web-based training can help them to save on costs (Blake et. al 2003). Cost savings are not the only reason why computer based distance learning is becoming popular among educational institutions. The reason why computer based distance learning has been embraced by business schools has been to use it as a support tool to enhance education (Anderson 2004).

Virtual learning platforms are software applications that try to imitate real learning environments as realistically as possible. There are numerous computer distance learning platforms around: already in the year 2000 there were more than 3000 distance learning platforms available and new ones are being created all the time. This illustrates that there does not exist one platform that would be suitable for every situation, because if there was one, it would already have conquered the market. (Kalliala 2001, 108.) In addition, offering distance education allows instructors freedom to be more creative in the classroom, offers a new level of communication with students, requires the university to keep abreast of new technology, and signals to the public that the institution is forward thinking and technologically advanced (Discenza 2001, 6). The greatest contributions of Internet based technologies towards learning in the last years have been the introduction of synchronous collaboration technologies which are often described as live e-learning or virtual classrooms (Singh 2003,117). Webcasting is one of these new technologies that are making it possible for organisations to replicate effectively the classroom experience in a virtual world. In

the future as video and audio feeds will be streamed over large and effective networks, students can benefit from being in a single virtual classroom although they may be dispersed geographically in different places (AlHashim et. al 2003). It is already possible with the existing technology for professors to deliver a virtual classroom session on only a moment's notice, with minimal preparation (Oakes 2002).



## **5 COLLECTING EMPIRICAL DATA**

### **5.1 Nature of Information Needed**

The goal of the empirical research that was carried out in the Mikkeli Business campus was to find out the reactions and opinions of the students and professors over the possibility of using webcasting as an educational tool. A significant number of people are not acquainted with the term webcasting and easily confuse it with videoconferencing and teleconferencing. It is not only the confusion with the term webcasting that is a problem, but also that people don't really know what it can offer. Because of this it was important to show the people who were going to evaluate its possibilities what exactly webcasting can do. The problem was that it would have been impossible to conduct an experimental webcasting course as the curriculum for the whole year 2004 was already scheduled. In order to show the possibilities of webcasting it was decided with Mr. Harri Lehti, vice president of GoodMood, to pursue another way to conduct the presentation of the product. GoodMood is a Helsinki based company that operates in providing webcasting services to organizations. The company was interested in the research that was going to be performed in the Mikkeli Campus, and offered to help with the preparations of the research. It was decided that it would be essential for people to experience a webcasting presentation for them to gain sufficient knowledge about the potential it can offer. It was decided to solve the problem by producing a recorded webcasting event, which could be accessed by every one in the Mikkeli Campus. The presentation was recorded in Helsinki and put on GoodMood's server for one month before being taken down. The main tool for gaining information was a questionnaire for students and professors that was attached to the presentation. The questionnaire was intended to give people a chance to evaluate and give their views on the possibilities of using webcasting in Mikkeli.

### **5.2 Infrastructure Available at The Mikkeli Business Campus**

Building an effective environment for the Mikkeli Campus in order to produce courses through webcasting requires a strong infrastructure with enough computers for at least one whole class full of students. The required hardware should be of high quality so that no problems would arise with delivering the courses as well as proper network connections. At the moment there are two classrooms with computers in the Campus. The first one is a proper computer classroom with brand new machines that were installed right at the beginning of the year 2004. The problem with this classroom is that there are not enough new computers for all students. The other computer classroom is actually a normal classroom with a standard classroom layout with a professor's desk facing the classroom. There are computers installed into the desks in front of each student. The problem here is that the computers are already going out of date.

The infrastructure in the future seems to be favourable to the acquisition of webcasting options to the Mikkeli Campus. The current situation will change dramatically after the summer. During several conversations with the dean of the Mikkeli Campus, Mr. David Atkinson, he has explained the future plans of building a new state-of-the-art computer classroom. According to Mr. Atkinson, the Mikkeli Campus will acquire at least forty new computers to be fitted in one of the normal classrooms at the university. The installation of the new set up for the classroom should be finished during the summer, so that by autumn 2004 there would be a new classroom full of new computers. These plans will make the acquisition of webcasting a reasonable option. With the intended layout, there will be enough computers for a whole classroom to use. This would make the following of a webcasting lecture possible for a whole class.

There are many ways to produce distance learning through the Internet that are best explained by Greenberg (1998):

*There are three basic ways of distributing distance learning courses through the Internet. The three ways are downloadable files, HTML/Java, and streaming courseware. Downloadable rich-media files can take up to several hours download and clog up organisation networks. To go native, the user buys an HTML authoring tool. For highly interactive computer-based training however, HTML alone is not*

*enough. Some of the ways to add interactivity include plug-ins, ActiveX controls, Dynamic HTML, Java applets, JavaScript, VBScript, and Shockwave. To make these Web pages talk to the server, there is PERL scripting, CGI scripting, Active Server Pages, JDBC, and Java on the server. Streaming takes the best of the old and the best of the new. Because it is the outgrowth of mature authoring tools, it can deliver fully interactive, full-screen streaming over the Internet. (Greenberg 1998 14-17.)*

The company GoodMood developed its own solution called WIP, for webcasting intercommunications. It is a software platform that uses streaming to deliver material for people who want to see it. According to the quote by Greenberg, using streaming seems to be the best alternative for an online distance learning course. The current version of the product is labelled WIP 3.1. The following information has been adapted from the technical overview of GoodMood's WIP 3.1 (GoodMood 2004).

WIP is an application that can be used for the effective delivery of live or recorded communication and presentations. It is far more than just a simple one-way tool that is used to stream information across users. WIP is designed to provide organisations a server-based environment for preparing webcasting transmissions. WIP is a comprehensive end-to-end solution that provides organisations with live or recorded webcasting services. WIP comes standard with a set of tools for controlling webcasting presentations. These tools can be modified and their visibility controlled in real time. WIP supports streaming video. The supported streaming formats are Windows Media 9 and Real Media and it also supports multiple sources and automatic client redirection. WIP uses an enhanced H.323 based videoconferencing with bandwidth saving capabilities where the concurrent user number is not limited. The media window supports a variety of file formats to be synchronized with Windows Media or changed manually. Feedback messages are collected on the administrator's page.

List 1. WIP requirements

## **PC Requirements**

The hardware requirements for WIP are:

- 500 Mhz processor
- At least 128 RAM
- 1024 x 768 resolution

Software requirements for WIP are:

- Internet Explorer 5.0 or later
- Macromedia Flash 6 .r47 or later
- Sun Java JVM 1.4 or later\*

Webcasting encoding computer\*\*:

- Windows Media Encoder for series 9
- 1,5 GHz processor
- At least 386 RAM

\*Java required only on the administrator's PC

\*\*Added computer/server requirements when encoding for webcasting

## **Server Requirements**

The WIP application server is Linux based, and is built on BEA Weblogic 8.1. The database is Oracle 8.1, which can reside either on the application server or for large implementations on a dedicated server. For deployments supporting up to 1000 concurrent users a two-server implementation is recommended with the following specifications:

- Dual Xenon 2.8GHz processor or better
- 2GB RAM

- 128GB RAID 5 SCSI Storage – depending on archiving requirements
- Global Network card and switch connection

Source: GoodMood Technical overview 2004

### **5.3 Nature of methods used**

It was decided after negotiations with Mr. Harri Lehti, that the most convenient way to conduct the research would be through the use of a questionnaire. Other forms of conducting the research such as focus groups and interviews would have been too cumbersome and time consuming to have been effective. Questionnaires could also be targeted to a larger population as well as to provide consistency in the replies as the same questions are asked in the same way from everyone. It was important to get a wide range of replies from different people to find if there are differences in their perceptions of webcasting. The problem with a questionnaire is that even though it is relatively easy to send the questionnaire to people, it is still hard to get them to answer. In order to maximize the amount of responses the emphasis was on making it as easy as possible to answer and send back. The same questionnaire was sent to the professors and students. It was attached to an e-mail message that informed people about the survey as well as to the webcasting presentation itself. Responding was also made as easy as possible as the questionnaire could be completed and sent directly back as a normal e-mail message.

Another aspect that was discussed when formulating the questionnaire was to keep the length of the answers as short as possible. The emphasis from the beginning was to cut down the amount of work the respondents had to do. Long questionnaires may discourage people to answer if it takes too much time. It was decided that the right way to deal with the issue was to make only a few key questions that would dig right to the point. The final number of questions was cut down to 11, which would be short enough to encourage people to respond, but at the same time long enough to get the information that was needed. There were only a few personal questions in order to

make sure that the respondents would not feel that their privacy would be compromised, but enough to form an idea of their computer skills and distance learning experience (See the questionnaire in Appendix A).

#### **5.4 Analysis of Collected Data**

The questionnaire was sent to 61 professors and about one hundred students. During the course of the time period between the 22 of March and the 23 of April a total of 64 replies were received (Appendix B, table 1), 26 of which were from females and 38 from males. Seventeen replies (27 % of all replies) were from professors and 47 from students (73 % of replies).

It was sad and disappointing to notice that of the 14 main campus professors who received the questionnaire none answered to the questionnaire. They are the professors who teach the business communications course as well as all the language courses. The reasons for this are not clear as every other group who received the questionnaire supplied at least some replies.

The Webcasting presentation was online for one month and was free for everyone to watch. Four replies arrived after the presentation had already been removed and are marked in the tables with an asterisk. The number of replies was relatively low, compared to what might have been expected. Students from the BScBA 2 class were the most active in responding, with only a handful of replies coming from the BScBA 3 class. This was not expected as it was assumed that both classes would participate equally. Also the number of replies from professors remained lower than expected. There are two suspected reasons for the lower than expected respond rate. The first one relates to a server update on GoodMood's server that was scheduled for the same day as the questionnaire was first sent on March 2. There was no prior notification of the update so it could not be anticipated. The server update started from 6 p.m. and lasted through the night, rendering it impossible to watch the presentation. The other reason for the low respond rate is the lack of motivation of the respondents during that time. In an attempt to gain additional responds, a

reminder was sent to the students two weeks after the initial questionnaire and a week later to the professors. The reminder did help to gain a few additional responds and raise the total number to 64 responds.

The last question of the questionnaire asked whether respondents felt that there should be some kind of change in the way classroom education is being conducted in Mikkeli. The question did not specify what kind of changes there should be done, so the extent of the answers was not revealed. A total of 46 replies (72 % of all replies) were of the opinion that there should be some kind of change (yes, to question 11). There were only 18 persons that replied NO to the same question. Of these 18 persons six (35 %) were professors (half of them females) of age over 30 years, and 12 were students (see table 2). The results show that the majority of the respondents would like to have some degree of change in the way the Mikkeli Campus organises its classroom education. It is important to notice that from the total number of replies from professors (17) the majority (11) also felt that there should be some kind of change (64% of the total replies from professors).

Question number seven sought to find an answer to how people evaluate the possibilities of using webcasting in the Mikkeli Campus. This question is the most important question in the whole questionnaire as it asks people directly to evaluate the possibilities of using webcasting. In order for this question to be answered properly, people were encouraged to watch the webcasting presentation prior to giving their answer. The results were even a little surprising as only one person evaluated that webcasting should not be used at all as an educational tool in Mikkeli (replied 1 to question 7). In the same way only three persons (5 % of all replies) evaluated (replied 1 or 2 to question 7) the possibilities of using Webcasting as an educational tool to be very small or that it should not be used at all. Only one of them was a student (male) and two were professors (one male and one female) (table 3). The number of people who answered in this way is surprisingly small, and makes it difficult to make any specific conclusions. It appears to be that the professors were more pessimistic than students about the possibilities of using Webcasting as an educational tool: two professors correspond to 12 % of the professors' replies and one student corresponds to only 2 % of the students' replies, however, on the basis of the

reduced sample, it is not possible to draw conclusions on the basis of the gender or occupation of the persons replying. The conclusion can nevertheless be that most of the people see at least some possibilities for webcasting in Mikkeli. Therefore 61 persons (95 % of all replies) evaluated webcasting as having *some possibilities*, *good possibilities*, or being *definitely worthwhile* for being used as an educational tool. A further breaking down and analysis of the responds reveals that 40 persons (62 % of all replies) evaluated the possibilities as *good* or *definitely worthwhile* (replied 4 or 5 to question 7), and 14 persons (22 %) evaluated as definitely worthwhile (replied 5 to question 7).

In order to attain a better understanding of the way people saw distance learning and webcasting in the Mikkeli Campus, additional filtering of the data for three different parameters was conducted. The additional filtering was done for these three parameters at the same time. The criteria used in this filtering included the replies that evaluated the use of webcasting at the Mikkeli Campus as having *some possibilities*, *good possibilities*, or *definitely worthwhile* (replied 3,4, or 5 to question 7), and at same time saw distance learning as a possibility to enhance normal classroom education (replied 1 to question 8), and also considered that there should be some kind of change in the way classroom education is conducted in Mikkeli (replied 1 to question 11). Of all the replies received, 42 person's replies (66 % of all replies) matched with the filtering criteria. From this result it can be concluded that a clear majority has a positive attitude towards Webcasting and distance learning and at the same time would like to see some kind of change in the way classroom education is being conducted in Mikkeli (table 4).

There is a fear that using webcasting or other distance learning mediums with no personal contact will lower the standard of education compared to what happens in a normal classroom. This is also seen in the answers that were received through the questionnaire. It is very interesting to notice that actually the biggest drawback of webcasting was considered to be the *lack of personal contact* (34 persons, 53 % of all replies) which is also the same result that many critics of distance learning point out (see. Nevgi & Tirri 2003, 14,21; Forelle 2003). The question is whether people felt that webcasting as an educational tool would still not be sophisticated enough to provide the feeling of a real face-to-face situation even though it has been developed for just

that purpose. Two persons (3 % of all replies) considered the biggest drawback with webcasting to be that there is *no infrastructure* (replied 1), four persons (6 % of all replies) *hard to use* (replied 2), three persons (5 % of all replies) *too expensive* (replied 3), thirteen persons (20 % of all replies) *not as effective as normal classroom education* (replied 4) and eight persons (13 % of all replies) chose *something else* (replied 6). There doesn't seem to be any relation between what was seen as the biggest drawback and gender, or occupation. The lack of personal contact was chosen as the biggest drawback by 7 professors (41 % of the professors) and 27 students (57 % of the students). The answer "not as effective as classroom education" was seen as the second most important drawback by both groups, 4 (22 % of the professors) and 9 (19 % of the students).

The only question to which answers seem to be non-trustable, is question number 6: *Have you heard about Webcasting before the presentation ?*. A big majority of 49 people (77 % of all replies) answered yes. Webcasting is quite a new technique whose use has so far been limited to big companies. The reason for the high number of "yes" replies might be that the short presentation that was done was not enough to demonstrate the differences with video conferencing and other older techniques, which indeed can be very familiar to the responders.

The age structure of the females is formed mainly of students under 30 years (18 individuals), the rest being two students of ages over 30 years and six professors (one under 40 and five over 40 years) (Table 5).

Of the whole female population (26) a majority of 19 (three of which are professors) (76 %) were of the opinion that there *should be some kind of change in the way classroom education should be conducted in Mikkeli* (yes, to question number 11). Seven females (11 % of all replies, 27 % of females' replies), three of them being professors, were of the opinion that no changes should be taken in the way classroom education should be performed in Mikkeli (Table 7).

Out of all the replies from females 19 (30 % of all replies, 73 % of the replies from females) evaluated the *possibilities of using webcasting as an educational tool* as good or definitely worthwhile (replied 4 or 5 to question number 7) (Table 7).

From the 38 (59 % of all replies) males that replied to the questionnaire, 11 (29 % of males' replies) were professors over 30 years old; the rest were students (Table 9).

Twenty-three (61 % of males' replies, 36 % of all replies) male persons evaluated as good or as definitely worthwhile (replied 4 or 5 to question 7) the possibilities of using Webcasting as an educational tool (Table 10). Fifteen males (39 % of males' replies, 23 % of all replies) evaluated as less than good the possibilities of using Webcasting as an educational tool (replied 1, 2 or 3 to question number 7) (Table 11). Four of them were professors over 30 years old.

Twenty-seven (71 % of males' replies, 42 % of all replies) of the males' replies considered that there should be some kind of change in the way classroom education should be conducted in Mikkeli (replied "yes" to question number 11). Those males who replied "no" to the same question were in total 11 (29 % of males' replies, 17 % of all replies), three professors and eight students (Table 12).

## **5.6 Conclusions**

Distance learning should not replace the normal classroom education in Mikkeli, an approach that has been the base for this research. It is a different issue altogether whether it should be used alongside of normal education, or if there are tools that would better suit the Mikkeli Campus. The choice of the best alternative comes down to a few basic facts. Webcasting is the newest, easiest to use and most flexible of the existing synchronous communication tools available at the moment. Product packages such as the GoodMood WIP are also able to use the best components of all the existing tools, including videoconferencing and web conferencing, in a

combined package. Webcasting has several features that make it superior to other similar technologies. The decision has to take into account the costs of acquiring the technology compared with the cost savings that are made when professors are not required to travel to Mikkeli. It also depends on how many courses the Mikkeli Campus would be willing to conduct through distance learning.

The empirical findings support the statements concerning distance learning made by different professionals of education and which have been presented in this study. The low respond rate must be taken into account, but the results still give a good assessment of how distance learning and webcasting are evaluated by students and professors. The conclusions that can be made based on the questionnaire are the following:

1. A majority of all respondents feel that there should be some kind of change in the way classroom education should be conducted in Mikkeli.
2. A majority of all the respondents saw that distance learning in general is a way to enhance normal classroom education.
3. An absolute majority saw that webcasting has at least some possibilities in the Mikkeli Campus.
4. The results from the questionnaire coincide with the predictions set up in the literature of distance learning.
5. Taking into account the leading literature in the field of education and the trend of even the most prestigious universities moving online as well as the results of the empirical study there is a clear possibility for webcasting in the Mikkeli Campus.
6. Technology is currently moving very fast in online distance learning which is important for both the Mikkeli Campus and GoodMood to notice, respectively as an end user and a supplier of such technology.

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