FINAL REPORT

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PROJECT ACRONYM
MATEN

PROJECT FULL TITLE
Multimedia Applications for Educational Telematics Network

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University of Twente
Faculty of Educational Science and Technology

TELEMATICS APPLICATIONS PROGRAMME
(EDUCATIONAL SECTOR)

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Multimedia Applications for Educational Telematics Network

SHORT DESCRIPTION OF THE PROJECT

GOALS

• Providing people with equal access to lifelong learning.
• Providing existing interactive materials and applications for learning at home, at school and on the work place.
• Developing new products and services on the bases of existing technologies in tertiary education and on the job training.
• Adapting new innovative tools in the area of collaborative learning and tele-presence.
• Raising awareness, developing standards and guidelines and spreading good practice for use of telematics in education and training.

Multimedia applications via computer networks provide people with equal chances for life-long education and at the same time with flexible learning not only at the school, but as well as at home at work place. The Web is the delivery medium, content provider, subject matter and "instructional designer" at the same time. Exploring more deeply the experience in this domain the project enables for effective and friendly flexible distance learning systems to be created.

Precursor to MATEN

The MATEN project has started after the INCO Copernicus project had been finalized. This Copernicus Project (COP 1445) was called "Flexible and Distance Learning Through Telematics Networks: A Case for Teaching English, Communication and Information technologies". This project (with its acronym FDLTN) was in general established to study how computer tools are affecting the ways in which instructional tasks are accomplished and, in turn, how existing patterns of social interaction are shaping the evolution of software engineering highly malleable tools. The project explored the interplay between a computer-based design courseware environment employed in the creation of distance courses by subject experts, including the user interface designers and the software engineers supporting the technology.

Approach

The MATEN project (Multimedia Applications for Educational Networks) succeeded the FDLTN project, and it had as the main goal to combine the unique capabilities of different media with the power of computer networks in World Wide Web platform in order to design a rich educational environment for everyone. This newly aspired environment aims at removing the limitations and at the same time enhancing the strong points of the traditional educational system. During the project different courses based on multimedia application of Web were experimented, Web-based multimedia tools for courseware were further explored and applied and implemented in the various Eastern European partner institutes for distance education. The project attempts to combine the unique capabilities of different media with the power of computer networks in World Wide Web platform in order to design a rich educational environment for everyone. That environment removes the limitations and at the same time enhances the strong points of the traditional educational system. Multimedia application of computer networks provides people with the equal chances for life-long education, for flexible learning not only at the school, but as well as at home at work place. The Web is delivery distance medium, content provider, subject matter and “instructional designer” all in one. Explor-
ing more deeply the experience in this domain the project enables for effective and friendly flexible distance learning systems to be created. During the project different courses based on multimedia application of Web will be experimented, the Web multimedia tools for courseware will be designed and implemented and centers for distance education at all participating sites will be created.

Results and Achievements

The western partners Twente and Exeter had the role to supply educational and language-didactic expertise respectively. The Eastern partners were the target sites, facing the need to transform traditional and email-based learning into multimedia-based courses that could transform the delivery-oriented courses into highly interactive and communicative learning environments. The process of technology-enrichment and pedagogic evolution was highly dynamic and despite of a rather detailed project plan, rather unpredictable. One of the challenges recurring back several times during the project period was to accommodate the ongoing technical progress with so-called pedagogical re-engineering: The attempts to reconcile the more traditional didactic practices with the recent opportunities for new learning paradigms. The more obvious recent trends in this respect are: Student-oriented, collaborative, exploratory and even constructivist learning. Several of these paradigms could be combined into the extreme situation that a student is provided with a well-performing web connection and a detailed curricular agenda without a formal supervisor, except the final confrontation with a test to prove his/her level of mastery.

The student-orientation would than be operationalized in the sense that the whole scenario, ambiance, pace and practical scope is controlled by this individual student, as if (s)he is a customer with its own needs etc.

The collaborative aspect in that case would manifest itself in the fact that students have to find the best and most attractive sparring partners in order to learn best. For second language learning, real-time conversations with native speakers would seem attractive. The critical issue however is then to find a satisfactory symmetrical situation where the language expertise is matched with any type of interest by the tutor. Besides that it is commonly accepted that domain expertise does not necessarily lead to effective learning at the tutee. But in general there is well-accepted evidence that co-students can play an indispensable role in the learning process, especially when it comes to failure anxiety, mutual understanding and the aspect of active learning; It is hard to achieve the interaction intensity between students by professional trainers, because of costs and flexibility reasons.

The student as a hobo on the web is generally seen as an inferior situation for learning. The risk of digression and disorientation is considerable. Also the information resources are not well organized and many have a weak validity and may cause misconceptions. Still more and more educationalists advocate the confrontation between students and the ‘hostile’ web, as it will be the future situation anyway. They claim that postponing these exercises in navigation have detrimental effects anyway. Exploration seems to become the default attitude for learners. “Curiosity”, “self-monitoring” and metacognition become the standard key words in autonomous learning. However there is still quite a long road between ‘course’-oriented learning and effective ‘student’-oriented learning. The emerging question becomes “How can we train learners to become independent learners?” Initially it seems a contradiction but seen form a pedagogical point of view it is not contradictory at all.

Constructivism (or better: ‘Constructionism’) is the essential theorem that learners will only learn if they themselves are actively ‘building’ and ‘embedding’ new concepts in their prior knowledge. The paradigm of ‘learning as a process of information transfer’ is scrutinized. The student surfing the web is placed in the extreme constructionistic situation; The chosen perspective, its focus, its integration and the consolidation process are in his/her own hands. The pedagogical re-engineering in our MATEN project was not seen as a question of tackling or kissing question of tackling or kissing each ‘hypes’. It was seen a serious responsibility in order not to adhere the media consequences solely, but to address the more essential questions how finally more qualitative learning could be excavated from below the many layers of fashions in the area of instruction, training, life-long learning and de-schooling society as formulated by Ivan Illich, Reimer and Paolo Freire.

Conclusions and Plans for the Future

The MATEN project will promote the existing research in distance education and significantly contribute to fundamental and applied research in many related areas such as informational technology, communications, languages, psychology and education. This project will outline some of the key strategic challenges and directions in applying multimedia for distance education. The expected scientific results will contribute to the research in the area of Communication and Information Technologies in Flexible and Distance Learning & Teaching and promote their efficient transfer into practical applications. They can be applied to the creation and development of Distance Learning Centers (DLC) in East-European countries and NIS countries. Using the multimedia features, which improves the quality of distance teaching, should be one of the main goals of such Centers.

During the MATEN project some courses developed within Copernicus 1445 project will be expanded by modern multimedia technologies. Two new courses that will be developed during proposed project “Basics of multimedia for training and learning” and “Human-computer interactions in training and learning” are intended to support distance courseware development across Europe.

The development part of the project will also result in an integrated courseware design and development tool, targeted especially to Internet, which will allow many educational professionals, including teachers, to develop their own courses on telematics networks, using a systematic approach and avoiding the need to know the technical details of telematics.
Both research and development proposed are expected to improve the existing telematics network for teacher educators built within Copernicus 1445 project, by incorporating multimedia WWW-based technologies to support flexible and distance learning.

The partners’ collaboration will be extended through the creation of DLS. The professional and course development will be extended to team teaching across the involved universities. This provides and important infrastructure to support the creation and further development of new centers. Team teaching will extend the expertise found on any one site and this and e-related collaborative professional development will foster the spread of expertise and courses in European countries.

Contact Details

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“Multimedia Applications for Educational Telematics Network”

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A Case for Teaching English, Communication and Information technologies

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Further information on the TELEMATICS APPLICATIONS Programme:
You can obtain more information on the projects of the TELEMATICS APPLICATIONS Programme from:

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