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ABSTRACT
        The Institute for Extension Studies at the University of
Tampere is coordinating a project called Network Education for Scientific
Libraries, Archives and Museums. This three-year project is a part of the
national program Finnish Information Society. The Ministry of Education is
funding the professional further education of scientific libraries and
archives through the project. The aim of the project is to develop training
based on information networks and to promote the production of related
distance learning material. The project also aims at improving knowledge of
teleinformatics and information networks in libraries, archives and museums.
So far, 14 courses of varying length have been organized with approximately
300 students from all over Finland participating. The project started in May
1996, and continues until the end of 1999 when the final report will be
available. The project has so far been carried out according to the original
plan, schedule and budget. This paper discusses the aims and organization;
stages of the project; training; studying; and results of the project. (AEF)

Network Education
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Abstract

The Institute for Extension Studies at the University of Tampere is coordinating a project called Network Education for Scientific Libraries, Archives and Museums. This three-year project is a part of the national programme Finnish Information Society. The Ministry of Education is funding the professional further education of scientific libraries and archives through the project. The aim of the project is to develop training based on information networks and to promote the production of related distance learning material. The project also aims at improving knowledge of teleinformatics and information networks in libraries, archives and museums. So far 14 courses of varying length have been organised with approximately 300 students from all over Finland participating. The project started in May 1996 and continues until the end of 1999 when the final report will be available.

Aims and Organisation

Network Education for Scientific Libraries, Archives and Museums is a project launched in the spring of 1996 by the Institute for Extension Studies at the University of Tampere. The aim of the project is to enable the personnel in libraries, archives and museums to take advantage of teleinformatics and information networks more effectively in their everyday work. Information networks are also used in the actual training of the personnel. The Ministry of Education is funding the project as part of the national programme Finnish Information Society.

The project focuses on developing distance learning based on information networks, related learning material and necessary tools. Distance learning through information networks is integrated as part of the training so that using the technology would become a natural part of work for the personnel. Information networks are topical and play an important role in the organisations which participate in the project, and therefore, the entire personnel should have a basic knowledge of this field.

The project is coordinated and training designed by the Institute for Extension Studies at the University of Tampere. The Continuing Education Centre at the University of Oulu is responsible for the distance learning course environment and it is also involved in the designing of the learning material. Partner libraries include the libraries of the University of Jyväskylä, the University of Tampere and the University of Techology, who give regular feedback on the training and learning material. In addition to these partners, representatives of the National Archives and the Finnish Museum Association participate in the project.

Stages of the Project

The project lasts three years. The first stage consisted of designing training for libraries, and the first courses began in the autumn of 1996. At the same time the project team began planning the distance learning and related study material. The second phase of the project focused on the education itself and how it could be further improved. The education was expanded at this stage to also include archives and museums. The third and last phase is presently in progress: in addition to existing courses, in-house instructors for the organisations are being trained. The last courses in the project are organised in the autumn of this year. Part of the courses will undoubtedly continue in one form or another even after the project has ended.

Based on feedback received during the training, the distance learning and related study material have been further developed. The participants give feedback both during the training as well as at the end of it. The aim is to react to this feedback as quickly as possible. If necessary changes cannot be made in the ongoing training, they will be made when the next training is designed. Part of the feedback also comes from the project team. This group of experts, who meet 3-4 times a year, functions as a support group in

the project. The group monitors the progress of the project and guides it in the right direction. The project lasts until the end of this year after which the final report will be made.

Training

The project consists of extensive information network courses and short updating seminars. The courses take place primarily in Tampere, and participants come from different parts of Finland. The courses aimed at libraries comprise contact teaching days and distance learning periods between and after the contact days. Participants meet three times for the contact teaching, which lasts 2-3 days. In all, the training takes from three to four months. The corresponding, but shorter training aimed at archives and museums has been adapted from the training for libraries. The need for basic training in archives and museums seems to be smaller and the starting level of students on average lower than in libraries. Both programmes require a basic knowledge of Windows.

In addition to long courses, two-day open updating seminars are held approximately twice a year. The majority of participants have earlier completed the network education or some other training provided by the Institute for Extension Studies. The aim of the seminars, as the name implies, is to update on the participants' knowledge of information networks. Topics vary, but the aim is to choose current themes which are relevant to the target group. In the seminars experts give information about the latest developments in the field, for example, in content, software and hardware. These seminars will be held even after the project has ended, because the field develops so rapidly, and the seminars have proven to be a good forum for meeting people in one's own field, for getting new ideas and exchanging experiences.

Participants in the instructor training are required to have a basic knowledge and skills of information networks. The majority of participants have had extensive training in information networks or they have completed other corresponding training. The instructor training is primarily pedagogical with an emphasis on distance learning. The participants are trained to master tools necessary for distance learning. The students also hold a practice course in their own organisation during the training period. They design, execute and tutor this course themselves supported by their own tutors.

Courses in the project are independent entities, but at the same time they complement each other. For example, a student who has had extensive training in information networks can regularly attend the updating seminars in order to get the latest information. In addition, he can take part in the instructor training. By combining different courses, an organisation will get truly valuable information network experts, who can train the rest of the personnel in the future.

So far 14 courses have been organised, and there have been altogether approximately 300 participants. The students come from scientific libraries, public libraries, company information services as well as archives and museums. The programme for the autumn will include one more instructor training, one updating seminar, and one extensive information network course for libraries. The information network education in the Institute for Extension Studies began as early as 1994, and it will undoubtedly continue after the project. In the future experiences gained from the project will be an important asset, and they will be used to further develop the network education.

Studying

The contact teaching has been constructed in a way to support distance learning as well as possible. Participants will learn basic skills, which they can broaden during the distance learning periods according to their own interests. Most of the teaching takes places in a computer classroom where all the students have their own computer. They will learn the use of information networks by doing and get the necessary skills needed in independent study. During the distance learning periods the participants complete independent assignments, which are closely linked to the contact teaching. They are supervised by the instructor. The assignments tie together the individual contact hours, they teach the participants how to use the team software and guide them to work in groups. The assignments are also used to monitor that all the students can keep up with the training.

In the beginning of the project web pages with an access code combined to a mailing list and an automatically updated noticeboard were used as the basic learning environment. During the second year a team software developed by the Continuing Education Centre at the University of Oulu was adopted. It has built-in communication tools and editors which have made studying easier and more wide-ranging. The students only need a computer connected to a network. Currently the third version of the course environment is being used.

The material for the courses can be accessed with a password and the students can also save their work in the same environment. Communicating with teachers, tutors and other students also takes place in the same environment. The team software enables collaborative learning across organisational boundaries and helps students share ideas and experiences with other participants throughout the training.

The instructor of a course creates the learning environment and distributes access codes to teachers and students. He also updates the pages and acts as tutor throughout the training. Students become familiar with the team software during the first contact teaching period when they are introduced to all the relevant functions with the help of exercises. The supervised exercises in the computer classroom guarantee that all the participants get a good start for the distance learning. Another medium of learning is the open discussion forum where students can discuss problems and ask questions. Tutors and teachers can also be contacted personally.

The course environment contains material related to the teacher's own teaching and assignments, and it can contain a list of links to web pages which deal with relevant themes. Thus, the student has at his disposal all the material used during the contact teaching to support the distance learning. In addition, separate study packages have been designed, which also contain lecture material, links to web material, and exercises. The study packages are completed between the contact teaching periods under the supervision of the tutor, who also checks the exercises and gives feedback. Each student chooses sections of the package that he needs and completes the related exercises. In other words, the distance learning is based on voluntarism, but students who complete all the sections in the package are given a separate certificate.

Results of the Project

The project has been extremely valuable for the development of information network education. Preliminary information of the students' skills, earlier experience and their expectations have proven useful. A detailed description of them, however, is almost impossible to get prior to the training even from the students themselves, because they all have a different understanding of their own skills and needs. During long training periods the programme can be changed according to the wishes of the participants. However, courses that students may have initially regarded as unnecessary have often proven to be the most rewarding ones. This is because the students have not had an exact idea of the topic.

In the beginning of the project it was difficult to estimate the correct ratio between contact teaching and distance learning. After experimenting different alternatives, the contact teaching has been decreased by way of increasing the amount of distance learning material and by having the teaching primarily in computer classrooms. Some contact teaching, however, seems to be necessary for effective training and results. Interaction between the participants increases when they meet each other, and study motivation remains high when students can solve problems in groups, exchange experiences and get individual guidance while sitting at the computer. Also, the success of one individual inspires others.

It is difficult for the participants to find time for studying while working, and the contact teaching seems to be one solution to this problem. During the contact hours the students can forget problems at work and concentrate fully on studying. At the moment the students feel that the ratio between contact teaching and distance learning functions well. The organisations that send their employees to this type of training ought to remember that students should be guaranteed time to study at the workplace during the distance learning periods. The organisation must be committed to the entire training, not just to a few contact teaching days.

The team software has proven to be a good means of combining distance learning and contact teaching. The course environment supports independent study, because it is flexible and does not tie the student to a certain time or place. While we offer students the means for independent information search and for adapting it, we also have to guarantee the availability of information and sufficient guidance. The distance learning assignments must be clear and unambiguous. The tool is new for many students and care should be taken in guiding them to use it, so that the software does not become an impediment instead of a tool of learning. Tutoring must continue throughout the training, because different people adopt the use of the tool at a different pace. Also, before the training begins the participants must be explained the technical requirements of the software.

The team software is ideal as a means of communication, because compared to email, many people can join in the discussion regardless of time and place. This is vital in long training periods with few contact hours. The team software functions as a support and contact channel, with the help of which the tutor can make sure that all participants get the support and guidance they need. However, it is important to remember to define the roles and tasks of all participants in the beginning of the course and explain them to the students, so that they know who to turn to in different situations.

Feedback from the participants is used to improve the training and learning material. The activeness of the participants can be followed with the help of statistics available from the course environment. This also puts the feedback into perspective and helps design courses accordingly. If a student has not sought to the training himself, his attitude toward it can be negative in the beginning. Motivating these persons has been one of the most challenging tasks in the project: we have been successful, as only one student has left the training.

The participants have been pleased to find a common language with computer experts. Misunderstandings have been avoided, and the students feel they have been able to cooperate with other professional groups better than before. Work that they used to think as a necessary evil, because it was unfamiliar, now seems challenging and rewarding. Many students have even found new interests and areas in their own work environment that they want to improve. An important motivating factor is that benefits received from the training are real and exceed the effort that was put into it.

Conclusion

The most important aim of the education has been to give an overall picture of information networks to the students. Hopefully they have also learned to see the range of opportunities available for taking advantage of information networks in their own organisation. It is also important to realise that one does not have to master everything: the student can improve skills in those areas that he is interested in and that he needs in his work. However, it is useful to be aware of different possibilities and how they can be adapted in one's own work, so that it is easier to ask for help in the right situation and from the right place. Learning by doing has also borne fruit: inspired by the basic skills learned during the training, many students have continued to study independently.

The project has so far been carried out according to the original plan, schedule and budget. We have also succeeded in our original objectives. It remains to be seen how well we can take advantage of the experiences gained during the project in the future. Including distance learning based on information networks in the training has proven to be an excellent addition to the entire education. The use of information networks alone while studying decreases prejudice and lowers the threshold for using information networks in one's own work.

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