Paper 10:

Bringing competence areas together: A collaborative approach to delivering and receiving networked learning

Mary Sletvold

Mary Sletvold
Department of Computer Engineering
Sør-Trøndelag College
Norway

Summary

- Do ODL - Dissemination of Open and Distance Learning, is a project granted within the European Commission programme SOCRATES, where important issues for dissemination of ODL in higher education are addressed. One objective of Do ODL is to define models for collaboration between European academic institutions in order for them to function as centres for each other in the field of ODL. As a part of the field trials in Do ODL, a course in "Strategic Internet Marketing" have been developed as a joint effort by the participating institutions. The group developing the course consists of lecturers within different fields in marketing and computer engineering, and with various experience in producing and delivering networked learning courses. Collaborative learning is being used as an integrated part of the course delivery, with a possibility for the students to choose

between face to face collaboration and networked depending on what is most appropriate for each student.

The result of this interdisciplinary, inter-institutional and international approach is, as far as the lecturers and the institutions are concerned, collaborative course development and delivery. With respect to the students, they are offered an active learning situation based upon a collaborative learning environment.

The course will be run for the first time during the spring term of 1998. The experiences regarding the course delivery will not be clear until after the course have been accomplished in June. This paper will focus on the development and implementation process and the experiences gained during this activities. However, activities related to the planning process of the course concerning delivery and accomplishment of the course, will be covered.

Motivation

- The use of computer supported collaborative learning (CCL), is a rapidly evolving research area both when used as a complement to traditional educational methods and used in networked-based learning environments. A lot of attempts to develop efficient ways of implementing CCL have taken place [1], [5], [7], [8]. These and related contributions have given fruitful experiences and inspiration.

The use of networked collaboration not only give new possibilities for implementing learning environments based on networked learning, it also implies expanded possibilities for lecturers to develop and give courses in a collaborative way. This brings us into a situation where limitations in collaboration caused by geographic distances can be reduced. It is possible to join lecturers with different professional backgrounds, into a co-operative course development process, bringing different and complementary competence into a course. In this way professionals with a special competence on a subject situated at an other institution can be utilised, and courses covering cross-over disciplines can be formed.

The cost saving aspect when several institutions can give one common course instead of running corresponding courses, is another motivation factor for initiating collaborative approaches to education delivery.

The integration of collaborative learning into distance learning courses is one of the topics that will be explored during the course delivery. This is an area of great interest and we feel a need for extending our knowledge by gaining experiences from real life course accomplishments.

Bringing different disciplines together into a collaboration, also bring different individual, professional and cultural perspectives into the process and into the course. This are both desirable and fruitful, but it also can be a source to conflicts and problematic situations. The challenges and possibilities related to bringing students with different skills, backgrounds and nationalities together in a co-operative learning environment will be investigated during the running of the course.

A very important side-effect of the course development and the accomplishment, will be an increased competence in communicating by a computer, computer-mediated competence, both with respect to the lecturers and the students. Even though there undoubtedly are different theoretical perspectives of communicative competence in general and computer-mediated competence in particular [4], it is not difficult to argue for the growing importance of mastering computer-mediated ways of communication.

The planning phase

The development group consists of five persons, three marketing professionals (two from Greece and one from Norway), one computer scientist (Norway) and one with experience from both fields (Finland). The background in developing courses for distance education was varying within the group. The participants were experienced users of electronic discussion groups and e-mail, but had limited experiences with software for meetings on the net.

In order to build a common fundament for the course development, we found it necessary to have a initiative face to face meeting. It was of great importance to actually meet the partners, and to have the opportunity to build a more correct picture of the expectations and personal aims for joining the development process, and of the institutions represented. It was very fruitful to have the possibility of co-ordinating a different view. Discussing this issues via computer-mediated communication capabilities would have been a very difficult task taken into consideration that most of us were inexperienced with using the most appropriate tools for meetings on the net. In addition comes the fact that this is a process strongly supported by visual and interactive factors like facial expressions, brain storming activities, immediate feedback and visible involvement. Clearly some of these aspects can be partly gained by using tools for electronic meetings, but unfortunately the result tend not to be as social and catchy as in a real meeting.

The first questions brought up at the meeting were of a very fundamental art: 'What is marketing?' 'Which views and orientations within marketing theory do we want the course to support?' These questions serve as examples of the necessity of building a common understanding of basic concepts prior to the process of creating a further agreement concerning the features of the product to be developed.

Objectives

- The main consideration was to develop a marketing course based on consumer marked theory, with a focus on how to integrate the use of Internet as a part of a total marketing strategy. We did not want to use too much energy on teaching basic computer and marketing theory, as these topics are covered by courses already found on the Internet. We wanted a course focusing on the operational and practical issues.

A copy of the main page for the course, including the course description and the course objectives are found as an appendix to this paper[1].

Target student groups

The course aim at students with marketing or computer-technical background. A basic knowledge within one of the disciplines is presumed.

The Course Implementation

Distance education model

The first step was to find a distance education model based on basic pedagogicgoals and principles. We find that the model chosen is based on a well-funded pedagogic framework, as it meets the ideas within several fields of pedagogical theory.

A lot of research brings forward the effectiveness of co-operative learning. This can to a large extend be summed up by quoting [2]: 'The amount of consistency of the research on co-operative learning makes it one of the most distinguished of all instructional practices for higher education'. The high level of accept for CL, in addition to positive experiences done by members of the development group, resulted in a wish to use it as a fundament for our course.

In addition to achieving an effective learning process, co-operative learning also helps the students develop their ability to working together in teams and collaborating with people with a different background. We find this issues particularly relevant when merging students from different professional backgrounds into collaborating groups.

Problem-based learning is a pedagogic key concept, founded on a constructivistic view of learning and the three benchmarks of constructivism [6]. The

1. Course description and course objective for 'Strategic Internet Marketing' are formulated by Arve Pettersen, School of Economics and Business Administration, SEør-Trøndelag College, on the behalf of the development group and on the basis of discussions at the initiative meeting.

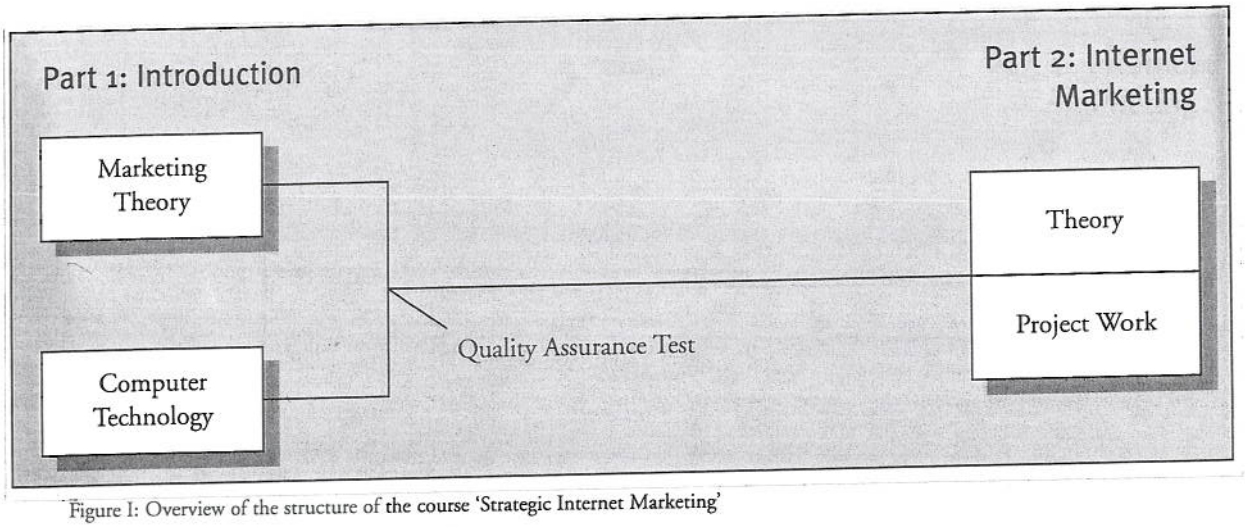

Figure 1: Overview of the structure of the course 'Strategic Internet Marketing'

first benchmark states that social negotiation is essential to learning. For some student groups this negotiation will be done via the Internet, putting new requirements upon the students capabilities to communicating and interacting in an effective manner via computers. Their challenges will be to develop a common understanding of the concepts (collaborative conceptual mapping) by means of the tools available on the internet, and use this knowledge in the process of building a common identification and understanding of the problem, and solving the problem using the same concepts and techniques.

The second benchmark is that learning most effective is done in real life environments. Writing a marketing plan and strategy for a real word company and to integrate the use of the Internet into the implementation of this strategy, will be the main task for the student groups. This is a problem close up to a real world situation, and finding a solution by means of communication on the Internet sure is close up to reality, at least within a short amount of time. The third benchmark states that the ideas and concepts should be learned in diverse ways. The subject covered by the course will be found in the textbooks and articles as well as in the lessons. In addition the Internet is an 'infinite' source of information. Further work on the subject using discussion groups, e-mail and net-meetings will provide additional ways of adopting an understanding for the different topics.

This framework also support learning by doing, as learning to a large degree is based upon the students actively using the theory in practice. This approach should have lead to changes in the part the lecturers are playing in the learning process, in order to achieve lecturers taking more the role of a guide. However there is a need for more experience on the basic structure and organisation of the course delivery process, before we can take such a role, particularly with respect to the CMC-part of the guiding. We will have to take one step at a time, but changing the role of the lecturer will certainly be a issue for exploration and research in the future.

Taken into consideration the different institutions involved and the variety of platforms and tools used by the students, it was a necessity to focus on availability when choosing technological solutions for implementation and accomplishment of the course. To achieve this goal, we had to keep in mind not to choose technology which can exclude a large amount of students. The result was a focus on standard software and freeware. Our challenge was to find technical ways of achieving our pedagogical goals by building a learning community supporting our educational model, based on this kind of basic technology.

Content and structure of the course

The course is split into two parts, one focusing on introductory theory for the two disciplines and one on internet marketing. The two introductory alternatives will last for four weeks, and will be run at the same time. The students are to follow the introductory session which is not in their basic dis-

cipline. However, the other introductory course is available, and can be used for instance for students who feel a need for brushing up their knowledge.

The students need to pass an exam after the introductory part, covering issues from both the introductory alternatives. The exam must be passed to continue part two of the course, and will serve as an assurance that the students have the theoretical background needed for the second part.

Part 2 includes 8 lessons over 8 weeks, and consists of a practical and a theoretical part which will be run in parallel and cover corresponding theory and practical tasks. The students will be divided into groups combining students with background in marketing and in computer technology. Student groups will work close to a self chosen company, producing a 'final report' including analyses and development of a marketing strategy. As a starting point an outline for a final report will be handed out. The final report will take form during the course progress, and the groups will do all their reporting on the Internet. The material developed by the groups will be available for all the involved persons, both students and lecturers.

The learning material

The course is based on textbooks and related articles. In addition, the lecturers will write lessons and make them available on the Web. The aim of the lessons is to give the students a broader view of the topics covered, commenting on and supplementing the information. In this way the lecturers try to put across some of the information traditionally given in classrooms. The lessons also will include links to related material on the Internet. And of course the students are free to search for additional articles and information on the net, and to share it with the rest of the students.

The lessons will be protected by a password after two weeks, and a new password will be handed out for those who pass the intermediate exam.

At the end of the course the student groups will be asked to evaluate an other groups work. The final report and the evaluation report will be used for a final evaluation done by the lecturers. If passed, the course will give credits according to the ECTS-system.

The electronic learning environment

The electronic environment is founded on the basic technological capabilities of Internet and Web. The use of Internet, e-mail and electronic discussion groups are the technological foundation for the course. In addition students depending on computer-based collaboration will need software for arranging meetings with other students (for instance Net-meeting or IRC).

The information related to the course and links for accessing the different tools are integrated into Web-pages providing an electronic working environment for the students.

Putting an interdisciplinary, inter-institutional and international course on the curriculum

- The fact that the lecturers and students involved are related to different disciplines and that the course is merging them into interdisciplinary collaboration, must be considered much more a strength than a problem. The positive effects of this is a possibility, both for lecturers and students, to explore and gain experience on new competence areas and at the same time extend the competence in their basic discipline.

  Issues related to the inter-institutional and international nature of the course do however include a lot of problem aspects not always easy to overcome. Enrolment, credit transfer and acceptance, examination and evaluation are issues handled in different ways depending on institution and nationality. The administrative systems are formed in different ways, and often it can be difficult to find solutions acceptable for all the involved institutions. Fortunately, a lot of institutions and national administrative systems tend to focus on internatio-

nalisation. Hopefully this can lead to standardised systems for credit transfer and collaboration across institutions.

As this study is a part of a research project, we had the advantage of a positive attitude inside the participating institutions. Whether taking the course and putting it into a complete curriculum would have caused problems, depends very much on the institution.

Within the Do ODL project we have chosen to use the ECTS credit system, in order to have a common way of describing the amount of work for a course. We have one institution responsible for co-ordinating the enrolment for the courses, and for providing Web-pages with the initiative course information. Also we have adopted a very open attitude considering the rights to the materials developed within the project as far as the participants are concerned. Collaboration of this kind will always include a need for trusting and sharing with the partners. When putting a common course on the curriculum, there will be a need for a more formal agreement stating out the rights to the developed material.

Experiences

- As in any project accomplishment a critical factor is to start with the foundation of a common understanding and getting a general accept for it. It is important to create an open discussion, and to get the different views out in the open in order to find the compromise solution best suitable for all the involved persons and institutions. A face to face meeting is best suited for this discussion, but in situation where arranging a real meeting is difficult, it can be substituted by a computer-mediated meeting. If the participants are familiar with electronic meetings and familiar with each other, it can be an effective way of starting out.

Further it is essential to develop a well examined and detailed plan for the whole process. The plan must include deadlines for all activities included in the project, and clearly state who are responsible. In cases where several persons are responsible, there should be one person pointed out to start and lead the activity.

No matter how detailed the planning process have been accomplished, there will still be a need for a coordianator. There might be minor misunderstanding or different understandings of issues, and there might be a need for following up the activities in various ways. Giving information to external persons interested, early contact with students, creating the Web-pages and the electronic working environment and keeping an eye at the accomplishment of the activities included in the plan, are typical tasks for the co-ordinator. So are inviting the rest of the group to meetings when necessary, and giving help and assistance when practical or technical problems turns up. The technical adviser and the creator of the Web-pages do not necessary need to be the co-ordinator, this jobs might as well be split on several persons.

Our experiences is that the participating lecturers are busy and involved in a lot of activities, and it tend to be difficult to find time and dates for meetings where everybody can attend. Much of the following up and co-ordination activities have been based on communication via e-mail and to a smaller extend on netmeetings. Hopefully this will evolve as the partners get more experienced with this kind of meetings. However, the more issues cleared out at an early stage of the development process, the more painless will the rest of the process be. We feel that our development phase has been a relatively easy one, as a result of a deep-going and detailed planning phase.

A matter of special importance is the planning and agreement of standard ways of doing things, and the selection of standard software tools. Discussions on this issue tend to be emotive and it is not always easy to find good compromise solutions that are acceptable to everyone. Practices and traditions varies from institutions to institution and from person to person. However, it is necessary to come to an agreement on this matters, the sooner the better. Talking about standardisation, aspects like enrolment, administration, standard formats for documents, and how the examinations are accomplished at the different schools, have to be discussed.

So far it is not easy to make a judgement about whether collaborative approaches to course deliveries are cost effective. Undoubtedly there is a lot of work prior the first time a course is run, both on development and co-ordination activities.

A very positive matter is that the involvement among the participants are good. We feel the result of the development phase is a very interesting and exiting course offer, even though we still are in a testing phase and are aware that there still are factors which need to be improved.

Future refinement

- There are several ways of improving the working environments for the students and the lecturers for future ODL courses based on the same concepts as Strategic Internet marketing.

  A lot of the co-ordination activities can be reduced by finding effective tools and automating some of the operations. For instance a possibility for publishing the lessons and students work directly on the internet from e-mails, would be of great help. We are now working on developing a suitable tool for this. Other activities that might be considered automated is student grouping, dealing with the student work, and to some extend even marking student work.

  A closer look into the co-ordination of the administrative routines at the institutions, also would be of great help. Co-ordination towards the students can also be improved, it should look as one course provider for the students. Some of this issues are covered within the Do ODL project.

  One of our greatest challenges in the near future will be to find ways of fully gaining the benefits of co-operative learning which have been widely documented in traditional learning communities, in electronic working environments. We will have to find effective methods of transforming the electronic environment into effective learning communities. This means using resources on increasing computer-mediated competence, both for lecturers and students.

The need of a pedagogy integrating the teaching of computer skills and understanding of the role of informatics in our society has been requested [3]. Further research on the use of computers as a medium for social and learning related communication, and how to guide the students in a process where they learn about the communication medium and expand the communicative skills as a part of the primary learning process are needed.

On the basis of this results, a need for supportive administrative and organisational tools are revealed as well as a need for support for students (and lecturers) when learning to use the tools and support for the learning process in the meaning of a learning environments. A future aim will be building an integrated electronic learning community including necessary support, where the lecturers can play more and more the role of a guide and supporter of the learning processes. Assisting this learning community there should be a supportive administrative and organisational system for lecturers.

Acknowledgements

- I want to acknowledge the lecturer group consisting of Erkki Leikkari, Helsinki Business Polytechnic, Finland, Theodoros Kargidis and Prodromos Monastiridis, both Department of Marketing, Technological Educational Institution, Greece and Arve Pettersen, School of Economics and Business Administration, SEør-Trøndelag College. I also would like to acknowledge Thorleif Hjeltnes, project leader of the Do ODL project, and the rest of the partner group participating in the Do ODL project.

References

Guzdial, M., Turns J., Rappin, N., Carlson D. (1995) Collaborative Support for Learning in Complex Domains (Computer Supported Colloborative Learning)

Johnson, D. & Johnson R. (1993) What We Know About Co-operative Learning at the College Level. Co-operative Learning, Vol. 13. No. 3, 1993

Jurema, A.C.L.A, Lima, M.E.C., Dalmau, M.c., Filho, M.J. (1995) Towards a Pedagogy of Informatics (Computer Supported Colloborative Learning)

Lane, D.R. Computer-Mediated Competence: An examination Of Communicative Competence Using The Modem As The Medium

McConnell, D. (1994) Implementing computer supported co-operative learning. London, Kogan Page.

McCown, R.R., Driscoll, M.P. (1995) Using Collaborative Writing and Problem-Based Learning in the College Classroom (Computer Supported Colloborative Learning)

Shotsberger, P.G., Smith K.B., Spell, C.G. (1995) Collaborative Distance Education on the World Wide Web: What Would that look like? (Computer Supported Colloborative Learning)

Sherman, L.W. A Postmodern, Constructivist and Cooperative Pedagogy for Teaching Educational Psychology, Assisted by Computer Mediated Communication (Computer Supported Colloborative Learning)