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Preface

This book has come out of the work of the European ‘Athena’ Network, which is a network of higher education institutions involved in feminist research and in delivering Women’s Studies and Gender Studies programme.

Women’s Studies has developed a particular pedagogic focus that values the ‘personal’ in the learning community. Feminist epistemology holds a sophisticated critical perspective on the relationship between technology and gender. These two factors combined with the pragmatic constraints of being a poorly resourced academic discipline has made Women’s/Gender Studies slow to take up the opportunities for using ICTs in teaching. The contributors to this book believe that there are productive opportunities for ICTs, they can if used well expand our students’ learning opportunities, as well as provide University teachers with opportunities to develop our feminist pedagogic praxis. If used badly they can restrict learning, and be a source of frustration and exploitation for staff.

We hope that this book is therefore a timely intervention in the developing pool of expertise in this particular academic teaching area. It warns of ‘elephant traps’ and ‘potholes’, as well way-marking the route around at least some obstacles for those who come after. It provides signposts and encouragement for those who want to journey further.

The book focuses on thinking and practice in Europe, and Western Europe in particular. This is because it is grounded in the experience of the contributors. It is a book by and for practitioners. There are no enthusiastic generalisations here from experts who never encounter real students, or struggle with obstructive hardware, less than helpful technical support, and Kafka-esque University bureaucracy.

We believe the experience described here, and the advice that arises out of it will contribute to the next stage of critical debates about the educational uses of ICTs. This is when as educators we move beyond the first stage of the innovation cycle; where enthusiasts and early adopters have set the agenda for debating ICTs and education, to the second stage where more critical users put it into practice and test its potential in real contexts.

The editors would like to express our thanks and appreciation to all the members. Athena expert panels 2a and 2b whose lively discussions and generous sharing of experience laid the groundwork for this book. We would also like to express a special thanks to Rosi Braidotti and Esther Vonk. Their hard combined with a creative vision and intellectual generosity

1. Introduction

One of the outcomes of the Athena-thematic network on Women's Studies is this book *ICTs in Teaching and Learning Women's Studies Perspectives and Practices in Europe*, edited by Sara Goodman, Gill Kirkup and Magda Michielsens. The experiences of the Athena members of panel 2a and 2b were put together with the questions, demands and experiences of other Athena members, and with what each of us knows in the field of Information and Communication Technologies (ICTs), and applied to Women's Studies education. The publication is the result of the intensive cooperation of the core members of the Athena-ICT-network, and of the resonance this activities had with our Athena members, and within our own universities.

Background

When the Athena network was under construction the working themes had still to be established. In the preliminary meetings, in Limerick (1996) and in Coïmbra (1997) it was not difficult to agree that the use of ICTs and multimedia in Women's Studies was a key topic. During preparatory meetings in Granada (1998), in Lund (1998) and in Brussels (1998) we started to learn about the kind of ICT experiments each of us was involved in. In the mid 1990s, everywhere in Europe educational use of internet was only beginning. We - as Athena - wanted to stimulate, to guide, document, and evaluate the way ICTs were being used in feminist educational practices at university level and the meaning being given to the new technologies. We wanted to construct a Network of women using ICTs in Women's Studies courses.

When we started to put experiences and insights together in the ICT-panel of Athena we distinguished on the one hand the general utility ICTs provide for a teacher, researcher, intellectual, feminist, etc, and on the other hand the specific use of ICTs for teaching. Generic uses of ICTs for academic research and management concerned us less, although we need to be constantly aware of constant changes in our work roles and tasks due to political and economic, as well as technical developments. All of these have an impact on our Women's Studies community.

It is typical in our changing global world that looking back to our Coïmbra meeting in July 1997, things look so different. At that moment under-use of, and poor access to the internet by women was much more extensive than it is now. Quantity and quality of equipment in many Women's Studies centres was a point of high concern (and remains a complaint) and it was not easy to find information about Women's Studies on the internet.

Seeing the internet as a content-provider for feminist issues was not then a part of our general attitude.

There is still much to be done in training and supporting Women's Studies colleagues in using the internet for everyday working, teaching, presenting, gathering information, and writing. Most of us who are working with it (as non-specialists) continue to learn ourselves. However, in some cases the technology and its applications have advanced much faster than users' skills, and retraining has to be systematic.

Nevertheless, use of the Internet is ubiquitous in European universities. When you want to know schedules for teaching, addresses of colleagues, backgrounds of authors and their affiliations, if you want a shortlist of authors on a specific theme, if you want to know a precise reference, if you want conference information, if you want to catch a train or a plane, if you want a preview of a future meeting place, etc., your first port of call is the internet. That's life, and it was hardly the case when we were planning Athena.

The way people use the internet as a personal reference library is something hardly worth mentioning. It seems to be transparent, and in university surroundings it is only worthy of note when it fails. Maybe this is unfortunate since often the full pleasure and power of it remains under-used. But, internet user ability is a matter of self-evidence and/or private self-knowledge. Only in formal courses for university teachers, is explicit reference made to the skills one has acquired in the ICT field. Outside such a course skills seem to be taken for granted. During the 5 years of Athena, internet skills have changed from something special (and seen as skilful) in the hands of a few, into a generic communication skill not so different from writing or using a telephone.

In our Athena ICT panel the focus was put on the way ICTs are used in Women's Studies courses. Not so much the way teachers are using ICTs in preparing their courses, but on the triangle between teachers / ICTs / students. How do we use Information and Communication Technologies in our interactions, teaching, communications, papers, instructions, assessments etc., with our students?

From the beginning the core of the Athena ICT panel members consisted of women who had experience in distance education, with or without the internet, and recent experiences in European projects delivering distance education supported by internet modules. They had run summer schools delivered by internet, local courses delivered via the internet, and campus courses supported by the internet. It was fascinating to see, during the years of work in the Athena group, how new experiences and new courses were developed building on these early experiences. What was exceptional in 1997 became regular practice in 2000. Step by step, as part of a global development in university education, courses were delivered by - or supported by - ICTs. We grew into a common frame of reference, a common language; we exchanged teaching models that helped us compare our experiences.

Funding

Let's not be naive and think that we are using the internet in our courses because we are so unique and progressive and oriented towards especially good education. We are all that, but more convincing is the fact that it is in the air, that we are implicitly or explicitly pushed into

it, and that there is higher education policy all over Europe to stimulate the use of ICTs. All over Europe the ministries of education and university authorities have earmarked money for pilot projects using innovative devices in higher education. In most cases the innovation was mediated by technology. In several cases the Women's Studies teachers involved in the Athena ICT panel were carriers and participants in projects financed by such innovation projects. Often the money that is put into pilot projects is called 'seed-money': the offspring has to be cultivated and cared for later on with regular finances. During the work for this book we cherished our pilot projects and put a lot of effort into regularising /mainstreaming the results that came out of it.

The authors of the book all started long before the EU summit in Lisbon, with its massive stress on e-technology and e-learning. However, we want to highlight the landmark that was set in Lisbon. Every one who is in a position to claim access to (more) e-facilities should refer to the documents of the Lisbon treaty and make good use of them. All the documents are on the internet, in all the relevant European languages. This is fundamental for the future of education in Europe.

In our book we try to describe how the authorities in different European countries, at different levels, are supporting the use of ICTs. We want to bring ICTs to the attention of Women' Studies teachers, to encourage more feminist teaching to use all the possibilities created by the extra money available for innovation.

This can be done in two ways: by writing applications and seeing them honoured; and/or by using the results that came out of other projects.

Most of the projects (in every country and at the European level) were and are financed on condition that the results are applicable to other domains than the small experimental garden they were developed in. And almost every project has a duty to disseminate the results to a broader public of potential users. Studying what is happening in the sphere of educational innovation at one's local university could mean a leap for Women's Studies e-teaching.

Feminist Pedagogy

Women's Studies has developed a particular pedagogic focus that values the 'personal' in the learning community. Feminist epistemology holds a sophisticated critical perspective on the relationship between technology and gender. These two factors combined with the pragmatic constraints of being a poorly resourced academic discipline has made Women's/Gender Studies slow to take up the opportunities for using ICTs in teaching. The contributors to this book believe that there are productive opportunities for ICTs, they can, if used well, expand our students' learning opportunities, as well as provide university teachers with opportunities to develop our feminist pedagogic praxis. If used badly they can restrict learning, and be a source of frustration and exploitation for staff.

Feminist pedagogy has a tradition of about 30 years of scholarship. It is questioned at the moment by new possibilities in education and by the way regular university didactics are absorbing the new technologies and systems. In the Athena ICT panel we all were convinced that we want and use a lot of interactivity in our courses, that we want students to take responsibility for their own learning process, that we need to facilitate peer learning, that we want to learn together with the students (content-wise and technology- wise). We become facilitators in a business that is also, for us, new.

These principles do not conflict with the driving forces of what we, for many years, have been doing in Women's Studies classes. However, writing in the field of open and distance learning(ODL) via the internet often uses a constructivist perspective, which does not seem too different from our feminist perspective. In the chapter in our book on "Feminist pedagogy and ICT", we scrutinize what can be called specifically feminist in the use of ICT in Women's Studies classes. Discussing this and writing about it, gave us a good opportunity to update our ideas about feminist teaching in general. Many years have passed since we had to fight for respect for personal experience in classes, for situated knowledge, for qualitative research methods, for non-authoritarian teacher/student relations, for action oriented research questions, for gender sensitivity in science. We must not underestimate what we have gained, and continue to repeat a message that students hear now in most of their regular classes. Without being over-optimistic, we have to take into account the fact that university didactics have changed, that students have changed, and that we have to re-establish, if possible, the specificity of our position.

The outcome of this is the use of feminist principles for better education, with good communication between teacher and student, with strong learning goals, and a critical stance towards technology that is imposed on us. After 30 years of involvement in critical pedagogy and feminist pedagogy some of us have been happily surprised about the easy way a feminist position in e-education was congruent with what all the 'regular' theoreticians now call 'good teaching'.

We have also learned that teaching via the internet certainly does not help us save time. It is a technology that needs more personnel, not fewer.

We also see some other specific feminist dangers:

- the danger of enlarging the distance between feminist teachers and feminist students;
- the danger of over-commitment of teachers: feminist teachers are eager to give too much;
- the danger of over-commitment by students: feminist students are eager to do too much.

We also saw the feminist gains:

- constructing a feminist cyber community
- linking women students and researchers to a feminist digital symbolic capital;
- changing intellectual lives for teachers and students as members of a global feminist and scholarly world;
- living, thinking, writing in tune with that world.

Women and ICT

Women as a group don't have a history of highly technical jobs, education and training, and not even of a high level of sympathy for technology. Recently this fact has received much interest, because of the perceived need in the developed sectors of the world for a highly e-skilled labour force. These countries really can use computer minded women. Efforts are made to convince women that they are able to do ICT-related work, that they are accepted

when they do it, and that they will enjoy it. Everything in these statements remains to be proven, but efforts are being made and the promises are high. In the book we give an overview of the facts and the figures about women and ICT.

Besides this factual information an interesting discussion goes on about what has to change to convince women to have a career in which ICTs play an important role. One point is very simple. ICTs have invaded every profession. So, if women want to enjoy the fruits of the fact that during the last 20 years they (as a group) have bridged the educational gap between the sexes, they urgently need to be skilled users of ICTs. The segregation of the labour market (women doing or studying one kind of thing and men another) will no longer give women niches where they can hide from technology. They will simply end up as unskilled low paid ICT users rather than highly skilled highly paid ones.

Women have gained equality with men in many ways; they are highly skilled, have degrees, go for careers in the fields they are trained in through their secondary, technical and university education. This has been happening over the last 20 years and now slowly the results can be seen. In social work, in nursing, in the arts, in childcare, in libraries, at reception desks, women are standing in front of computer screens. Women have to start accepting (if not loving) computers, whatever branch they are trained or working in. There is no place to hide from bricolage and logic. Girls have to forget that it isn't their world. Everybody (at least in the developed world) lives in a cyberworld now. Everyone who is not flexible on this point excludes him/herself.

In the 1990s the dominant paradigm used to discuss the alienation of women from technology and the computer world concerned the different learning styles of boys and girls / men and women. This discussion produced interesting insights, and in the book we go deeper in to these. In what ways do women learn differently from men? In what ways does computer education respond more positively to the cognitive styles of men than of women? Are differences in styles or learning types between the genders more convincing than differences in styles within the genders?

An impression of the polarization goes along the following lines:

- women prefer to see the global scope of what they are learning;
- women prefer to go step by step, systematically;
- women don't initiate experiments and they do not like them;
- women prefer to use their own familiar language;
- women want to be included in the culture in which they move;
- women want to communicate and to socialise;
- women don't have computer experience;
- women have to overcome a negative attitude towards computers;
- women learn easily from other women;

- women want to feel safe while learning.

This all sounds like common sense: we do recognize aspects of these statements in our students and in our selves. And, importantly, there is nothing in this statement that claims that women are born with an antipathy towards computers or born with a tendency not to engage in experiments. In other words, the gender perspective on learning that uses the idea of learning styles sees these styles as acquired customs of learning. The reasons why a certain type of learning style is more often used by girls and by boys are complex. All the insights we have concerning gender specific socializing by society in general (media, public messages, churches, narratives among others), and by parents and teachers need to be considered in the elaboration of how the learning attitudes of men and women differ.

Ideas about learning styles have been useful in inspiring teachers (at all educational levels), and certainly feminist teachers to take the habits and wishes of girls and women more into account in their didactic approaches. However, not every man has the same learning style and all educated women have been through a (male- biased) educational system. What is the use of the concept of 'gendered learning style' if we think about differences between boys, between girls, between social classes, between cultures, between generations? Feminist and other critical educational scientists believe that we have learned enough from the 'learning style' approach and that we can move on. We shared that insight while developing and running our ODL-feminist courses and researching our e-teaching styles.

The paradigm of learning styles was replaced by a paradigm of learning settings. The focus became on (optimising) the circumstances for learning and no longer on behavioural or personality characteristic of the learner.

Besides studying the learning styles of students or best settings for e-learning for our students, we also considered the best ways in which we, as teachers, can share our knowledge and experience. We have been retraining ourselves, in certain ways, during the last 5-6 years, while we were driving ourselves towards new practices. Women's Studies has been a university activity in which female teachers have put a lot of energy. Many of us have been strongly motivated to engage in the adventure of new teaching practices. There was little systematic knowledge to build on, but this stimulated creativity. It prevented us to indulging in easy tools and simple checklists. Techniques had to be invented on the fly, while writing and developing courses. This was SO refreshing. For most of us, our involvement in ODL via Internet, or using ICT on campus courses, brought a shared seriousness about university teaching that was very rewarding. Many of us had never before reflected on our activities in the teaching process, and our students in the learning process, with the precision that we were using in deconstructing what we knew (live teaching) and constructing what we wanted to achieve (distance learning via the internet).

In the book we look closely at the ways teachers are trained to use new media. We also share our experiences as e-teachers. Several personal reflections on the way some of us looked at ourselves while auto-constructing a new 'me' as an e-teacher give an honest picture of the process of adaptation to the new role.

Virtual learning environments and cases studies – good practices

At this time (2001) in European higher education we are confronted by policies encouraging us, and sometimes almost coercing us, to use ICTs. So even though the members of Athena panels 2a and 2b have been seriously and enthusiastically engaged with these new teaching technologies, we have also been aware that there is powerful pressure to use these technologies and that most of the time the policy battle goes on above our heads.

We argue that Women's Studies teachers should try not to be the passive receptors of what is decided at university or national levels but rather work actively with the issue of ICTs in higher education policy and teaching.

When we discuss the case studies the following questions are central.

- Do we know what we need?
- What is an electronic or virtual learning environment?
- What are the criteria for a good e-learning environment ?
- What do you have to know to use it ?

In this book we give an in-depth presentation of and reflection upon a number of e-learning case studies. One of the important benefits of working together in the Athena panel 2a and 2b, was that it gave us a chance to critically reflect upon and analyse our teaching experiences using ICTs in a group of university teachers who were enthusiastic, knowledgeable and critical in their use. Our discussions and seminars furthered our knowledge and we were able to follow developments in a number of Women's Studies courses over a period of three years. These case studies represent a range of ICT use in Women's Studies. The first two cases we discuss are internet-based distance courses in Women's Studies. One is a Swedish university consortium project including Lund University, Umeå University and Linköping University, and the others are a Belgian inter-university project including the University of Antwerp, University of Ghent and University of Brussels. The next cases are from the University of Utrecht, Leeds Metropolitan University and the University of Sunderland. These cases discuss the use of ICTs in campus-based Women's Studies courses. The Vifu (www.vifu.de) case study is based upon the virtual part of the first International Women's University (Ifu) that took place in Germany, July - October 2000 under the theme "Technology and Culture". The book will also include contributions on e-learning at the University of Rome and at Universidad Complutense De Madrid (U.C.M) by Myriam Trevisan and Fátima Arranz Lozano respectively.

Laurence Claeys and Magda Michielsens present the case study of the Belgian Stiva-project "Gender and Politics". The Stiva-project includes three courses: 'Feminist Theory' (taught by prof. dr. Magda Michielsens, University of Antwerp), 'Equal Opportunities' (taught by Alison Woodward, University of Brussels) and 'Women and Media' (taught by Frieda Saeys, University of Ghent). These courses are part of the Advanced Academic

Curriculum in Women's Studies, a one-year full time post-graduate course, existing since 1994, and presented annually . Students who do not have a university degree can also follow the courses although they can never obtain the Women Studies post-graduate degree. The project was financed by the Ministry of Education, and co-financed by the three participating universities.

One of the central aspects of the "Gender and Politics" project has been the interactive and mutual development of the courseware and the course, so the courseware was developed in the direction needed for the specific course. This gives room for more flexibility in planning and more creative possibilities for course development. In particular, this project focused upon adaptivity in the courses. In Women's Studies courses often have a diverse population of course participants. In this case study, course participants included: unemployed people who would like to work in the Equal Opportunities sector; teachers and school directors who are taking a sabbatical; people who follow the courses because the content is related to their job (women's organisations, those responsible for equal opportunities in government departments); students from different disciplines who take these courses as optional course; and teachers who were not on sabbatical. In campus-based courses the teacher can still fill in the gaps in knowledge of particular students and can resolve misunderstandings as part of the teaching process, although she can never individualize the content. Authoring Course Ware (ACW) was used for developing the Women's Studies course and resolved this problem. With ACW courseware, the course will adapt to users with different backgrounds, prior knowledge of the subject and different learning goals. Different course paths are created for different students, depending on their level of education and background knowledge. This makes the course richer and more flexible so that different students can get personalized content and a personalized order of presentation.

The Swedish case study is analysed by **Sara Goodman**. The **Centre for Gender Studies, Lund University** gave the internet-based distance course "Feminist research on the Net and a consortium including **Lund University, Umeå University and Linköping University** gave "Gender, Society and IT". During the 1990s within the Swedish University system there was strong encouragement both via leadership and funding to create more distance courses and educational programs via the Internet. The Lund Centre has had an active interest in exploring and using feminist resources on the internet. At the same time the Centre has been increasing the number of undergraduate courses. The University's willingness to support these courses coincided with the Centre's interest in broadening the undergraduate program and its curiosity about working with new media.

Important goals for these courses included using ICTs reflexively, and to discuss feminist research on ICTs. The courses required little ICT competence and some of the students were new computer users. The website for the courses was put together by Lund's teachers and included WebPages, a course calendar, a bulletin board café for the entire class and special bulletin boards for discussion groups. Additionally the courses used email, a chatroom and the students papers were published electronically. New users gained their competence through different class assignments and the teachers learned as we developed the courses. The courses used technologies progressively starting with simpler applications and giving the students time to familiarize themselves with the different medias of communication used in the courses. Both course emphasized developing a critical use of internet resources.

The written evaluations of these courses were quite positive particularly of the part of the course concentrating on research on IT and social change. The course participants were a mixed group, which included regular university students as well as others who were using distance courses as a way to access university education for the first time. Another group consisted of women who were establishing themselves in the workforce or who had already worked for some years. The course participants' evaluations of the course as a whole were positive and they particularly liked the IT activities.

The teachers' evaluations noted that the course required intensive periods of work and at times there were technical problems. The flexibility for students in being able to study from many different locations required a much more structured planning by the teachers. The work seemed to take more time than the teaching team had expected perhaps due to the extent of individualized communication and in part because of the time spent monitoring group discussions. The course development was a new pedagogical challenge for our team of teachers and the process also gave us more insight into our "normal" teaching.

Women's Studies at the Faculty of Arts, University of Utrecht, Netherlands, is represented in a case study of a three-year project that ran from September 1996 until August 1999. Mischa Peters presents this project which had the aim of introducing information and communications technology to MA students in on-campus Women's Studies courses. Women's Studies at Utrecht received funding from the Dutch Ministry of Education to improve the quality and 'studiability'² of higher education. A goal of the Utrecht project was to improve teaching in relation to the issues of diversity in Utrecht's Women's Studies programme, and the limited amount of teaching time available due to University budget constraints. Teacher-student contact at the time was limited to two-hour classes twice a week. In order to improve and stimulate communication between students outside of the classroom setting, an electronic bulletin board was introduced as an asynchronous discussion-platform. Two years of use of the bulletin board, indicates that students needed to be required to participate in the bulletin board discussion in order to be very active. However once the students were actively involved, their evaluations indicated that they found the bulletin board to be a relevant complementary tool to classroom discussions. Utrecht has also developed a 'Women's Studies information guide', which incorporates both the use of 'old' places of information such as libraries and the women's archives and 'new' places such as the World Wide Web

Catherine Euler reports on her use of an email group to support the teaching of an MA in Violence, Abuse and Gender Relations at **Leeds Metropolitan University** over the period of a year and more recently using one to support the teaching of a course on the same topic at the **University of Sunderland**. At Leeds Metropolitan University an email group was used for over a year. Her discussion in our forthcoming book indicates that email groups can work even in a course discussing sensitive issues but that it is important to establish trust and that activity in the groups takes time to evolve.

¹ By Myriam Trevisan and Fatima Arranz respectively.

² With 'studiability' they meant the way students are able to study and learn from the material offered.

Euler considered a bulletin board platform but found that while her university was interested in increasing what it called 'flexible learning', it did not offer resources such as a server to support the use of the bulletin board platform. About half of the students had not used email before participating in the course so it was important not to require a sophisticated level of knowledge of ICT. The course was taught in a traditional way, and the email group was originally conceived simply as an add-on so that there were no collaborative online assignments or formal assessment of online work. The email group was there to pass on information about assignments, scheduling changes, upcoming conferences, calls for papers, job opportunities, meetings of a feminist research methods group elsewhere in the university, the tutor's availability for tutorials, to forward on news about violence against women from different parts of the world, bibliographical references or useful hyperlinks.

Euler follows the growth of communication in the egroup at Leeds Metropolitan University. This form of communication was used in a non-assessed, non-judgemental manner without effort from the teacher to keep students focused on a particular topic. For her students "information interactions were woven together with the more emotive exchanges, and this weaving together contributed to the learning outcomes."³ While it is recognised that learning has an emotional component, the "need for learning" that "arises from discrepancies between knowing and experience" is particularly acute for feminist researchers-in-training".

The Virtual International Women's university (Vifu = Virtuelle Internationale Frauenuniversität) was the virtual platform of a three month's postgraduate university (Internationale Frauenuniversität = Ifu) programme that took place as a face-to-face event in summer 2000, in Germany and is presented by **Mara Kuhl**. Vifu has been providing information, enabling virtual contact and virtual community and offering documentation. This case provides an excellent illustration of the crucial role that women friendly ICT design has in enhancing women's use of technology for learning. It shows that ICT when well designed enables intercultural learning. Moreover it gives some hints about the differences women make when we are involved in software engineering and design. Nearly 900 participants and about 230 lecturers came from over 100 countries to participate in the International Women's University (Ifu) They worked in interdisciplinary groups in six project areas: work, migration, city, body, information and water. To give an impression of the heterogeneity of ifu: 60% of participants came from Africa, Asia, Latin America and Eastern Europe, the rest from U.S., Austria, Canada and West Europe. After Ifu was over and all participants, lecturers and organizers dispersed back to their homes across the world, the vifu team went on to incorporate project work presentations, homepages, protocols, articles, films, 'fotogalleries', pieces of art etc. that were the results of ifu. The discussions on mailing lists and the forum turned to new subjects like planning the future of ifu. New networking mailinglists emerged. Today there are over 60 mailing lists and, from their names it is clear that at least half of them serve for current scientific networking and cooperation. These case studies offer different examples of the integration of ICT's into Women's Studies. The two internet-based distance course cases illustrate two different ways to develop courses.

³ Learning' is here defined "as the transformation of experience, through reflection, conceptualisation and action." (As per Owen, Christine; Pollard, Jennifer; Kilpatrick, Sue and Rumley, Diane (2000) *Electronic Learning Communities? Lessons from the Ether*. Centre for Research and Learning in Regional Australia, Faculty of Education, University of Tasmania. <URL: <http://pandora.nla.gov.au/parchive/2000/Z2000-Aug-14/www.crla.utas.edu.au/discussion/d6-1998.shtml>>). I think that this transformation often involves the use of emotional energy.

In the Belgium case, there are resources to work closely with the courseware developer and to have the courseware tailored for the particular courses. Existing courses are redesigned to be used as distance courses. In the Swedish case, standard and/or free programs were combined to create the courseware and new courses are developed specifically for use as internet-based distance course. In the case from Utrecht University, a special pedagogical project is supported to use ICT within regular course. The project is funded and the university has supporting resources and standard courseware platforms. Whereas in the case at Leeds Metropolitan University, ICT is a course add-on which has no particular budget or available resources from the university. In the final case, Virtual International Women's University, ICTs are used to facilitate information and communication in a three month summer university and a ICT team keeps the website going and available for international communication among courses participants in the year following the course. It is the diversity of the case studies that makes them interesting. By presenting diverse cases which represent a range of experiences, resources and uses of ICT, we hope that the book will be accessible to women study teachers and programs with a variety of needs.

Methodology

Out of all this material and personal experience we distilled a methodology: a step by step manual with advice for the use of internet and other forms ICT in Women's Studies teaching. We point to the dangers and chances for failure. We highlight the new possibilities and indicate ways to gain the highest profit from the human and financial investments made.

In the book we exemplify the kind of analyses that are necessary before one can start designing an e-course:

- needs analysis
- user analysis
- technical analysis
- resource analysis

After having formulated the right question, one can decide what kind of e-course is a reasonable goal. Then, one can start to dream about how the course should look like and plan how to achieve the goal.

An e-course not only has to be written, designed, put into an instructional design, put on the internet, it also has to be maintained, supported and updated. We offer an annotated checklist of points to keep in mind while teaching a course that relies heavily on ICT.

Looking back while we are going further

We have reached an important moment for feminist pedagogy. During the 1970s and 1980s feminist pedagogy avoided engaging with educational technology. Its interest was focused on the human interactions that took place in the face-to-face classroom. It drew from a Friirian tradition of social learning for political liberation. It showed little interest in instructional design. This meant that Women's Studies and Gender Studies were not well placed in the 1990s to make good use of ICTs in teaching. This is changing we hope, and we want our book to contribute to this change.

Those feminist teachers who were enthusiastic or even just curious to experiment with aspects of ICTs have demonstrated both how it can be used to support liberatory aspects of learning, as well as illustrating its weaknesses when the technology is allowed to drive the pedagogy. In our research we have discovered that this field of literature: instructional design, learning theory etc. like most others is a mixture of the turgid and banal, the insightful and the challenging. It is a literature that feminist teachers need to engage with much more actively than has happened so far. As we have engaged in it, it has become clear to us that it is also a field that is strongly in need of the feminist perspectives and analysis that we could bring. We also find ourselves in the company of many allies who are also critical enthusiasts for the potential of ICTs in education: those who are concerned with the use of ICTs for development education, or the education of the socially excluded. We are not the only educational movement that has come late to the technology, and with many valid worries about it, but at the same time we have an increasing excitement for what it can offer us for our particular pedagogic and political aims.

So what we want to do in the book is share that growing excitement. We hope to have been able in our book to transmit the excitement of doing it, inventing it, writing beautiful websites, e-manipulating pictures, looking for illustrations, previewing the itineraries students might choose to go through the material, responding to their remarks and questions. And there was the excitement and despair of students in front of the (sometimes) unwilling technology. And ours from time to time...

2. The Context – Women’s Studies and ICTs

This chapter provides a background and context to some of the changes occurring in university education and in Women’s Studies. An important context is the ongoing dialogue about and the development of feminist pedagogy. Women’s documentation centers and libraries have played an important role in the development of the use of ICTs within Women’s Studies. The chapter finishes with a discussion of the current use of ICTs and multimedia in teaching and learning.

Feminist pedagogy - Magda Michielsens

The arrival of the use of computer-based communication, new information technologies and the possibilities of on line teaching stimulated a trend to re-think the principles of university teaching. New tools cannot be simply added to old practices. In thinking about the aims of courses taught with the help of ICT, and about the added value of the new paths, reflection about the whole teaching process reaches much further than simply the use and selection of technology. This is the case for universities as a whole, and it is no different for women's studies.

At the Athena ICT-expert meeting in Noordwijk-aan-Zee (March 1999) Jalna Hanmer asked the question: When we are using ICT in our women's studies courses how do we remain faithful to the basic principles of feminist teaching?

Because, some of us have seen the possibilities of Internet to support courses through websites, we see the gains from distance learning for many women who have schedule and mobility problems and we want to enrich our courses with those technical possibilities. But, no device ever revolutionized teaching unconditionally. We always have been critical of

mainstream university teaching, so that we also do have to double-check new techniques. We don't need to be 'a priori' against innovations simply on the grounds that most women don't love technology. And, we don't need to be 'a priori' pro, because simply we want to contradict the stereotype that women (or women's studies) are a-technological or anti-technology.

To answer Jalna's question about the compatibility of ICT with the principles of feminist teaching we have to scrutinize those principles, starting from their origins and thinking them through to the most recent developments. It is not an easy analysis, because we have to take a historical view the early principles of women's studies, and then check what is left of it in the many women's studies courses that are taught at present (2001) all over Europe.

For teachers and students women's studies started as, and always continued to be, a common enterprise of the transformation of knowledge. Women's studies represent a transitional phase in the construction of knowledge. Women's studies is committed continuously to screen knowledge and research in all the phases of the process, for gender dimensions. Screening and correcting, alongside the construction of less biased insight, is the mission of women's studies at the universities.

Given the acceptance of women's studies into academia, the stakes have got higher and higher. Still, in our courses, we go into the (pro/contra) feminism discussion, we are transmitting to new generations of women our skills as researchers and intellectuals; we engage in joint work, we propose different perspectives. But, it is not longer a project; it has become a discipline with formal results and approved methods.

In the early days of women's studies (1970s) students and teachers engaged in an educational process in which they (we) wanted to change knowledge and to change their/our intellectual environment. It was about changing the societal position of women, but also (and not least) about inscribing women into science, into culture, into the academia.

The principles of feminist teaching were strongly influenced by the social dynamics of the period in which women's studies in the U.S. and many European countries emerged: left wing students' movements inside the universities, feminist movement outside the universities, the flourishing of so called new social movements. It was a period of democratisation of higher education: more students went to the university, the new student population included more girls than ever, and a new generation of faculty members was employed (see e.g. Bourdieu, 1984; Dueli Klein, 1983).

Women's studies developed in a climate of social movements, democratisation, close contact between mature students and young faculty. It was a period of debate about methods in the social sciences and humanities. It was a period of joint revolt against old-fashioned professors and their teaching methods. Not all the social movements of that moment pointed in the same direction, and feminism and women's studies certainly represented (together) their own specific claims. Contacts between the women's movement and women's studies in these early days were not problematic: working together was the device, often the same people at different places.

Women's studies-women had chosen to work in the university, in the academia, without subscribing all the characteristics of it: deconstructing the pan-male scope of knowledge was on their (our) agenda. A passion for knowledge, for understanding, and for doing research

was the driving force, not academic routine. Career or status ambitions were not a part of the game at that moment. Women's studies turned out to be more than a passing critical movement in academic life. It developed into a very revealing scientific endeavor about the transformation of knowledge.

A typical characteristic of the women's studies classes at the universities was the comparable situation of students and teachers: teachers of course had more background, more research skills, but they too were new in exploring scientifically the position of women, the patriarchic dimensions of society and of philosophy, and the phallic organization of the overall libidinal economy.

Those were the days ...

Research about the situation of women was not only done within the universities. But, it was within the universities that it was called women's studies, and in using that term now, we are referring to both teaching and research about gender on an academic level. Originally the difference between the work done in and outside university was not so big. It is now.

In the early days of women's studies

- teaching staff and students were engaged in the same endeavor;
- this implied horizontal relations between staff and students;
- teachers and students shared a common mistrust or critical attitude towards established knowledge, in which often there had been no place for women;
- together students of women's studies and teachers in women's studies were working for a societal change for women;
- in women's studies, experience was considered as an important source of information, given the fact that there was very little documentation about women's experience of life.

This horizontal relationship was easier to handle in the early days than it is now, because also teachers had very little experience and knowledge about women as a research topic. Also the teaching practices were invented together, starting from the shared insight that only transmitting “knowledge” (mere information) would not result in illuminating the “Woman’s Question”, or in changing women's lives.

On the practical level, we saw classrooms in which the following elements were common practice:

- working groups - instead of, or as a complement to, lectures;
- learning from experience; taking one's own experience and position serious and analyzing it as a source for further learning;
- holding always a perspective on social action;
- looking for the political consequences of obtained insights;
- flexibility of learning forms;
- spontaneous motivation to learn and to know;
- seeing the teacher as not really a member of the establishment;

- students and teachers together risking a double exclusion from the established academic structures ;
- themes included questions about to sexuality, identity, power, multiple levels of oppression, patriarchy. The quest for a new paradigm in education and knowledge would remain incomplete if the experiences and perspectives of women were not taken into account more fully;
- struggling with a interdisciplinary approach;
- establishing groups of women as learning communities or intellectual communities.

Those characteristics were seen as representing the nucleus of feminist pedagogy. You can find them summarized here and there in a few keywords in many feminist.

Before we go into the discussion about the use of ICT as a tool in feminist pedagogy at the university, we must clean up our desks and our minds and try to be clear what we mean by feminist pedagogy in the early days of the 21st century. What are we keeping of these early principles, now that women's studies is an academically accepted approach and that we have come far in our process to transform knowledge. And, be it with the help of feminists or not, mainstream university teaching itself has changed a lot in recent years.

Times are a changing ...

Although the age of the students and of the teachers has changed, although universities have changed, although political activism in the streets and in the broad political field has changed, although the ambitions students have changed a lot, academic texts about the principles of feminist pedagogy have NOT changed so much. This remark is not intended as a compliment. There is a real danger of sounding old fashioned if you continue to speak of self-expression, experience driven learning, conscious-raising exercises etc. . Those are the slogans of the 70s. What, however, is NOT old fashioned is the fact that feminist pedagogy is about constructing 'emancipatory classrooms'. Feminist educators always have been committed to implement and research a liberatory pedagogy - and until recently this certainly was not the general atmosphere that prevailed in universities (Mauthner).

Melanie Mauthner wrote an inspiring text about the aims of a feminist pedagogy, based on the work of writers in this field (Morley 1999; Walsh 1996; Lather 1991). It can be briefly summarised as follows.

Feminist pedagogy aims:

- to enable students to develop conceptual tools;
- to create knowledge that fosters resistance;
- to encourage students to question and challenge;
- to draw attention to the effect of power relations in the classroom and on learning ;
- to cross boundaries and demarcations of power between students and teacher;
- to heighten student awareness of the politics of knowledge and knowledge construction in specific disciplines; for example, to see the vested interests implicit and often hidden in certain paradigms and epistemologies;
- to encourage students to challenge dominant theoretical frameworks in relation to their own research questions;

- to develop critical thinking and deep learning rather than surface or strategic learning;
- to develop independent judgement, communication and analytical skills;
- to motivate and inspire.

She recaptures these aims in four steering principles, that inspire all feminist activities in higher education:

- empowerment
In feminism the word 'empowerment' seems (since the mid 1990s) to replace the 'liberation' discourse of the 70s. Of course it is not exactly the same: there is a shift in accent from the struggle to reach an ideal state of 'liberty' and 'freedom', to a situation where one acknowledges that one always lacks freedom and power, and resources, but can obtain more power, more self-confidence, more skills and more resources.
- reflexivity
In feminist pedagogy there is a permanent attention on the sociology of knowledge, on a macro, meso and micro level, included in everything what you are doing.
- power
Critical and empirical epistemology and the micro-physics of power are introduced into the classroom.
- participation
Whatever form the course takes (because feminist pedagogy does not mean that the course only uses discussion or workshops) the students are invited to participate in the process of producing 'knowledge'.

These principles can be used with all kind of students (mature, very young, in an obligatory course, with very motivated women's studies students, in a life-long-learning trajectory etc). They can be used with all sorts of content.

Women's studies also represents an interdisciplinary endeavor and this demands special didactical approaches. An other point that is very important for feminist women in the university, is the fact the women's studies is offering an intellectual community that include the whole world. Although the traditional feminist movement in every country hardly exists anymore, there is a worldwide virtual community of thinkers, researchers and students in the field of women's and gender studies. It is very important for feminist pedagogy that new students are introduced into that community of practice.

Given all the popular publicity about the World Wide Web, email, chat rooms, discussions groups, interactivity, information society and fast interconnected computers, the hypothesis is that education supported by ICT will promote empowerment, reflexivity and participation. The only things that could lack working with ICT are the (in the ideal case) warm In this books the high aims of web-supported learning are continuously confronted with the even higher aims of feminist pedagogy.

The use of ICTs in feminist research and documentation - The global network of women's documentation centres, libraries and archives - Annamaria Tagliavini

“Considering that without documents women have no history, and without history women will be accorded little respect in the present or in the future, therefore collections of archives, family papers, oral histories, and artifacts should be preserved to document and to honor the contributions of women, and information about women should include statistics, directories of women's organizations, and bibliographies of research on women”

This quotation from the Information Statement was issued at the end of an important world conference which was held in Boston, Massachusetts, in 1994, on the promising theme of “Women, Information and the Future”. It is both a summary and a programme: it crystallizes the main points of work already done, by stating unequivocally the importance of honouring the lives of women and their contribution to culture and society. It is also, however, a forward-looking document of plans and activities that are still to come: archiving the lives of women has become a top item on the world feminist agenda. As such it has also undergone a profound movement of both renewal and professionalization in recent years.

In some ways, the women's movements have acted all over the world as a great stimulus for gathering, documenting and preserving the memory of and narrating the lives and activities of women. In the early part of the 20th century, a great deal of those initiatives were the result of donations, legacies or gifts bequeathed by generous, political-minded and well-off supporters of the women's movement. Thus, the oldest women's library in fact has been born in Barcelona in 1909 the Francesca Bonnemaison, then the Fawcett appeared in London in 1926, the Marguerite Durand in Paris 1931, then the IIAV in the Thirties, and the Arthur and Elizabeth Schlesinger in Boston in 1945. These are very early examples of what was to become an established feminist practice.

Historically, most women's groups and feminist collectives of the 1970's in Europe and the United States gathered almost immediately around projects of archives or documentation centres. Spreading counter-information has always been an honourable feminist tactic. Despite differences of geographical locations and cultural/political contexts, they work in the direction of disseminating women's culture, and establishing connections among different and sometimes fragmented women's realities. They are both points of concentration and of distribution of material, and as such they double-up as meeting centres, coordination points and general information desks for activities related to the status of women.

Much ink has been spilled and a lot of systematic bridge-building has been going on by the time we can read the Draft resolution of the Knowhow Conference on the World of Women's Information held in Amsterdam August 1998:

“We the 300 women and men from 83 countries and seven continents gathered together represent the global community of information specialists, librarians, archivists, academics, politicians and activists

in the field of women's information. The mission of the KH Conference is to improve the visibility and accessibility of women's information on the global and local level. This includes informations for and by indigenous women, migrants, refugees and lesbian...Women of all nations should work together to share information and support each other's work to document the world's women."

Boston and Amsterdam have been two crucial milestones in the construction of the global network of women's documentation centres, archives and libraries. Faithful to the motto: "think globally, act locally", the Know How Project aims to turn this network of women's libraries into an international non governmental organization supporting women's culture all over the world. On top of the continuity of aims and vision and the renewed energy that is invested in the project of archiving the lives and work of women, two other points are noteworthy if one compares the Boston 1994 to the Amsterdam 1998 declarations. Firstly, the concept of 'women' has grown to encompass a fra broader range of categories, which indicates that 'diversity' has become a common political and professional practice. This broader vision has also meant that this project has received enthusiastic support from international organizations like UNESCO and the World Bank which, in very different and at times politically opposite ways, give top priority to issues of development and of diversity. The second aspect concerns the role of Information and Communication technologies (ICT's) to the practice of librarianship and to women's documentation centres. Let me expand on this.

The Know How Conference funded among others by UNESCO has seen the culmination of a process that historically accompanies the development of the women's movement from a set of informal and loosely organised groups, to an increasingly integrated and professional entity. The aim is to share knowledge and expertise between women's information specialists throughout the globe. Its mission has been to improve both quantitatively and qualitatively the standards of women's information services at the local and global level. One of the major goals was committed to creating a forum where ideas and experiences from the South, North, West and East could be equally represented, compared and discussed.

One of the most important outcomes of this agenda-setting conference has been the *Mapping the World* project, a comprehensive overview of women's information facilities, their work, their goals, their achievements. The result is a complete list of 167 websites related to women's organisations all over the world, which can be consulted online(<http://www.iav.nl>).

The data provided by these websites represent an enormous amount of published and unpublished materials, an extraordinary symbolic capital . This was often collected in conditions of extreme hardship and political opposition, by women who had to fight against every kind of discriminations. It was also gathered in a relatively short span of time: less than one century.

All the information provided pays attention to the documentation of present situation and past traditions. It does not confine itself to traditional areas of knowledge and expertise, but it attempts to honour the great variety of female talents and the multi-faceted nature of women's intelligence and creativity by archiving and promoting also different kinds of endeavours: art, music, writing, cinema, theatre, visual arts.

Moreover, the global network of women's libraries and documentation centres keeps up the proud tradition of both female hospitality and of feminist efficiency by offering reception space and the use of meeting and consulting facilities. Post-academic teaching and training also score very high on the agenda, which means that women's libraries employ and gather not only information specialists, but also a very large range of women professionals. For instance, they foster feminist and female organizations of psychologists and social workers and make their services accessible to other women. They also open up their spaces to writers, scientists, scholars and historians at local and global levels. Furthermore, they offer internationally recognized shelter to women's groups living under oppressive regime and to minority groups everywhere.

As if this rather impressive array of social, cultural and didactic activities were not enough, in recent years libraries have undergone a profound transformation. Together with collection of books, periodicals, self produced materials, libraries and archives are in recent years become crucial key actors and players in the world of ICT- Information Communication Technologies. This means that the figure of the librarian, traditionally a rather re-assuring and self-effacing one, has been transformed into something quite unprecedented: halfway between the cyborg and the hacker. With a computer and Internet connection in every women's library and a feminist librarian in charge, there is no knowing where the feminist revolution might end.

ICT's are clearly the best tools to make all these sources of information available to a wide public of user at international level. It is obviously not only a question of technique, because ICT's are , after all, only a medium for communication: the message remains most important. Issues of access and participation by women to the ICT's , however, show a very strong gender bias that discriminates against them. They are many-faceted and range from physical access to the home computer, against the general trend which reserves them for a mostly male, teen-ager or poyun type of users both in the household and in the community. They also involve however the issue of the kind of material that is available on the information highways and the extent to which this material shows a distinct male bias in both form and content.

It has become a point of consensus in the Know How network to argue that women's interests, imagination and areas of concern need to be given higher visibility, especially on Internet. In a more feminist vein I feel strongly that more efforts are needed in order to avoid the conspiracy of silence of a communication system media which is based on the allegedly 'neutral' male language. This false neutrality expresses the strongest gender bias and it thus perpetuates traditional patterns of exclusion of women. In this respect, Internet is no improvement on the "old" , three-dimensional social space, but rather a perfect reflection of it. Moreover, in keeping with the respect for diversity expressed in the 1998 Amsterdam declaration, it is crucial to take into account factors related to ethnicity, race, nationality and religious identity. It is equally important to assess their impact upon women's chances of gaining access to the ICT's and to their potential benefits. Age and bodily ability remain, for instance, major discriminating factors, because these visual technologies require very fit and strong bodies to sit in front of screens and intricate keyboards for hours. We also know that new kind of occupational diseases have emerged as a consequence of the ICT's, especially among secretaries and other computer-based jobs. In other words, the real bodies of real women have to be taken into account if their access to the ICT's is to improve. To fully

realise the potential of the Internet women's viewpoints, interests and imagination must be addressed, voiced and legitimated. Only if these aspects are taken into account can ICT's be used effectively to support the empowerment and participation of women, especially in the South.

Although these are serious concerns regarding access and control of these networks, electronic networks are currently promoted as useful tools to facilitate community organising. Thus, women are taking bold steps and increasingly moving in new directions by networking electronically. A recent review by IWTC (International Women's Tribune Centre) considers that "each day more and more women around the world are using computers to communicate globally". Tapping into world-wide networks, they are talking with one another, planning and strategizing as if the whole world were their own community. This research conflicts with the traditional view of many who comment that Internet is a "white man's medium". In 1995 a research produced in US on women using on-line systems shows that they are the 20% while in 1997 they grow at 40%: to day 5 millions of women use Internet in US but according to the same source they are 91% white, 60% younger than 35 years old, 82% highly educated with a university degree, and 76% has a permanent job.

But the same picture is changing very quickly. A research produced in UK shows that women are the fastest-growing group of Internet users, in the past three years the percentage of men online has tripled (from 11% of all adults to 34%), while the percentage of women has quadrupled. It has grown from the 5% of the population in June 1996 to 21% in June 1999. Although the balance between male and female users has remained fairly constant, at about 60-40, among 15 to 25 years olds girls outnumber boys. And a survey by the Georgia Institute of Technology last year put the male-female split at 65 to 35 in America, 82 to 18 in Europe and approximately 72 to 25 in the rest of the world. Thus, the balance is beginning to shift. Despite these significant problems of uneven participation and access, ICT have facilitate the distribution of women's information as well as communication between women.

The process of standardisation of techniques and norms, which is fundamental to the dissemination of technology has never raised the problem of gender difference and it has never occurred to anyone sitting in the various ISO committees, devoted to the selection of international criteria and standards, that women's culture has a proper and specific language, with its own intellectual and political history. This means that the specificity of women's and feminist languages needs to be given visibility and space.

That is in fact the main reason why many women's organisations have developed their own information systems. This project, however, immediately raises the issue of the relationship between knowledge, power and technology and the role they play in analysing this type of communication flow. I can safely state that the assumption of the women's information networks is that horizontal or circular structures provided by women's networks can and will defy the vertical exercise of power. They will do so by redistributing it, while using the technology for wider reach and more gender-conscious and friendly approach. It is in fact necessary to break the gap between female projects and the so called "male mark" of technologies, and the telematic world in general.

I am not stating this with any facile optimism; I am perfectly aware that women's organisations and webites alone cannot compete in fact with the huge market of Internet. Strong of my fifteen -year experience as Director of the Italian Women's Library in Bologna, however, I choose to stay loyal to the feminist motto: 'don't agonize, organize!' I consequently think that it is important to make a start so as to make women visible on the Net and to enforce women as producers as well as users of such information. The debate not far from over. Some for example now argue that the prevailing discourse on the role of the Internet on the empowerment of women in the South is simplistic and optimistic. I resent such skepticism and I think it may even be dangerous for women at time of such fast-changing social transformation. I think women need to be present in the world of ICT's if we are to even attempt to make a difference.

As the philosopher Rosi Braidotti argued: "The extent to which Internet is capital-intensive, male-dominated, Westernized and English-speaking is simply distressing."

Our first collective priority is to go on fighting all forms of exclusion, on the basis of gender, age, illiteracy, ethnicity or race. For this reason we must not allow the masses of women globally to miss the boat of the information revolution. Through improved facilities, renewed contacts, more efforts at training women for the use of ICT's and higher degrees of professionalization the women's global library networks are doing their best to contribute to make the reality of women's presence in ICT's less of a 'virtual reality' than it is at present.

A fresh look at the use of ICTs and multimedia in Women's Studies teaching and learning in Europe - Magda Michielséns

In the early days of the Athena project we undertook a survey on the use of ICT and multimedia in Women's Studies. The results were published in Athena I and presented and discussed in a workshop at the Tromsø conference 1999⁴.

Three years and several Athena meetings later, we want to look again at the results of our survey and comment on the evolution we have seen in the field of women's studies during the last 2-3 years.

The situation, as described by the coordinators for women's studies centres. In the survey it was clear that coordinators in the centres for women's studies had a more outspoken vision about the ICT-situation of women's studies at their university than

⁴ This chapter is based on Pouwels, Babette (2000). ICTs and multimedia in Women's Studies teaching and learning in Europe. In: Braidotti, R. & Vonk, E. *The Making of European Women's Studies. A work in progress report on curriculum development and related issues*. Utrecht: Zuidam & uithof, p. 87-97. Given the results of the survey I (MM) related these results to the experiences reflected upon during the Athena-workshops in the period after conducting the survey.

individual teachers had. By definition coordinators are more experienced in preparing and supporting it than individual teachers.

Coordinators know that most universities provide ICT equipment for teachers and students, but they also know that it is very difficult for the teachers to keep their equipment up to date, and for students to have the facilities where and when they need them.

In recent years coordinators in women's studies centres played a central role in bringing ICT into the women's studies teaching. They have to "prospect" for equipment, often they have organized courses, and they promote networks in which experiences can be shared.

In 1999 many women's studies centres provided training to their staff and students. Out of the centres involved in our survey 80 % provide training to teachers, 73 % to researchers and 87 % to students. The overall numbers at the moment will be higher. This is automatically the case because it is, all over Europe, a matter of educational policy to train university staff in the use of ICT. Every university in Europe has financial resources labelled for this purpose. Courses are organized, and new standards for teaching are formulated

But, the position of women's studies teachers is not the same in all European universities. At some places there are coordinators in women's studies centres. They are in a position to play their pivotal role. Other women's studies teachers function in a more isolated position. They work at generic departments (philosophy, sociology, sociology of the family, media studies) and teach women's studies courses (or general courses with such a high degree of gender-relevance that they can be called gender- or women's studies courses). The introduction of those teachers to the world of ICT is the responsibility of their departments. Often they have to ensure themselves that they are inserted in a general training program.

Three years ago, it was possible for a department to choose to be not very involved with ICT. In 2001 this is no longer possible. PC's, e-mail, www, CD-ROMs have invaded our educational space, and these tools are here to stay.

Access to equipment, facilities and training

Universities are supposed to offer teachers and students resources to work with ICT. By resources we mean equipment, access to facilities such as PC, e-mail, the Internet, an electronic link with the library, training, and technical support to keep all these systems running.

Our Athena-survey and every day experience shows that almost all teachers have access to a PC and that almost all teachers are using it frequently. We often forget that this is an immense revolution in academic working methods. The formal standards for temporary products (notes, minutes, letters) have become higher and higher. But, even more important is the fact that because of the use of PC and ITC in general more and more secretarial work (work that used to be called secretarial ...) is done by the teacher herself. Everyone in our survey made use of the e-mail and the World Wide Web facilities. And four out of five teachers had access to an electronic link with the institution's library and most of them used it.

The basic ICT devices became a part of everyday working life. We also learned, however, in

the survey and in other papers and experiences, that there remains a huge lack of knowledge and skills to use the devices to their full potential. There is a strong tendency not to explore the possibilities of the facilities available, beyond what presents itself daily and is easily used. Training is needed to reach an optimal user level.

Most of all, what is needed to become an informed and up-to-date user of the available facilities is support. Teachers at the same university have completely different stories about their experiences with their institutions' ICT-infrastructure because personal support differs. A teacher who is not a computer enthusiast needs personal support to order a new computer (the availability of the money is of no use if there is no personal guidance in ordering and choosing the configuration for that specific person and specific project). If your email-system is completely messed up, you need to know your way through the departmental or university help desks, if not you are e-isolated for days. If you are invited to participate in an e-course, but you are working with Netscape 4 and the course needs the use of Explorer 5.5, you must know or learn how to download. Help and/or courage will be needed in the beginning. The examples given here do result in completely different perceptions of the ICT-possibilities by teachers in their local situations.

With regard to training we have to distinguish between general training and applied training. With *general training* we mean training that focuses primarily on how to use specific software programs and specific types of ICTs, for example training in surfing the Net or technical training in writing web pages. *Applied training* in the use of ICTs means training that is related to the function and application of different types of ICTs in the curriculum. Applied training in ICTs makes the connection between ICTs on the one hand and educational goals and the content of a course on the other hand.

About three out of five teachers in the 1999-survey pointed out that they were offered *general training* in the use and application of ICTs. Only a quarter of the teachers that were offered general training used it. Fewer teachers (about 25%) had the possibility to take *applied training*. Half of the teachers that were offered applied training made use of this opportunity.

These figures tell us that a large amount of women's studies teachers were not taking the opportunity to get skilled in e-learning.

How can we make sense of this when we know that on the Net we can see the fact that there are extremely creative activities in the field of feminism and women's/gender studies?

- We need to distinguish between users and content providers. Some women's studies professionals are perfect users, without having the wish to provide material on the Net
- A 'click' is needed to make clear that the difference between delivery content on paper or in a class is not so very different from delivering it in cyberspace. During a short time span one could see growing the amount of material provided on the net for women's studies classes. Our networks have to support this increase.
- Basic ICT skills are becoming basic requirements for everyone in the academic environment, and it has to be seen actively, not only as a user or a consumer.

Students

Three out of five teachers were of the opinion that their Women's studies students had access to a PC at their university and half of the teachers indicated that their students had access to a PC at home. One third of the teachers believed that their students had access to a PC both at the university and at home. A quarter of the teachers stated that their students did not have access to a PC at all; either at the university or at home. When students have access to a PC, almost all of them will use it; teachers said.

The teachers are rather confident about the access of their students to the internet. In the survey, however, the real situation of the students was not researched. I was not the topic of the research.

Every teacher feels at ease referring to the World Wide Web for additional or central information. Students are supposed to know how to handle the new resources. In the university policy councils every effort is made to optimise students' access to the Net and their working conditions if they are using computers at the university. Access to a PC and to is supposed to be standard equipment to be able to study. Of course, there are universities that have scarcely enough teaching rooms, and so there also are universities that don't have enough computer places for students. What we saw in the last three years is that times are changing very rapidly. A pen-and-pencil story of one (e.g. Italian) university in 1999 might be replaced by a regular on-line Windows 2000, Explorer 5.5, Office 2000 PC in every auditorium and meeting room at the same university in 2000; and the futurist (e.g. Norwegian) university of 1998 is struggling to find money to replace its completely outdated computer park, with its once highly sophisticated graphical possibilities.

Time

There still circulates a strange myth that computers and ICT are time saving. After many years of experience one confirm: there are many gains to be obtained by the use of ICT in teaching, but time saving is NOT one of them.

Women's studies teachers overwhelmingly complain about the lack of time to use the new resources and devices properly. In our survey about fifty percent of the teachers felt that they could not catch up with the changing new technologies and said that they wished they had more time to learn more about the application of ICTs and the new possibilities which resulted from this.

"I don't feel really educated in it and don't seem to have time to get more information about the different possibilities."

"(...) and the time it steals from reading, discussion, supervising and meeting other women in the field, which seem more central to me."

Besides the arguments mentioned above, there were other problems. For instance one teacher argued that students were not interested enough in using ICTs in their classes. For students, this teacher said, ICTs are just something to use, not something special.

It all depends on the time people are prepared or able to invest in teaching. It also depends upon the kind and/or level of teaching you are offering and for how many students, and it depends upon the way you personally are incorporating ICT use into your everyday life. It takes some time to learn how to put together a website, but when that skill is one of your regular writing abilities, offering a website to support a campus course is easier than putting together a syllabus.

Colleagues who are new in cyberspace often feel forced into it. For them it really is too time consuming to learn to support their lessons by Internet. One colleague told me at a Women's studies research conference: "I have a department to run, articles and books to write, PhD's to supervise; I have to be at the front edge of my discipline, participate in the networks of my field etc etc: I don't have time for new gadgets. What is absolutely necessary in ICT for my work, my assistants have to do for me. It is the logistical, supportive work they always have done for me. I needed that and I still need it. It is not because it is electronically that I have the time to do it (and I have a social life to safeguard)."

It is completely understandable, but it is predictable that some professors will move away from teaching at BA and early MA level. Not because their teaching is providing students with less information, but because their habits and attitudes no longer match with the basic demands and skills of students. The value of those teachers will remain (temporarily) in conducting master classes, in which the focus is on the creativity and advanced thinking of the mature students. But any researcher or scholar who cannot use a computer will not stay at the forefront of research for long.

Multimedia

Traditionally women's studies course are great users of multi media materials.

In the 1999- survey and in the interviews with our women's studies colleagues we learned about the enthusiasm with which documentary films are used (and sometimes made) in the class room; diaries, audio tapes, slides, photo's, pieces of art are elements of the regular equipment of most women's studies teachers. This relates to the fact that most women's studies teachers have a drive to make their courses (using films, pictures, sounds, music not made for educational purposes, but just being available as a part of cultural life).

Conclusions

The results of this pilot study showed great differences in teachers' use of ICTs and multimedia in European Women's studies courses. Those differences certainly still exist. At the individual level, the differences in ICT use between teachers are enormous. Some teachers use information found on the WWW from time to time for their courses while others have a lot of experience in developing and teaching complete ICT- and multimedia-based distance courses.

The differences between teachers in using multimedia for courses are less significant than the differences in the use of ICTs. Unlike ICTs, relatively many teachers in their Women's studies classes use multimedia. In general, access to multimedia tends to be less problematic

for teachers than access to ICTs. Besides, for most teachers, multimedia is 'easier' to use than ICTs, such as the Web or mailing lists.

Frequent access to good equipment and facilities is crucial for teachers who are using ICTs in their courses. Many teachers stress that it is important for both teachers and students to have access to a PC and the Internet. Otherwise it would be senseless to design courses where ICTs play an important role. A lack of good equipment and facilities is the main reason for teachers not to use ICTs in their courses.

Although almost all teachers indicate that they have access to a PC, e-mail and the World Wide Web, the quality of the equipment and the possibilities for access vary a lot. Some teachers have access to a powerful PC of their own, provided by their university or institution; others have to share a computer with colleagues or even have to purchase their own PC. In some institutions everyone has automatic free access to the Internet, while in other organizations just a few PCs are connected to the Internet.

Two other explanations for the fact that teachers do not use ICTs are: lack knowledge and a lack of time. Teachers said that they often didn't have the knowledge and skills to use ICTs. At the same time they could not find the time to improve their knowledge and skills.

In general, teachers state that learning to use a PC or to create websites will take a lot of effort and time. Many teachers were only willing to spend that time on the condition that they could benefit from it. Most teachers, who said that they did not have the time to learn to use ICTs, were of the opinion that this learning would take too much time, relative to the outcomes. For example, they did not think that ICTs would have added value to their teaching compared to more traditional teaching methods, or they did not have any ideas of how ICTs could contribute to their courses.

Though teachers say that they did not have much time, many of them indicated that they would like to get training in the use and application of ICTs. Most of them stressed the fact that, in general they did not like the 'general ICT' training programs where one learns just to surf on the WWW or use e-mail facilities without making a connection to the courses they are teaching. Women's studies teachers prefer 'applied ICT' training: focused training that makes the connection with the content of their work and their teaching.

Women's Studies centres and departments can also play an important role in stimulating their teachers to use ICTs. Many centres and departments provide training in the use of ICTs or they hire technical support.

To conclude, we would like to stress the importance of the relationship between the use of ICTs and course content. As we said before, many teachers who are not using ICTs at the moment often do not know exactly what they could gain from it. It is crucial to make the connection between the use and application of the Internet, e-mail, electronic discussions, websites etc. and the things that people are doing in their work and in their teaching. As one teacher puts it:

"Actually, I feel everything is a bit of a learning process and quite fun and very useful. I also try to keep realistic expectations and to choose what I want to learn about. My experience is that there are so many interesting resources on the Internet for feminists and people in women's studies - that it's easy to arouse the

interests of women's studies teachers if one starts from their own interests. The problem with many general courses in IT, electronic communication, etc. is that they rarely make the connection to what we are doing in our teaching."

3. Women, Technology and ICTS

This chapter begins with a general consideration of the gendered division of labor within higher education in Europe, focusing on the situation with in mathematics, science and engineering education. Then, we continue with reflections about what happens with teachers and students when information technologies become a primary communication means within higher education.

Redressing the balance? A comparative overview of gendered entry to Maths, Science, Technology and Engineering Higher Education in the European Union - Sue Morton

The positive action of early 1980s Britain aimed to redress the gender balance of entry to the traditionally male-oriented disciplines, with similar initiatives being implemented in other EU countries. What has been the impact of these initiatives? Does the evidence support the positive, and continued, effect of such action? Is the ratio of females in the male-oriented disciplines in contemporary higher education greater than in the previous decade?

In the mid to late 1980s, the onus of financial support shifted from the national to the international. Initiatives designed to redress the gender balance became less of a priority for nation states and more of an objective for, such as, the European Social Fund. Is there evidence to support the positive, and continued, effect of these initiatives, irrespective of the shift in funding sources?

Anecdotal evidence seemed to suggest that, despite over a decade of initiatives, female entry to Maths, Science, Technology and Engineering in Higher Education (HE) was falling - not only in the United Kingdom (UK) but across the European Union (EU). This chapter demonstrates an overarching perspective on the main dimensions by providing evidence on gendered entry to HE across the EU throughout the 1980s and 1990s. Its primary focus will

be to offer responses to the questions outlined above but, given the topic's dynamic and volatile nature, it aims to raise more questions than it answers. All findings are based on EU indicators and categories, explanations of which can be found at relevant points in the text. The chapter begins with a general comparison of entry to HE across the EU for the academic years 1980/81 to 1996/1997. Table 2 shows the number of students in thousands in Tertiary Education ⁵ for each of the fifteen member states.

Table 1 below relates the member states to the abbreviation codes in the tables and figures that follow⁶.

Table 1 Key to Tables and Figures

Code	EU Member State	Code	EU Member State
B	Belgium	L	Luxembourg
DK	Denmark	NL	Netherlands
D	Germany	A	Austria
EL	Greece	P	Portugal
E	Spain	FI	Finland
F	France	SE	Sweden
IE	Ireland	UK	United Kingdom
I	Italy		

Table 2

Trend in the number of pupils and students: HE - ISCED 5,6,7 - 1980/81to															
1996/97															
All students in 1000s															
	B	DK	D	EL	E	F	IE	I	L	NL	A	P	FI	SE	UK
1980/81	217	106	122	121	698	117	55	112	1	364	136.	90	113.		828
			3			6		6			8		2		
1996/97	361	180	213	363	168	206	135	189	2	469	241	351	226	275	189
			2		4	3		3							1
% increase - 1980 to 1997	66.4	69.8	74.3	200.	141.	75.4	145.	68.1	100.	28.8	76.2	290.	99.6		128.
				0	3		5		0			0			4

Table 2 shows that, in general, the number of students (males and females) in tertiary education is increasing, albeit only slightly in some countries. Notable exceptions include:

- The Netherlands: 532,400 (1993/1994) to 469,000 (1996/1997)
- France: 2.09million (1995/1996) to 2.06million (1996/1997)
- Germany: 2.16million (1994/1995) to 2.13million (1996/1997)

⁵ International Standard Classification of Education (ISCED) categories 5, 6 and 7

⁶ Figures are not available for Sweden 1980/81

The trend data for Germany is of particular interest in the early 1990s. The number of students in HE rose sharply from 1.7million to almost 2.1million between the academic years of 1989/1990 and 1990/1991. Whilst a possible explanation might relate to what was taking place at that time in terms of the planned reunification, a more detailed investigation is beyond the scope of this chapter. Further research would need to be carried out to determine the underlying cause(s) for such a marked increase in the overall number of students.

The first section of table 3 below shows that female entry to HE is fairly consistent with the overall trends for entry

Table 3

Trend in the number of pupils and students: HE - ISCED 5,6,7 - 1980/81to															
1996/97															
Female students															
	B	DK	D	EL	E	F	IE	I	L	NL	A	P	FI	SE	UK
1980/81 (1000s)	93	52	503	50	305	594	22	482		144	57.5	44	53.2		303
1996/97 (1000s)	182	98	975	174	890	113	69	102	1	226	117	200	120	154	980
% increase in number of females 1980/97	95.7	88.5	93.8	248.	191.	90.9	213.	112.		56.9	103.	354.	125.		223.
1980/81 % females	42.9	49.1	41.1	41.3	43.7	50.5	40.0	42.8		39.6	42.0	48.9	47.0		36.6
1996/97 % females	50.4	54.4	45.7	47.9	52.9	55.0	51.1	54.0	50.0	48.2	48.5	57.0	53.1	56.0	51.8
% increase in students who are female 1980/97	7.6	5.4	4.6	6.6	9.2	4.5	11.1	11.2	50.0	8.6	6.5	8.1	6.1	56.0	15.2

Table 2 and the first section of Table 3 provide a graphic demonstration of the consistently greater number of female students entering HE in France than in other EU member states. The data presented show a trend throughout the EU for a general increase in the number of students entering HE overall and in the number of female students, in particular. However, looked at in terms of percentages, a different picture begins to emerge. The second section of table 3 shows the percentage of women entering HE across the EU for the same period⁷.

It is not possible to show in the confines of this chapter, however, the fluctuations in the percentage of female entry to HE within each member state across nearly two decades, from 1980 to 1997. The percentage of women entering HE in Portugal throughout the period, for example, has increased from 49% to 57%. There are a number of marked peaks and troughs for Portugal that fluctuate from less than 50% in 1980/81 to almost 60% in 1981/82, dropping back to less than 51% the following year.

Another example is Greece, where the percentage of women students rose from 41% in 1980/81 to a high of 51% in 1991/92, with the most recent data showing an overall decline to 48% in 1996/97. The percentage of women entering HE in Germany was around 41% until 1990/91 when it rose to 43%, before dropping back the following year. Since then the data for Germany shows a general increase in female participation, although the most recent statistics indicate that less than half of all HE students in Germany are

⁷ Percentage data for Luxembourg is only available for 1994/1995, 1995/1996, 1996/1997 - approximately 50% of students entering HE in Luxembourg each year are women

women (46% in 1996/97). Other member states with less than 50% female HE participation for 1996/97 are Austria (49%) and The Netherlands (48%). What are the issues and implications of the data and how do the findings relate to the questions raised earlier? In order to offer further explanation, a more in-depth review of female entry by field of study to HE across member states is required. The fields of study groupings shown in Table 4 below are based on the EU indicators and referenced by category for the purposes of this chapter.

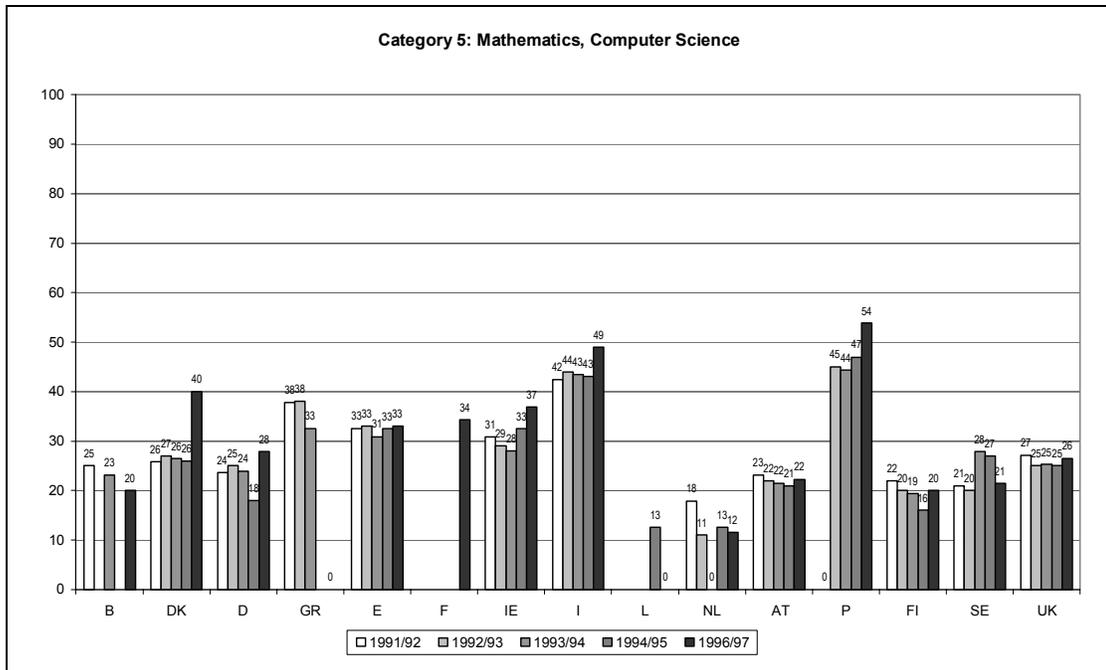
Table 4 Fields of Study Groupings

Field of Study	EU indicators Grouping
1	Humanities, Applied Arts and Theology
2	Social Sciences (business administration, mass communication and documentation)
3	Law
4	Natural Science
5	Mathematics and computer science
6	Medical Science (including nursing)
7	Engineering, architecture (transport, trade, craft and industrial programmes)
8	Others (education science and teacher training; agriculture; home economics; services sector; others unspecified)

The figures for categories 1 to 4 in Table 4 above reveal a few surprises, particularly in relation to the most recent data. The data for category 6 (Medical Science) show an exceptionally high percentage of female participation but, given that this category includes Nursing, it is hardly surprising. These five categories may be of general interest but, with the exception of categories 5 (Mathematics and Computer Science) and 7 (Engineering, Architecture etc), there is little direct mapping between field of study groupings and the traditionally male-oriented disciplines outlined earlier. The EU indicators groupings outlined in table 4 above impose constraints upon the amount and level of useful analysis possible here. However, certain of the data may answer some of the questions posed earlier and identify any anomalies, within and/or between member states. Therefore, subsequent discussion will focus on categories 5, 7 and, to some extent, category 8 as being of interest. The percentage data showing female students by field of study within member states for the remaining five categories are also included for interest within the context of this publication.

At this point it should be noted that, whilst overall statistical trend data have been published for the period 1980/81 to 1996/97, referenced earlier, systematic collection of data by field of study within member states only appears to have been in place since the 1991/1992 academic year and, for some of the member states, is relatively incomplete (ie France, Luxembourg and to some extent Belgium, Greece and Portugal). Furthermore, the source of EU statistical data used for this chapter appears to have a publication lead time of three years. The most recent statistics from this source are based on the 1996/1997 academic year, with a publication date of June 2000. The remainder of this chapter focuses on the statistical data published for the academic years 1991/92 to 1996/97. Figs 1, 2 and 3 show this data for the selected categories in the order 5, 8 and 7 to enable the reader to more easily reference the comparative analysis that follows.

Fig 1

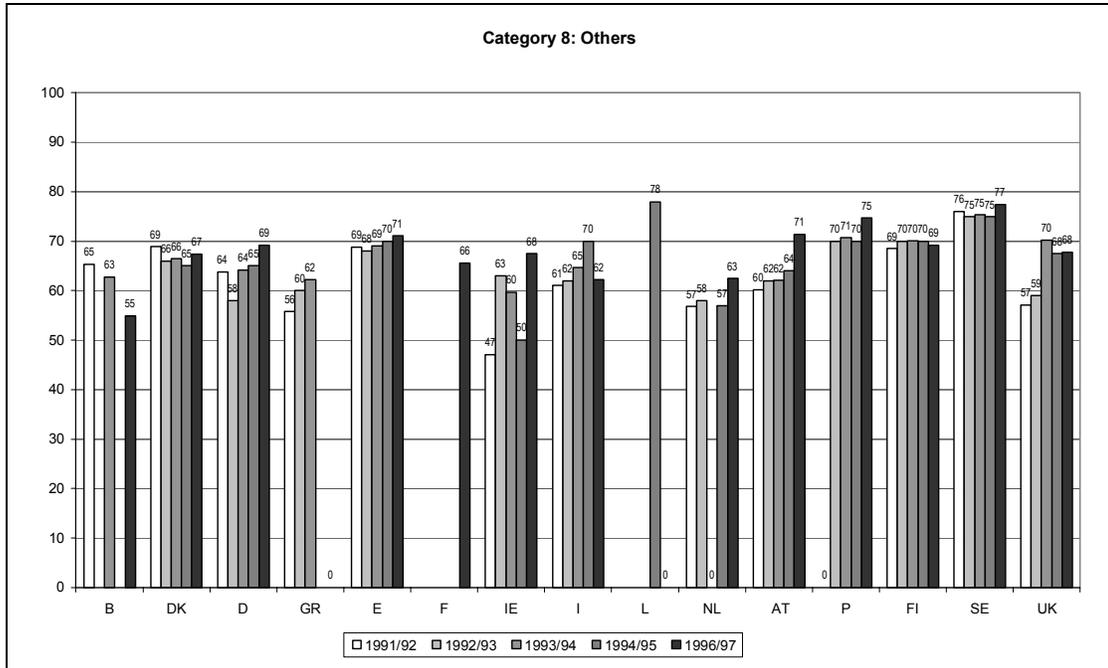


Investigation of the bar chart in Fig 1 on an individual basis highlights a few areas for further research. The data show that the percentage of female entry to Mathematics/Computer Science (category 5) between 1994/95 and 1996/97, for instance, has increased in nine of the member states, albeit slightly for some, but markedly so for:

- Denmark where it has risen by a dramatic 14% (26% to 40%)
- Italy where it has increased from 43% to 49% female entry

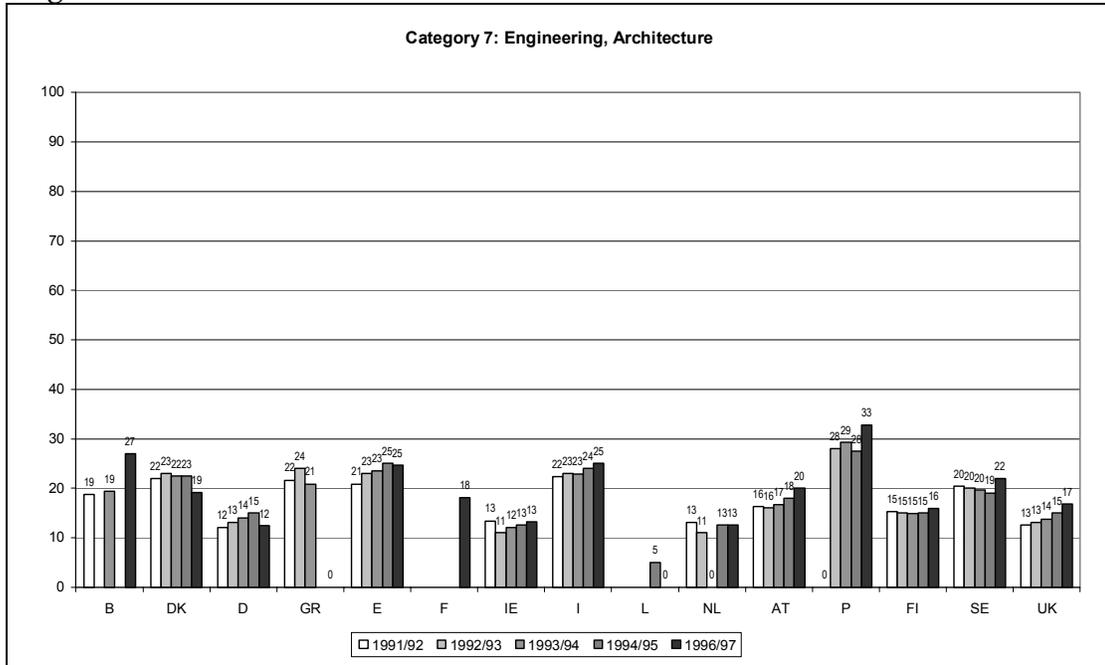
Portugal, which has the greatest percentage of female entry to this category, has risen from 47% to 54%

Fig 2



Whilst the data for Belgium and Sweden show a decline in category 5, Fig 2 shows that in the same period the percentage of female entry to Engineering/ Architecture (category 7) in these countries had risen, alongside that of eight other member states. Could this simply reflect a shift in female preference between the categories rather than an increase in female participation? The most recent data for Belgium, Germany, Sweden and, to some extent, Finland and Austria might be seen to offer support for this theory. However, scrutiny of the data in Fig 3 for category 8 (Others) may provide further insight to the overall increase in categories 5 and 7.

Fig 3



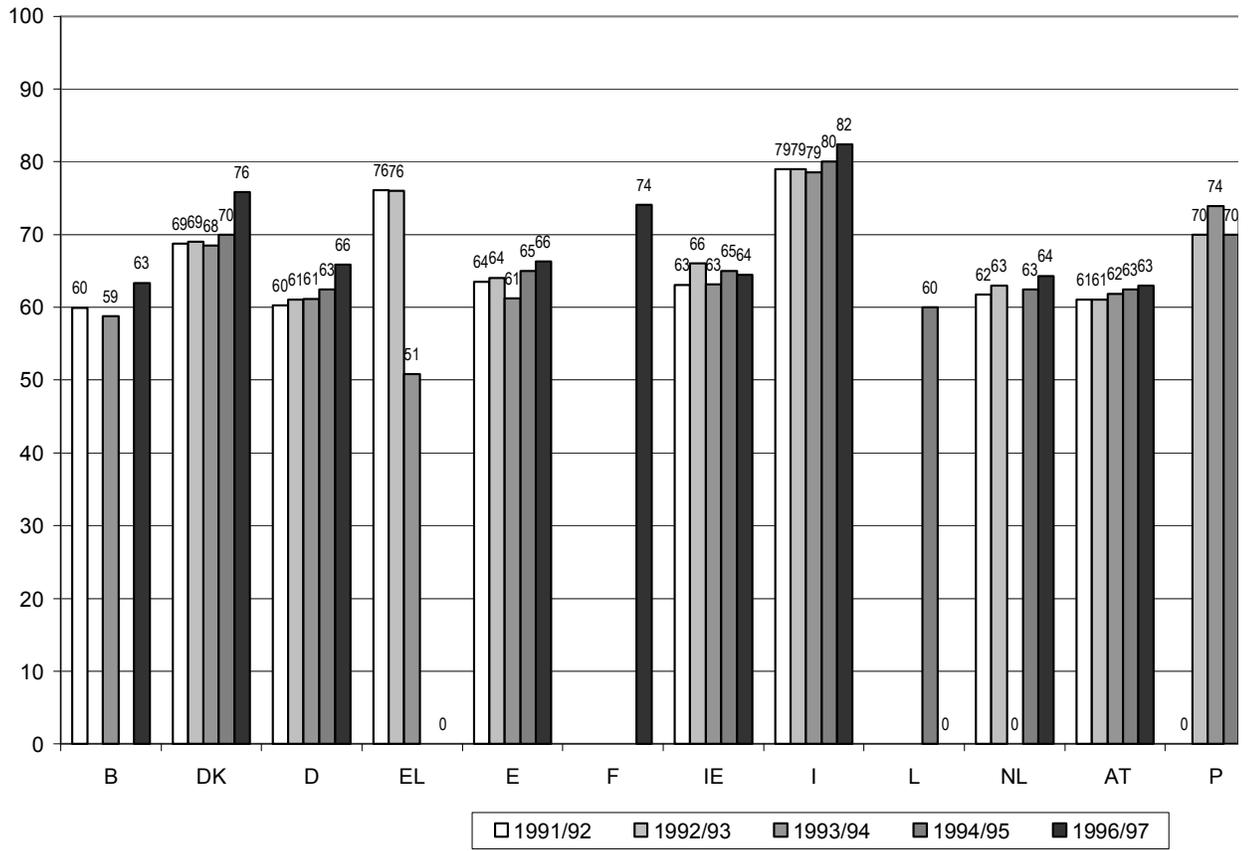
Italy, for example, shows a marked decline in category 8 which seems inversely proportional to the increase in the other two categories overall.

In The Netherlands, however, female entry to category 5 has declined, remained constant in category 7 and increased in category 8. Could this reflect that HE is becoming more cross-modular and inter-disciplinary? Perhaps such programmes of study, that do not fall easily into any of categories one to seven, are simply defined under the 'others unspecified' sub-heading of category 8? This hypothesis does not explain the data for Portugal though, where an overall increase can be seen across all three categories.

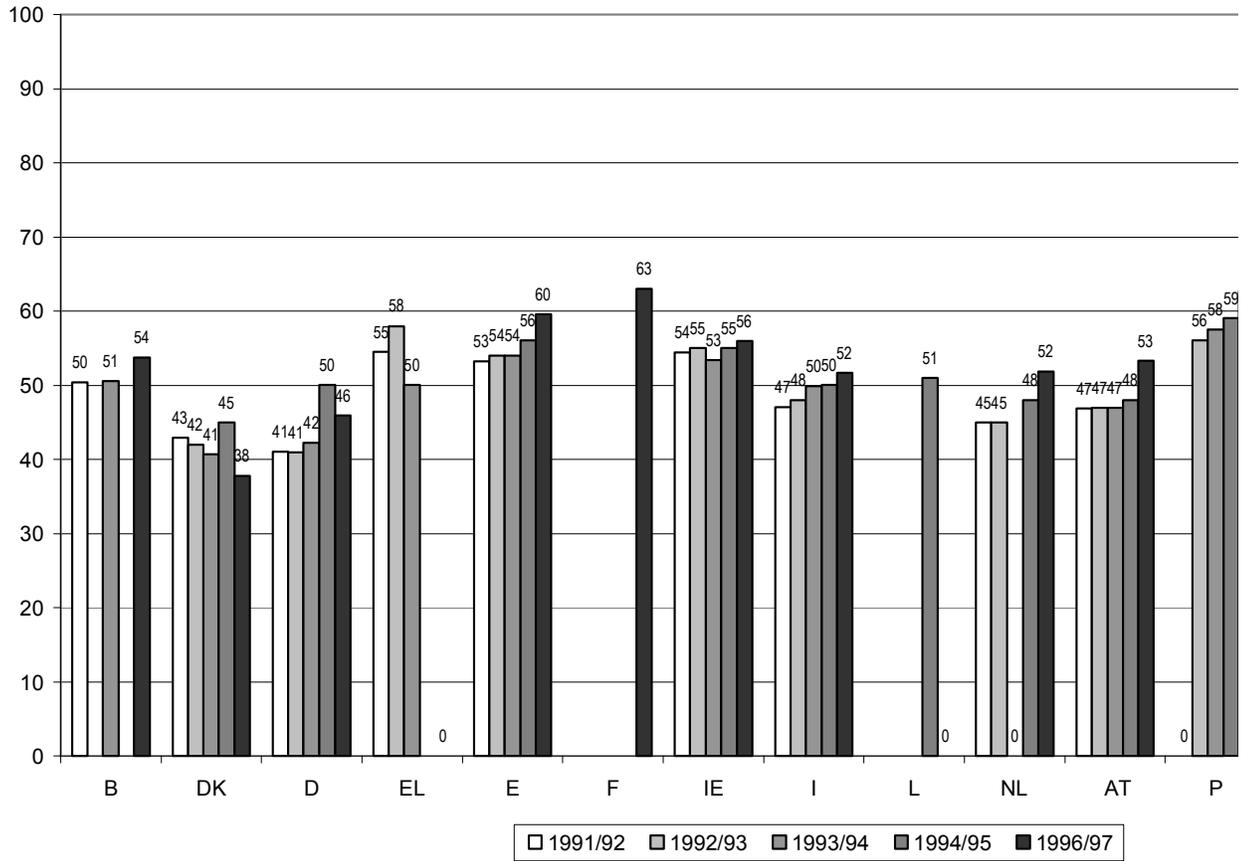
What conclusions can be drawn from the data that has been presented? Is it possible to determine answers to the questions that were posed at the start of the chapter? The analysis throughout this chapter has been constrained by the limitations of the pre-determined indicators and categories of the statistical data. Nevertheless, the data has shown that the overall number of women in HE education has increased in each of the member states over a period of almost two decades. It has also shown a general increase in the proportion of female students entering HE across the EU. It has not shown, however, that there is a continued increased in the percentage of women entering the male-oriented disciplines in HE generally, or within member states in particular.

Further research would need to be carried out if an answer was to be provided to this last question.

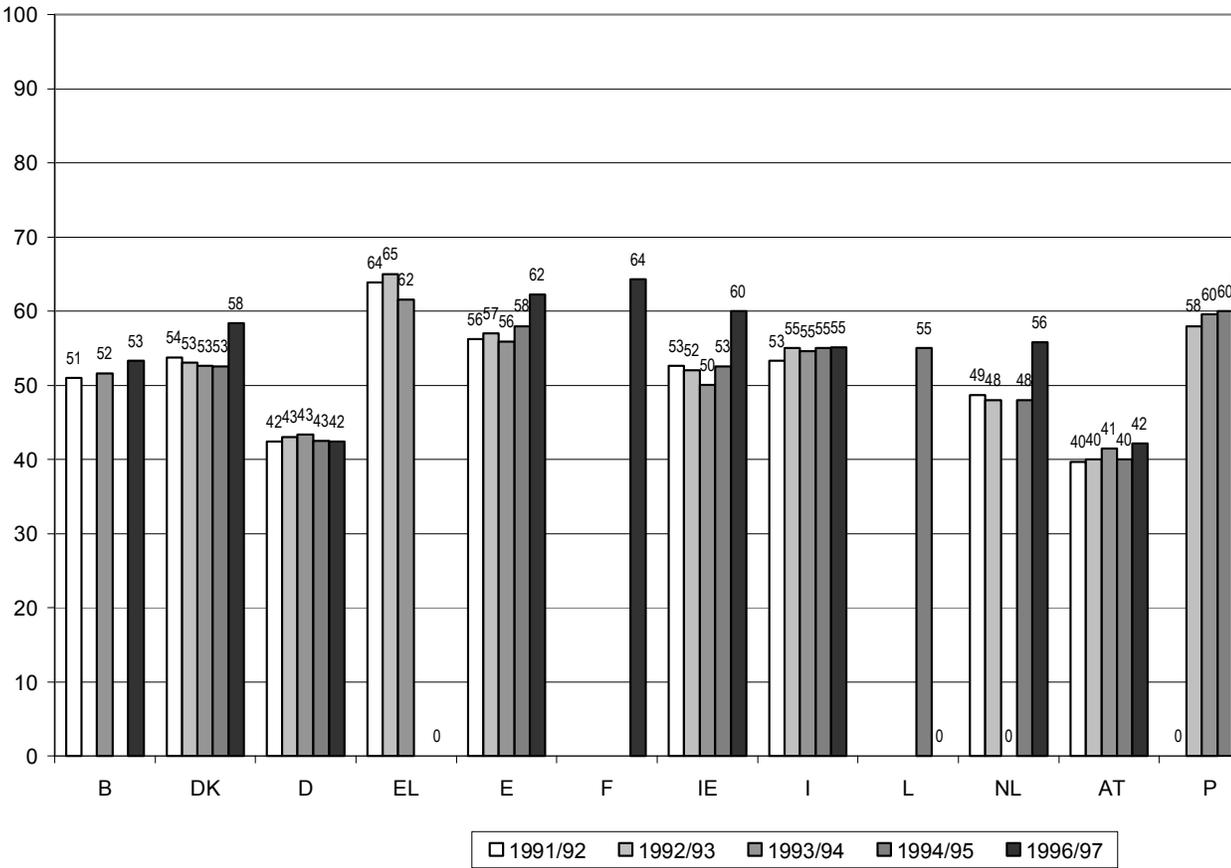
Category 1: Humanities, Applied Arts, Religion



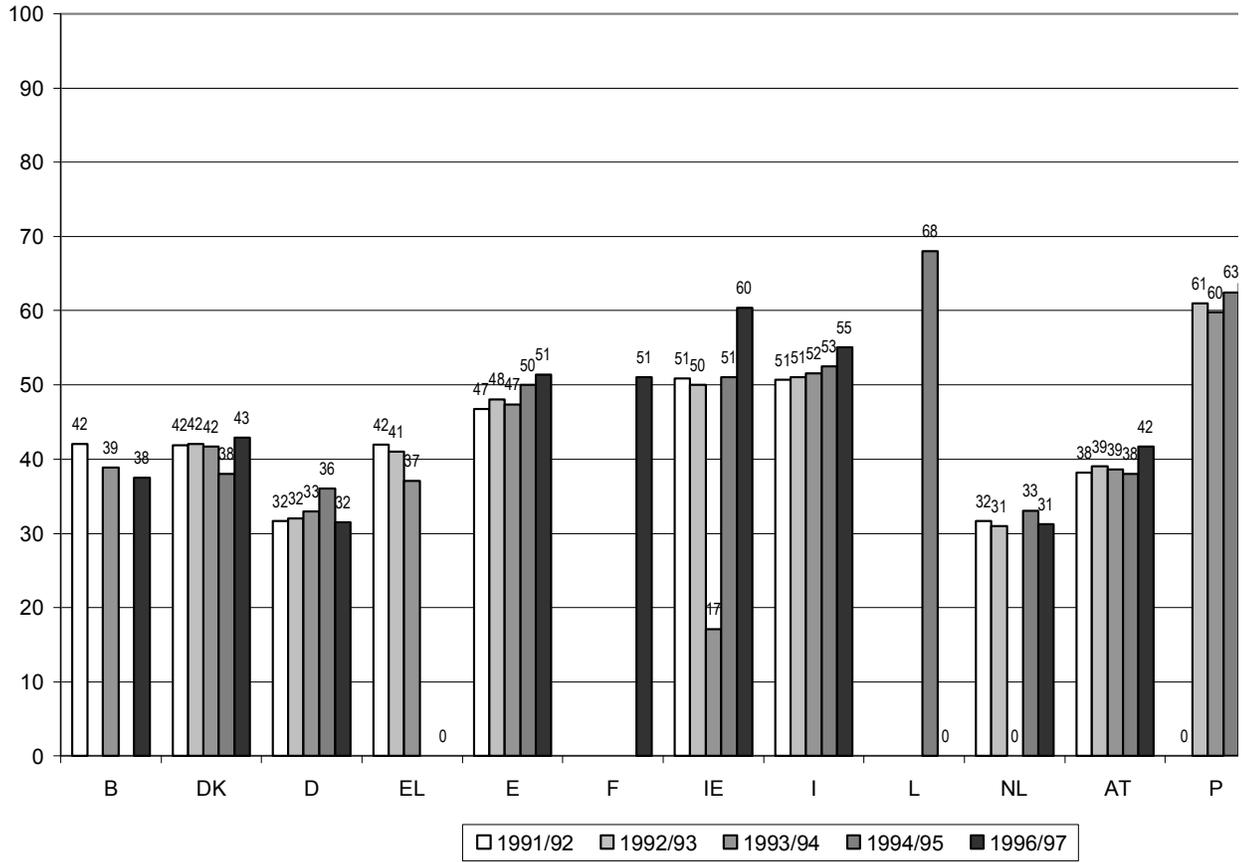
Category 2: Social Sciences



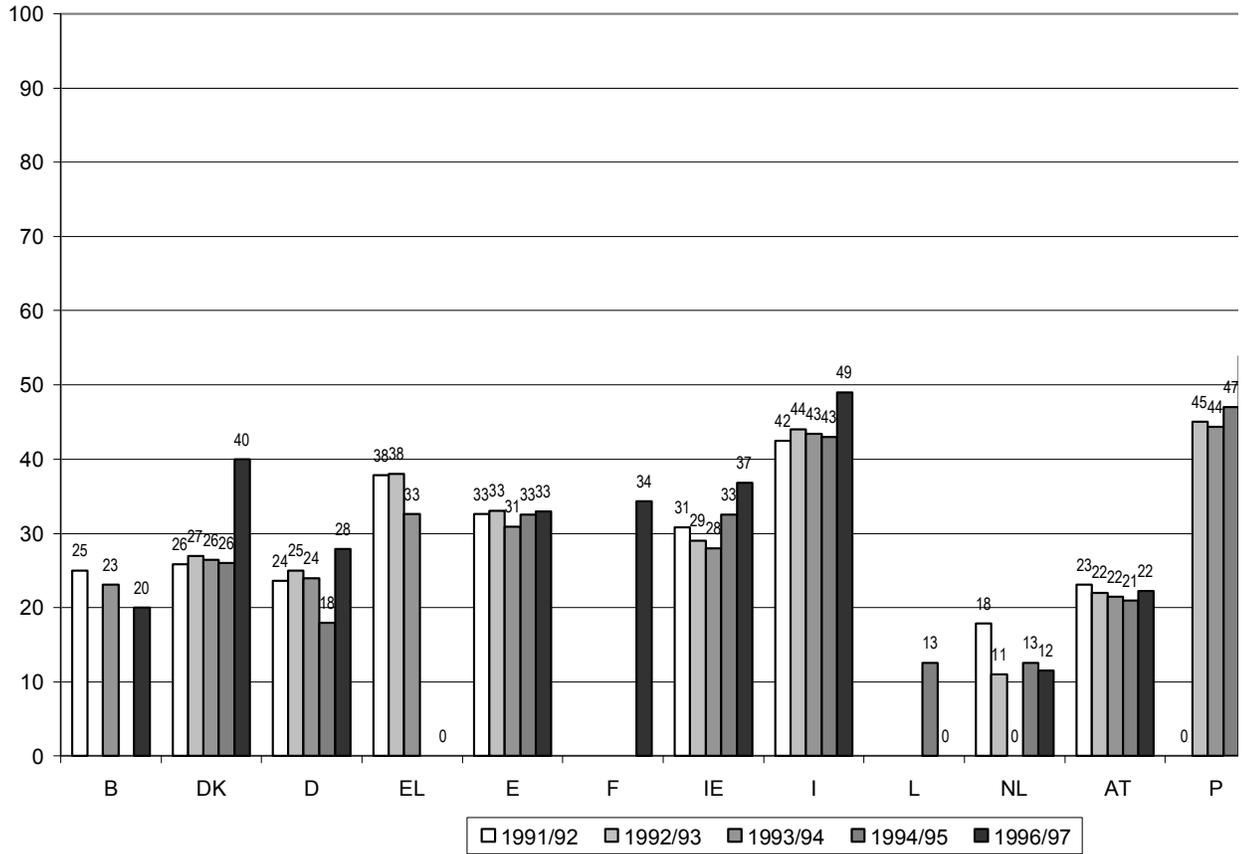
Category 3: Law



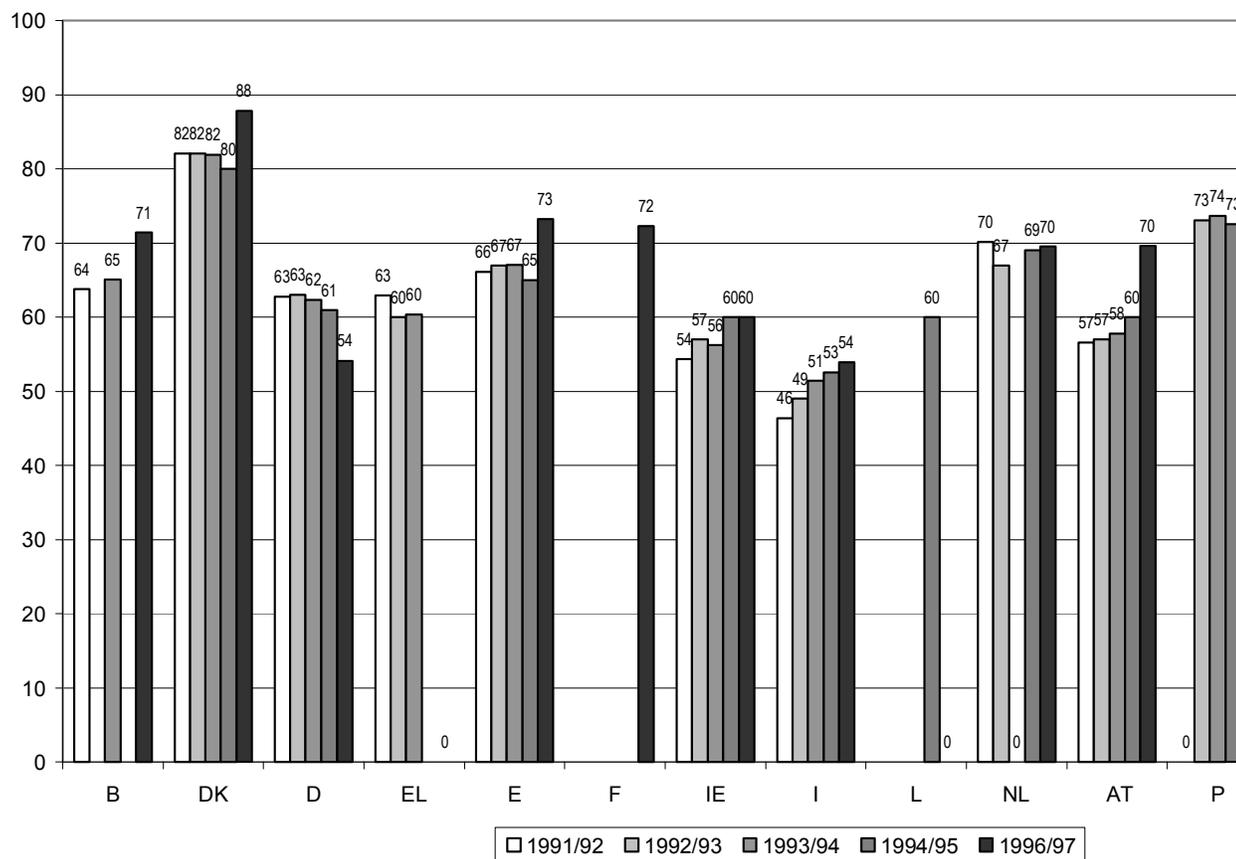
Category 4: Natural Sciences



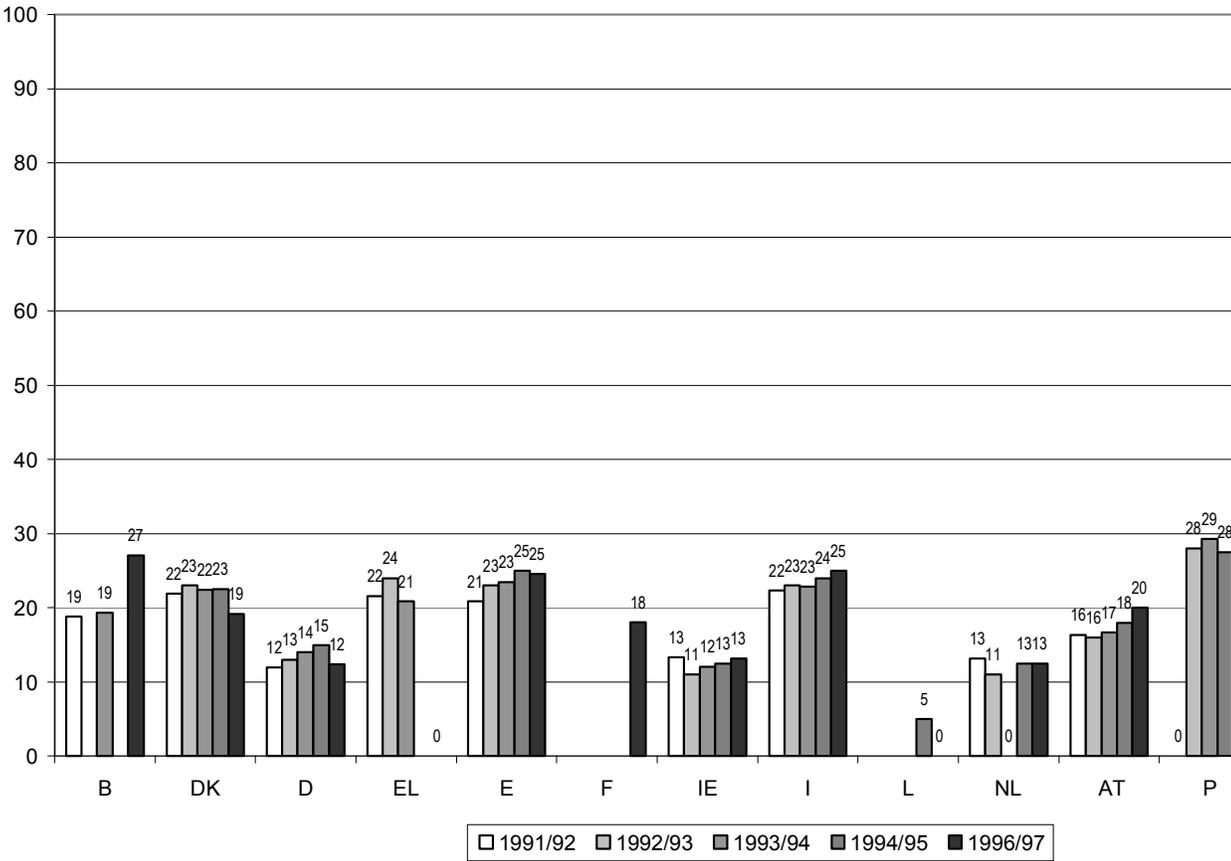
Category 5: Mathematics, Computer Science



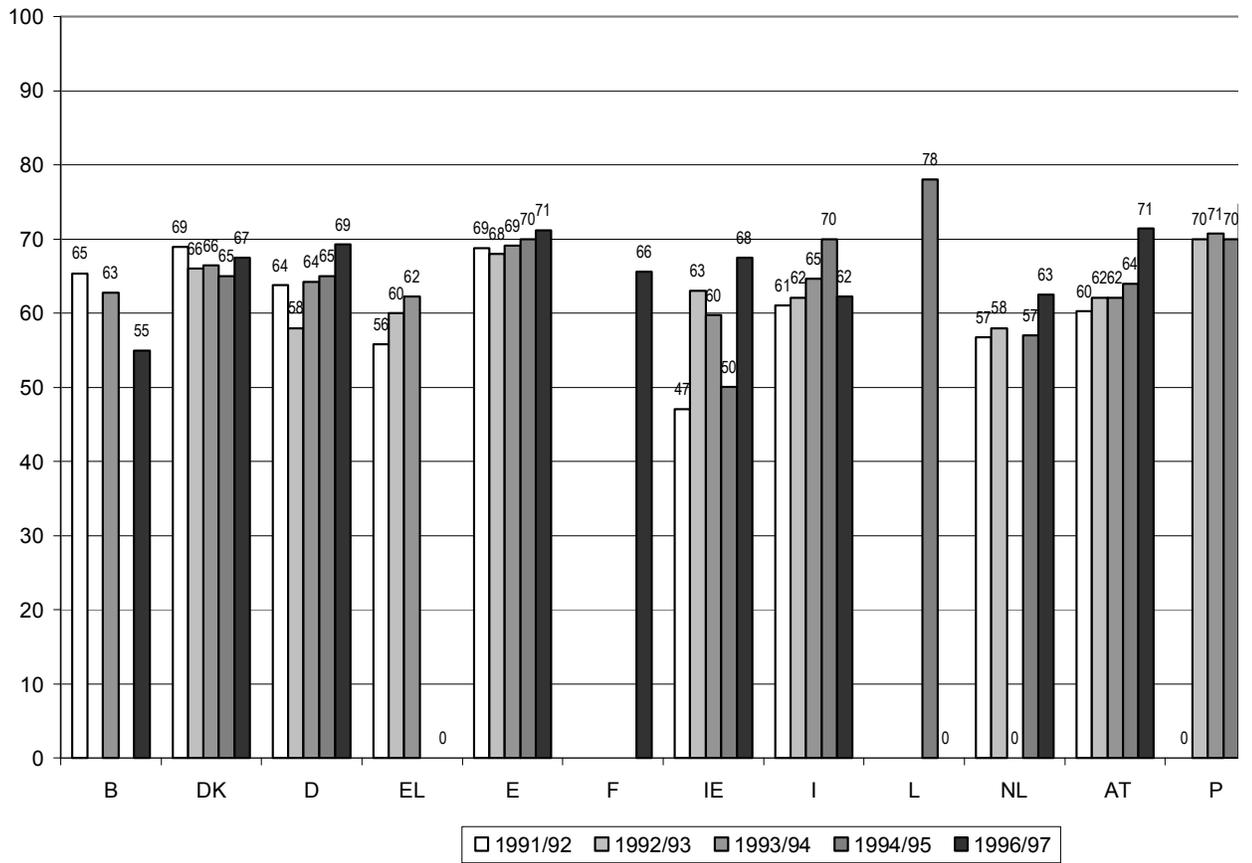
Category 6: Medical Sciences



Category 7: Engineering, Architecture



Category 8: Others



Teacher or Avatar? - Gill Kirkup

'I was thinking that we all learn by experience, but some of us have to go to summer school',⁹

The summer of 1983 was an exciting time for those of us working in Women's Studies at the Open University (UK). For nearly five years we had worked, campaigning for, designing, and finally producing the first undergraduate open and distance learning course in Women's Studies, which could be studied by anyone anywhere in the UK. For six weeks during July and August of that year over 600 students (90% women and 10% men) came, for a week each, to the campus of the University of East Anglia for the intensive residential component of the course. An OUUK Women's Studies summer school ran every summer from then until 1999. In 1999 the final cohort: just over 200 students, studied, argued and enjoyed themselves; and in a different political and educational world the undergraduate course, and with it the summer school, came to the end of its life.

In 1983 colleagues teaching Women's Studies in face-to-face contexts, had been dubious about whether the self-reflective, personal-change aspects of Women's Studies which were so much a part of its particular nature and its political project, could be reproduced without the intensive small group experience. The OUUK course team wanted to incorporate this intensive experience into the multiple-media structure of the OUUK's supported open and distance learning system. The summer residential school was designed as a distinct but integrated component of a course which used broadcast TV and radio, audio tape and interactive study texts, supported by optional small group tutorials in local centres. In 1983 many OUUK courses had residential schools, these provided specific types of experience that could not adequately be reproduced through other media: for example laboratory work, computer access, field work or simulation. The Freirian objective of 'liberatory' education through a group learning experience (Freire, 1990), or in 1970s feminist terms: 'consciousness raising', was not the usual rationale for a residential component. Students brought to the residential school the immense wealth of their lived experience and used it collectively to reflect on the theories they were grappling with in their study texts, as well as using these theories to reflect on

⁸ An avatar is a graphical icon that represents a material person (or an aspect of their identity) in a computer-based system. Avatars can be found on various chat domains and other multi-user domains. In sophisticated forms they can be animated and so programmed to interact with other avatars.

For example the following three pictures have been taken from a Web gallery of avatars, I could use any of them to represent myself as the author of this chapter. None are visual representations of what I physically look like, but all three embody something symbolic I want to say about myself. Are they more than a visual pun? If this paper was online I could animate any of these to represent emotion perhaps.



⁹ Peter de Vries Tunnel of Love 14

their lived experience. They expected their teachers to engage in, if not lead, both activities. Students called this: 'making sense of it', 'finding the language to describe what I've always felt', and 'finding other people who feel like me'. There was a sense of 'discovering' knowledge about gender from within one's self, and through honest and 'authentic' shared experience with others. There was a notion, criticised during the 1990s of a real 'I', an authentic self, an identity which could be discovered, explored and developed

I remember the first week of that first year: the excitement of meeting, in the flesh, the students who had been composite abstractions in our heads for so long. Most of the teaching staff were part of the team who had designed and written the course but who had no direct contact with the students who, scattered all over the UK, were being supported by local tutors working with them in their local area. The staff were excited, the students were excited. We wanted to see who our students were; they wanted to see what kind of people feminist academics were, and maybe meet the authors of their study materials. How we all looked and behaved were taken as important symbols of the nature of Women's Studies and feminism more widely. Staff represented to both Women's Studies students and to students from other courses who were on campus at the same time, feminist scholarship, and feminist lived practice. We had to demonstrate 'erudition' (that Women's Studies was properly scholarly) as well as the ability to socialise and have a sense of humour. We embodied not only our 'authentic' selves but also our 'discipline'. Small issues such as the fact that many staff wore their toenails painted in the summer were seen as bodily signs that studying gender did not produce de-sexualised women. As practitioners we embodied our knowledge and skills, sometimes to the detriment as well as the benefit of those learning from us.

A colleague has recently written:

In higher education, our attention is expected to focus on the substance and complexities of the discipline and topic under discussion, not on our selves, our own interests or even on our personal reactions to the topic. Academic objectivity requires us to sift very carefully questions of true and false, right and wrong, valid or invalid, good and bad, insightful or obtuse from those of personal taste or distaste, political or religious commitment, fear or loathing, enthusiasm or delight. The pursuit of objectivity and the mistrust of the personal and private is the platonic moral heritage of all higher learning in the Western world' (Blake 2000 p 187)

I suspect Blake would feel that our Women's Studies residential schools transgressed in all the ways he listed. But feminism had declared that 'the personal is political' and that the boundaries between public and private are political constructions which consign some people to the realms of the private and personal only, with no place as social actors or in the construction of knowledge. One of the many aims of Women's Studies along with its traditional scholarly aims such as developing analytical tools and critiquing bias in previous theories of gender difference, has been to validate personal experience as 'real' knowledge and a resource for theory testing. This method of learning as well as constructing knowledge corresponds well with the terminology of reflective practice, and communities of practice (Schon, 1983, Lave and Wenger, 1991) which also presume embodied actors.

Since the early 1980s open and distance learning has expanded dramatically (in new incarnations such as 'flexible and distributed learning') using new information and communication technologies (ICTs). This has been accompanied by changes in the curriculum and, in many countries, in the organisation of post-school education.

Postmodernism has given us a different understanding of identity, as fractured and often internally contradictory. It has questioned the possibility of an authentic 'I', and the Internet it has been argued allows us to adopt any identity we chose for the time we are online (Turkle,1997). It is the perfect environment for us to explore our many identities. Yet, as educators we remain committed to the importance of integrating the student as a whole person into the educational experience, helping them to become 'deep' and reflective learners, knowing that all knowledge is situated knowledge (Haraway, 1988, Harding, 1993). We also develop ourselves as practitioners in a changing technological and ideological environment. Since that first Women's Studies course in 1983 I have tutored on a number of courses in various disciplines, and year by year I have expanded my experience of using ICTs in my teaching. In all situations the issue of the context and identities of my students and of myself, and how we embody these identities in our use of ICTs, has mattered. In any distributed or distance education system the identities of both students and teachers must be represented somehow and articulated into a learning community. But how do we do this if identities are always unfixed? In this chapter I reflect on issues such as 'situatedness' identity, authenticity and embodiment, as they have presented themselves to me using computer-mediated learning. Is my identity as a teacher, as an aspect of an authentic 'me', to which I have a duty (to myself and others in contact with this aspect of 'me')? A duty to make this identity a coherent one, grounded explicitly in lived experience? Or is my identity as a teacher, and in particular as an online teacher a performance constructed for a particular moment with reference to little else? How do I represent/create this identity as teacher in an online situation? Do I represent my material self, with biographical text and images; or do I create symbolic 'avatars' who exist only in the online teaching/learning environment, embodying only the identity of online teacher?

Where are 'You' ?

One of the commonest experiences of anyone joining online forums is that one of the first questions you are asked by other members is 'Where are you from?' followed by some other personal questions about your age or gender perhaps. This always seems to me to strike a jarring note, since one of the promoted advantages of the Internet is that it transcends distance and I can talk to anyone in the world as if they were online in the next room. The language of the Internet suggests that once online we enter a virtual place (the Net) which transcends the material location of our keyboarding bodies. But by this first question a notion of geographical distance is set up, of real embodiment, connected via the technology to others who are also embodied in material geography. Despite all the cyber-real rhetoric we have a need to locate people relative to ourselves, in space, and with respect to other criteria that are important to us – effectively to embody them in the technology. This I would argue is especially true if we are engaged in an educational activity with them. Not acknowledging the constraints of the material context and 'real' lives of our students and ourselves is one reason that ICT based education can be a less than satisfactory experience.

This seems to be implicitly accepted by online teachers at one level, even when the rhetoric is of disembodiment. In setting up any online seminar when participants have never met in the flesh, teachers are advised to encourage students/participants to make personal introductions about themselves, perhaps including a photo image or representative icon. The presumption is that what participants say will be selective, but 'truthful', that it will reflect the material reality of their lives, rather than a constructed virtual identity. But why should this be so? Would the kind of learning that takes place in the group be invalid if instead of short autobiographical statements with a photo,

participants created a virtual identity represented by an ‘avatar’? And what about how we as teachers present ourselves? We have usually made more demands on students for self-exposure than we have on ourselves. We are the students’ teachers, not necessarily the students’ friends.

Who are ‘You’?

On one of the first courses I tutored via the World Wide web, one of the first things students did was circulate photographs of themselves, some with a little quiz – such as a group photograph and a request that the other members of the group guess who in the group was the student. I refused to put up a picture. I was unconvinced that it was necessary, and like many academics I have more confidence in my textual identity than in my physical visual identity. In this course, unlike the Women’s studies course, when my physical identity gave me authority in the content, this was a post-graduate professional teaching course, and I did not think I looked like a ‘professional teacher’. I decided to present myself only through textual means. I had no idea until much later about the mystery that this produced for the students. The absence of a visual picture of me remained an unsolved puzzle for some students long after the course finished. I have since had students from this course visit me at work and comment about how I wasn’t/was as they imagined me to be (or perhaps what consonance there was between my textual identity and my bodily image). They also told me about the emails that they exchanged with each other while they tried to guess what I looked like and come up with a composite image of me, that literally embodied, for them, my identity.

This year on another course where I tutor online I decided to remove the issue by putting up a small photograph and a short biography. It is there but and remains uncommented on by students. I have to say that I spent longer deciding which photo I wanted to use than I would spend deciding how to dress for the first face-to-face tutorial I might have with a group of students. The problem with photographs is that they are images of embodiment, but very limited ones. When we meet people in the flesh the image we present is composed not only of how we look but also how we sound, how we animate our bodies, even how we smell. So much is missing in just a photograph that the deliberate choice of a fantasy avatar might in some ways represent symbolically more about ourselves than just a picture. I have had a similar problem about designing a personal web page. As academics we are now expected to create a web page which, somehow, in one document, maybe with some linked pages should represent to everyone who accesses it: students; colleagues; strangers, the sum of what we are professionally. There is no other document in my life that attempts to do this for all these audiences. Even CVs are tailored for particular purposes. For me the problem of finding one visual image to represent me, or one web text to do the job, demonstrates the reality of the post-modern argument that identities are multiple, if not fractured. Even what appears to be a coherent identity that of ‘teacher’ is a coherent integration of many identities. The limits of computer-mediated communication mean that only the most simplified identities can be adequately represented or performed by most people.

Is it ‘Me’ or is it the software?

Bill Gates had a vision of the perfect online educational system, and the perfect online teacher:

When the information highway is in operation, the texts of millions of books will be available. A reader will be able to ask questions, print the text, read it on screen, or even have it read in his choice of voices. He'll be able to ask questions. It will be his tutor.' Gates 1995 p 195

In Gates' vision the perfect tutor is an intelligent machine. The problem of representing/embodying the human teacher is removed. Fortunately, or unfortunately the intelligent machine tutor has still some way to go before it is sophisticated enough to fulfil Gates' vision. Instead, it has seemed to me that what was being required of me as an online teacher on some courses was partly the attributes of a perfect machine: to be always available when the students 'needed' me, responsive to all individual queries, as well as responsible for the success of online group interactions. The sense of there being nowhere I could escape from the demands students made of me via the computer can be compared with slavery, or with the parenting requirements of caring for an infant. My 'online teacher' identity had a negative impact on my other identities, online and material.

This was my least happy online teaching experience. I found myself on a hot June Sunday in my campus office facilitating an online group of international students studying an MA course. I felt none of the elation described by many teachers when they write about online teaching: the sense of breaking boundaries of time and space, or communicating freely across the world. Instead I felt tired and exploited. I wanted to be with my family who were enjoying a local festival; I wanted to be able to maintain reasonable boundaries between my work and private time. I felt I could no longer control the various facets of my work, or identity. There was no joy in this elision of work and leisure, in the dissolution of the boundary between my private time and my teaching time. Over a year later I am better able to impose order and control, and have built new boundaries to manage my professional identities and those other identities that I am.

When my students appear frustrated by the apparent 'urgency' of Internet based communication compared with paper-based, I understand their feelings and try to help them take control of the technology rather than be always responsive to it. My students are also material beings situated in diverse geographical and social contexts, with many identities only one of which is to be a student in a course that I tutor, but that identity is grounded in material reality like all the rest.

Minds and bodies

The value of ICTs to enable the teacher and student to transcend barriers associated with time and distance (both geographical and social) and be able to engage in learning, anywhere, anytime, as anyone, is questionable. It seems to me that in this notion of transcendence is one in which biological and social embodiment is viewed as constraining rather than enriching (for example see Tiffin and Rajasingham 1995)

There is a sense amongst many writers such as Blake quoted earlier, that if learners and teachers could transcend the 'limitations' of being embodied, of being socially and economically situated, we could get right down to the 'real' educational business of dealing mind-to-mind with issues of the intellect. Drawing on my background in gender studies I know that this Platonic position is, a male one. Historically in Western, and

much Eastern culture the most highly valued knowledge has been that of highly abstract subjects such as philosophy, mathematics and theology. These activities were considered best carried out by men who denied their embodiment, and lived, where possible unpolluted by the nearness of the bodies and demands of relationships with women and children. Our universities were places where celibate men studied, their monkishness a sign of their intellect: their focus on higher things. Others, most often women and young people, organised the physical necessities of material life for these men: preparing food, making clothes keeping the domestic and work environment clean and warm. Today knowledge-making is still a restricted privilege, and the restrictions are in many forms. Who has this privilege to engage in the abstract activity of knowledge creation – either online or on a University campus? Which identities are knowledge-making identities?

ODL was perhaps one of the first educational areas to situate the student within the material world, rather than remove them from it to a world of ‘dreaming spires’ or green campuses. However, maybe because of this ODL never had the status of ‘proper’ university courses. ODL students have always been recognised as having primary identities outside their ODL course. Student support was partly about helping students manage all the conflicting demands of those identities. Research on women students in particular has argued that they have different material circumstances from men, different realities from which to draw on for their intellectual scaffolding and their emotional and financial support. In the 1980s and 1990s women distance educators shared ideas and produced a range of papers on the issue of gender in ODL (Burge 1996, Burge and Lenskji 1990, Kirkup and Von Pruemmer 1997, Kirkup 1996, Faith 1988). Books were produced about the particular needs, motivations and strengths of women ODL students (Lunneborg 1994 and Heron 1997, Von Pruemmer 2000). This wealth of research has much to say about the opportunities and problems provided when we acknowledge the diversity of students embodied experiences.

It is from this embodied experience that we use ‘situated reasoning’ (Brown 1989) to make meaning for ourselves and for others. Bodies produce knowledge and that knowledge: that meaning we make, is inescapably located in there. Gender is inscribed on our bodies (as is race and other importance social differences), it is produced in the interactions our bodies have with others, and our bodies are for others always gendered signs. If we accept a definition of gender as a symbolic system it should not surprise us that technologies have gender, or that the interaction that we have with virtual bodies online corresponds to this system. There is an obvious discomfort in most online communications if gender cannot be ascribed to a participant. Although I am drawing on a career of research on gender, the tools of gender analysis can be turned to use in other areas, to uncover the operations of other aspects of difference, diversity and inequality.

Haraway in ‘Modest Witness’ (1996) argues that historically not only attributes of gender, but of race, class and language have defined who can validly ‘know’ about the world. Instead of excluding some people from knowledge making our task is to find ways of including a much more diverse body of people. The fact that this has to be done through an electronic medium will not necessarily make it any easier than doing it in a face to face classroom. Brown (1989), in his seminal paper on the importance of situated learning, in designing ICT learning environments for students wrote *‘We all use our embodied and embedded position in the world to off-load onto our environment part of the representational and computational burden of cognition. The processes that we use to do this allow us to*

respond in real time to events as they unfold in the world in which we are embedded' (Brown 1989 p 17).

Nowhere in Brown's work or writings by Lave and Wenger (1991) are political and social factors such as gender an explicit part of the debate. However, the logic of their argument is that they should be, as should race and other important determinants of 'situatedness'. Brown's hope for the creation of a 'universal learning environment' would seem to be a contradictory hope, if his learners are engaged in 'situated reasoning' as he calls it, or producing 'situated knowledge' as Haraway might describe it. Their embodiment will suggest different kinds of learning environments, which allow people to choose to represent themselves differently and perform different identities, whilst recognising that all of these should have some correspondence with the material world.

Authors like Seeley Brown and Duguid (2000) reflect the focus very well in their identification of education as a group process where knowledge is constructed: *'Together, members construct and negotiate a shared meaning, bringing the process of the group along collectively rather than individually. In the process, they become what the literary critic Stanley Fish [1980] calls a "community of interpretation" working towards a shared understanding of the matter under discussion.'* (Brown and Duguid 2000 p 222)

'The Road goes ever on and on'¹⁰

As someone who has been very concerned about ICTs creating further educational inequalities, I have been struck by the truth of an argument by Brown and Duguid (2000) that our concern with the 'information poor' having no access education may be misplaced. It may be, they argue, that ICTs will provide the less wealthy with their only access to information. The rich will be able to afford, for themselves or their children, the luxury of full-time study at conventional campuses, where they will incorporate electronic and distributed learning as part of a rich integrated educational experience. One which will allow them also to develop and integrate their various identities to produce coherent and confident social actors. Our concern should be how we offer online distance education experiences that can achieve a similar outcome, rather than one that offers only opportunities for the creation of constrained, simplistic identities, and consequently constrained and simplistic knowledge production.

We need a more complex understanding of how we represent, develop and control the identities that we have online. When we are clearer about our online identities as teachers, and the ways in which we articulate these with our other identities and with the identities of others, we will be better placed to help our students with theirs. A role which must be an important part of online teaching. The concept of teacher 'avatar' could be a very creative one, but I would argue, no 'teacher' avatar should ever float free from the material context in which the other aspects of the individual are located,

¹⁰ The whole verse is from the 'Lord of the Rings' – a common virtual home for many avatars:

'The Road goes ever on and on
Down from the door where it began.
Now far ahead the Road has gone,
And I must follow, if I can,
Pursuing it with eager feet,
Until it joins some larger way
Where many paths and errands meet.
And whither then? I cannot say'

Tolkien J.R.R. 1954 The Lord of the Rings, London Allen and Unwin, Second edition 1966 p 48

not should any student avatar. It is also important that the technology in which these avatars exists should remain the medium through which teaching/learning is carried on, not the driver of it. In my own experience as an online teacher embodiment has only been a problem when it has been ignored. Online meetings should provide that same kind of excitement that those Women's Studies summer schools provided, one that came from understanding embodiment to be symbolic and dynamic.

Being a Cyborg Teacher - Magda Michielséns

Background

Since 1996 I have had several experiences in cyberteaching:

Cybernoise 96, Cybernoise 97; Diotima 96-97, 97-98, 98-99, 99-00; Gendering cyberspace 99-00, 00-01; Websupport of campus courses, e.i. JIT 2001, Girls and Media; Stiva 1999-2001.

Cybernoise 96: together with colleagues from the university of Utrecht we constructed a website, to support the Noise summer school. Some lectures were put in the Net, as web texts, information about the summer school was given by means of the website of the courses, we gave an Internet workshop for the students of the summer school and we held an IRC-session with a group of students in Odense.

Cybernoise 97 was a distance course, for students who subscribed from all over the world. The material was linked to the live-material of the Noise summer school, and students from the summerschool could access the e-course also, I gave a live hands on workshop at the summerschool to demonstrate the course ware and the website. The website provided a professional courseware context, developed in close cooperation with a software developer (for very little money).

In Diotima 1996-1999 (a Socrates ODL project, with the universities of Antwerp, Dublin, Lillehammer, Utrecht, Orebro, Madrid, Torino) a course "Gender and Politics" was developed the first year, taught the second year, and during the third year a national package of the course was developed. Afterwards a consortium of universities was created to keep on delivering the course, and potential new ones, based on the Diotima experience. Although my university decided not to be a part of the consortium, I was teaching my part of the course during 99-00.

In the project "Gendering Cyberspace" the university of Utrecht coordinates a new Socrates ODL-project, in which Thessalonica, Lund, York, Antwerp, Lodz, Odense participate to offer a short ODL course (9 ECTS the first year, 6 ECTS the second year) on Women and Cyberculture.

At the university of Nijmegen I support my campus-courses for small groups of advanced students by web pages. There is so much about my courses on the Net that in some courses allow some students to take the course on distance.

At the university of Antwerp we developed a ODL-course, called Stiva¹¹, one year, divided in three modules, Feminist Theories, Equal Opportunity Policy, Gender and Media, for 13 ECTS all together.

When I started analysing my experiences in each of these cases I saw immediately that my enthusiasm in making the course is much greater than in teaching the course. I also see that most of the projects demand an intensive collaboration with colleagues, often internationally, always between different universities. This element is highly complicating the work.

Writing my own material

In the different experiences writing my own course for the web (or writing a course with web support) was a delightful experience. Hypertext and graphics offer me the way I want to write. I can show the many different aspects of a topic I want to treat in my lecture, and I can leave it open to the fantasy and courage of the students to explore these ways or not.

I can take the student with me in the explorations and the philosophical aspect of thinking, while they also can choose for the hard core only.

I like the possibility of indicating many layers of a problem, without being forced to write a book or an article about it. Writing for the web fulfils completely my needs as a teacher to translate my pleasure in a theoretical discourse into a form that can be handled by the students. It is like a narrative and they can take it in doses as they choose.

I'm an ex cathedra professor, and the Net gives me - an old fashioned orator- a completely new platform. Of course, I'm not that old fashioned, given the fact that I write, for many years, my own websites. However, I like to explain, to give lectures, to be behind the cathedra. I don't like workshops, being a guide, being a facilitator. I don't say that one is better and the other is worse. I only say that this is what I'm doing best and like the most. And Internet gives me the space to write as if I were lecturing. It also is very handy that I can elaborate my message step by step. I don't have to be complete at the very start of the web-version of my course. There is much more to say about this aspect, but this is the main point: the pleasure of writing for the Net. I described that pleasure on the net in several websites, e.g.

<http://women.ped.kun.nl/inscribing>

<http://women.ped.kun.nl/dreams>

I have to admit that, when accompanying a regular campus course with comments and synopses on the Net, it is very hard to keep the promises. With live meetings every week it is easy to miss a deadline of the update: a week is only a week. A failing server, a meeting abroad during the week-end, a hackers' visit, an illness of an assistant, etc. are enough to derail the whole process.

Enjoying writing on/for the Net, for distances courses or for web supported live courses, I have no problems with my virtual existence. My virtual me is a very open person. I write for an imaginary audience. They can learn a lot about me on the Net, if they care looking for it. Most of the time the real me does not know or does not care if they look at it. I keep on being surprised (in real life) when I apprehend that people (students,

¹¹ Described later in this volume as one of the cases or good practices.

colleagues) know things about me that they only can know from the Net. In interactions with students I have little wish to add in (e)discussions something to the many things I already made available in while writing the course.

During a course, teaching - interacting - reading their assignments - I hardly can force myself to do add something. I have the feeling that it is already there, and I don't have the time or the energy to rephrase it.

It is not so different from my live teaching: I like to tell, to lecture, and to elaborate for a motivated audience. I'm exemplifying attempts to understand, struggling to understand and to know more, linking things up, giving improvised illustration; I'm showing them the effort of speaking, reading, and thinking.

I don't *teach* a course, I give them a reading and thinking programme for the following years. Live-students ask me to do the exam later than it is planned, because they want to do more extra reading - it is not different for the distance course. In both cases I hold them back, and try to make clear the difference between what is obligatory to take the credit and be graded, and what is additional context and optional material. That is just the way I am teaching.

I'm a cyber teacher, and I a feminist, but in my own way I am the kind philosophy professor my own philosophy professors used to be. I love the use the Net and e-learning platforms in being that traditional philosophy professor.

I needed the experience of cyber teaching to understand better my own teaching practice. As a cyber course developer, author, professor on the Net, I learned more about students and the way they are supposed to study and are studying than I have done the 25-30 years before.

Collaborating with colleagues

In every e-course I have participated, the collaboration with colleagues was the most difficult aspect. Realistically speaking people don't have the time, but they do want to collaborate; they engage in the projects for which they (honestly speaking) don't have the time or resources.

Also a very difficult aspect of the collaboration is the question of copyrights. There is not only the fact that at the level of the course, in relation to producers of material outside the inner circle of collaborators of the course, every piece used has to be checked concerning the permission to use it. Although for educational aims the laws are easier to use than in other circumstances, it remains difficult.

Working with international teams, from different universities, the question of copyrights becomes also difficult to handle within the team. There hardly is, at the moment, a formal structure to handle these problems. The courses I have been working at are developed in small international teams, as pilot projects. These projects were not a part of some big "virtual university" or "open university", were every step is formalised and organised by a specific university department. To tackle the intra-team copyright question is almost too difficult for pilot projects.

Tutoring

In all the courses described above I have written some web lectures about which I'm still satisfied years afterwards. On the other hand, in all these courses I could have done (theoretically) much more as a tutor of my part of the course. Everyday tutoring is absolutely fundamental for the success of the course. There has to be interaction with the students, one has to keep them on track, one has to follow the discussions they are engaged in, one has - as a teacher - to stimulate by means of questions or remarks in the course. I know that it is essential, but I find it very difficult to find the time and the energy. As a (web) writer of the material it is as if I have given all, and I cannot offer them more than that in an e-discussion.

Only in the Stiva-course it was satisfactory, because I did the minimal necessary (reading and grading the assignments; going into discussions when my attention was called to it by the tutor), and the tutor/assistant did the rest. The perfect work of the tutor prevented drop out, and she guided the students in a way that was an example of how it needs to be done.

In cyberspace it is very difficult to be author of a course, professor/expert of the material, cyber guide, **and** tutor of the course, all at once. I realized that I love to do/be the first part, but that I do need assistance do/ be it all. There are no technical obstacles, but I cannot provide the mental space, with an overloaded agenda, and after having written the course.

To conclude

Reflecting on myself as a cyber teacher, I see that I'm not that much of a *teacher*; I seem to be more of an *author*.

The reasons are several:

- Cyber teaching is innovative, and as such the main way to do it during the recent years was to do it in the context of international projects. This is very positive; it is extremely fruitful that it is well supported by the EU. But, it also turns the professors involved into cyber (projects) managers. There always is much more involved than only teaching the course.
 - As cyber teachers and innovative cyber-project-managers, we also are designers of new courses and new ways to design a course. Often course development and planning becomes more demanding than the everyday teaching.
 - Live-teaching has its routine, on the personal level as well as on the institutional level. Cyber-teaching hasn't (not yet). Given the fact that we were, with our women's studies projects, in the frontline of the developments, we had/have to invent it all. It was/is extremely fulfilling, and it made me think more about the needs of the students than ever before. When I have written my course for the Net, when I have searched, selected and implemented all the links, when I have anticipated many possible questions and added material to answer the questions, when I have added illustration and all kind of images, after I have added some video material, and when I'm satisfied of the aesthetic level of the course, I have no more mental energy to run the tutoring and the everyday discussions with the students.
- Maybe this will change with e-courses after running them for several years without too much newly written material, but at the moment it is like this.
 - For me, linking students to a community of learning, a virtual intellectual

community, is very important. However, I think that different teachers have different way to reach the same goal. In cyberspace, mine is writing, not interacting.

4. Cases and good practices

This chapter gives a number of case studies of use of ICTs in Women's Studies. These cases provide a spectrum of uses from internet based distance course to the use of ICTs as a complimentary tool in regular teaching. Additionally the cases vary in the types of technologies used

The case of Flanders (Belgium): Stiva-project "Gender and Politics" Laurence Claeys

Context

The DIOTIMA-courses¹², developed, taught and followed by teachers and students from different European countries was for us the starting point for thinking about doing online Women's Studies courses, similar to Diotima, but more specific for a Dutch-speaking audience. The use of the internet to create networks and learningcommunities was a great novelty in which we saw the huge innovative opportunities for education. When in the succession of the DIOTIMA-courses the idea of the development of national distance courses rose there were a lot of ideas but it was impossible to estimate how it would work out. We worked out some of the ideas and looked for fundings. Finally the development of the internet-based distance courses Women's Studies in Flanders became possible thanks to the fundings of STIHO¹³, a fund from the Dutch-speaking Community in Belgium, and co-financing of the universities of Antwerp, Ghent and Brussels. STIHO is a fund who allocates money to projects in higher education that are innovative in both technical and content related ways. The substituted projects had to contribute to the development of innovative education forms (and the use of ICT) related to the changes in society (Willems, 2001).

¹² For more information about Diotima: <http://diotima.let.uu.nl>

¹³ For more information about Stiho: <http://www.ond.vlaanderen.be/innovatie>

We named the online Women's Studies courses Stiva¹⁴, it stands for 'Stimulerend Innovatie Vrouwenstudies Afstandsonderwijs' (in Dutch), it also means a depot for merchandise in the hold of a ship (in Italian).

The Stiva-project is part of the Advanced Academic Curriculum in Women's Studies, a one-year full time post-graduate, existing since 1994, and taught yearly. The Stiva course enhances three courses: the course 'Feminist Theory' (taught by prof.dr.Magda Michielsens, UIAntwerp, promotor of the project), 'Equal Opportunities' (taught by prof.dr.Alison Woodward, VUBrussels) and 'Women and Media' (taught by prof.dr.Frieda Saeys, RUGhent).

The courses are in first instance for holders of a university degree, but students who do not have a university degree can also follow the courses. These second group of students can obtain a certificate of post-academic education if they successful followed the 3 courses.

General background of the students

Every course was followed by 25 to 30 students, twelve students followed the three courses, the other students followed one or two courses. They were aged between 23 and 45, all except one were women and their knowledge about Women's Studies or Equal Opportunities ranged between almost nothing (just interested in Women's Studies) and very much (people who worked in women's organisations for years).

The student population from Women's Studies courses in Flanders is very diverse. This is the case also in our Stiva-courses. It consists of:

- unemployed people who would like to work in the Equal Opportunities sector;
- teachers and school directors who are taking a sabbatical and want to learn more about Women's studies;
- people who follow the courses because the content is related to their job content (women's organisations, the coordinators for equal opportunities policies from different ministries);
- master students from different disciplines who take these courses as an additional or optional course;
- teachers (not on sabbatical).

All the students studying the online courses were really intrinsic motivated and were interested in gender questions, emancipation and Women's Studies. Everybody was doing it by interest, nobody was obliged to follow the course.

"I started the Women's Studies courses because I really wanted to do it after my Linguistics. But following the entire course [the three courses] was impossible, I have to work. The fact that it was online was very handy, at the same time I also had a baby and it was impossible to do her away to go to the classes. Therefore I started this online Women's Studies courses." (Bianca, 19/4/2001)¹⁵

The ICT knowledge of the greatest part of the students was minimal by the start of the

¹⁴ For more information about Stiva: <http://www.uia.ac.be/women/odl> (in Dutch)

¹⁵ All citations are extracts from interviews with Stiva students in april 2001. Only the students who followed the three online courses were interviewed, all interviews were taken by master students of the University of Antwerp as part of their research classes.

course. In the leaflets we distributed we mentioned that no prior ICT knowledge was needed to start the course.

To avoid too many technical problems (and the drop-out due to technical frustrations) we held three face-to-face meetings about 'introduction to the Net'.

Due to the fact that not all the students followed this introductory internet meetings, there was also a FAQ¹⁶ and intensive support by email and telephone during the first weeks of the courses.

Course description

The three Women's studies courses were developed as a pilot project, it was the first time in Flanders that Women's studies courses were taught online.

Only one partner in the project, Magda Michielsens, had former experience with ICT and web-supported education and with European online Women's Studies courses¹⁷.

Timing

During the academic year 2000-2001 the pilot version of the 3 courses was taught.

The first course (Feminist Theories) started on 15 October 2000, the second course (Equal Opportunities) started on 15 January 2001, the third course (Women and Media) started on 15 April 2001. They were taught successively.

Course aims

The most important of the overall aims of the courses was the development and improvement of the emancipation expertise of the participants through insights in the theory about feminism and the construction of femininity and masculinity in society.

Further we wanted the students to create the following knowledge and skills by following the online courses:

- knowledge about women's history
- insight in the gender construction of history and society
- analysing and writing texts
- looking to the world through gender-glasses
- making use of the internet, email and other ICT possibilities¹⁸.

Every teacher also formulated the specific aims for their course.

In this article the Feminist Theories course is taken as an example as we go further in to the characteristics of a course, it would take too much time to specify every course.

The structure of the different courses are roughly the same in each case.

The aims of the course 'Feminist Theories' are to give an overview of the different feminist theories. It concerns a broad field, including policy, science, feminist

¹⁶ Frequently Asked Questions

¹⁷ Magda Michielsens uses ICT in a lot of her own courses (i.e. the course Youth and Information Technology <http://women.ped.kun.nl/jit2000>, the course Methodology <http://women.ped.kun.nl/methodology2000>) and also in international courses (i.e. Cybernoise <http://women.ped.kun.nl/cybernoise>, Diotima <http://women.ped.kun.nl/Diotima> and Gendering Cyberspace http://www.let.uu.nl/womens_studies/gendering_cyberspace)

¹⁸ Kirkup and Morton concluded that women are very positive to the idea of learning to work with computers in the context of studying other content-related courses that they find interesting (Kirkup, G. et al, 2000). An underlying goal of the online courses was the increase of the computer literacy of women.

consciousness and the development of skills like analysing texts and constructing arguments.

The course consists of 5 topics:

1. The Feminist canon
2. Feminism as a social movement
3. The symbolic capital of women
4. Different views on emancipation
5. Women in cyberage

The first course is also taught as a live (face-to-face) course in the same year as the online course. The other courses had in former years been taught as a live-course, but in this year only as an online course. All the teachers had great experience in giving their course to a live audience.

Other features

about the courses

There was a live-meeting at the start of every course, if necessary there was another live-meeting during the course. This was only organized if students asked for it, there was always only a small group of students who visited the live-meetings.

The courses are in Dutch. The students go to the Stiva webpage (<http://women.uia.ac.be/stiva>) and enter their password to start the course.

We asked the students to follow a time schedule, because we decided that passing at the same time at the discussion points made the discussions more interesting and created more contact between students.

Although we asked the students to keep the time schedule most of them did not. We also did not want to give them a very restrict time schedule because one of the aspects why people are following an ODL¹⁹ course is the time and place flexibility. The students had to participate in discussions and had to write papers to get their certificate.

The grade they could get is a number from 0 to 20/20. The students needed to have at least a 12/20 to pass.

about the teacher, project leader and tutor

The teachers had to create extra time to develop the courses; they were not paid extra hours for this work. There was one full-time assistant (the project leader) for helping creating the courses and all the other work involved with online courses (promotion, tutoring, re-writing certain parts of courses, searching for interesting webpages and images, bringing in the content of the course in the courseware). Finally for the second and third course an extra person was appointed to help the teachers and project leader due to the fact that the workload was too high. This extra person only stayed for four months in a part-time function.

Planning and development

The courseware we use for the distance courses is Authoring Course Ware (ACW). This courseware was a new courseware package developed to reach the goals we had

¹⁹ ODL stands for Open and Distance learning

formulated for our project (see further).

We have been working together very close with the courseware developer, to tailor the standard courseware to our specific needs. Several meetings between the project leader, the teachers and the developer were organized to synchronize this process. Before starting the courses some teachers had experiences with the use of other standard courseware packages. We also looked at trials from WebCT, Toolbox, Blackboard and the use of simple HTML pages for online learning²⁰.

The great advantage of ACW was the mutual development of the courseware and the course, so the courseware was developed in the direction we needed with our kind of course. When using standard courseware there is not much flexibility, the dependence of the specific format is great.

Four people did greatest part of the work: Prof. Dr. Magda Michielsens as teacher from the first course with a lot of prior knowledge about online teaching, ISI as courseware developer, Dra. Laurence Claeys as project manager and Dra. Babette Pauwels as ICT expert on docent-centered learning.

The other teachers were responsible for the content of their courses but less involved with the global development process. Only the project manager was working fulltime on the development of the course.

The development of the content of the course/courseware proceeded in three phases:

- ✓ Phase 1: implementation of the basic version of the courseware and analysing the needs, content and structure.
- ✓ Phase 2: simultaneous feedback to the courseware developer, adapting the existing content of the life-courses to distance-course content and input of the content;
- ✓ Phase 3: finalizing the course-structure, the layout and the content.

In this article we will not describe the way the courseware was developed, we will emphasize on the development of the online course itself.

Phase 1: Implementation of the basic version of the courseware and analysing the needs, content, instructional design and structure

The schema described in “How to Develop an online course”²¹ from Web solution is a good starting point to describe the development of our three Women’s Studies courses. We passed through three stages

1. Analysing the needs, users and technical requirements
Before starting the development of the course we analysed the needs, users, existing content and technical requirements.
The aim of developing an online course came into being out of the need for content providers for the internet (especially Dutch content), the need for

²⁰ More information about comparisons of existing courseware, see:
<http://faculty-web.at.northwestern.edu/at/beaman/autocourse/comparison.html>
<http://www.marshall.edu/it/cit/webct/compare/comparison.html> en
<http://www.ctt.bc.ca/landonline/sbsall.html>

²¹ http://www.stylusinc.com/online_course/tutorial/lesson1.htm

innovation in higher education, the need to give people the opportunity to follow Women's Studies courses in their own pace and place and the need to narrow gender gaps in ICT.

The only place in Belgium where students could follow the complete Women's Studies curriculum is Antwerp. So students had to come from all over Belgium to follow the courses. The Women's Studies student is also often a full-time worker, and all these factors make it really difficult to attend to campus courses.

It was decided to make an online course and not a web supported course. The aim was to make a course where all the information would be online, no reader or compendium, no cdroms. But this was aiming high, for the second course a reader was distributed.

In analysing the technical requirements we presupposed that students would work with a Windows operation system, the browser Internet Explorer 5.5 and would be able to get online.

Analysing the content

We started by setting the educational goals for each topic (each course consists of five topics).

Starting from the written course we divided it in compounds (little pieces that students will see in one moment, usually maximum the length of a screen).

In analysing the existing course content the development was quite different between the first and the later courses.

For the course Feminist Theories we started from the written course and the campus experiences. Due to intensive communication between the teacher and the tutor there occurred a real content-expansion out of the written course and the experiences. There has also been an intensive search on the Internet for information useful in the course.

Analysing the instructional design and structure

The course map/flowchart was developed, within the courseware it was possible to develop linear structures. Many flowcharts have the assignments or quizzes, discussion moments apart from the lecture, in our case it is integrated in the lectures.

Phase 2: simultaneous feedback to the courseware developer, adapting the existing content of the life-courses to distance-course content and input of the content

After having analysed the different tasks, we have made the decision on the necessities of the courseware. In different discussions between the teacher, courseware developer and project coordinator was decided to focus on the adaptivity of the courses (more information about adaptivity, see further). The tools for this had to be developed.

The reconstruction of the existing course content from the live-courses to distance-course content was also done in this second phase.

By rewriting the existing texts to web lectures the cutting up was the most difficult thing to do. By presenting online information to students we had to keep in mind that students cannot read on a screen without clicking for a long time (normally one screen

is the maximum students can get in one click). So all the material had to be cut up. Also for the adaptivity we had to work in little compounds. For every compound there had to be decided for which student group it was mentioned, and if necessary we had to write an other or an extra compound for a certain student group (target group).

It was not enough to rewrite the existing content of live-courses because all the teachers tell much more in their classes than what is written on paper. This part had to be written from zero. Also the extra information like literature lists, web links, pictures and movies had to be searched for. Once the structure of the content was fixed and a great part of the content was written, everything had to be put into the software.

It was also in this phase that we created some sessions to test the accessibility, the rapidness, the total interface of the course and the capacities of the server. We did this by asking people all over Belgium to login to the course at the same time and work for an hour in it.

After this session (that we repeated three times) every person wrote down his or her comments. For us it was very important to test the course on the end user so that suitable changes could be made. Very often software (and other courseware) is developed with a standard user in mind, we wanted to test it on a diverse public. By looking for people to participate in such session we looked for people with a lot of ICT knowledge, with some ICT knowledge, people who have much experience with online education and had none, and different users: males, females, young, older etc. It was important not to do these tests in the latest stage but some time before, otherwise integrating the changes could involve a lot of rework.

Phase 3: finalizing the course-structure, the layout and the content

In the final stage we developed a lot of surrounding html-pages, like the techno-talk discussion platform, the discussion platform, How to start?- files and ICT Helpdesk files. We also planned to develop a student and teacher database (with a picture and some information about the student/teacher), but due to lack of time we implemented this database some weeks after the course was started.

There was an intensive interaction between the project coordinator and the teacher about the course content and the layout.

There was an intensive interaction between the project coordinator and the courseware developer about the server needs, the specific features of the courseware (testing and implementing).

This was almost a day-and-night work and would have been much better with more workforce.

It was not that everything was done once the course was developed, teaching and tutoring the course and keeping the server online was also a work intensive job to do.

Teaching with interactive and adaptive components

General Information

The course structure we used was a linear structure; this was a conscious choice because we really wanted to 'teach online'. With a more unlineair structure you can give information but the process to convert information to knowledge in a didactic way is more difficult, if not impossible.

Every course consisted of 5 themes (topics) with for every topic having the same structure:

1. Introduction
2. Structure of the topic
3. Content of the topic (material to be studied)
4. Glossary list
5. Link list
6. Literature list
7. Assignment list

In the next chapter we will explain the interactive and adaptive features we use in the courses.

Interactivity

The use of different forms of interactivity is very important in an online course, it is the interactivity that makes the computer and the online learning situation unique, it creates new possibilities never used before in distance education (Borsook et al., 1991).

It is especially needed to let the students feel that they are not alone, to give them feedback, especially women want to communicate and socialise during their study process (Michielsens, M.). There is a strong debate about what interactivity means. For this article we use a very simple definition of interactivity: we understand interaction as every form of action-reaction that happens, this can be person-to-person or person-machine or machine-person interaction.

The best-known interaction form is the discussion, one person says something, someone else reacts and an action-reaction takes place.

Further divide is made between synchronous (i.e. chat, videoconferencing) and asynchronous (i.e. threaded discussions) interaction and one-way (a letter from the teacher to all the students) and two-way (i.e. email communication) interaction.

Different forms of interactivity are used in the Stiva courses: general threaded discussions, private, student- en teacher notes, emails, movies, multiple choice questions, search functions, direct messages from teacher/tutor to students when studying.

We will discuss all of them here except the use of emails that we suppose everybody knows.

Threaded discussions

For every course we created a techno platform and a discussion platform.

The techno platform was used for the exchange of questions related to technical problems, the discussion platform was for questions related to the content of the course but also for more general information. We told the students that they had to see it as 'the talk after the class, when the teacher has left'. The platforms were made in FrontPage²², it is a very easy way to create platforms who are simple, but user-friendly.

The studentes to ask questions related to the content of the courses, to inform about documentaries, conferences, publications, very often used this platform.

²² Frontpage is a HTML editor from Microsoft

The purpose was that students informed each other and answered the questions, only when the question stayed unanswered a teacher or tutor posted an answer.

Private, student- and teacher notes

Students could leave notes for themselves or for other students at every page of the course.

Private notes were used for personal use on a certain page; students could -by clicking a simple command- write down a personal remark or notice that was only seen by themselves; it was invisible for other students or teachers.

Student notes were written by students for students, if they wanted to discuss a certain topic in the course they could leave a note for the other students. By clicking a simple command they could start a discussion thread.

Teacher notes were questions that teachers left at certain points in the course, it was the start of a discussion thread. This note form was also used as assessment: all students had to answer the question.

Movies

The aim at the start of the course was implementing a lot of video material. After a while it seemed impossible to do this in a way all students could see it because of a bandwidth shortage. It is a lot of work to integrate movies in your course because you need video editing material (hardware and software) that is quite expensive.

In our universities it was possible to let the central audiovisual service do it, this made the editing of the material not very flexible but well done.

Multiple choice questions

The students were assessing themselves by answering multiple-choice questions. If they answered the question correctly they could go further, if not, they were kindly asked to restudy the former pages or to read some extra material.

For the courses that we were teaching multiple-choice questions were not a very good way to assess the students, to reduce philosophy to multiple-choice questions is too limited.

The courseware gave us the opportunity to use it but in general we didn't often use this feature.

Search functions

It was possible to look in the course for specific texts or notes, students and teachers can search on student name, texts (words or part of words in the text or in the title), time (when was the note written) and in a certain part of the course (or over two or three courses).

Direct messages

The teachers and tutor had the possibility to send direct messages to the students who are logged on to the course. This means that all students who are studying at a certain moment will get a pop-up window with the message of the teacher. This is mostly used to send the students motivational messages.

Adaptivity

It has always been a problem for the organization of Women's Studies courses that the student population is very diverse. In campus-courses the teacher can still fill up the gaps in knowledge of particular students and can resolve misunderstandings, although she can never individualize the content.

Much current content for web-based courses are still implicitly oriented for a traditional on-campus audience, but the courseware we used seemed to resolve this problem. With ACW the course adapts to users with different backgrounds, prior knowledge of the subject and learning goals. This makes the course richer and more flexible so that different students can get personalized content and a personalized order of presentation.

In ACW different forms of adaptivity can be used.

1. Adaptivity for differentiation within target groups

(discipline, prior knowledge of Women's Studies, amount of time they can spent on the course)

Dependent on the characteristics of the students an other course content appeared when they login to the course. The three characteristics we used to differentiate were:

- Discipline: the studies they had already finished (i.e. philosophy, political science, literature,...)
- Prior knowledge of women's Studies
- Time element: students can choose if they want to receive a lot of information (more than they have to study) or just the content they have to know to pass their examinations.

2. Adaptivity for differentiation based on the history of the study during the study process.

If the students wanted to jump around in the course they were nicely told to follow the path that was outlined (traced out) for them. They got messages like 'you first have to look at 'this: with a link' before you can look at 'this: with an icon pointing at the page below who is empty at the moment'.

The path also changed depending on the wrong or right answers they gave on multiple-choice questions. In this way the teacher had the opportunity to teach a course like a course they built up in a face-to-face course.

There are some online teachers who don't like to give the linear path but rather give them a matrix of information..

Feedback and assessment

To get their final grade students don't have to make an oral or written examination, they had to:

- answer the teacher discussion notes in a proper way
- write some papers (maximum 5 papers for 1 course)

We were sure that we did not want an oral examination at the end, but it was difficult to decide how to evaluate the students. At the end we decided that we had to use the new media for the evaluation, as we did for teaching of the course.

Students liked to get feedback very quick because they were afraid to go wrong at the beginning. For teachers it was difficult to evaluate during the year, they were used to a final evaluation at the end of the year. So it meant a new way of working (and

workload) to evaluate papers during the year.

The teachers weren't paid to give the online courses, so it was really an extra workload.

"(...) but if you don't get a reaction immediately or on a short term, than I asked myself: 'To whom am I talking?' This is a bit the comment I have about the papers: 'for whom do I do this, for myself?' – yes, than I don't have to"(Karen, 19/04/2001)

In our course it was also the problem that teachers did not have the time to give feedback on a short term and did not have the time to enter the course often, the students got frustrated about this. They had to relay on the tutor and their peers too much.

"It is really very unclear how they [the teachers] evaluate and what they expect. And I think that for certain people it's really working on their nerves"(Bianca, 19/04/2001)

If the answers on the discussion platforms were really going the wrong way teachers also adjusted the discussion or completed them.

The role of the teacher, tutor, technical assistant and student

An important task division has to be made between teacher, tutor and technical assistant during the course. We worked it out this way:

- The tutor

The tutor, who was the same person as the project manager was the person students contacted for everything (general information, questions about the content and technical problems).

The communication between her and the students was quiet informal and accessible.

"the contact with L. [the tutor] is really very good, she explains everything step by step, she has an answer on every question. It's really good that one person does the follow up of the course"(Inge, 2001)

Her most important tasks -once the courses were started- were:

- sending emails to all students every two weeks with the information about the new topic and the table of content
- visiting the discussion platforms once or twice a day
- answering the emails and telephones of students
- updating (and cleaning up) the course with own information or information given by the teacher.
- keeping the server online and making back-ups on a regular basis (together with the technical assistant)

- The technical assistant

The technical assistant helped by resolving problems students were confronted with when the tutor was not able to resolve it, he also organised the installation of the server(software) (Windows 2000 Server met IIS and MS Access).

He was always willing to help when problems occurred.

- The teacher

When the tutor was not in the position to answer content related questions she sended the emails from the students or the questions on the discussion platform to the teacher. The teacher (for every course there was a different teacher, sometimes more than one teacher) answered all of them. The tutor is kind of a filter between the student and the teacher, for students it was also easier to

contact the tutor then the teacher.

One teacher organised a live meeting that was free to access, this was experienced in a positive way.

"Finally we don't have much contact with them [the teachers]. During the first course there was a live-meeting...that was of course very good...because you can ask all kinds of content-related questions" (Karen, 2001)

Students

The drop-out defined as "who does not finish the course and do not get its degree" is high in ODL-courses compared with other courses. Dependent from the course between 41% en 52% of the online students finished the courses. There were also a lot of students who would reach 'their own goals' but not get their degree because they did not submit all these papers.

"I didn't really start with a specific goal. My goal was to extend my general knowledge about women history because it's not so evident to find it somewhere..." (Tina, 22/04/2001)

It's difficult to say if the students are reaching the goal they put first when they started the course, because their goals could change in time

For the students who didn't have much experience with the internet we can say their skills to use these tools have improved and they feel more secure than before.

One of the students has had huge technical problems at the beginning of the course because to get access to the course they needed to have a Windows OS; she worked on an iMac and used MacOs. She didn't have any experience with the Net, nor did people in her environment, at the end of the course she said:

"On technical site I learned a lot with this courses, now I work fluently with the internet, before I wasn't really an internet adept, I thought I needed to learn it because it was modern and useful and so I've got two birds with one stone" (Karen, 19/4/2001)

We interviewed the students who followed the three courses, they all defined their experiences with the online Women's Studies courses as positive, even the students who dropped-out. They had a lot of comment on the technical problems at the beginning, the shortage of feedback, not enough communication between students,...but the factors who seemed to be decisive to go further with the courses were the content and the way the course was adapted to the internet medium (texts adapted to the medium, use of links (but not too much), visual material, the set up of the course).

When one of the two factors was not fulfilled (for example: the second course was less internet-based (long texts taken out of articles or replications of PowerPoint projections)) it was much harder for the students to go on.

"...about the first module [Feminist Theories] I can really say that it exceeded my expectations...the second module [Equal Opportunities] was more a series of slides...then you can better read a book"(Tina, 22/04/2001)

Teachers

We didn't interview the teachers about their experiences with this new way of teaching, but those who didn't have much experience with ICT and ODL often mentioned they liked the development of the course and they learned a lot.

One of the negative sites was that the tutor was not able to travel around all the time to visit all the teachers, so when they were confronted with problems they often had to resolve them themselves.

7. Reflections, conclusions and recommendations

- The online learning process

For students it was very difficult to learn to learn online, they are so used to paper or ex cathedra study that in the beginning of the course they were discussing 'how to learn online'? But this was no reason not to exploit the possibilities from e-learning²³

One of the tips a student gave was very useful for all

"The course is very attracting. A possibility for learning: it's like looking very concentrated at a documentary on the television.

There it's also impossible to underline things and still you remember a lot afterwards. By following visual information you trust on the selection capacity of your head.

You know that, for yourself, it remembers the most relevant information. To underline is the affirmation of the doubt against your own knowledge???

The advantage of the internet is that you can go in rewind-mode to see again.

The course is the middle way/ melting between book and television/ movie. Refreshing" (Tina, 16/10/2000)

- The role of the tutor

An important role of the tutor is e-moderating discussions or making connections between teachers and students. The tutor is in direct contact with students and teachers, she is a mediator between the students and teachers in both ways. Tutors or e-moderators need a lot of online competencies like: understanding online processes, technical skills, online communication skills, content expertise and some specific personal characteristics like being motivated, being able to establish an online identity, knowing how to create an online learning community (Salmon, G, 2000:41).

This is a new way of teaching, done by a person with a 'new role'. It's important to define this role and tell the students this person is there 'for them'.

Virtual students, using a fast and instant satisfying medium are very demanding, they want the answer now! The course has to be 24 hours a day online and emails must be responded in 12 hours, otherwise they get the feeling of 'being left alone'.

- The role of the teacher

In our online courses the teacher is more a content-provider than a person who is giving classes. The didactical process was developed before the course started. Once the course started it was the tutor who was doing the follow-up, motivating, explaining and mediating of the discussions. Maybe it would be better that the teacher and the tutor were the same person but reality tells us that this is impossible due to time problems and the specific characteristics that are needed for a tutor who not all teachers possess. It is still important that teachers know something about digital didactics and are able to rewrite their course for this medium. If not, it is better to keep the distance courses in a more traditional way and just to use the internet for communication.

²³ In the report of the European Commission e-learning is defined as the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services as well as remote exchanges and collaborations (Commission of European Community, 2001: 2)

- The technical implications
When starting an online or web supporting Women's Studies course it is important to have some technical knowledge about HTML, web servers etc. The relation with the technical staff is of huge importance to create online courses. The ICT-market found an important client in universities and high-schools, especially for courseware. Technology, however, must not determine how the teaching will happen. The use of a digital didactic process for online teaching is one of the big challenges, and it is an aspect that courseware developers not always think about profoundly, it is the academic world who will have to create this digital didactic process and there is still a lot of work to do.

The development, teaching and tutoring of the online Women's Studies courses was a very intensive work to do. By the start of the project it was difficult to know how everything would work out because not much good practices were available. We hope that with this article we brought some information of how to start developing an online course and we hope it stimulates more people to integrate ICT in their courses in a significant and joyful way.

This academic year (2001-2002) the Stiva courses are taught for the second time, with as much students as the first time, with as much enthusiasm from teachers and tutors as the first time, with less technical problems and with no money.

The STIVA fundings were not renewed but the courses go on, in between the search for new funding is going on. But it is much harder to find money to continue projects than to start projects. There is not so much work on the courses this year: the update from the material, the check for new and better links, ... and the digital material can be used over and over again, like a little part of the brains of the teachers was caught and digitized and will never be lost.

Reflections upon teaching and learning in an Internet environment - the course "Gender, society and IT" at Centre for Gender Studies, Lund University - Sara Goodman

In 1998 and 1999, the Centre for Gender Studies, Lund University, Sweden developed and gave two internet-based courses "Gender, society and IT" and "Feminist research on the Net". This section of the chapter reflects on these experiences.

The context

The context is the Centre for Gender Studies, Lund University gaining the possibility to give a course with our team of teachers as well as similar course together with teachers from Linköping University and Umeå University. During the late 90's within the Swedish University system there has been a strong interest and

encouragement (financing) to create more distance courses and educational programs via the Internet. The motives for this will be discussed further in the chapter. The Lund Centre has had a relatively active interest in exploring and using feminist resources on the Internet - this interest is in part due to the teaching staff and in part due to our very active librarian who maintains our Web pages and is responsible for a national data base on Women's Studies Researchers. At the same time the Centre has been trying to increase our funding for under graduate courses especially since our limited funding prevented us from giving part-time courses. The university's and Swedish government's willingness to support internet-based courses coincided with our interest in broadening our undergraduate program and our curiosity about working with this media.

The Centre for Gender Studies has a well developed undergraduate program with a growing student base. Our interdisciplinary centre is a small part of largest university in the Nordic countries. Lund university dates back to the 1600 hundreds but women have been a part of the university for a little more than a hundred years. Currently the majority of undergraduate students are women. Being a relatively new field, a small centre and interdisciplinary in a large university which is strongly oriented to academic disciplines has at times made the Centre somewhat of an outsider in the university structure and yet also given considerable freedom in an environment that has been mildly positive to Gender Studies. Thus, exploring the new opportunities provided by internet-based teaching fit into our innovatory pattern of developing new courses and initiatives.

Our regular university students tend to be young with a mix of older students. They may be at the first year at the university or just about to finish a degree in another department and wanting to read a Women's Studies course before graduating. Our students are very engaged in the centre's courses. They tend to be active, vocal and critical. Some of our students are activists and others primarily interested out of their own personal intellectual curiosity. Nearly all our students say that our courses give them an opportunity to deepen and focus their interest in gender issues which is often not available in other departments. Our courses emphasis the intersectionality of gender, class, ethnicity and sexuality.

The centre also has its own well-developed library and the librarians play an important role in our education and also in helping students from other departments find materials for papers. As we developed the internet courses our librarian Catarina Carlsson was an active member of the team of teachers.

Planning, structure and educational goals

A team of teachers worked on organizing and teaching the course. The aim of the course was to both give an introduction the theories and research in gender studies with a particular emphasis on historical relations, current material conditions, ethnicity and legal change in Swedish society. After this introductory part of the course, the course focused reflexively on using ICTs as a media of communication and as a research area. As the students became more familiar with communicating with ICTs, we worked with feminist debates regarding ICTs and gender bending, education and computer mediated communication and changes in work and the gender division of labour related to ICTs.

The course was structured into different modules. In the beginning we keep the level of computer communication rather simple. We did not directly teach computer skill though following the course allowed students who were unfamiliar with computers to advance in their level of computer ability. The course required little ICTS competence and some of our students were new computer users. The new users gained their competence through different class assignments. Additionally, the course emphasized using information resources - both on the net and in the nearest library. Students received assignments to explore the nearest library to them and report back to the rest of us about the availability of gender studies materials. This was a study in contrasts. Some of our students were in small Swedish villages where the library might have two of three books available. Others were near large university libraries - two students were in Moscow and explored the library there which had many feminist theorists but they weren't indexed under gender or feminism. Since the course was given in Swedish, all of the students had some connection to Sweden even if they were living in Moscow, London or California

Along with the exploration of library resources, the course was aimed at using ICTs reflexively and critically. Throughout the course there was an emphasis on the critical use of Internet resources and on critically evaluating resources on the net. Nonetheless, working with the net gave an element of play and discovering to the course since not so many of our students were aware of the fantastic resources available in Gender Studies – from library databases, to article collections and electronic archives over historical feminist texts and newspapers.

The course was a half-time course which is the equivalent of 20 hours a week for 20 weeks. This was a bit tough for students who were working and meant that the course was a large part of their free time.

Planning and developing the course took a good deal of time and effort. Firstly, it was a form that was new to us but primarily internet based courses need to be planned more carefully and further in advance than classroom courses. Since much of the communication is text based, we had all the assignments, explanatory texts, schedules, “lectures” and workshops prepared before the course started and put in place on the net. The planning process was exciting for us, since we had extra time and resources to do it and since we all participated and gained insight into how our colleagues were thinking about teaching. Nonetheless, it is more work to publish everything on the internet – even if there are gains. The high degree of planning, structuring and getting things done in advance or course has positive aspects. On the other hand it makes our work more inflexible. Once things are decided and published on the net, we are not inclined to redo the work in an evening when we realize there is another issue that we could take up and explore. This is in contrast to the more flexible teaching in classrooms – where we might not change the course but can easily change the emphasis in a lecture to focus on a particular question that arises during teaching.

The size of our internet courses and regular classroom courses varies from 20 to 50. The larger internet courses felt very labour intensive and we had to work hard to find ways for students to give each other more feedback. We spent very much time commenting upon the various assignments and papers that the students had.

Pedagogy

In developing all of our courses, we have reflected and discussed feminist pedagogy. Here I will connect to Magda’s and Gill’s discussions and also to our own specific discussion about tensions and dilemmas in feminist teaching in a university context. We often find that our students are very active, critical and at times demanding as a group. Bell hooks discusses her strong sense of engagement with her students and this is a dynamic in our classrooms as well. We find that this dynamic can also include students varying in their relation to us and relating to us as teachers, feminist comrades, role models, anti role models, or authority figures to be rebelled against. How would our relationships be with students via the Internet? To summarize here, there were less of a strong group dynamic and more individualized communication in spite of our efforts explicitly to avoid this by having group discussions, group assignments, students commenting on each others work etc. Additionally there is the pleasure and tribulation of reading so many texts. When problems arise they seemed to require more attention and effort from the teachers’ side than would be the case with face to face communication.

The Students, who were they and what were their expectations and evaluations?

We carried out more extensive written evaluations of these courses than our other courses. The students were a mixed group. Some were regular university students and similar to our students. Others were using distance courses as a way to access university education for the first time. Another group consisted of women who were establishing themselves in the workforce or who had already worked for some years. Although many students had suggestions for change, the course participants’ evaluations of the course as a whole were quite positive. The students would have liked more feedback - though they received much more individual feedback than they would in a normal classroom course. Can the desire for more feedback be related to the weaker group feeling or to the individualized method of communication?

The Teachers and their evaluations - time and space

The teachers' evaluations noted that the course required intensive periods of work and at times technical problems. The flexibility for students in being able to study from many different locations, required a much more structured planning by the teachers. Even though our doctoral assistant carried out the bulk of the technical work with the web pages, creating links and discussion groups, the work seemed to take more time than we expected perhaps due to the extent of individualized communication and in part because of the time spent monitoring group discussions. We were generally pleased with the quality of the students' assignments and papers and enjoyed reading their work. At a time when the university was stressing performance levels (such as the percent of students completing courses), we felt vulnerable when the rate of completion was lower than our normal courses. Nonetheless it was stimulating working with women who were outside the normal university contexts.

Within university education, the use of information and communication technologies (ICT) presents new possibilities and challenges. The successful development of these technologies demands a critical analysis of teaching methods and organizational change from a gender perspective. Internationally there is a growing body of research on gender, ICT and university pedagogy but very little in-depth research has been done in this area in Sweden. Since current Swedish educational policies encourage the use of ICTs and multimedia in distance and open learning in university education, it is vital to both develop an accessible knowledge base on gender issues and also to develop new research in this area.

The Use of ICT in Women's Studies Education at Utrecht University - Mischa Peters

Introduction

Over the last few years, the department of Women's Studies in the Arts at Utrecht University (the Netherlands) has introduced and expanded the use of multi-media and the new information and communication technologies. This resulted not only in a critical analysis on 'cyberspace' as a new social and textual space, both in research and in education, but it also resulted in the introduction of the use of new technologies to our teaching. We have been involved in European projects developing long distances, courses (such as *Diotima* and *Gendering Cyberspace*), rewrote some of our existing courses to be taught long distance and via the internet, and started to use ICT in our regular classroom education. This case study will focus on a three year project which ran from September 1996 until August 1999 and which had as aim to introduce the use of Information and Communications technology to our on-campus courses for MA students. After the end of this project, which resulted in an integration of ICT applications in most of our curriculum, a follow up project was started, which specifically aimed at evaluating the result of this integration. On the hand this evaluation focussed on the student's proficiency in the use of a variety of ICT's after finishing a women's studies curriculum while on the other hand we tried to investigate whether our teachers felt they

where able to guide the students in the use of ICT with the knowledge and support they had, or whether they felt the need for extra training in this field.

Context

In our Women's Studies program²⁴, which is located at the Faculty of Arts, we have always been very concerned with the didactics of our teaching. When, in 1996 money was made available by the Dutch Ministry of Education to improve the quality and 'studiability'²⁵ of the Dutch higher education, we took this opportunity to improve some didactic issues which had been bothering us. These issues were linked to the specific situations of our program such as the diversity of the students who take our classes and the limited amount of time our university enables us to meet with the students.

The students who take our courses come from a variety of fields such as literature, history, filmstudies, art history and even fields outside the Faculty of Arts such as the social sciences, philosophy etc. There are also a lot of students from abroad in our institute who only stay for a couple of months. Furthermore, we do not have a fixed order in our women's studies curriculum so in one class there can be students with a lot of women's studies experience together with students who might have taken just one course of women's studies before. This results in classes with a great variety of students both in background and obtained knowledge in the field of women's studies.

We meet our students twice a week for two hours only. In between these sessions they work at home on the reading material and the assignments. The time available for lectures and discussions is therefore limited. This is, of course, not very stimulating for the students. Therefore, we are always looking for ways to improve the involvement of students both in discussions and with the reading material in the limited time available for it. In other words, we were looking for a tool that could help us overcome the pedagogical difficulties offered by a diversified student group but at the same time would help us to 'exploit' these differences among the students in such a way that it would enable them to learn from these different experiences and knowledge. The instruments we were looking for should do all this without having the students spend more time in the classrooms. To conclude, we were looking for a tool that could improve and stimulate the communications between students outside the classroom.

Planning and Development

After some investigations into possibilities of the use of new technologies to improve the communications between students we started using a bulletinboard, an a-synchronous discussion-platform. This discussion-platform is now used for different purposes in different courses. In some courses it just provides a platform for questions and discussions so students can ask questions when they are reading an article and are having trouble understanding some concepts. In other courses the discussion is more structured and is guided by specific discussion questions. Our experience after two years of using the bulletinboard is that the students need some stimulant (for instance compulsory participation in the discussion, a bonus on their mark etc.) to get them active, but that

²⁴ At the moment this chapter is written, Utrecht University is working on changing the format of our curriculum to the Anglo-American format of the bachelors - masters model. With this change of model also comes a change of contact hours, ICT involvement etc.

²⁵ With 'studiability' they meant the way students are able to study and learn from the material offered.

once they are actively involved the discussions are lively and very interesting and student evaluation shows they find it a relevant tool, although not enough to replace classroom discussions altogether.

The very easy and simple bulletinboard we used in our first experiments had to be replaced very soon because of a bug in the software. The technical staff in our department advised us to use a special courseware tool called WebCT (WebCourseTool) which had as one of its functionality's a bulletinboard. Once we successfully started using this we discovered more and more the advantages of using a program like this and we now have developed an easy-to-use, specifically to the needs of our department adapted template of this courseware. This enables our teachers to, relatively easy, make an online version of their course where they can put extra material, study questions and guidelines, a women's studies glossary (which gets more updated and expanded all the time) and of course, access to the bulletinboard.

We have also developed an 'women's studies information guide' which gives guidelines for our students on how to find information relevant for women's studies. It incorporates both the use of 'old' places of information such as libraries and the women's archives and 'new' places such as the world wide web. At the moment we are also involved in the creation of a database where we can store and make accessible all the material (video, audio, photographs etc.) we use in our teaching. This database will become a standard part of the WebCT course development environment.

Pedagogy and Feminist Teaching

Improving and stimulating the communications between students outside the classroom can of course be done in a number of different ways and need not necessarily involve any new technologies. However once we started looking in the direction of the new technologies we saw more advantages than just using them as a tool for communication. The new technologies are not only technology they are new media as well. Since we are learning our students how to use the 'old media' (books, television, films etc.) as an object of study we felt we could not ignore these new technologies. We want our students to be able to make interdisciplinary and multi-media comparisons for instance between the old and the new media. The same goes for the new technologies a source of information. Since we teach our students how to use the libraries we felt we needed to teach them how to use the Internet, CD-ROMs etc. to find information catered to their needs. A last advantage we saw in the use of the new technologies was that it would enable us to encourage our students not just to be consumers of culture but become producers of culture as well, something which the new information and communication technologies enable you to do. To this end we offer them the possibilities to hand in there final papers not only as written and printed paper but also as a webpublished paper. When they decided to choose this option we try to encourage them to use the advantages the medium offer to create hyperlinks, include pictures and use a less linear style of writing, while on the other hand still reminding them that the quality of their work should be of academic standards with correct use of quotes, references, bibliography etc.

Evaluation

From the start our attempts to integrate the use of ICT in our curriculum has been closely monitored and evaluated by the Institute of Education, Utrecht University

(IVLOS)²⁶. In the academic year 1999/2000 the IVLOS ran a specific evaluation project aimed at:

- a) gain insight in the way the repertoire of ICT-skills, which are offered in the women's studies curriculum, is picked up by the students; and how this could be improved
- b) gain insight in the way the various separate women's studies courses use ICT-products, and if and how the use of ICT in these courses relate to each other. If this relation is absence, we would like to create a better way to use ICT so that we learn the students a variety of skills that complement and not contradict each other, and that we start with basic skills (simple e-mail messages or bulletinboard) and evolve to more difficult tasks (websites, databases).
- c) Evaluate whether the women's studies teachers have enough skills to support the students with the ICT tasks. Or, if they lack the necessary skills, are able to get support or extra training.

To this effect the IVLOS developed a number of activities:

- a) individual course evaluation consisting of a questionnaire for the participating students
- b) interviews with first year women's studies students (conducted at the beginning and the end of the academic year)
- c) interviews with women's studies students who are in later phases of their studies
- d) interviews with women's studies teachers

From the individual evaluations and the student interview came the conclusion that both older and new women's studies students appreciated the use of ICT in women's studies courses. They find it important that they learn to use the various computer-technologies and -skills, and that this is supposed to be a necessary part of their education. They evaluate ICT as a useful and stimulating supplement to their regular schoolwork. Some students indicated that they missed a link between the virtual and the classroom activities, they suggested that the online activities should be evaluated or discussed in the classroom.

The critique points from the students were mostly directed towards the women's studies program and the way the individual courses used ICT-activities without any apparent order. At the moment most courses use ICT in fairly similar ways (as extra opportunity for student-discussion and peer-teaching). Student indicated that they would appreciate a certain increase in difficulty in the used ICT-skills. This is difficult considering the fact that most students don't follow the same course through or program and might take the individual course in a totally different order.

From the teachers interviews the strongest impression was that almost all teachers thought of ICT as an important asset for women's studies. All teachers have more or less experience in the use of ICT in their classes, and they all agree that it asks for a different didactic approach than regular classroom teaching. They have to think carefully on how to use digital material and how best to use ICT-applications. Especially balancing the virtual and 'paper' material, and the coupling between the virtual and classroom discussion is seen as difficult and time-consuming. The time-aspect is often mentioned by the teachers in a negative light. The development of the new materials is time-consuming (especially in the first year(s)) and the extra material created by the students on the bulletinboard and other discussion platforms takes another toll on the teachers time. Especially, when this has to be done before each class to be able to integrate the

²⁶ This evaluation has been done by Y. de Jong and P. J. van Eijl

virtual discussion in the online discussion. For the teachers ICT has to stay a didactic tool, not a timeconsuming passion taking too much time away from their main interest: content. Therefore they all value the ICT support provided by the technical department and the especially by women's studies hired "Women's Studies Multimedia Manager". Without their support and knowledge they would not be able integrate the use of ICT in their courses.

From these reactions from both students and teachers it follows that both groups feel the use of ICT is important for women's studies education. In all they feel the experiments in Utrecht are valuable, but some things could be improved.

In this evaluation we have not looked at the study results from these new groups of students. However, both students and teachers indicate that they have the feeling that the results have improved but we have not statistical data (yet) to back this.

Reflections, Recommendations and Conclusions

We concluded this project with a positive evaluation and are at the moment working hard to firmly incorporate the use of ICT in our everyday teaching. However it needs to be mentioned that the project did meet some bumps on the way. For instance in the first year we encountered a number of technical failures which makes it hard for the students to keep motivated. Also not all the students had easy access to necessary technology, which gave those students a feeling of extra workload because they had to do an extra effort to get to a place where they could use a computer. One of our main bumps however has been the increased workload for teachers, especially in the experimental phase, where we asked the teachers to think about and work, on top of their already heavy schedule, on the introduction of new methods in their teaching. Moreover since the use of these technologies was new to most teachers they had to go through a number of training's which also increased their workload. Since most teachers, and especially in the first year also most students, were very inexperienced in the use of these new technologies we also had to work against a number of fears, insecurities and general ideas on the difficulties of computer use.

Despite these negative encounters, this project was a success. The students are generally very enthusiast and ask for more and more diverse and technical difficult introductions of technologies instead of less or easier to use technologies. We have better exam results and more students concluding the courses with a positive result. Both staff and students have more knowledge and are better trained on the use of ICT in general and in education in particular.

An Unambitious Email Group: Supporting Students on Violence, Abuse and Gender Relations Courses - Catherine A. Eule

Over the last year I have used an email group to support the teaching of an MA in Violence, Abuse and Gender Relations at Leeds Metropolitan University, and over the last two months I have used one to support the teaching of a course on the same topic at

the University of Sunderland. I have recently been asked to develop an entirely online course on these themes, and I am concerned that if students have not met face-to-face, they may not be able to give and receive the kind of support that has been so essential to my LMU MA students over the last three years. These courses not only explore gender and power on a theoretical level and teach empirical social policy research methods, they inevitably give rise to personal crises and transformations among the students. When they begin to place their own individual experiences of violence and abuse into a wider social context, they may be dealing with quite serious emotional responses for the first time, or they may be experiencing greater anger or disturbance around issues they have previously dealt with. While disclosures are not a regular occurrence in the face-to-face-seminars, students usually make links of some kind between personal experiences and theoretical structures, or personal experiences and intervention structures. In this sense the courses are similar to others in women's studies, but with a focus on hugely emotive, painful and sensitive issues being discussed in an academic environment. In the seminars, discussions can range widely, often veering off topic and leaping to another theme as women make links. The face-to-face seminars include elements of humour, experience, socialising, emotion, statistics, and theory.

Each semester the students engage in a substantial amount of mutual support and disclosure outside the classroom. It is challenging, if not impossible, to disentangle the emotional energy that is used to achieve learning outcomes from the "purely" cerebral activities. This dichotomy between emotion and thought informs much of the literature on computer-mediated communication (CMC). Women's studies teachers and students may utilise emotion to achieve learning outcomes, and it seems particularly relevant on the courses I teach. Emotional response enables the kind of uncomfortable rupture between perceived and actual reality that leads to empowering feminist insight, particularly when combined with a recognition that one's individual problems are related to the wider social context of gender relations. In order to assess the ability of a purely online course to adequately support students examining violence, abuse and gender relations, I have looked at some of the literature on computer mediated communication and analysed the email interactions from my two courses. I also interviewed students from the long-standing egroup about perceptions of its negative and positive aspects.

Literature Review

Much of the literature on using CMC for teaching reports on research about relatively ambitious projects. I describe some of them as 'ambitious' because they were usually more than I was able to do as an individual in a less than supportive institution. The literature may describe a system or courseware for transforming a whole university into a virtual environment (eg, McLintock, Robbie, 1992; Schneider, Daniel, 1994; Bilotta, et al, 1995) or, at the other end of the spectrum, it reports on various insights gained from trying to get students to learn by interacting via either bulletin boards or email groups. It seeks to examine the differences or similarities between online and face-to-face (FTF) seminar discussions, or synchronous and asynchronous communication, and compare learning outcomes. It may also seek to compare the utility of bulletin boards as opposed to email groups. Often the focus is on how to coerce or manipulate students into posting course-content-related thoughts, or on keeping online students focused on a particular topic. I looked specifically at research on CMC, not at work on designing various forms of interactive multi-media and website design, or electronic textbooks, etc. I was interested in understanding what had happened when teachers used either egroups or bulletin boards, and selected a few relevant articles from what is now a fairly vast

literature on the topic (Owen, Pollard, Kilpatrick and Rumley, 2000; Schahczenski, 1998; Gillies and Teles, ND; Bates, 1995; Proceedings of STOP Surfing, START Teaching Conference, 2001; Jegede, 1998; Beaudin, 1999).

I also looked briefly at some literature on synchronous communication (eg., Marvin, 1995) but while similarities were there, a lot of differences also existed. The time lags in the interactions my students experienced went from anything between a few minutes to seven or eight days. One article had a very good handout for students on how to use online communication, with good guidelines for students to help them get others to respond to them. However, it was still focused on how to get discussions to happen, rather than on emotional support functions (Funaro and Montell, 1999). I did not particularly focus on gender and identity online (eg Schmeiser, 1996), although online identity issues may become more pressing if in the future the course involves students who have never seen each other face-to-face. Several authors have looked at gendered communication differences online, but I did not focus on this because my main egroup was entirely composed of women (eg Blum, 1999; Ferris, 1996). An excellent and very useful review of the literature on gender equality, or lack of it, in CMC, has been carried out by Jennifer Trias (1997).

In the material specifically focused on CMC, the learning outcomes are often, though not always, assumed to be dependent upon the degree of interaction that occurs, and the degree to which it mirrors FTF discussions. In most cases the practitioner-authors had used CMC to try to create online discussions similar to those one might find in a seminar context. I have not been so ambitious. I simply wanted to use an email group to support the FTF seminars, and to be able to communicate with all my students at once. I found a useful and free bulletin board at the [Nicenet Internet Classroom Assistant](#) site allowed threaded discussions, the posting of schedules, readings, and so forth, but the university felt unable to support the use of it for assessed work, because of anxieties about consequences should the 'foreign' server go down. The university was interested in increasing what it called 'flexible learning,' but had not then enabled the university website to be used much in conjunction with courses, nor was there any central resource to assist with website design. I also wanted to keep the project simple because about half of my students at LMU had not yet used email before coming on the course. About two-thirds had never accessed the world-wide web and all of them had to be pushed into using the web for research by an assessment in their first semester in which 30% of their mark was for an annotated bibliography of online texts relevant to a particular theme.

In my unambitious technological project, the course was taught in a traditional way, and the email group was originally conceived simply as an add-on. I did not give specific assignments which had to be completed in a collaborative way online, nor did I try to formally assess any online work or the level or degree of interaction. I set up the group on [Yahoo!Groups](#), I gave the students a few lines of guidance on how it could be used, I taught a couple of students how to use email, and then started posting to the group myself. I did not impose, dictate or particularly direct its use, I simply made it available to them. I discovered, however, as has been discovered elsewhere, that in CMC "meaningful functions can exist without negotiation" (Tolmie and Barbieri, 1997). At LMU, the way the students used the email group changed over time. As they became more familiar with both each other and the technology, they had more "ownership" of the group. Towards the end of the year, they regularly and independently used it for both sharing information and supporting each other in their research and writing. At Sunderland, this has not yet occurred, but it may be due to the larger class size or to the

relatively short length of time they have been interacting, or to the lone male presence on the course, which has been a slightly inhibiting factor in the face-to-face seminars, especially because of the subject matter. Due to the MA course being closed at LMU, the last year's email group only had five students. The Sunderland group includes 15 students. In both cases some bonding occurred face-to-face before the email groups were formed.

The LMU Interactions

I used the email group to pass on information about assignments, scheduling changes, upcoming conferences, calls for papers, job opportunities, meetings of a feminist research methods group elsewhere in the university, my availability for tutorials, to forward on news about violence against women from different parts of the world, bibliographical references or useful hyperlinks, etc. If I received information about events happening among other violence researchers in the UK, such as seminars or lectures, I would just forward them to my MA egroup. Thus we were building networking and some sense of professional connectedness, even in a largely unsupportive university environment.

Initially the personal, or emotional content, was low. Outside the classroom, the students met together and began to talk to each other socially, and as this occurred the social interactions on the egroup increased. One of the initial things which caused a difficulty was that some students were not as aware as they should have been that when you press 'reply' to an individual, your reply goes out to the entire group. Two months into the email group, one of the students was having a tremendously difficult time with her job, she had broken off a long-term relationship earlier in the year, and was now enjoying the comforts of a new partner. However, in one email she thought was privately sent to one other student, she graphically described her sexual activity in the context of how much better she was feeling, and this mistakenly went out to the whole group. While it caused the student concerned great embarrassment, the group reassured her when it next met face-to-face and most of the students thought the whole thing was extremely funny. However, one student who had suffered some sexual abuse felt very uncomfortable about it, and one student from Malaysia thought it very inappropriate. Both of these students used the email group thereafter less than the others, but I don't know if this was related to this incident. I thought it was inappropriate as well, and felt it necessary to say something to the student concerned, but managed to do it in a way she also thought amusing, and the mistake did not re-occur. However, it made everyone in the group very aware of the fact that all interactions sent to the group could be read by the whole group, and if personal communications were sent they needed to be more careful about the address line!

Once the research and writing-up process meant they were no longer meeting as a face-to-face group, I would sometimes exhort them to use the group more, and I asked directly about students who had gone quiet. "[name], are you there? How are you?" Emails to me were often about tutorials and setting up appointments. One message sent to the group was, "Having a deadline like that forces me into some action/panic stations. (I believe it is the ARGH phenomenon...Need to bat on now that I am committed to a tutorial." After the dissertation process had started, students spontaneously began sending drafts of written work to me. In some cases I was able to use Word to make comments on the text and send these back to the student by return of email. I made my corrections and comments in red, so they could be easily read. You can do this with the Track Changes,

then Highlight Changes option in the Tools menu. You just need to tick the box next to 'Track changes while editing.' The students found they had a faster turn-around time for tutorial input this way than when I posted manuscripts back to them. (Post-graduate students at LMU do not have their own pigeon-holes). It was useful to me as well, as I could make sure to get a copy of the draft before a tutorial session, rather than during one, and thus had time to make more in-depth comments on it.

These functions were very important, but what became evident at roughly the six-month point was that students were using it to share support, especially on an emotional level. Some interactions occurred which I never read, because they took place individually between students, rather than being sent to the group. For example, Student 1 described an interaction she had with Student 2. Student 2 had undertaken a dissertation in which she looked at the role of personal trauma in motivating women to develop new interventions. She had spent many difficult hours interviewing friends and relatives of a woman whose 15-year-old daughter had been killed after working in prostitution for two weeks. The mother had spent several fruitless years trying to convince the police to act against the man who had become her pimp and who had pressured her into prostitution. After the daughter's death, the mother campaigned constantly for years to have under-age prostitution recognised as child sexual abuse, and succeeded, in collaboration with other groups, in initiating nation-wide policy changes. For Student 2, it was both inspiring as well as harrowing material to go through. She herself described in a group email how she felt traumatised when doing this research. In the individual email interaction with Student 1, they had initiated a discussion about "the trauma of women's voices" and had followed this up with a phone call. Later as Student 2 began having increasing success with her research plans, Student 1 wrote, where the whole group could 'hear,' "This is marvellous. I am thrilled everything is going so well for you. Wonderful about [name]. It is so good to hear that you are doing so well. My thoughts are with you."

Other support work was more overt, but clearly woven together with information and socialising. In this context the emotion/mind dichotomy is not useful. For example, Student 3 had gone quiet for a bit but came back and wrote of her dissertation research, "Hi I am still here but overwhelmed as usual. I have booked a week off [work] to do my research, waiting room study and interviews with women from the [domestic violence] support group. It coincides with the Women's Aid 2001 campaign (order a campaign pack they are free and brill) it just so happens that the focus of the campaign is DV and Health, couldn't have timed it better." She ended by inviting the rest of the group to a party at her house.

In one very funny as well as comforting email, a student described her anxiety at not finishing her writing-up, and some of her task-avoidance strategies. "I bought Nigella Lawson's 'How to be a domestic Goddess' at a discount bookshop recently. Jim went off to Majorca today with three of his men friends. I've taken three days off work to write my MA dissertation. And, as usual, I am doing everything BUT that. Today – after driving Jim and buddies to the airport I had the urgent need to go for a run around [name of hill], go buy some curtains, buy the ingredients for three cake recipes, buy a bookcase from a pine shop, before returning home to make Banana Cake (which required every implement in the kitchen) but the 'fuggy smell throughout the house' promised by Nigella was imperative to my dissertation...does anyone else have problems settling down to work?"

Many of the others in the group responded to this email, as they had gone through similar experiences themselves. Student 3 wrote, “I am so reassured and your email really made me laugh. Well I am seriously into [TV programme] so what can I do? ...Pete is being incredibly supportive thank goodness and work is ever demanding with exciting prospects. I am applying for a £3000 research bursary so you never know, I might even get paid to write up my dissertation. Fingers crossed. Hang on in there you wonderful women, we will need [Student 2’s] autograph soon. Lots of love and positive vibes to you all. Oh, and ...is it tea and Nigella’s cakes at yours?”

Students occasionally shared references they had found and shared information about their methodological processes and difficulties. Student 1 had to get permission from a agency in the criminal justice system to look at some records, and the process of obtaining permission went on for some weeks. In the end, she was asked to sign the Official Secrets Act, and the agency gave permission only on the condition they could look at her work before anyone else (including me) and withhold permission to publish (or submit) if they so chose. She decided to use the data she already had collected from other sources. “So,” concluded Student 1, “anyone doing a PhD and requiring statistics from [agency name] should allow between 6-9 months for permission and clearance and accept that research arising might run the danger of being suppressed – should it not be ‘appropriate.’” This email was accompanied by extracts from letters she had received from the agency. Another student had to get permissions from the local medical ethics committee, and we all heard information about what that, also difficult, process was like.

Student 1 was very strong on theoretical approaches, and sometimes shared insights with the group; she was once able to share with Student 3 information on how to contact a potential interviewee. Student 3 shared legal information with the rest of the group because her background was in law, and Student 2 shared information about health and counselling, her professional background. Student 4 remained quiet for most of the year, only coming online four or five times. She was also absent at many of the face-to-face seminars, but did come online to say “Hi, everyone, things are ok. getting there bit by bit. Hope to see you all soon.” Student 5 continued to experience technical difficulties with her home email. She had two young children and was unable to get into the university much to use the computers there. She could ‘hear’ what everyone was saying, and everyone was aware of this, but when she responded the others were unable to read the text sent. When Student 5 went into the hospital due to a difficult pregnancy, delaying her dissertation, she asked that the group should know, and several sent cards.

The LMU Interviews

It may be that some of these comments are overly positive because they were still speaking to me, an instructor who still has power over their work until they submit the dissertations. However, they seemed quite willing to share both negative and positive aspects of the egroup when I asked. The interviews were conducted very informally over the telephone. All students interviewed gave informed consent for their comments to be included in this article.

Student 5 commented that, “It has been useful to me to read what others have written, but some were more personal, and it was not right for me to read what was being written. [A reference to the sexual content of one or two emails in the beginning.] ...Reading it gives some support from the rest of the group. Information-wise there has

been a lot shared...I felt less isolated even when I had stopped coming for class. I was still part of the group and it made me feel good.”

Student 4, who used the group the least, commented that, “If I had had the time it would have been useful. It’s for those people who want to be connected. It could bring people together for support but with it being my work email I don’t have time to read it and digest it; a lot of the time I don’t open it. Either you do your work or you don’t – I don’t see the point of fussing – it’s just life and you plod through. I’m used to doing stuff on my own – that’s how I’ve always been...I’ve always coped independently and I’m used to that, but I got some emails when I had the problem with my daughter and it really touched me that somebody was there. But sometimes it got overwhelming. How can people spend so much time on email?”

Student 3 said, “I think it has been invaluable. It has provided a quick and easy access to each other as well as a good source of information. It has also been a source of support and I would say an essential component of the course.”

Student 2 commented that the group had been “very beneficial. It is useful to share information, and I have a feeling of being connected even if I don’t send anything. I very much had a feeling of being part of the group. I could have used it to better advantage, it was only through lack of time. Even if I don’t reply I find it useful...People have forwarded useful and inspirational information and I think it is effective and productive as a way of communicating...I want to use the email group idea for this task group on DV and the health service being formed in [city]. We can all speak to each person at once - it’s quicker and more effective.”

Student 1, who used the group the most, commented, “It’s been a bit of a godsend. I found it very motivating – there was always someone to turn to. When you’re part-time you’re less isolated... You could just look into the group and talk to people who understood what you were doing, who were on your level. It was fantastic! It helped me a great deal. It’s still a way of communicating, even though we all have such busy lives. It’s been like Linus’ blanket, a comforter, it’s there if we need to say, ‘oh god I can’t cope with it anymore.’ There’s a shared confidentiality in the group. Even when people aren’t responding you know they are there listening. For this type of course it’s particularly important, you can feel very very alone. It’s been very important, because of the nature of what we are dealing with. It hasn’t been imposed on people, it’s there when you need it.”

The Sunderland Interactions

The Sunderland group, which has only been going for two months, is much larger, and has a lone male presence. The first week of the group was largely me posting information about various lectures in the Northeast of England on the subject of violence against women. In the second week there was silence. In the third week students began to come in, and there was some discussion of where to obtain certain bibliographical resources, about schedule changes in the module, and an invitation to a professor’s inaugural lecture. In Week 4, a student posted a message headed “The Cry of Motherhood: Save Our Children” which contained an emotive account of the use of children in the conflict in Israel and Palestine. Unfortunately the response she got was from the lone male, who just pressed reply without changing the subject line, and whose response had nothing to do with the original posting. He was actually sharing information about a research job opening on women asylum seekers fleeing domestic violence. She did not give up, however, and later that day posted some gleanings from her research on newspaper reports about

sexual violence against women in Fiji, headed “Disturbing Info.” One report included “A seven month old baby was taken to the hospital for weight loss and continuous crying. Examination revealed severe damage of the rectum. Baby had been repeatedly abused by her father.” So far no other student has responded to this, and the student has not posted anything further. If this continues for another few days, I will intervene and comment, so she is not left hanging in cyber-isolation. Yesterday a student shared information about a UK agency which she thinks may have such a strong confidentiality policy that they are not referring anything to anyone, even if a child discloses sexual abuse or domestic violence. I will await the responses from the others on this. This group is taking time to build up, but is approximately at the stage the LMU group was after this period of time. Unfortunately it is only a course, not an MA programme, so the egroup will only be needed for another month. It may be that they will experience some useful interactions or support in that time, but I doubt they will be able to experience what the long-term group has experienced.

Conclusion

The egroup was a non-assessed, non-judgemental space. I was not trying to impose a seminar-like discussion on them, nor did I make any special effort to keep them “on topic” (Beaudin, 1999). They were an extremely proactive group in any case, both academically and personally, and made use of the egroup as they needed it. The interactive function of face-to-face seminars, in which individuals bounce ideas off each other in real time, refining old and learning new concepts, actually took place in the seminars, but not in the email group. Drawbacks of the egroup are that themed discussion threads could not be developed as easily as they can be on a bulletin board or conference space. Sometimes I would send a notice about a conference and that would stay as the subject line for the next three-four exchanges, even though the email content had nothing to do with it. I think had I given them written guidelines on simple matters like this at the beginning then communication would have been clearer at times. In a supportive institutional environment, bulletin boards are probably better because of their greater flexibility and ability to let students focus on themed threads, although in my experience as a student on an Open University course, an over- proliferation of themed threads can get confusing. Some bulletin boards try to separate the coffee/chat room area from the intellectual responses to readings or exercises sections. It seems that it would be useful to experiment with not controlling it that much. For my students, information interactions were woven together with the more emotive exchanges, and this weaving together contributed to the learning outcomes.²⁷ While it is recognised that learning has an emotional component, the “need for learning” that “arises from discrepancies between knowing and experience” is particularly acute for feminist researchers-in-training (Brookfield, 1995, cited in Owen, et al, 2000). These are the fissures that create transformation and consciousness.

I found that both humour (Baym,1995).and other emotion among the students became a major way for social interactions to be facilitated and supportive meaning to be created. CMC can and is used to communicate around emotional issues and themes (Rice and Love, 1987, cited in Trias, 1997). In the LMU group successful learning outcomes were related to peer-exchanged emotional and personal support. In my experience, the CMC contributed to peer-learning, and to the students taking more responsibility for their own learning (Harasim, 1997). The LMU students were self-aware and often responsive to social cues (Matheson, 1991, cited in Trias, 1997). The women on the course had a

²⁷ Learning’ is here defined “as the transformation of experience, through reflection, conceptualisation and action.” (As per Owen, et al, 2000). I think that this transformation often involves the use of emotional energy.

personal orientation, supported others, used humour, had a focus on community-building, and seemed appreciative of each other. However, some of the interactions with men that have been noticed by others were absent in a single-sex context. The women did not spend time with apologies, or defending themselves against reproach, or dealing with sarcasm, as has been the case in mixed group settings (Ferris, 1996; Herring, 1993, cited in Trias). Of the five learning indicators posited by Owen, et al (2000), my feeling is that the LMU group most often posted messages which included inquiry, experience, and experiment, but less often, if at all, on reflection and conceptualisation. However, this is not based on rigorous analysis of the exchanges, merely on an overall sense of what happened over the past year. Reflection and conceptualisation happened more often in the FTF seminars. Both environments included emotion as a component of learning the material, but the online environment included more overt expressions of personal support for each other.

I think it would be possible for a group of women studying violence, abuse and gender relations in a totally online environment to have an adequate, safe and supportive academic space, but a lot of the work of people getting to know each other and feel comfortable with each other would need to happen at the front-end of the process. It would need to happen very quickly if the course were only a few weeks long. The length of the course seems to be an important factor. Students on courses with sensitive subject matter need time to build trust. Perhaps initial face-to-face meetings could take place in the style of a day-long seminars, rather than relying entirely on cyberspace, but this may not be practical for all distance students. There also needs to be a place for posting photos, as faces give social clues, but the challenge of this is sometimes beyond students new to the technology. Smaller groups seem to work better, and the longer the group exists the more the quality of the interactive support has a chance to improve. Certainly single-sex groups are to be preferred due to the subject matter.

Any future attempt to create a completely online course in violence, abuse and gender relations which involved little or no face-to-face interactions would need to take these reflections into account. It is imperative that online women students studying sensitive topics receive the support and information they need to cope with the material. It is the only ethical way to proceed.

Vifu - the virtual part of the International Women's University ifu²⁸ - Mara Kuhl

The Virtual International Women's university (vifu = Virtuelle Internationale Frauenuniversität) is the virtual platform of a three month's postgraduate university programme that took place as a face-to-face event in summer 2000, in Germany. Vifu has been providing information, enabling virtual contact and virtual community and offering documentation. Although it is not a distance education programme in the narrower sense, it is a very interesting project that fits perfectly into a manual about ICT and Women's Studies. It provides an excellent illustration of the crucial role that women friendly ICT design has in enhancing women's use of technology for learning. It shows

²⁸ I thank Heidi Schelhowe (vifu project leader) who generously provided me with information in the well-known motivating manner of cooperation between vifu staff and ifu participants.

that ICT when well designed enables intercultural learning. Moreover it gives some hints about the differences women make when we are involved in software-engineering and design.

The context of vifu:

Vifu (www.vifu.de) was the virtual part of the first International Women's University (ifu) that took place in Germany in July - October 2000 under the theme "Technology and Culture". A group of feminist oriented academic women in Germany created an idealistic project of a women-only postgraduate university programme in Germany. The aim was to bring together highly qualified female scholars and scientists from all over the world to research and discuss crucial global questions in an innovative structure of cooperation. Ifu's core concept aimed at challenging traditional boundaries by working together interculturally and interdisciplinarily, by integrating art and science as well as theory and practice. Financial resources and support came from subsidies and sponsorships from political agencies; communities, federal states, the federal government, the European Commission and foundations; from industry and private organisations. The success of the fund raising allowed the majority of ifu participants to get a grant for their three months of study. Ifu was also supported by the voluntary work of committed individuals. The universities of Hanover, Hamburg, Bremen, Kassel and Suderburg hosted ifu and provided the infrastructure.

Nearly 900 participants and about 230 lecturers came from over 100 countries. They worked in interdisciplinary groups in six project areas: work, migration, city, body, information and water. Requirements for participation were a university degree at minimum, an interdisciplinary orientation and most importantly a background in women's or gender studies. Good knowledge of English was another criteria as the language of ifu was entirely English, including that of vifu.

To give an impression of the heterogeneity of ifu: 60% of participants came from Africa, Asia, Latin America and Eastern Europe, the rest from U.S., Austria, Canada and West Europe. They were scientists and humanities scholars from all disciplines, filmmakers, artists, nurses, political activists and leaders from civil rights/women's organisations, media professionals etc. Not explicitly a criteria but a very fruitful challenge apart from interculturality and interdisciplinarity, was that of generations. The participants consisted of women of all ages from young graduates to highly experienced professionals. This demanding diversity was the major challenge for communication and learning processes at ifu and for the development of the virtual platform of ifu: the [vifu](http://www.vifu.de).

Course/content description of vifu

Before ifu started as a face-to-face event in July 2000 a virtual presence for ifu on the internet had been installed in March 2000; to announce ifu, provide information, to give a platform for participants to organize their trip to Germany and get in touch with each other. This was the basis for vifu, the Virtual International Women's University.

Vifu consisted of four sections. There was the central unit at the Humboldt University of Berlin from where the vifu project was coordinated, where the main server was and from where services for and cooperation with the participants was organized. There were the three vifu sections for the ifu project areas. Work (taking place in Hanover), Information

(Hamburg) and City (Kassel), where online-learning environments and tools had been developed for the different project areas. These were tested during ifu.

This article concentrates on the Berlin part of vifu because it provided the prerequisites for intercultural and interdisciplinary learning of the heterogenous participants of ifu and serves the ongoing process of scientific cooperation by supporting exchange between the 'ifuities'.

The vifu team adapted and added new functions to the vifu sites according to the different tasks that were needed in the different phases of ifu. To structure the content of vifu three phases will be distinguished: *the preparation phase* before ifu started as a face-to-face summer school, the time when ifu were held (*actuell ifu*) and the *after-ifu phase*.

Preparation phase

The functions of the vifu server in the preparation phase were information dissemination, community building between future participants and providing a structure for discussion. The server consisted of web-pages about ifu, the project areas, lecturers and organizers and the living conditions in Germany. Link lists provided resources for the participants to prepare the project work they had chosen. A couple of interactive applications invited the users to fill the site with their own content and therefore to start shaping vifu. The most prominent example of this is the discussion forums. These were moderated but deliberately not password protected to keep them open to non-ifu community members. The main discussion forum was the venue for a process of solidarity between women who knew each other only through virtual discussions and were joined through their common interest in an event like ifu. Participants in the main discussion forum launched the W.O.M.A.N's fund ("We Offer Money Assistance Network", Isabel Zorn) to provide financial help for already accepted ifu participants who could not fulfill the material requirements for visa offices (like giving proof of the possession of a certain level of financial funds), who could not afford the flight ticket or who would not be able to pay the rent for accommodation in Germany²⁹. This laid the basis for participants identification with ifu and with the other participants³⁰, and prepared for the intense, brief face-to-face period where the common working activities needed to begin immediately.

Actual ifu

During ifu the vifu site started to grow as the services to encourage cooperation between the participants were introduced. Apart from internet access, all 900 participants were given the possibility of having an e-mail account. This tool was crucial for some participants to reach their families and friends and be up to date about (sometimes awkward) political developments in their home countries. Mailing lists for the different project areas and the project content in these areas was installed. Lectures, workshop descriptions and project presentations were added and current events communicated. In the last phase of ifu project results and databases for networking were installed. New contributions were mostly from or at least stimulated by participants. Technical support by the vifu team enabled participants to process their results into a suitable electronic format to plan their work and achieve results. Through the intensive cooperation of the

²⁹ For a summary of the process see: Grüter, Barbara Maria (2001)

³⁰ For an analysis of the identification processes at ifu see Sabina (?)

Berlin vifu team a group of participants from different project areas initiated and developed an expert-database in which all participants could easily submit data for example personal background and interests.

This database allowed for searching among participants to find expertise where only some details are known (e.g. the country and ifu project area). This pass-word protected database was incorporated in the already existing tool to search for lecturers and organizers. Emerging geographical and subject-oriented networks were installed via mailinglists, and the responsibility of maintenance of these was given to the initiators.

The vifu teams in all project areas stimulated an interest in ICT among the participants through making knowledge easily accessible and orienting their training in computer skills to their project-work. Internet skills for e-mailing and internet-research and basic html knowledge for producing their own project websites were provided. Members of projects which needed programming skills and more sophisticated knowledge to realize their aims were offered workshops. Consulting hours gave an opportunity to deal with individual questions. The infrastructure for these activities varied in the different hosting universities. As ifu took place during university vacation time some universities reserved computer pools exclusively for ifu participants . In these cases the access to computers was good - even excellent-compared with the situation of normal participants in Germany. In other hosting university locations the access to computers was very bad or nearly impossible.

With these virtual features vifu provided an infrastructure for participants' self-organisation, cooperation and networking. Trips through Germany and visits to the ifu "Open Spaces" events that took place every Friday in Hanover could be arranged, and thereby contact across the geographically separated project areas were possible. Discussions were also held via participants' mailing lists and separate from the original forums. On these list conflicts were dealt with and social rules for the interpersonal relations were discussed. As the participants' mailing list was not filtered or moderated a flood of mails caused problems and discouraged unexperienced individuals from using the tool so that participants demanded from each other adherence to the set standards for manners in virtual interaction. One reshaping of social structures was that 'students' demanded to be called participants.

After-ifu

After ifu was over and all participants, lecturers and organizers dispersed back to their homes across the world, the vifu team went on to incorporate project work presentations, homepages, protocols, articles, films, 'fotogalleries', pieces of art etc. that were the results of ifu. The discussions on mailing lists and the forum turned to new subjects like planning the future of ifu. New networking mailinglists emerged. Some of these were temporary, for a special purpose like setting a new structure for mail filtering, netiquette, the publishing of a book, and the organisation of networks. Today there are over 60 mailing lists and, from their names it is clear that at least half of them serve for current scientific networking and cooperation. The participants' mailing list that encompasses all participants is a lively list for general discussions about vifu, ifu and topics of general concern for women as well as offering professional support (call for papers, vacancies, etc.). New projects and cooperations emerged as for example an after-ifu conference day during an international conference in Dubrovnik in April 2001. But not everybody names the 'subject' field in an e-mail in the correct way nor sticks to the

mailing list conventions. Because of this there is an unsorted mailflood, and some participants have abandoned the vifu mail account.

An important task that vifu took over after ifu was that of providing a site for remembrance (for example by different photo galleries) which is an important contribution to the empowering idea of ifu: keeping a women only academic structure for cooperation and research alive, and providing individuals who are “alone” again in their homecountries with the possibility of reviving a feeling of connectedness, and re-establishing the bond that working together had created.

Planning and development- Pedagogy and ICT and feminist teaching

The vifu project was financed by the German Federal Ministry of Education and Research. The majority of vifu personel and volunteers were female; the Berlin unit was exclusively women. The four projects had altogether a budget that financed an academic assistant for each. Berlin also contracted four participants for different amount of hours. The project leaders of all the parts of ifu fullfilled their tasks in addition to their everyday academic work without extra payment. Individual computer science participants voluntarily took over the tasks of teaching and support, as did competent participants. All contracted persons of vifu (and ifu) worked considerable amounts of overtime and the workload exceeded -especially during the months July to October when ifu took place- the formally planned load. In Berlin this was due to the ambitious concept of software design as an open process that also required intensive non-virtual contact with the users. Also the high demands the team had for its service provision contributed to the workload.

The vifu´s concept of taking seriously the interdependency between technology and human interaction makes it very hard to neatly separate the software development from the pedagogical and feminist aims. So the software decisions have to be presented in relation to the design concept³¹. The vifu team in Berlin that engineered and designed the internet vifu site with all its features was strongly committed to the basic ideals of ifu. Vifu was planned as an innovative virtual environment where women coming from different backgrounds and cultures should feel stimulated to use ICT, to communicate through it and contribute to shaping the environment. In the pre-planning phase of vifu the Centre for Interdisciplinary Women´s Studies (Zentrum für Interdisziplinäre Frauenforschung ZiF) of the University of Kiel conducted research about “Gender and ICT in the context of the Virtual International Women´s University” (Pasero 2000) to develop recommendations for designing such a demanding virtual environment. One result was that there are very few concrete experiences of incorporating gender or ethnicity as a crucial variable (Pasero 2000: 73). So the vifu team had to develop their own concept for a gender- and culture-sensitive virtual environment.

³¹ The technical information here is taken from a workshop sessions with Barbara Schelkle (vifu´s software engineer and main webmistress) and Heidi Schelhowe (vifu project leader) and from Kreutzner (2001)

The basic conceptual principle for the vifu team was “cooperative software development” (Schelhowe 2001: 2) which was central to the choice and customization of software. Wherever possible open source software was used, which had the major advantage of the accessibility of the source code. This holds true for the operational system (Linux) and the webserver (Apache) It allowed the team to build in new structures, to restructure applications and to add and interconnect features. Open source software also enabled fast debugging. Another important advantage was that the software was free and no license would have to be bought. The vifu team also mentioned the aspect of power relations in the context of software and protocol choices, because changes in open source are traceable. For the directory of lecturers and organizers that later was extended to the expert database an ‘LDAP’ protocol was used. This is an open standard protocol that can be used with different interface software and allows the integration of further features like additional personal information.

“Cooperative software development” is based on the idea of a heterogeneous group of users developing and formulating unforeseeable needs and requirements. Here not only are future users involved in the process of development but the development process itself is seen as a never ending evolution of the software, directed by the users emerging needs and requirements. Software itself is seen more as a service than as a product. To find out about users’ needs an intense contact, including ‘non-virtual’ encounters between developers and users is necessary. The place for this exchange was in workshops and courses given by the vifu-team and in the team’s cooperation with project groups.

The image of the user is that of a demanding person potentially challenging the technology with her needs (not vice versa), able to learn the required skills and interested in the context of the technology. Technology is seen as a medium that opens possibilities for humans to extend their material reach and access potential knowledge. At the same time it may restrict human (inter-)action therefore humans have to actively shape and reshape the technology (see also Grüter, 2001 : 10). The vifu webmistresses searched for feedback by participating in the virtual discussions and by being present, by request, for project tasks. By enabling the participants to work out their technical ideas on their own through passing on skills and knowledge and providing support, the participants were able to design considerable parts of the web pages and services themselves. Features were developed for interactive and self-determined individual action like completing the expert database with biographical background or the tool for building one’s own website.

This flexibility and adaptability turned out to be a crucial point for the continuous acceptance of the virtual services by the participants. In one local vifu project, software especially designed for the project group work was finally abandoned by some of the participants because it was not possible to reconfigure it as working group constellations changed. This single aspect of inflexibility towards emerging new working groups and towards the need for crossing group boundaries made the whole software unsuitable for further usage. The structures pre-given by the technology were not accepted by these ifu participants.

As the contract with the Humboldt University finished after the ifu, the vifu server was transferred to the University of Hamburg, from where it was in operation until the end of 2001. During this period, the funding allowed only for technical support so that the content remained static. In 2002, the maintenance will include content management again, as the ifu organization, financially supported by the Federal Ministry of Education

and Research, charged the former vifu project leader, Heidi Schelhowe, now at the University of Bremen, with the care of the server.“

Evaluation

As there is no official evaluation available yet this gives chapter gives the author's personal statement as a participant of the project area 'Information' about the vifu server. In my view the aim of ifu: to give a female approach to "Technology and Culture" was realised through the way the vifu server team planned and supported the virtual site, and gave services. The virtual ifu was an integral instrument to prepare and enable the highly ambitious project of a three months face-to-face innovative university programme where women of all ages and professions, from all over the world, came into a new environment and worked through an intense and interdisciplinary program. As the vifu sites stimulated an identification with ifu and with the other participants, part of the work of 'getting in touch' was already done when the participants saw each other for the first time. This enabled participants to join into the diverse participants group, to handle ICT productively and provided the infrastructure for common research. It empowered women by opening possibilities for networking and for positive experiences with technology. The basic features of the vifu concept proved to be successful in its integrative, stimulating and empowering aim.

Participants started to discuss, use and think of technology in general, and in particular the technology necessary for vifu as 'a tool on one's own'. The women friendly designed virtual environment and the support provided enhanced the women's use of technology with its practical orientation towards concrete goals like participation, communication, presentation and transmission of knowledge and networking. Through passing on a demystified understanding of technology, the vifu server team empowered women to appropriate the technology for themselves. Giving them the opportunity to utilize ICT for self-defined goals led to a curiosity and determination to use the technology. The different features of vifu go on empowering women in their professional and personal spheres, long after ifu has ended.

Women made a difference in the software-engineering. The all female team of the vifu server started imagining the diversity of users in their distinctiveness: that the women at ifu would have different approaches and goals concerning the use of ICT and that these would definitely be different from the ones people producing software applications would have. Being able to design for concrete but still unknown purposes they showed their willingness to be led by the group of people knowing less (in technical terms) than they did. They renounced the authority of the technical expert and passed it to the user.

Recommendations

An explicit image of the user/participant in relation to ICT and the role technology should play in shaping the human interaction for learning and communication was a helpful step for the vifu's software design. At vifu technology was seen in its potential to enable and motivate persons, not as a tool to present information to them. Software decisions were adjusted to this concept and the design took advantage of the possibilities ICT offers. Also the software development integrated the ideals or meta-goals of ifu. The openness to flexibly add and restructure the applications according to emerging working and communication needs was one of the reasons for its continuous use by participants. The interest of vifu participants in ICT was strengthened because they

needed to acquire technological competence for their professional aims. ICT skills will be learned if their use is oriented towards concrete goals as communication, presentation, information/knowledge access, and networking. The acquisition of ICT skills should be conceptualized as a crucial spin-off from the courses' learning goals. This means that time and personal resources have to be generous.

To demystify technology, the construction and reshaping of software has to be made transparent or at least visible. This is important to encourage women to see technology not as something they can spoil if they dare to touch it, but as a tool that requires shaping and adjustment. If technical applications enable women to participate, to learn and to self-organise, if technology allows women to shape it and to get involved then stereotypical behaviour such as technophobia will be much less common. Instead women will appropriate technology for their own aims and have fun using it, as they did in vifu.

The use of ITC in Women's Studies: the case of University of Rome "La Sapienza" - Myriam Trevisan

At a first glance it seems impossible to determine the ways in which new technologies are used by Italian Universities in combination with gender studies, as the Women Studies' department is almost non-existent in Italy. The matter is actually more complex, since the courses offered at the Italian University are very different from those offered in the rest of Northern Europe. In fact, gender attention has been present in many fields (history, literature, anthropology, sociology), although a specific course in Women's Studies is not offered. Active feminist Professors have ensured a concrete attention to women's issues within 'neutral' courses.

As a consequence to an inside protocol, signed on the 18th of December 1999 from the equal opportunities' department and CRUI formed a coordinated network of Delegates of Rectors, a course in Women's Studies is being created within the reformed programs of the Italian University. The course will be offered as part of the three year degree program in 'Humanities'.

If the overall situation is considered, therefore, the use of new technologies can be considered. In the University of Rome students have been sensitive to gender issues for a long time, and the University's delegate for equal opportunities, professor Marina Zancan, Professor of Modern and Contemporary Italian Literature, has also striven to tackle gender issues.

More specifically, the link between new technologies and gender studies can be approached on several levels. The first is from the students' point of view, that is in consideration of teaching techniques and use of computers by students and Ph.D. students. The second is from a practical point of view, that is with reference to those research projects in the process of being developed. The third is in relation to information, that is so as to grant accessibility to the projects taking place within university.

Starting from the academic year 2000-2001 a required use of computers and internet has been added to the Ph.D. program in History of women writing (coordinated by Marina Zancan - University of Rome "La Sapienza") and to the Apollo project- a project open to Literature majors, organized by CRUI and financed from the European Social Fund. Prior to this year, it was part of the Summer School on the history and cultures of women 'Annarita Buttafioco" at the Certosa of Pontignano - Universities of Siena and Arezzo, organized in cooperation with the Ph.D. in History of women writers.

As for the research projects that use new technologies, two examples are: the national research project on the Places and sources for a history of women in the twentieth century financed by MURST and coordinated by professor Marina Zancan, and the European project Culture 2000 WWW women writers' words of which professor Francesca Bernardini is responsible at the University of Rome la Sapienza. The

project is organizing catalogues of the private archives of Italian twentieth century women writers (such as Alba de Cespedes, Gianna Mazzini, Paola Masino, Giovanna Zangrandi) and the data is collected in a database that will shortly be put on line in the culture 2000 website, so as to make such archives open to all international scholars interested.

Furthermore, a new research project is being promoted - in combination with the national project TIL: italian texts on line financed by MURST and coordinated by professor Roberto Mercuri, University of Rome La Sapienza - to put the writings of Italian twentieth century writers on line (Caterina da Siena, Lettere, Gaspara Stampa, Rime, etc). These are being organized with the SGML standard, so as to ensure the perfect keeping of all the information open to an international audience (<http://til.let.uniroma1.it>).

We are also creating a section dedicated to the history and writing of women within the Crilet (<http://crilet.let.uniroma1.it>) divided into a theoretical part and a part dedicated to the authors, where critical contributions, organized bibliographies, theses and an information on the various activities connected, are found.

New technologies are in fact being used to highlight the activities taking place: a site for the Department of linguistic and literary studies has been created (<http://rmcisadu.let.uniroma1.it>) where information on conventions or activities related to gender studies are on line. For example all the information related to the Ph.D. course on History of women's writing or to the summer school on History and culture of women can be found here. Further, the site Culture 2000 is being created collecting all the information on those Institutions which have joined the project (Twentieth century archives at the University of Rome La Sapienza; the Elvira Badaracco Foundation's studies and documents on women in Milan; the Mondadori foundation in Milan; the Multimedia archive on Sicily's twentieth century). The site also gives information on meetings and shows on Alba de Cespedes and Paola Masino (Rome); on the seminar on feminist archives offered by the Baracco Foundation; on the seminar *Le pensée et le corps par fragments: l'écriture féminine* (Lille) and on the meeting on Elsa Morante (Madrid). For the teacher it was a realisation from fantasies about giving live classes but with the possibilities to touch every passing knowledge path that is impossible in live courses.

By offering some linklists, short abstracts from books or articles or by starting a discussion, students can pick in if they want, they can gain more in-depth knowledge about the topics they are interested in, they can choose themselves and the knowledge is right there, in the course or on the Net or in the words of students. And students can study in their rhythm and from different location without losing the possibility to come to interdisciplinary knowledge construction through interaction and communication with co-students, teachers and machines.

5. Planning, implementing and reflecting upon ICTs in Women's Studies/ Gender Studies

This chapter discusses pedagogical and practical considerations for developing webcourses in Women's Studies. It finishes with recommendations regarding staff development for using ICTs.

How to do it? Step-by-step to an online Women's Studies course: a checklist for (thinking about gender) in every stage of online courses development - Sonya Spee and Madga Michielséns

Introduction

When you have the plan to create an online course there are several steps that you need to take before you can really start teaching it.

You can be sure it will take a long time, maybe a year, between starting with the development of the course and teaching the course if you want a 100% e-learning¹ course.

If you are only thinking about developing a web supported course then you do not need so much time, certainly not if you do it with 'simple' HTML¹ pages developed with a HTML-editor.

Within this article we present some necessary steps that need to be taken before offering a women's studies online course. The aim of this article is to give some guidance, it certainly does not claim to be exhaustive.

Assumptions

We assume that you have **the money** to start with the course and that you already know with whom the women's studies course will be developed, **the crew** must certainly exist of: a teacher (or different teachers), a technical assistant, an assistant who can do Net research and rewrite courses if the teachers don't have the time to do it, and a tutor or e-moderator¹ (once the course is started). Best thing to be is that the crew is highly motivated and enjoys working with new media. If you work with one or more partners it is also necessary that one of the partners takes the role of coordinator so that the different partners work closely together and not next to each other.

You also need an **up-to-date computer** with the necessary software. If you need to work with HTML you can use Macromedia Dreamweaver¹ or Microsoft FrontPage¹. And you will certainly need an image-editor (for example Irfan View¹ or Paint Shop Pro¹). These are just some of the programmes you can use, it is a selection but you can find many more.

An other factor is **the time**: digitalizing a course is a work intensive job to do, do not underestimate the time you will have to work on it.

Step by step to an online course

This paper starts from the framework from Websolutions (2001), but works it out specific to women's studies courses and gives more direct questions (and hopefully answers) to start. Some of the tasks or questions are mentioned for one of the partners in the project, some for all of them. In the text you will find icons next to the text, these point to the partner these question is mentioned for.



Figure: The different partners of the online course development crew¹

Analysis

Once you have decided about using the Net to teach, the first step is making an analysis of the current situation and your wishes regarding to the innovation of education and the use of the Net.

Here you will find some important questions you need to answer that can be used as a guideline for creating online courses.

Needs analysis



Why are you thinking about giving an online course? Is there a demand for it?

When you think about using the Net, is it a **100% online course** you have in mind or a **web supported course**? The second implies that you give campus classes or distance education courses (by way of video-or audiotapes, readers, broadcasting,...) and you use the Net for supporting the students or give them extra information.

The needs you start from are very different, the time, energy and workload are also very different whether you use the Net to give online courses or web supported courses.

We tried to make this checklist usable in the two cases, but it is possible that the checklist concentrates more on online courses then on web supported courses.

What are the **needs of the students**?

What are the **needs of the teachers**?

Why do you want to support the course with use of the web?

What are the **extras you give** them by doing so?

Using the Net is a very sexy thing to do (Bates, 1995:59) but be sure it is a good way to give classes before you start doing so, there are a lot of other ways to organize distance courses.

Bates gives seven criteria where the choice of technology must be based on (1995:2).

The questions, grouped under the following criteria, must be analyzed:

- Access: how accessible is a particular technology for learners?
how flexible is it for a particular target group?
- Costs: what is the cost structure of each technology?
what is the unit cost per learner?
- Teaching and learning: what kinds of learning are needed?
what instructional approaches will best meet these needs?
what are the best technologies for supporting this teaching and learning?
- Interactivity and user-friendliness: what kind of interaction does this technology enable? how easy is it to use?
- Organizational issues: what are the organizational requirements, and the barriers to be removed,

- before this technology can be used successfully?
- Novelty: how new is this technology?
- Speed: how quickly can courses be mounted with this technology?
how quickly can materials be changed?

User Analysis



After you decided to use the Net for your women's studies course you have to look what your target group is. Who do you want to reach and for whom is this course written.

Is the student group homogenous? If not, can you determine different student groups?



You can have a very diverse student population, like women from women organizations, women with already a broad background in women studies, elder and very young students etc.

Do you want to differentiate the course to these different student groups and what are the characteristics of the different groups?

Technical analysis



When you want to use ICT in your web courses it is very important to keep in mind that the minimum standards pupils need to have to attend to the courses must be very low.

You must adapt the course you are going to develop to the minimum standards you impose.



The questions that you have to ask:

- which **software** do your students need to enter the course (browser, audio- or video software...).
- Is it normally installed on computers or will you have to explain them how to install it?
- must they be online during study time, or is it possible to download the course?
- how much bandwidth do they need? (when you're working a lot with digitalized material you need more bandwidth than if you only work with online texts).
- Are you going to use audio and/or video material? what kind of programs are needed for this?
- what is the ICT experience of the people with who you're going to organize this online course?



It is also important the tutor of the course to have enough knowledge about the technical aspects of the online courses, not only about the courseware but also about all the possible problems students could experience, because she is the person the students will contact when they encounter problems.

Resource analysis



Before starting with writing you must know **what already exists on the Net**.

Doesn't there already exist an online course with the same content?

What kind of material is available on the Net that you can integrate in your course, this implies a lot of hours surfing around on the Net.



Most of the content that you can find on the Net leaves an online address of the author, simply by sending this person an email you can ask her/him for permission to use the article in your course¹. If you just want to link her/his site to yours you don't even have to ask permission. Especially in English there already exists a lot of information about Women's Studies and women's themes on the Net.

From now on it is also important to analyze what you find: organize your bookmarks, write little abstracts about very interesting sites you find and are willing to use in your course, look at the lay-out of the websites, look at what you also would like or what you really want to avoid. Be critical. There are a lot of good but also very bad examples¹.

Also start thinking about your own material: which publications are you going to use, do you have a reader you normally use that you want to convert into web lectures?

Do you have some audio-or videomaterial you want to integrate in the course?

Is your university connected to some databases (library or other) where online texts are available (and where you can connect to directly from your online course)?

What about the copyrights laws? Remember that the copyright laws are more relaxed to use for educational goals than for commercial purposes.

After you analyzed above subjects its time to decide how you are going to present your online course. You can choose to write a course by writing your own webpages with a HTML editor, you can use an existing commercial courseware package (like WebCT, Toolbox, TopClass, Blackboard, ACW, eCollege.com...) or you can programme your own courseware.

The negative sides of creating your own HTML pages this is that it is not so flexible and does not have so many interactive components. It is also more difficult to update your files. An other negative aspect is that it's quite difficult to give a linear class.

We can recommend this kind of use of ICT for web supported ICT learning.

For totally online courses it's quite chaotic.

The latest years there is a real explosion of commercial courseware packages, there are great differences between the packages (price, tools, user friendliness).

We recommend you to go surfing on the net and compare the different courseware¹ packages, look for the digital pedagogic they're using. Often the courseware uses a lot of technological tools but without having a view on didactic processes. It's also important to look if an other faculty of your university already uses a special courseware package, maybe it is interesting to use the same.

Use of different media



It is also important to start thinking about how you will distribute the course to the students: Are they getting a reader? Do they have to buy books? Do they have to learn 'on the Net'? Do you want them to print a lot or rather not? Do they have to follow conferences? Do they have to listen to audio lectures?



As you will have seen many questions are interconnected and there is no strict border between the different decisions.

Instructional design

Educational goals



Determine what the goals are the students have to reach after having studied the course.

What are the course aims? the educational goals? the skill goals?

How are you going to reach these goals? What tools are you going to use to assess whether the students have reached the goals ?



Course structure



When you're organizing the course you must create a course structure, a kind of template that you're going to use during the development.

You can choose for an 'unstructured, ailinear' course, a more or less chaotic collection of data you want to present to students. The question here is if you're giving online courses or information.



The most challenging goal about using the internet for study purposes is the conversion of information into knowledge and this is –I think- only possible if you use a didactic process in your courses. There is an enormous amount of information on the net, we have to convert it in



knowledge and this happens by fitting it in a didactic form

Chunking and rewriting the course content



Very often the development of an online course is a conversion of an already existing course (campus course, a reader of a course, published articles etc).

When you're writing an online course it's useful to take all this material with you, pouring it in a new course structure and rewrite and chunk it.



The knowledge you want to bring to the students in this online course must be written in a new language 'the teachertalk on the net'.

Some features of this 'nettalk' are:

- Address yourself to the student when you write and do this in an informal way;
- Don't be afraid to use too many numbered or bulleted lists, this is more well-organized for the students than unstructured texts;
- Condense what you want to write, don't use more than 50% of the texts you would use for an article, reading on a screen goes 25% slower than reading on paper;
- Try to divide your texts in separate pieces not longer than one screen;
- Use enough visual or/and audio materials;
- Restrict the links in the course, it's better to offer an (extra) link list at the end of a chapter/course than to put a lot of links in the texts, this drives the student away from the course and the chance that she will not come back is high;
- Use internal links if possible, to refresh the information students already have learned; it's good practice to link back to former information;
- Use 'speaking' titles, so students can find the information back where they're looking for (Claeys, L, 2001: 58);

If you write the course it's important to vary the course, you can use quotes if you want the student to think about something, you can offer an audiolecture or audio conclusion, you can give some examples with a lot of pictures, you can ask students to start a discussion about a specific theme.

During your writing process it's important to think about all the possibilities you can use.

Time structure and feedback



When you're so far in the course it's important to decide what the study load is the students can bear. How many ECTS can they get when they finish the course and how much content can they handle in what time.



This depends on the final examination the students have to pass:

Is it an oral or written test (then you restrict the geographical place where students can follow the course), do they have to write a final paper or different papers during the course? Do they have to answer multiple choice questions?

It's important for the students (and for the teachers) to know in advance how they will (be) examined, much of the decisions that have to be made depend on it.

There's also the question of the 'openness' of the course, are they going through the course as one group? or can they go as quickly or slowly as they want, everyone in her/his pace?

The answer to this question is important, it will have a lot of implications on the communication tools you're going to use and the student population you are going to attract.

Are the teachers able to give feedback during the course or is this impossible; if so, are you going to use computer-based multiple choice questions that can give adequate feedback?

The tip, if you're going to use multiple choice question is: this is a really time consuming activity to develop, so start with it early enough in the course development.

Layout and interface design



This more practical site of developing online courses can be important if you can manipulate the design yourself.

If you're going to work with HTML-pages you have all of the layout under control, when you work with a course platform sometimes you can manipulate the design but it's not always like this.



If you do it yourself, be sure the layout is calm, attractive and recognizable.

Be sure that the navigation process is simple and user-friendly and that students can see where they are at every moment and go to the overview page and exit the course at every place in the course.



Communication design



A very important factor when you use the computer and the internet for studying is the communication resources you offer. It are the interactive and communication components that make de computer as distance education instrument so unique (Borsook, T. K. et al., 1991).



There are different useful communication forms, but you can not use all of them.

A decision has to be made based on the goals you determined and the openness of the course (important for the choice of synchronous or asynchronous tools).

Some possibilities are: email communication, mailinglists, newsgroups, bulleted discussionplatforms, text-based conferencing or text-chat, computer mediated conferencing, video conferencing, whiteboard or an online virtual world with different rooms.

Normally one or two communication tools are used in online courses.

Different communication tools means a lot of work for the teacher or tutor because they have to follow-up all the communication processes.

If students post a message or question they expect an answer in the next 24 hours, if not they really feel alone, like they're talking to a wall. Keep this in my mind when you make your decisions.

Tests



Never start an online course without testing the learning environment.

The start of an online course has to run smoothly because the drop-out rate can be very high if the students are faced with a lot of problems at the beginning of the course. You need to know if the server can handle the amount of logins and if the course is user-friendly. Therefore you need to create short test from one or two hours from different computers with different operating systems from different places. Ask the testpersons to write a short report about the positive and negative experiences they had during the testtime.



Do these enough in advance so you can adjust the course in time.

Other decisions to be made

Some other questions you have to think about before the course starts are:

- How are you going to welcome the students? and how are you going to motivate them? Do you have impulses in mind you can use if the students get demotivated?
- Who is going to do the follow-up of the course? is there a tutor or is the teacher doing everything? At every moment during the course someone needs to do the follow-up. One tutor can support up to 25 students (Salmon, 2000: 23).
- Is there a FAQ for technical assistance?
- Who will maintain the server and create backups?
- Take care about the language you use if you give technical information, most of the terms will be very simple to understand for you but you have to think from the eye view of the student and adapt your language to her/his level. You can easily resolve this problem by distributing a glossary list with the most used terms or with including a class with 'an introduction to the internet', this can happen online or in a real life meeting.

Conclusion

With these checklist we want to stimulate people to pass the line from thinking about online women studies courses to doing online women studies courses. Maybe they would be convinced more easily if we would have written about the fun and stimulating experiences we had with developing these online courses, but these wouldn't have been very helpful. But indeed, we enjoyed thinking, creating and organising the courses.

Staff development and support for using ICTs in creating women's studies courses - Gill Kirkup

Any university teacher who adopts ICTs even in a small way in their teaching will have to learn new skills and new roles. These roles and skills may make enormous demands both in staff time and in the learning required, even in situations where the staff member themselves is simply having to deal with systems and applications that others have designed. Apart from the small numbers of university teachers who are themselves technical innovators and enthusiasts, the rest, both resistant and enthusiastic, need extensive support from their institution and from their professional networks to become competent and feel comfortable with new developments in university level teaching. In this chapter we have identified those areas of academic practice and skills that we feel are crucial to the successful adoption and use of ICTs in teaching Women's Studies at university level, and suggested the kind, and extent, of training and support that should be provided for those engaged in teaching in this field.

The new professionalism of University teaching

In Europe there is increased demand for professionalism of university teaching. For example, the Swedish University system is currently emphasizing training in pedagogy for university teachers. There are also discussions about how many months of training in pedagogy are necessary. UK Government has set up the Institute for Learning and Teaching with the intention that all university teaching staff, and many teaching support staff will have a professional accreditation (Membership of the ILT) to indicate their proficiency to teach at University level. This accreditation for teaching proficiency has been demanded of staff at all the lower levels of the education system but never before of university staff. Traditionally the professional

requirements to teach at university level have been those of scholarship and research in a subject discipline. The new requirement to demonstrate proficiency in teaching will be additional to this. The accreditation will be achieved either through following a set of ILT accredited courses or through the production of an assessed portfolio of evidence demonstrating both competence and a theoretical base to the teaching carried out. As with other professional membership requirements, to retain continued membership of the ILT, a university teacher will have to engage in regular professional teaching development activities. Membership of the ILT will be a requirement for anyone taking a teaching job in higher education. Only new staff will be able to teach during their probationary period without accreditation, because the expectation is that during this probationary period they gain accreditation.

On the one hand this kind of professional recognition for University teaching could be beneficial for many staff, in particular women who have developed a career in teaching without engaging in those senior levels of research and scholarship that have been the main sources of recognition of excellence. Now the ILT and other initiatives such as awards for teaching excellence (ref) should make it possible for excellent teachers to be acknowledged and rewarded. This could be of great benefit to Women's Studies which has always been interested in pedagogy and good teaching (viz. the earlier chapter in this book on feminist pedagogy). But, there is also a real danger that these initiatives embed particular models of teaching and learning that do not take account of feminist pedagogy, or a sophisticated understanding of ICTs. For example the UK ILT has been criticised by one of the major University teaching trade unions for its poor equal opportunities practices.

It is in the context of this development and ever changing ICTs, that the Women's Studies community at university level should begin to take control of its staff development needs and be pro-active in its demands from institutions and other agencies involved in staff development (and accreditation) provision and policy.

New roles in the creation and production of student learning materials and programmes

In a stereotypical face-to-face university teaching situation there are two phases to any teaching: the planning/preparation of the lecture or seminar, and the delivery of the teaching, assessment and support. When new media are incorporated into teaching it becomes obvious there is a third stage (which was probably always there but seen as a small part of preparation) that is the **production** of teaching/learning materials, between the planning and delivery stages. In some cases, especially when a course is designed around a custom made website or CDROM, the issues of production take up most of the energy and resources of the teachers, planning is collapsed into production, and support can become an 'orphaned' afterthought.

We have divided our discussion in this chapter into the two main activities of:

- Creation and production
- Teaching, student support, and assessment.

There is an overlap between the development and support needs for each of these activities, but separating them like this will, we think, make it clearer where in the teaching process these needs are arising, and why we are arguing for certain types support. In this section we examine course creation and production activity.

Facility with new applications

Where teachers are being required to use generic software such as WebCT or computer based conferencing applications such as FirstClass, time needs to be allocated for learning to use the new media. Initially time needs to be set aside for training in an application. This training time needs to be accounted for and it should not be an expectation for staff above their usual teaching load. It can be beneficial to train a discipline area or course team together since there will be both a synergy in their use of the application as well as the creation of a support community for the continued learning that needs to continue many weeks beyond

the initial training. Women's Studies understands the particular nature of the strained relationship between gender and technology and technical anxieties felt by women students. It needs to acknowledge these need of staff and request group training and support from within their institution.

The real learning of any new ICT application happens as it is use to teach. This is a source of anxiety for staff who do not want to appear incompetent in front of their students. It is also a source of increased workload, since each new application initially increases the time it takes to do a task. However, it should not be presumed that, after this initial learning curve, all ICT applications will reduce the time spent in course design and delivery. Some applications provide the opportunity to engage in activities previously unavailable and therefore produce extra work even for the skilled user.

The identification of training needs is usually done through a combination of the Institutions identification for forward plans, the interests of technical staff, who enjoy teaching about their favourite new applications, and the demands for training made by the early adopters and enthusiasts. Women's Studies staff have not been early adopters and enthusiasts for the technology and have therefore inherited training packages defined by the needs of others. In many cases it may be useful for Women's studies staff to identify their own training needs and present these to their training department.

New relationships with technical staff in the production of materials

Developing and supporting courses using ICTs is a team operation. Websites and multimedia that demonstrate professional production values need a level of ICT skill that most academics will never have the time or inclination to develop. Nor should they be expected to. However, that means that we have to learn to work in teams, not only with other academics but with people who may have no interest in our subject area, and who more controversially, may be antipathetic or hostile to it, and to us. A feminist gender power analysis needs to be brought to bear to understand the problems and challenges faced in particular by mostly women staff and students, working with mostly male technical staff. The problems faced by women students to get access and support to computers in computer labs is well documented. Less well documented is the experience of women academic staff in getting computer support. Good technical support may often be key to the success of implementing ICT.

It is well documented (see Wakefield) that power is often asserted by technical staff, over non-technical women users, though their refusal to share understandings of the system in a common language, and through sometimes wilful obstruction, and sometimes accidental confusion and failed communication. A successful relationship between scholars, teachers and technical staff will produce a synergy in which a suggestion by an academic for a piece of teaching materials will be greeted by technical support with: 'Yes, lets see how we can do this,' rather than a version of 'I'm sorry but the system/software doesn't allow you to do that,' that many of us are familiar with. In the gender/power/technology relationship, the male computer technician holds most power, but in the university hierarchy of academic position and salary the woman scholar hold most power. This can lead to tension, if not open warfare, which it is important to acknowledge and make visible. The expectation is that in the professional relationship it is the academic who must demonstrate the management skills to deal with the inherent problems in this relationship. Acquiring these skills should also be part of the staff development of women academics.

Managing teams

An academic will have more to manage than their relationship with a computer technician. Teaching is changing from being a job carried out by the scholar, with the help perhaps of a teaching assistant, to that of a team operation in which a number of people bring different skills and perspectives to the job.

Depending on the scale of the teaching and the level of ICT use, this team could include the following people:

- Subject specialists/scholars. These may be one or more teachers and even visiting experts/ consultants.
- Technical staff. At the simplest this will be someone who turns some academic text/ideas into web pages.
- Designers. More complicated web-sites and CD ROM's will need a designer who interfaces between the subject specialist and the html technician to create well integrated websites that obey the rules of good interface and page design
- Media producers. On a large project the course may want to produce its own multimedia rather than just use 'found' media. In some cases it may be cheaper to produce one's own rather than pay copyright to use someone else's video, still photographs etc. As far as possible this media should demonstrate professional production values, and therefore need input from professional media producers (photographers etc)
- Web editors. This may be the same person as the designer. Their job will involve both the kinds of editorial tasks that previously text editors carried out, and may include other tasks such as applying a 'house style' for websites. Marking-up, or 'tagging' pieces of course-ware with 'meta-data' so that they can be properly stored and identified in a database, and identified for re-use. For small-scale courses this might be incorporated into the work of the academic or the designer.
- Software programmers. A very adventurous teaching team may have an aspect of teaching that they think could be taught well through a specially designed piece of software, such as an interactive simulation. The design of such a piece of software will demand programming skills beyond those of Web production and may mean working with software programmers.
- Tutors/teaching assistants. The people who design the teaching may not be the only people who teach/tutor/ support/facilitate the course. These other people will need clear communication of the intentions of the course designers.

Very few institutions will have course teams as varied, or as large as this. However, most ICT courses will use some of these kinds of personnel, at least in the development and production stage. Team working, and team management is not only a skill that needs to be developed it also is also a time consuming part of the course development process. Institutions need to recognise the demands made on academics' time to manage the integration these staff and their products through meetings and other avenues of communication.

New roles in the teaching/ support/delivery/assessment of student learning

Online assessment

The previous discussion has focussed on the issues that arise during the development of courses that use ICT. Many of these continue during the whole life of the course, as it is delivered, evaluated, updated and revised, and many are specific to the interactive teaching process of the delivery of the course. The issue about time needed to learn new applications, and to learn updated versions of applications, applies just as much to the teaching/delivery aspects of the course as it does to course creation. Some software will not be used in course creation e.g. conferencing software, or electronic marking tools, they will only be used during the study time of the course, although designers will have to understand them well to have designed good teaching activities to use with them.

Online teaching

One of the most popular applications, and one that has low resource demands in the course production stage, is computer-based text conferencing, also called computer-mediated communication (CMC). This can be offered as an alternative to, or an addition to face-to-face seminars. Usually the teacher who normally runs the face-to-face seminar is the same person who will run the course conference. However, the skills demanded for conference facilitation are different from those demanded for face to face seminar facilitation. A skilful teacher will find some transfer of skills, but being a good facilitator demands the learning of new skills. There are a number of books around which are manuals for the conference moderator such as 'eModerating' by G Salmon. However, again teaching staff need both training, and the time and opportunity to practice these skills before they use them with students. Institutions can allow time for this training, and develop practice conferences where staff can at least experiment with the basic facilities of the system. Ideally a Women's Studies department could establish a computer-based conference for its own staff which would allow them to practice the facilities and reflect on their use and development in the particular context of feminist pedagogy.

Every example of teaching using online asynchronous conferencing has indicated that a successful, active, conference demands much more time than teachers ever expect, and much more than covering the same debates in a face-to-face seminar. This is true of student study time too, and this needs to be taken into account in the course design, but in this chapter our concern is the development and support demands that this produces for teaching staff.

In assessing the workload of teaching staff a realistic estimate needs to be made of the amount of time any online conference will take. This will depend somewhat on the design of activities that take place there and how much input is needed from the teacher. It is very supportive for the teacher if the course developers have created examples of group activities that the teacher can choose to use, and adopt as they wish. These activities should include example messages and resources that the teacher can draw on. Teachers new to this medium, especially those working with course materials that were produced by other people can feel very vulnerable, and the course developers, and others in the department can do much to provide the 'behind the scenes' scaffolding of resources for the teacher. These resources, such as examples of activities, frequently asked questions etc can be built up over time into an interactive teaching archive, which is also the common memory of the department. However, to do this well means drawing again on the skills of technical staff to set up and maintain this kind of archive on a departmental server. It will have only limited use of if it is simply an ad hoc collection of materials.

Online teaching through conferencing is also demanding also that teachers log in to a conference read and comment regularly. The activity of a conference is often directly related to the 'presence' of the teacher. This presence does not need to be directive or in the form of extended authoritative messages, it can be in the form short acknowledgements to students' contributions with extended summaries at intervals. But the student needs to be able to see (from facilities such as message 'history') that their contribution is being read by a tutor. Academic staff do have other aspects of their work that take them away from their PC, conference research and holiday. During these periods a conference is likely to 'die', and when that happens it is very difficult to revitalise it. It is therefore good practice to have teachers working in teams on a conference, even if some members are only there as back-up when the main teachers are away. These kinds of support frameworks need to be designed into the support structures, and the workload of teaching staff.

Flexible use of other communication media

Communication via CMC, or email is only one of many communication channels amongst students and teachers. Teachers need training in the educational uses of media such as telephone contacts with students, as well as email and synchronous 'chat'. A cynic could argue that the enthusiasm for text computer conferencing in education is partly driven by the fact that conferencing systems make visible and public the activity of both teachers and students. Not only demonstrating through messages that people are 'working', but through facilities such as message 'history' which trace if and when someone read other people's messages. This makes it possible to give students an assessment grade reflecting their contribution to the conference. It also makes it possible for managers to hold teachers accountable for their teaching activity. This can create situations in which teachers and students are discouraged from communicating in other more private and less permanent ways, for example meeting to speak or exchanging private emails. However, good teaching includes the ability to choose the most appropriate method of communicating and using it to support the student's learning. This is a training need.

Online Assessment

A variety of methods of online assessment are developing. Some of these simply allow the student to submit an essay as an email attachment to a tutor. Others are specially designed systems which interface with a university record keeping system to store all grades as the teacher gives them to the student. Some are automated by the course creators so that the student completes multiple choice questions that are automatically marked and the results sent to the teacher as an indication of the progress of the student. These multiple choice systems are not much used in Women's Studies, where student work mostly work takes the form of extended written materials . Some assessment application involve specially designed software that allows/forces the teacher to comment electronically on the students' text. All need some training and time allowed for initial learning. Those which force teachers to give electronic feedback on written work mean that giving the same high quality assessment feedback always takes more time than the traditional feedback method of hand-written comments on the student's text

- Staff Development and Support Overall Recommendations. Women's Studies departments should produce a 'rolling' staff development programme, for all those involved in teaching. Staff should receive recognition in some way for their participation in this programme, and be given appropriate allowance in their work time to complete it.
- Individual staff should be helped to identify their own particular professional development needs and in negotiation with their department arrange to be involved in a programme of professional development. This should be recognised in appraisal, and also in their workload.
- Adequate technical support should be provided, and in a Women's Studies department it might be appropriate to consider the gender balance of the technical support team.
- The Department should deliberately build a support community for teaching issues, this may involve having specific group activities around ICT issues and applications. The best support for learning comes from colleagues rather than from other experts.

- Pressure from the University for increased ‘cost-effectiveness’ though ICTs seems to presume that increased ICT use leads to reduced resource demands in other areas. This is not actually the case (refs.) Therefore a major role of the Department should be to defend its staff against teaching overload which is a frequent outcome of incorporating ICTs into courses.

Literature

Bates, AW (1995) *Technology, Open Learning and Distance Education*. Routledge, London and New York.

Baym, Nancy K. (1995) The Performance of Humour in Computer-Mediated Communication. *Journal of Computer-Mediated Communication*, Vol. 1, No. 2. <URL: <http://www.ascusc.org/jcmc/vol1/issue2/baym.html>>

Beaudin, Bart P. (1999) Keeping Online Asynchronous Discussion on Topic. *Journal of Asynchronous Learning Networks*, Vol. 3, Issue 2 (November). URL: <http://www.aln.org/alnweb/journal>

Bilotta, Eleonora, et al (1995) *An Educational Environment Using WWW*. Centro Interdipartimentale della Comunicazione, Dipartimento di Scienze dell'Educazione, Universita' degli Studi della Calabria, Rende <URL: http://www.igd.fhg.de/archive/1995_www95/papers/97/EduEnv.html>

Blake Nigel 2000 Tutors and Students without Faces or Places *Journal of Philosophy of Education* Vol. 34, issue 1 Feb 2000 pp183-197

Blum, Kimberley Dawn (1999) Gender Differences in Asynchronous Learning in Higher Education: Learning Styles, Participation and Communication Patterns. *Journal of Asynchronous Learning Networks*, Vol. 3, Issue 1 (May).). <URL: <http://www.aln.org/alnweb/journal>>

Borsook, T.K., Higginbotham-Wheat, N. (1991), 'Interactivity: What Is It and What Can It Do for Computer-Based Instruction?', in *Educational Technology*, october: 11-17.

Brown John S 1989 Toward a New Epistemology for learning, in Frasson C and Gauthier J (eds.) *Intelligent tutoring systems at the Crossroad of AI and Education*, Norwood, NJ: Ablex

Brown John Seely and Duguid Paul 2000 The Social Life of Information, Boston harvard Business School Press

Burge Elizabeth and Lenskyj H 1990 Women Studying in Distance Education: issues and Principles *Journal of Distance Education* Spring Vol. V No 1 20-37

Burge Elizabeth J 1996 Inside-Out thinking about Distance teaching: making sense of reflective practice', *Journal of the American society for Information Science* 47(11) 843-848

Claeys, L. (2001), *Onderwijsinnovatie: casestudy afstandsonderwijs Vrouwenstudies STIVA*, unpublished thesis, UIA, Antwerp.

Claeys, L., *Virtueel leren: verwachtingen, ervaringen en aanpak van studenten die online leren* (2001), unpublished report, with thanks to the students who cooperated this research. Commission of the European Communities (2001), *Communication from the Commission to the Council and the European Parliament: the eLearning Action Plan: Designing tomorrow's Education*, Brussels, 28 march (ref. COM (2001)172final)

- Faith Karlene (Ed.) 1988 *Toward New Horizons for Women in Distance Education*, London, Routledge
- Ferris, Sharmila Pixy (1996) Women Online: Cultural and Relational Aspects of Women's Communication in Online Discussion Groups. *Interpersonal Computing and Technology: An Electronic Journal for the 21st Century*. Vol. 4, No. 3-4. <URL: <http://www.helsinki.fi/science/optek/1996/n3/ferris.txt>>
- Fish Stanley 1980 *Is there a text in this class? The authority of Interpretive Communities*, Cambridge: Harvard University Press
- Freire, Paulo 1990 *Pedagogy of the Oppressed*, London Penguin
- Funaro, Gina Maria and Montell, Frances (1999) Pedagogical Roles and Implementation Guidelines for Online Communication Tools. *Asynchronous Learning Networks Magazine*, Vol. 3, Issue 2. <URL: http://www.aln.org/alnweb/magazine/Vol3_issue2/funaro.htm#7>
- Gates Bill 1995 *The Road Ahead*, London Penguin Viking
- Gillies, Mary Ann and Teles, Lucio (ND) *Asynchronous Online Classroom Interaction to Enhance Instruction in English Literature*. Simon Fraser University, Canada. <URL: <http://www.sfu.ca/cde/Teles/papers/asynchronous.htm>>
- Grüter, Barbara M. (2000) e-motion- Über elektronische Formen der Bewegung und die Gestaltung von Interaktionssystemen in MMI-Interaktiv (4) nov.: http://www.mmi-interaktiv.de/ausgaben/11_00/
- Grüter, Barbara Maria (2001) Macht und Schönheit von E-motion. Eine von vielen Geschichten über die Neuen Medien in Kraft Alsop, Christiane (ed.) *Grenzgängerin. Bridges between disciplines. Eine Festschrift für Irmgard Staeuble*. Heidelberg: Asanger Verlag.
- Harasim, Linda, et al (1997) *Learning Networks: A Field Guide to Teaching and Learning Online*. Cambridge, MA, The MIT Press.
- Haraway Donna 1988 Situated Knowledges: The Science Question in Feminism as a site of Discourse on the Privilege of the Partial Perspective, *Feminist Studies* 14 (3): 575-99
- Haraway Donna 1966 *Modest Witness@ Second Millenium. Female Man meets Onco Mouse*, London Routledge
- Harding Sandra(1993) "Rethinking Standpoint Epistemology: What is 'Strong Objectivity?'" from Alcoff Linda and Potter Elizabeth Eds. *Feminist Epistemologies*, New York, Routledge, reprinted in Evelyn Fox Keller and Helen E. Longino (eds) 1996 *Feminism and Science* Oxford, Oxford University Press
- Heron Mavis 1997 *In my Own Skin. Dialogue with women students, tutors and counsellors. Researching reality, meaning, change and growth in the Open University*. Open university Walton Hall UK, Regional Academic Services internal Monograph

International Woman's University. Hanover: International Women's University Ltd, Press and PR Department: 3.

Jegade, OJ (1998) *A model for distant peer tutoring using computer-mediated communications in a cooperative learning environment*. Centre for Research in Distance and Adult Learning, The Open University of Hong Kong. Paper prepared for the International Conference on Collaborative Networked Learning, New Delhi, India, Feb. 16-18. <URL: <http://www.india.edu/ignouconf/papers/paa001.html>>

Kirkup Gill & Christine Von Prümmer 1990 'Support and Connectedness: the needs of women distance education students' Journal of Distance Education Fall 1990 Vol.5 No.2 (pp. 9-31)

Kirkup Gill 1996 'The Importance of Gender' in R Mills and A Tait Supporting the Learner in Open and Distance Learning Pitman, London, pp.146-165, ISBN 0-273-62316-8.

Kreutzner, Gabriele and Schelhowe, Heidi and Schelkle, Barbara (2001) *Global Learning and Interaction: Virtual Women's University (vifu)* forthcoming: GASAT conference proceedings.

Lave J 1988 *Cognition in Practice* Boston MA Cambridge University Press

Lave J and Wenger E 1991 *Situated Learning: Legitimate Peripheral Participation*, Cambridge U Press

Lunneborg Patricia W 1994 *OU Women Undoing Educational Obstacles* London Cassell

Marvin, Lee-Ellen (1995) Spoof, Spam, Lurk and Lag: the Aesthetics of Text-Based Virtual Realities. *Journal of Computer-Mediated Communication*, Vol. 1, No. 2. URL: <http://www.ascusc.org/jcmc/vol1/issue2/marvin.html>

McLintock, Robbie (1992) *Power and pedagogy: Transforming Education through Information Technology*. Cumulative Curriculum Project Publication No. 2. New York Institute for Learning Technologies. <URL: <http://www.ilt.columbia.edu/academic/texts/mcclintock/pp/title.html>>

Meßlinger, Karin and Bauschke, Carola (no date) *Towards the Future of the*

Michielsens, M. *Virtual Ties. Women and Information Technologies*
<http://www.socsci.kun.nl/ped/alg/magda/ties/index.htm>

Owen, Christine; Pollard, Jennifer; Kilpatrick, Sue and Rumley, Diane (2000) *Electronic Learning Communities? Lessons from the Ether*. Centre for Research and Learning in Regional Australia, Faculty of Education, University of Tasmania. <URL: <http://pandora.nla.gov.au/parchive/2000/Z2000-Aug-14/www.crla.utas.edu.au/discussion/d6-1998.shtml>>

Pasero, Ursula and Landschulze, Maren (2000) *Gender und Informationstechnologien im Kontext der virtuellen ifu*. <http://www.uni-kiel.de/zif/vifu.htm>

Proceedings of the STOP Surfing, START Teaching National Conference (2001)
University of South Carolina. <URL: <http://www.rcce.sc.edu/ssst/01/proceedings.pdf>>
Salmon, G. (2000), E-Moderating, The Key to Teaching and Learning Online, London,
Kogan Page

Schelhowe, Heidi (?) Virtuelle ifu - die Internationale Frauenuniversität im Internet.
WeltWeite Wissenschaftlerinnen-Netzwerke für Forschen und Lernen www.vifu.de

Schelhowe, Heidi (2000) Perspectives of virtual ifu.
http://www.vifu.de/areas/information/lectures/heide_25sept2000.html

Schelhowe, Heidi and vifu-Projektteam (2001) Virtualität als Teil des
Studienreformprojektes ifu, pp. 175-192 in Neusel, Ayla (ed.) Die eigene Hochschule.
Opladen: Leske + Budrich.

Schmeiser, Lisa (1996) Why Bring Gender Online? *Computer-Mediated Communication Magazine*, Vol. 3, No. 3. <URL:
<http://www.december.com/cm/mag/1996/mar/toc.html>>

Schneider, Daniel (1994) *Teaching and Learning with Internet Tools: A Position Paper*. Workshop
on "Teaching & Learning with the Web" at the First International Conference on the
World-Wide Web, 1994 at CERN, Geneva. <URL: [http://tecfa.unige.ch/edu-comp/edu-
ws94/contrib/schneider/schneide.fm.html#HDR8](http://tecfa.unige.ch/edu-comp/edu-
ws94/contrib/schneider/schneide.fm.html#HDR8)>

Schon Donald 1983 *The Reflective Practitioner*, New York Basic Books

Shahczenski, Celia (1998) *Experiment Substituting In-Class Discussions With Email Discussions*.
Computer Science Department, Montana Tech of the University of Montana. <URL:
<http://fie.engrng.pitt.edu/fie98/papers/1249.pdf>>

Stielstra, T. (1999) *Internet-gids: schrijven, zoeken, email in praktijk*, Den Haag: Sdu
Uitgevers.

Tiffin John and Rajasingham Lalita 1995 *In Search of the Virtual Class*. Education in an
Information Society, London Routledge,

Tolmie, A. and Barbieri, S. (1997) Guest Editorial: Computer-mediated communication in
Higher Education. *Journal of Computer-Assisted Learning*. Vol. 13, No. 4 (December). <URL:
<http://www.lanccs.ac.uk/users/ktru/ditorial.htm#ed134>>

**Trias, Jennifer Vaughn (1997) *Democracy or Difference: A Literature Review of Gender Differences in Online Communication*. Department of Mass Media and Mass Communication, Temple University, Philadelphia. <URL:
<http://nimbus.ocis.temple.edu/~jvaughn/papers/litrev.html>>**

Turkle Sherry 1997 *Life on the Screen. Identity in the Age of the Internet*, New York
Touchstone Press

**Von Pruemmer Christine 2000 *Women in Distance Education*, London
Routledge**

Websolutions (2001), *How to develop an Online Course?*
http://www.stylusinc.com/online_course/tutorial/lesson1.htm

Willems, P. (2001), *Aanvraagformulier stibo-project vijfde ronde*
<http://www.ond.vlaanderen.be/innovatie/nieuws/index.htm>