
NEW MEDIA IN SPORT AND SPORT SCIENCE - THE EUROPEAN PILOT PROJECT "ITES"¹

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Introduction

The integration of new information and communications technologies into tertiary-level education and research is a special challenge for all institutions of higher education throughout Europe. Whether in the traditional fields of activity and responsibility of academic education, in the context of scientific congresses or publications – the conception, realisation and evaluation of innovative internet-based learning environments is gaining cross-border momentum with the effect that in a few years time virtual universities and colleges are likely to be a reality world-wide. Apart from the technological development of specific hardware and software applications, concepts of teaching methods and communication systems based on findings of psychology of learning and proven by information science will be ever more at the centre of interdisciplinary research in this field.

Against this background, the Institute of Sport Science at Saarland University has realised since 1998 the European pilot project "ITES – Information Technologies in European Sport and Sport Science" which will be sponsored by the European Commission until 2003. This interdisciplinary research and development project aims at the integration of innovative information and communications technologies into the traditional university fields of activity and responsibility using topics of sport and sport science in Europe as an example, realises and monitors systematically and evaluates the opportunities and restrictions of implementing interactive and multi-media concepts and their integration in the established forms of scientific seminars ("Web-based Teaching"), scientific congresses ("Web-based Congressing") as well as scientific publications ("Web-based Publishing").

Multi-media and learning programmes in Europe

In 1995, the European Commission arranged for the research project "Multi-media and learning programmes" to be started. This project aimed at assessing the current situation in the field of multi-media learning programmes in Europe and developing an action plan to activate and co-ordinate European research initiatives in this field and make them more efficient. The European Commission comes to the conclusion that (1) European Universities work on non-commercial multimedia learning programmes of high standard but for internal use only. (2) To be able to disseminate course material and share research findings, they increasingly introduce high-speed telecommunications networks, (3) Starting out from the current degree of networking with 24 million computers worldwide and extrapolating the annual development rate of currently 70 per cent, by 2008 – in less than 6 years from now – there will be a complete global network. (4) Particularly in the field of university teaching, one can assume that more than 10 per cent of all university courses will also or exclusively be offered as web-based courses in 2002. The "virtual university" has stopped to be a utopia long since. Its realisation, however, still requires further developing and, in particular, transferring to and testing in the different areas of application.

Online discussion in the field of sport science via Internet: preliminary stages to ITES

Sport science as well has to face this technological challenge and contribute to the development of a virtual university to be established in the future. As a consequence, the Institute of Sport Science at Saarland University held a web-based seminar for third and fourth year students on the issue of "Sport Talent" for the first time in winter term 1997/98. Apart from the dominant content-wise discussion on aspects of sport talent, the seminar aimed at imparting knowledge in the new information and

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communications technologies and their significance for different areas of application. Participants could use the functions: real-time transmission of live expert lectures with audio and video data; interactive communication; parallel integration of course and lecture materials (slides, panels, etc.); availability of videos of the expert lectures for asynchronous participation at a later time; usage independent of whereabouts of the participant (transmit and receive alike); user-friendly interface; simple technology for access and usage; low costs and expenses for provider and user.

Despite a short run-up period and short-term announcement, there was surprisingly great interest in the discussion, which reflected in a lively virtual participation. After filtering the logfiles, the number of online requests amounted to 250 participants from five European countries. This clearly shows the great interest in thematic discussions on the issue of sport talent in Europe as well as the available facilities and preparedness to use the new communications technologies.

The European pilot project “Information Technologies in European Sport and Sport Science”²

The realisation of the outlined online seminar led to the idea of scrutinising the opportunities of an unrestricted communication and its integration into the field of teaching sport science. These considerations aimed at the development and analysis of a European model concept on the integration of multi-media and interactive information and communications technologies in university teaching. The thematic networks of the European Union EDEN (European Distance Education Network), EGREPA (European Group for Research into Elderly and Physical Activity), ENSSEE (European Network for Sport Science, Education and Employment) and EUCEN (European Universities Continuing Education Network), as well as 19 universities, colleges and sport institutions from 13 European countries have supported this pilot project.

Such an educational conception can be judged exemplary as there have not been any comparable conceptions on the integration of new information and communications technologies into sport and sport science so far, however, the close cooperation with the European Universities Continuing Education Network and the European Distance Education Network, two thematic networks of the EU in the field of education and further education, open and distance learning at European colleges and universities, clearly shows the importance of this project also beyond the borders of sport science.

First considerations on how to realise the project brought to light the large number of linguistic, technological and thematic problems arising in the conception and realisation of the pilot project. Just think of technological compatibility, availability of the necessary infrastructure in communication technologies for all participants Europe-wide or different hardware and software standards. This clearly shows why the technological orientation towards “the weakest link in the chain” is necessary. Furthermore, practical possibilities, lowest technical requirements and low costs must be well considered.

The conception of the pilot project plans four intertwined modules which are realised in different time frames and with different contents: (1) Organisation of a European interdisciplinary expert hearing on the integration of new information and communications technologies into areas of activity and responsibility of teaching and research in sport science (“European Expert Hearing”). (2) Realisation of a European pilot seminar on the issue of “Sport Talent” via the Internet (“Web-based Teaching”). (3) Implementation of the sub-project “Web-based Congressing” in the framework of the international congress “Activity and Aging”. (4) Generation of an Electronic Journal on the issue of “Motor Control and Learning” (“Web-based Publishing”).

“European Expert Hearing”

There is no doubt that the integration of new information and communications technologies into teaching and research in sport science is an interdisciplinary project. It requires the knowledge of technical conditions of hardware and software applications used, knowledge of teaching and learning

² See homepage of the EU project at <http://www.uni-saarland.de/ites>

processes dealt with in the pedagogical psychology, combined with experience in interface design and communication, let alone the knowledge of sport science as the exemplary project content.

Representatives of sport science can only partially contribute their knowledge and experience to solutions in the outlined disciplines. Therefore, the realisation of such a project has to rely on the cooperation with competent partners. This led the Institute of Sport Science at Saarland University to organise a European Expert Hearing, which was held on 10 – 13 November 1999, on the integration of new information and communications technologies into areas of activity and responsibility in the field of teaching and research in sport science.

Content-wise, the Expert Hearing was divided into two phases. In the first phase, the participants presented and discussed models and concepts of the integration of new information and communications technologies and its significance for the sport and sport science in Europe including latest international tendencies and approaches in educational theory and psychology, such as media didactics or learning and behavioural research, as well as latest insights on open and distance learning and adult education. In a second phase, the Expert Hearing presented a first test for the realisation of virtual, internet-based events in university teaching as internationally recognised experts had prepared different aspects on the issue of sport talent as an exemplary topic to be presented and discussed by the present participants as well as via the Internet.

Module “Web-based Teaching”

The subject matter of the sub-project “Web-based Teaching”, which has been developed since the beginning of winter term 2000/2001, is to realise a European pilot seminar on the issue of “Sport Talent” structured in six modules. This seminar intends to impart and discuss theoretical models and empirical findings from the field of sport science and sport medicine on the one hand as well as practice-relevant findings from high-peak performance on procedures in talent promotion and selection in the international context on the other.

The exceptional quality of this European seminar, which mainly addresses third and fourth year students, lies in the integration of new media. The implementation of the internet-based author system Art-Web (<http://ites.swi.uni-saarland.de/ites>) facilitates the preparation and follow-up of all seminar classes as well as different ways of communication. Additionally, the integrated audio-visual online discussions with experts from sport science and sport practice offers the possibility of thematic discussions. The pilot seminar is planned to be carried through synchronously or asynchronously at different European universities and colleges as well as sport institutions.

Module “Web-based Congressing”

From 28 - 30 October 1999, the Institute for Sport and Preventive Medicine at the Saarland University, the Saarland State Sports Association and the Institute of Sport Science at the Saarland University jointly organised the international pilot congress “Activity and Aging” in the framework of the sub-project “Web-based Congressing”.

Through the inclusion of representatives from sport science, sports medicine as well as their higher and related disciplines, the organisers realised an interdisciplinary debate in the five working groups Movement and Training Science, Pedagogy/Psychology, Sociology, Orthopaedic Sports Medicine and Internal Sports Medicine focusing on questions relating to the aging process in the context of activity, exercise and sport that reached beyond the scope of the scientific disciplines. It was complemented by a political keynote address, two thematic introductory lectures, five main lectures. In addition, scientists, politicians and sports representatives for the European Union presented and discussed practice-oriented models, scientific findings as well as political programmes in an international forum (representatives of the WHO, the International Council for Sport Science and Physical Education, two thematic networks of the European Commission, the German Federal Ministry for Family, Senior Citizens, Women and Youth, the French Ministry for Youth and Sports, and others) as well as in a national forum (representatives of the Federal Institute for Sport Science, the German Sports Association, the German Association for Gerontology and Geriatrics and the German Centre for

Research on Aging). A total of 248 participants from nine countries participated in the international congress “Activity and Aging”.

The main focus of the module “Web-based Congressing” lay in the realisation of a multi-media and interactive “virtual congress participation” with an emphasis on audio-visual applications, facilitating a comprehensive online participation in a scientific event, live and in real time. Additionally, the working groups and panel discussions offered the possibility to participate via live-chat. After the conclusion of the event, the lectures and panel discussions of the congress “Activity and Aging” have been available as a hybrid product, for a CD-ROM has been generated and disseminated parallel to the book of the same name so that the audio-visual applications which are available online can also be used offline.

Module “Web-based Publishing”

The sub-project “Web-based Publishing” aims to demonstrate new possibilities for internet-based publishing. Since the winter term 1999/2000, the sub-project focuses on the elaboration of a technologically founded and at the same time application-oriented concept of the pilot E-Journal “Motor Control and Learning”, the development of a suitable strategy for evaluation and monitoring as well as its integration and sustainable transfer into the Scientific Community.

So far a web-based prototype has been programmed (incl. necessary databases, e-mail-supported distribution method, full text search, interactive feedback strategies, open commentary room, etc.) which covers the communication interests of a Scientific Community in an exemplary way and is an appropriate instrument for “just-in-time” publication. Considering the unsettled legal situation (“author’s perspective”) on the one hand and little acceptance and within the Scientific Community to use the E-Journal (“user’s perspective”) on the other hand, we should be rather conservative in our expectations regarding the international Scientific Community. If we do not succeed in adjusting the formal status of technical scientific E-Journals (e.g. by establishing of review procedures and impact factors on the one hand or by achieving the recognition of publications in E-Journals in formal qualification procedures on the other hand) to the status of traditional (international) Journals of the print medium, then the existing possibilities of multi-media and interactive communication offered by the new information technologies will be wasted and at best be of little, probably of no use for the strategic development of technical scientific communication and publication.

Conclusion

Web-based applications are making dynamic inroads into university fields of activity, particularly in the areas of teaching and research, congressing and publishing. Cross-border, virtual universities are likely to be a global reality just a few years from now. All scientific disciplines in the tertiary sector throughout Europe must adapt to and participate in this development. This is the only way to make specific technical use of this development and become aware of possible risks early on.

In the future, the further development of scientific disciplines will partly depend on the participation, design and use of new information and communications technologies. Sport Science, with its many links to almost all social spheres of sport and its organisations, has to take up this challenge. The virtual pilot seminar on the issue of “Sport Talent” at the Institute of Sport Science at the Saarland University, and particularly the audio-visual online discussions realised therein, has been a modest, exemplary contribution.

The thus developed idea for a European project on the issue of “Information Technologies in European Sport and Sport Science” focusing on “Web-based Teaching”, “Web-based Congressing” and “Web-based Publishing” seems to be ideally positioned to integrate sport and sport science into this communications technology development within an international context in a model and exemplary way.

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