

# From Experiments to Everyday Practice in Online Distance Education

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*Background reading presented to the 14<sup>th</sup> AAOU Conference on Open Learning and Distance Education: "Ideology, Pedagogy & Technology" in Manila, October 25 - 27, 2000*

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### **1. A preliminary note**

This paper reflects on developments in approaches to online teaching by the Centre for Distance Education at Carl von Ossietzky University of Oldenburg, which we began in 1995. Our practice necessarily refers to specific cultural and institutional circumstances, which are characteristic for Germany and its institutions of higher education.

Distance education at the university level in Germany has been for many years the province of the FernUniversität in Hagen, a specialized distance teaching university, founded in 1975. The FernUniversität became a large-scale provider of courses in business administration, social sciences, humanities, law, computer science, and electrical engineering taught at a distance. Today, the FernUniversität offers a total of about 1,500 courses to its more than 50.000 students. Each course varies from 20 to 180 learning hours to be completed within a 15 week-long semester. The majority are degree-seeking students (around 85 %), but the system is also open to students preferring individual courses for continuing education or for professional development. These students are studying the courses under the same conditions as degree-seeking students: the difference is that they cannot earn a degree.

According to federalism in Germany, the FernUniversität Hagen is a state university of North-Rhine Westfalia. Therefore it can only run its own study centres for decentralized student support within the borders of North-Rhine Westfalia. To provide equal opportunities to more than 60 % of their students from other German states, state authorities in fifteen other German states need to be involved.

In 1978, the state of Lower Saxony developed its own concept of providing state-wide student support for the students of the FernUniversität. The respective ministry established units for distance education located at and being part of three conventional universities. It outlined two areas of responsibilities:

- first, to give support to the students of the FernUniversität, and
- second, to develop and deliver its own distance teaching programmes in cooperation with the faculty of the respective home university.

Thus, the Centre for Distance Education at Carl von Ossietzky University of Oldenburg became responsible for a rather peculiar set of tasks: to support students of other than its own university and to develop distance teaching within the context of its own university.

This multifunctional structure of central university units for distance education became known as the "Lower Saxony Model" in higher distance education, and it has proven its effectiveness. At Oldenburg University, services for advising and supporting students of the FernUniversität in general and the tutorials in particular are of high quality, and the development of its own programmes mainly for professional development and in continuing education are manifold, remarkably successful and sustained. (Bernath 1993, 1994a, 1994b, 1996)

Recent developments towards online distance education shall now be reported in more detail against this institutional and political background.

## **2. Tutorials for students of the FernUniversität provided by mentors of the Centre for Distance Education**

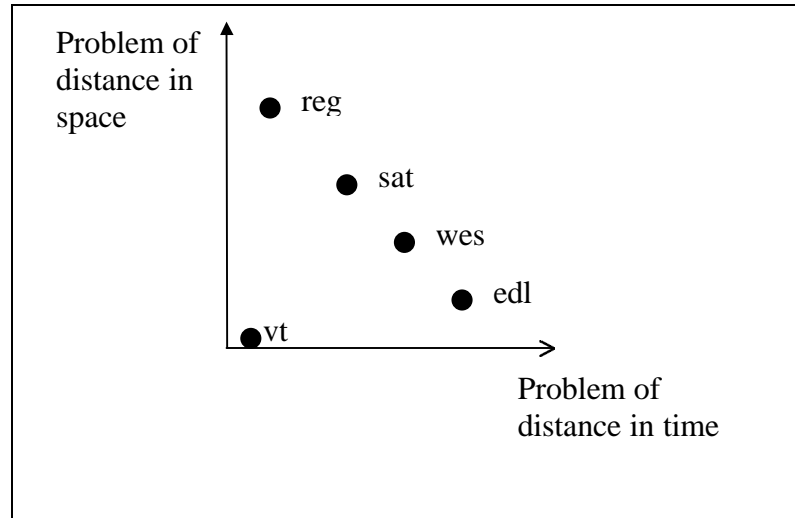
The majority of degree-seeking students of the FernUniversität are centrally served with a correspondence type of tutorials for assignments. Decentralized student support in study centres is provided by **mentors** in face-to-face meetings. Mentors support students to understand the content of the courses and, perhaps most importantly, to meet groups of distant and dispersed students to encourage the exchange of ideas and learning experiences between fellow students. Within the context of the FernUniversität in Hagen, mentors do not grade assignments and examinations; the mentor's face-to-face tutorials are voluntary events.

Mentors of the University of Oldenburg offer their face-to-face-tutorials in a mix of evening classes, day and residential schools. The mix is determined by various factors, such as the specific requirements of the subject areas, students' needs, availability of resources and the overall features of the study centre's programme for face-to-face tutorials. The programmes of five centres at the universities in Bremen, Hamburg, Hildesheim, Lüneburg, and Oldenburg are interrelated to improve the effectiveness of each study centre's programmes within the greater region of North-West Germany.

The above mentioned mix of face-to-face tutorials is the result of well balanced different forms of tutorials and gives the students an opportunity to make choices for their voluntary participation. The differentiation of various forms of tutorials is intended to allow as many students as possible to take part in meetings with their mentors prior to their assignments and examinations.

Evening classes invite students in the vicinity of a study centre and are regular events. They follow the pace of the course of study. There is empirical evidence that 30 minutes of travel time to a meeting point with the mentor is the preferred limit. (Bernath & Hohlfeld 1982) Day schools and, even more so, residential schools over a weekend or over a whole week are attractive to students who live far away from a study centre. However, the residential schools are singular events; students prefer their own choices and combine their individual mix of options.

Beginning in the middle of the 90s, since the Internet spread into homes, we became aware that mentoring students through the Internet would help to overcome the two limiting factors of our face-to-face tutorials, that is on the one hand the **geographical distance** between the student and the study centre, and on the other hand, the **distance in time** between the process of self study and the fixed and paced tutorial event. With the perspective of considerable improvement due to the new online format we were confronted with the radical questioning of the face-to-face component in whatever version.

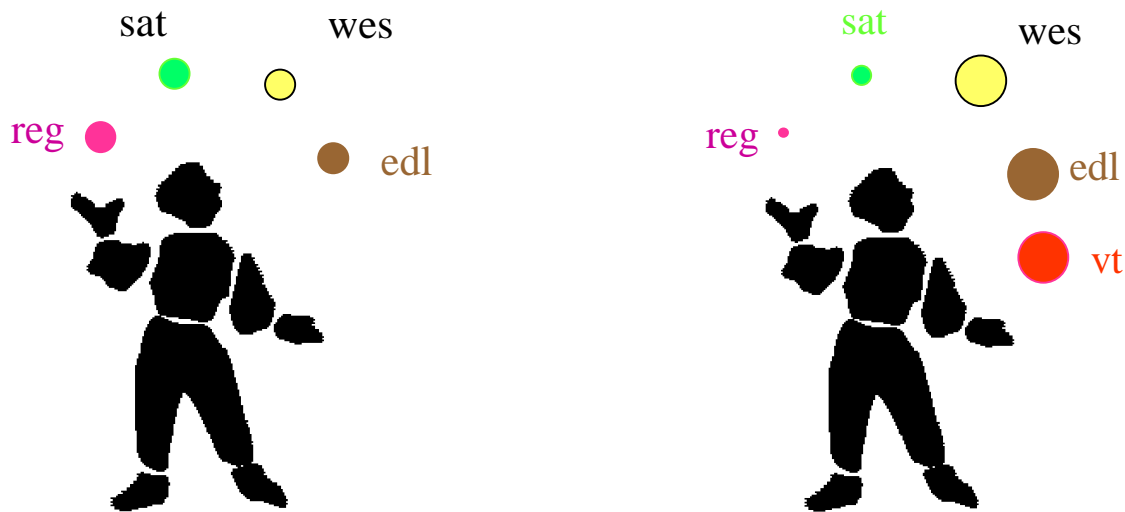


Legend: reg = evening class; sat = day school on Saturdays; wes = residential school at weekends; edl = educational leave during a week; vt = virtual tutoring/online tutorials

In 1996 we started to experiment with online tutorials. During the 1996/97 term, our mentors, for the first time, offered tutorials using interaction and communication via the Internet in mathematics, business administration and economics, macroeconomics, psychology, and quantitative methods in social sciences. The technological platform was specifically chosen for its low cost and easy access while at the same time complying with what was then state of the art standards (i.e., the combination of the Web, news groups, e-mail and FTP).

### **New perspectives with online tutorials**

Our first experiences with online tutorials in 1996/7 were conducted under every-day working conditions. Reflection on our first practical experiences suggested that we should intensify developments towards online tutorials. We already could foresee how this new form would require changes in the mix of tutorials we offered. A reallocation of resources would necessarily have to happen due to limited resources. We recognized that online tutorials are structurally different from face-to-face forms. We ran into a "juggling game" by introducing online tutorials being structurally different from, but at the same time being complementary to, face-to-face tutorials. A new perspective arose with online tutorials, as we learned that online tutorials and face-to-face tutorials at residential schools are matching perfectly and seemingly are being the "balls" to be played in the game of the future.



Since then, organisational measures have been taken to sustainably integrate online tutorials in an already existing mix of various forms of face-to-face tutorials. Tutors or mentors, experienced in correspondence and face-to-face tutoring, have been considered as the backbone in such a strategy. They were regarded to be the privileged content experts and we expected them to apply the new media and understand the different interaction and communication processes of virtual tutorials. In such a change process with high expectations, tutors and mentors clearly deserve professional development and support to appropriately make use of the potentials of the new media for their tutorials. Furthermore, the complexity of the change process required formative evaluation to allow reflections and revisions for further developments.

### **Findings from experiments with online tutorials**

One of the most important findings of our formative evaluations has been that online tutorials will not substitute for all face-to-face tutorials. Regular evening classes clearly will compete with online tutorials. On the other side, online tutorials will perfectly match with residential schools. However, practical experiences and pedagogical considerations will work strongly to keep alive the personal and direct contact between teacher and student. There is a rationale for integrating the complementary functions of online and face-to-face tutoring by preferably being conducted by the same mentor.

Online tutorials are still marginal in terms of student participation. To increase the importance of online tutorials several criteria need to be fulfilled:

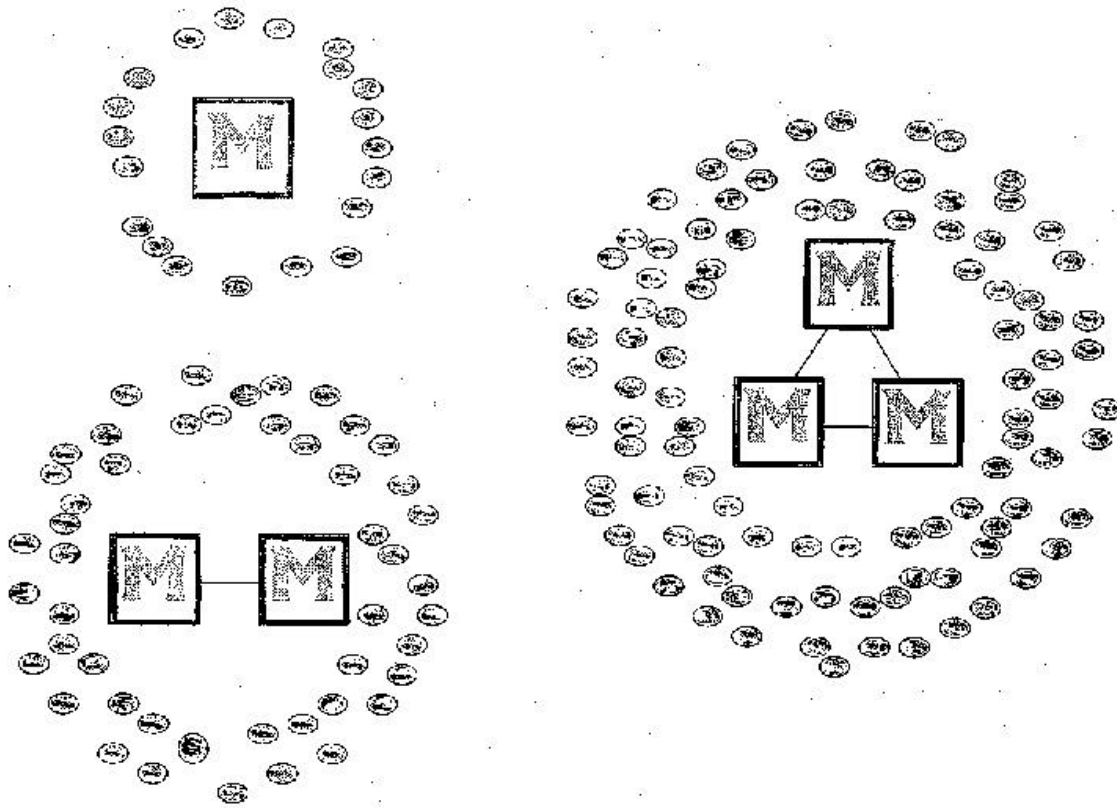
Online tutorials must

- serve students on a **larger-scale**,
- serve in both **asynchronous** and in **just-in-time** interaction,
- be **affordable** to the student, **cost-efficient** to the provider, and therefore **sustainable**.

We learned that restructuring and redesigning the format for tutorials requires collaborative efforts. Given the already existing experience of mentors in their respective academic fields, one must build on these human resources. Experiences in inter-institutional cooperation are another excellent asset for the establishment of networks of mentors and study centres to

better meet the needs of large numbers of students. Mentors need to form teams in order to serve larger numbers of students.

The majority of mentors are employed on a part-time basis, which limits their availability for on-line interaction. In contrast, teams of mentors can compile each of their limited resources into a reasonable amount of hours and with these they will be able to optimize their total presence on line. Furthermore, the written inputs of tutors during their online communication are themselves documents which can be re-used by the team members. Such an "archive", which is then a team product, can be of high value. "Archives" also generate spin-offs in terms of re-usable written on-line communication in online tutorials. They constitute another advantage of strategic importance for future developments.



It is necessary to underline that online tutorials are a group-oriented approach. It allows for individualized interaction as well as for learning in groups.

We found that the pattern of activity of participants in virtual seminars and virtual tutorials is quite different from the well-known ones of face-to-face events. Many more participants can raise their issues at the same time in a virtual environment. This causes a significant increase of visible activities. On the other hand, each input may satisfy other participants and may therefore cause their "inactivity" on screen. There are good reasons to recommend a student-mentor ratio of 20:1 for online tutorials. As a result, in order to ensure communication in online settings limiting "seat" capacities is imperative. With more mentors forming a team the "seat" number can be increased. The benefit of a team approach will not only be in terms of

numbers. The benefit of the team can be realized in terms of just-in-time services and of the quality of the tutorial as well.

### **A new perspective with online tutorials**

Online tutorials are a new approach. We haven't yet discovered all its potential being too much attached to the traditional face-to-face paradigm of tutorials. One can see on the horizon promising perspectives for the development of distance learning and training. Space and time are going to lose their constraining effects on interaction and communication in distance education. Online tutorials have already proven to have the potential better than any other practiced form, to enable highly effective interaction and communication between mentors and their students in distance education.

Online tutorials require a substantial amount of technology. There are the "classical" Internet services like the WWW, e-mail, news groups and FTP, and there are all kinds of different electronic platforms like HyperNews, FirstClass, Lotus Notes, which we tested and analyzed. Any choice needed to relate to our pedagogical and organisational goals, which were primarily low cost, easy access for students and the provision of closed study groups.

Eventually, we opted for the elaborated data-base oriented communication software Lotus Notes and Lotus Learning Space. After four years of trial and error, a lot of uncertainties and sometimes a feeling of overemphasizing technology, we are happy to once again focus on the pedagogy and the organisation of tutorials in order to improve our service on behalf of the students. The everyday practice now takes place in all subject areas of undergraduate study. (Kleinschmidt 1999)

### **3. Experiences with a virtual seminar for professional development in distance education**

In 1995, before the rise of the World Wide Web and the discussion on global education became as obvious as it is nowadays, distance education was seen as the fastest growing teaching format world-wide. On top of its already favorable position, new online teaching opportunities gave distance education an enormous boost.

In the midst of the institutional rush toward distance education that began in the early 90s, and has accelerated in speed towards the end of the 90s, some crucial issues are in danger of being forgotten. There are very few formal opportunities for faculty and professionals in higher educational institutions to develop knowledge and skills in distance education, and particularly in the management of distance education. While there are a very small number of degree or certificate programs which grant certification in the field of distance education, most full-time faculty cannot reasonably attend these programs because they are either not easily accessible, require full time study for too long of a period, or are too expensive. Several institutions also offer short programs or certificates, but these often relate to specific technologies and skills. Distance faculty and administrators often end up learning how to develop, deliver and support courses through the trial and error method, and getting occasional advice from their more experienced colleagues. They do this with almost no background in distance education theory, pedagogical models, or positive examples of good practice.

It was felt that there are two critical needs that emerge from this analysis:

1. There is a need for faculty and administrator training programs in which new distance education faculty and administrators can develop a broader perspective of the general foundations of distance education and can learn critical knowledge and skills in the field.
2. There is also a need for a global perspective among distance education faculty and administrators so that they can benefit from the knowledge of how other institutions approach distance education and solve problems, particularly in cross-cultural contexts.

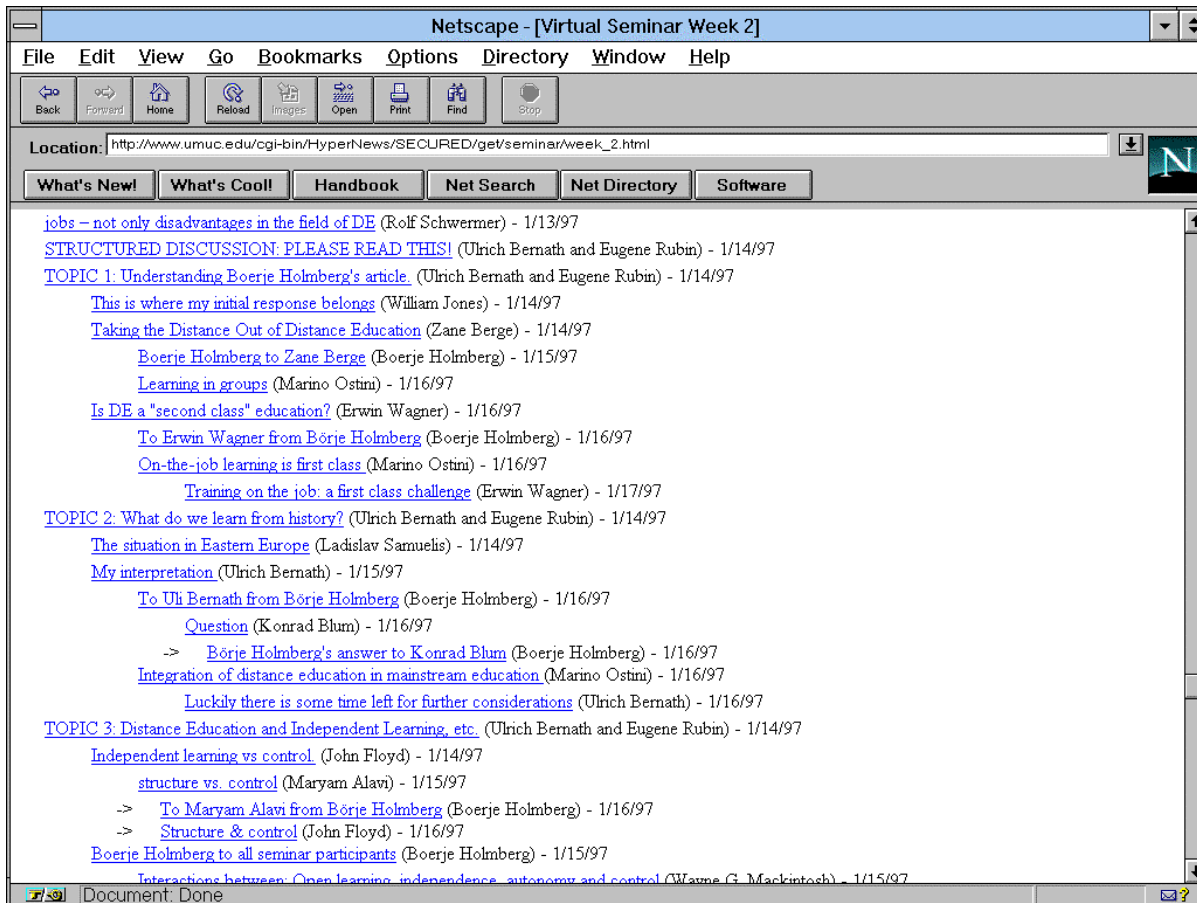
Given that need for such development and training in distance education, the author, along with Eugene Rubin from University of Maryland University College, submitted a proposal in 1995 to participate in the “Global Distance Learning Initiative” of the International Council for Distance Education (ICDE), which, in collaboration with the AT&T Foundation, offered a series of grants for research/exploration in the area of distance education. They were awarded a grant for 1996/97 to develop and test a virtual seminar for professional development in distance education.

The original objectives of this project were:

1. Develop a 10 week course entitled “A Virtual Seminar for University Faculty and Administrators: Professional Development in Distance Education”.
2. Offer the course via the Internet to a maximum of 45 participants (15 from Germany, 15 from Maryland and 15 from various locations around the world) January through March 1997, as a pilot project, prior to a global implementation. The participants would consist of faculty and professionals working in a variety of institutions in higher education.
3. Evaluate the seminar outcomes and revise the course.

### **The structure of the virtual seminar**

A decision was made early on to offer the seminar via the Internet using easily accessible and wide-spread computer-based technologies. Given the 10 week syllabus, the ongoing work commitments of the participants, and their location in different time-zones, it was also decided that real-time synchronous technologies were not appropriate. Asynchronous computer communication appeared to be the most appropriate mode of communication, and it was decided that web-based computer conferencing would be best to support the structure and objectives of the seminar. It was felt that with this decision, the method and the content of the seminar were consistent. Both the Internet and the World Wide Web were coming to the fore, and were potentially providing great opportunities for distance teaching, as well as teaching in general. For us, the web-based seminar was a positive example of the environment for which the participants were being trained. The web-based conferencing system that was selected was HyperNews, which is a Unix-based “threaded” system (the titles of the various messages look like an outline or “tree”, so that you can follow the “thread” of a particular part of the discussion.)



The general strategy of the Seminar was to encourage faculty development in two areas:

1. Theory in distance education. By this we meant the foundations, history, theories, institutional models and the technology-base of distance education.
2. Practice in distance education. By this we meant the applications and the actual process of developing, delivering, supporting, guiding, evaluating and administering distance education courses and programs.

The syllabus for the seminar and the changes that have been made over the course of three seminars are as follows:

## The Syllabi of three Virtual Seminars

	1997	1998 I	1998 II
Pre-Seminar Week	n.a.	Introduction and practice with the conferencing system	Introduction to our conferencing system
Week 1	Introduction and practice with the conferencing system	Foundations of Distance Education	Foundations of Distance Education
Week 2	Foundations of Distance Education		
Week 3	Institutional Models of Distance Education	Institutional Models of Distance Education	Theories in Distance Education
Week 4	Theories in Distance Education		
Week 5	Technology of Distance Education	Theories in Distance Education	Technology of Distance Education
Week 6	Introduction to D. E. Applications and Projects		
Week 7	Student Support	Technology of Distance Education	Organizational Trends in Distance Education
Week 8	Instructional Design		
Week 9	Technologies	Distance Education Applications;	Distance Education Applications;
Week 10	Summary and Conclusion, Project reports		
Open Forum week 1 - 10	n.a.	Discussion of Seminar Experiences	Discussion of Seminar Experiences

In addition, the general Seminar environment was supported by :

- a "home" page, which led to the various weekly conference discussions, as well as allowed for general announcements;
- a brief self-submitted biography and photograph from each participant;
- an introduction/orientation document; which explained the logistics, schedule and other details of the planned virtual seminar;
- a readings pages, which listed the readings for each week;
- a short tutorial for learning to use the web-based conferencing system;
- a separate computer conference to obtain technical assistance, as well as an e-mail link to the conferencing administrator.

The core professional development strategy of the seminar was one of combining the idea of master practitioner with that of peer interaction. Each part of the syllabus was achieved by common discussion of a topic supported by interaction with a well qualified "expert" in the field of distance education. Thus, the design of the seminar was one of a meeting of peers and not one of a relationship between students and teacher.

The seminar leaders were well aware that they were dealing with qualified professionals who were actively employed in academia, business or government. We were also aware that many of the academics were engaged in a regular teaching calendar. In other words, the participants were a group of working professionals who had commitments other than the seminar. With that in mind, several aspects of the design of the seminar are notable:

1. The start of the seminar in January and the 10 week length of the seminar was chosen so as to avoid interference with the various academic class calendars of the participants;
2. Readings were selected and kept small to minimize preparation requirements during the weekends prior each seminar week;
3. "Required" participation was estimated to be three to five hours per week; and we expressed our expectation that the participants should regularly log-in on Mondays and Fridays, plus "a day or two in between;"
4. Attendance at the post-seminar face-to-face evaluation meeting was required for the participants from Germany and Maryland (to compensate for the free access to the seminar).

In addition, the core seminar feature of visiting "experts" was a unique opportunity to interact (in almost real-time) with distinguished scholars and practitioners. It was reasoned that this would be a strong motivator for faculty to persist in the Seminar, since this opportunity would not normally be available elsewhere. The seminar leaders jointly provided the overall framework for each of the weekly discussions.

### **The conclusions from the seminar experience**

A virtual seminar involves reading and writing and thus demands much of the participant's time. The written contributions in the asynchronous discussion process differ from the synchronous and flighty chat and are fundamentally different from a conventional seminar. Engaging in a virtual seminar and using computer conferencing is a much more reflective process than face-to-face interaction. One types out one's thoughts, rereads them, often edits them or adds to them, and sometimes even spell checks them. After carefully inspecting what one has written, the work is then submitted for others to read. The written word is recorded and thus, it persists. It can be read and reread by others long after the termination of the seminar. To characterize such effects of asynchronous communication processes, the author coined the term "ripple effect", as it seemed to be much like throwing a stone into the water (the incoming messages) and seeing ripples expand outward (pondering on the content of the message). (Bernath & Rubin 1999b, 2000)

Conventional seminars do not allow all participants to contribute at once. They usually do not encourage a response from each and every individual. Moreover, it is difficult to attend to and keep track of a long sequence of oral contributions. A long list of written contributions is treated differently. You can stop when you wish and easily compare and contrast various contributions. You can go back and reread for clarification. The asynchronous computer conference is, in a way, a renaissance of reading and writing communication. We can now hope that it will bring us new and extended opportunities for teaching, training and learning, regardless of time and space constraints. Peters engaged himself actively in our virtual seminar. He characterizes it as an example of a "knowledge building community." (Peters 1998)

The positive results of the virtual seminar likely correlate with the interest of the participants in their own growth of knowledge and acquisition of skills. Clearly the relevance of the content is related to the participant's persistence as well as their attitude. Our data clearly indicates a positive affect and a continuing involvement of the participants in the process of the seminar.

The discussion process in the virtual seminar needs direction and moderation to best use the opportunities offered by the media and the technology. In particular, it is important to get as much of the activities on the "surface" as possible. There is also an emotional component to

the seminar. Participants not only reported a resultant positive or negative affect in the discussions, but also reported the establishment of varying degrees of personal relationships with fellow participants. We felt that this emotional component was critical to the success of the seminar.

One of the goals of the seminar was to enable a cross-cultural sharing of experiences, ideas and opinions. This was deemed to be a potential positive outcome because:

1. distance education occurs in some manner in almost all countries of the world and in a wide variety of ways, and using a variety of levels of technology;
2. distance education is increasingly becoming a world-wide enterprise in that courses are now capable of being delivered almost anywhere in the world; and
3. the cultural and regional bias that each participant brought to the discussion would result in a broader and deeper learning.

Our three seminar experiences definitely supported the above supposition that the cross-cultural aspects of the seminar would result in positive outcomes. Not only was a broad variety of opinion expressed, but often these opinions prompted discussion that reflected a more comprehensive analysis and understanding of critical issues. This was particularly true of technology related discussions, where participants from nations that were not highly technology enabled often came up with innovative and useful solutions to problems that did not occur to participants from high technology countries.

By being globally accessible via the Internet, the content and interaction allowed participants to differentiate and generalize across cultural borders and among the diverse practices within the field of distance education. It gave depth to the learning and forced the participants to think beyond their own cultural and environmental constraints.

The seminar was also an example of distance education in practice. One of the primary goals of the seminar was to inform distance educators about issues related to the practice of distance education. We essentially “practiced what we preached.” It even allowed some of the more experienced participants to obtain a better understanding of their own students’ experience within distance courses. Finally, we consider our virtual seminar to be an outstanding success. The model has already been replicated in several other environments.

### **Where do we go from here?**

Perhaps the most important outcome of the seminar was the growing awareness among the seminar leaders that, while the seminar was a "success", as it was designed, the seminar was an additional workload on top of their distance education administrator’s role. It seemed impossible to continue it in that form, and it also seemed too difficult to turn into an ongoing activity at each of their institutions.

Thus, the idea developed that each of their institutions should seriously consider offering some sort of formal training for distance educators which would lead toward a credential. It was out of these discussions, both within and between their two institutions, that the idea of a formal Master’s degree in the management of distance education came about. A decision was made that the University of Maryland University College (UMUC) would develop and offer a Master of Distance Education degree, and that Carl von Ossietzky University of Oldenburg, would partner in this enterprise by developing and offering a certificate that would be fully integrated into the UMUC Master’s degree.

#### **4. The Master of Distance Education degree program**

The Master of Distance Education (MDE), designed in an online format to serve the needs of individuals responsible for leading and managing distance education within government, business, non-profit and educational organizations, was launched in January 2000, just a year after the virtual seminar experience was completed.

The online MDE covers a broad range of topics that need to be addressed by distance education and training professionals. Graduates of the program will be able to develop a vision for the implementation of distance education within an organization and communicate that vision effectively to others; develop strategic goals and business plans for distance education within an organization; design and implement the necessary support services for a distance education program; analyze, design and recommend an organizational distance education technology plan, and manage the implementation of that technology in distance delivery; function effectively as leader, manager and team member within a distance education or training organization. Students will develop competencies in organizational and management processes; leadership and change management; information technology; business development, strategic action planning, and problem solving; and will understand the importance of both ethics and social responsibility. This is an applied degree, aimed at developing the managers of distance education and training organizations of the future.

It is intended that the proposed program should address a global audience. This is because:

- a) the field of distance education is of an international character, with expertise, research and models that cross national boundaries,
- b) the market for graduates of the program crosses national boundaries, and
- c) there are only a small number of institutions worldwide that are offering a similar credential.

The program is actually conceptualized (when complete) as a group of approximately 18 courses. Students would be able to enroll in either the full Master's program or in one of several Certificate programs. Students who enroll in a Certificate program would be able to continue on the Master's program if they so chose.

The Master's program consists of seven core courses and four elective courses. In addition, a student is required to take either a distance education project course or an additional two elective courses.

A Certificate consists of four courses, two of which are from the basic core of the Master's program and two are developed specifically for the certificate as well as electives in the Master's program. The Foundations Certificate in Distance Education (CDE - Foundations), Oldenburg Universities' contribution to the joint program, consists of the following four courses:

- OMDE601 - Foundations of Distance Education
- OMDE605 - New and Emerging Media in Distance Education
- OMDE606 - The Economics of Distance Education
- OMDE624 - Student Support in Distance Education

Within the first year, 300 students, mostly from the U.S., have registered for the MDE. These large and unexpected numbers and their constant raise ask for urgent strategic and operational decisions today and in the near future. We planned to reflect on the experiences of the first

year of the MDE in a pre-conference workshop prior the 20<sup>th</sup> ICDE World Conference in Oldenburg, March 30, 2001.

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Further information regarding the Master of Distance Education degree program can be found at:

<http://www.uni-oldenburg.de/zef/asf/crde.htm>

<http://www.umuc.edu/mde/>

<http://info.umuc.edu/mde/home.htm>

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*Ulrich Bernath has been the Head of the Oldenburg Branch of the ICDE General Secretariat since 1995, responsible for Germany and the European Union. He is a member of the International Program Committee of the 20th ICDE World Conference in Duesseldorf (Germany), April 1 - 5, 2001, and he is responsible for the "Pre-Conference CeBIT Event", March 28 - April 1, 2001.*

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