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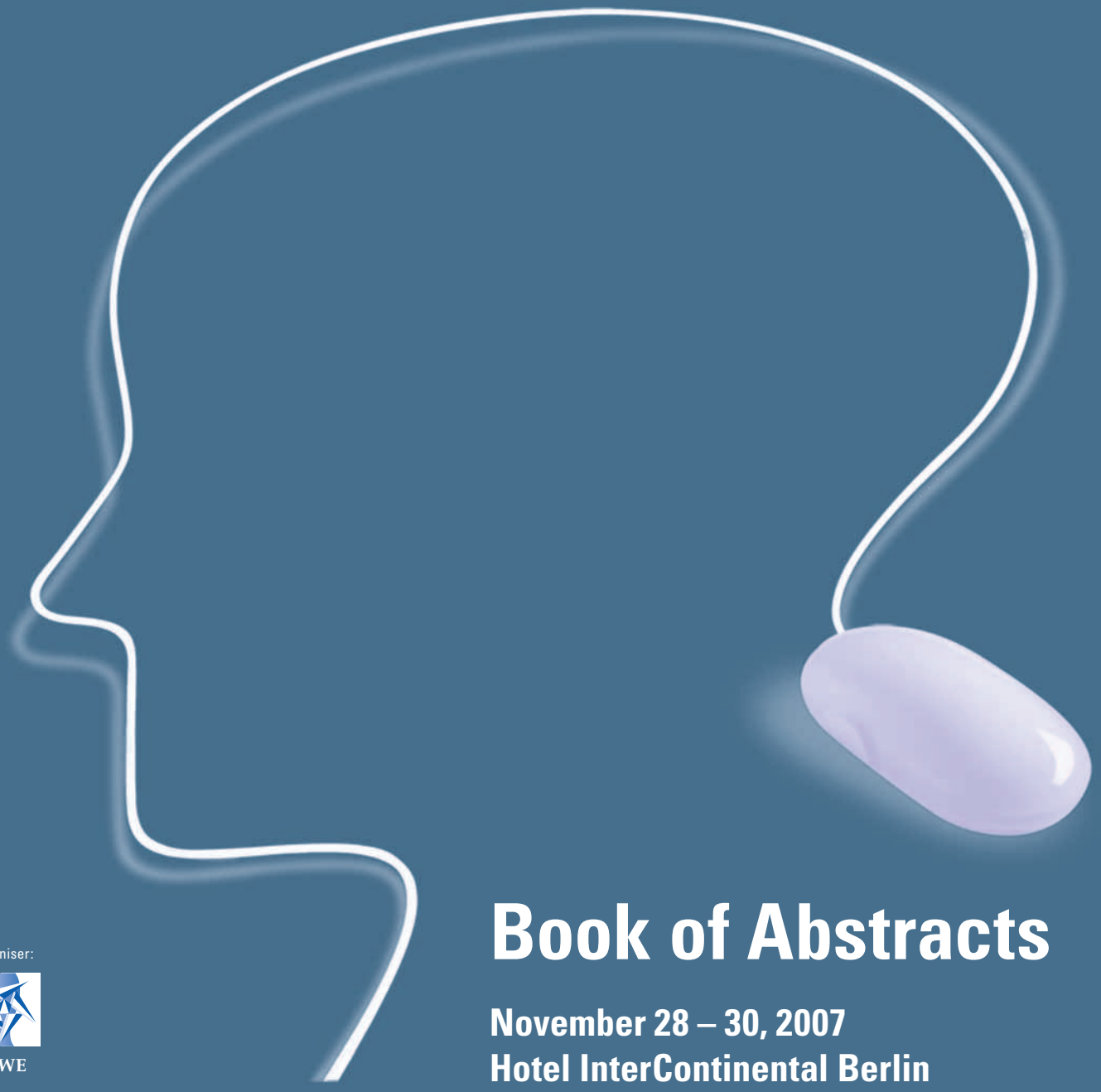

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E-Learning and Knowledge Management: How to Reconcile Coherence and Variety of Solutions, Efficiency and Reactivity?

Eric de Dreuzy, Director eLearning, Air France, France

To support employee skills development and Company projects, Air France provided more than 2.5 million training hours and spent almost 200 million Euros on training in 2006. The AF training plan must include 50% part of mandatory training.
A number of important issues explain the high levels of annual investment (8,7 % of total wages devoted to training) to maintain the qualifications required by the competition in all transport sectors: for example, flight safety, aircraft fleet development, IT evolutions, as well as internal changes in organization.
The Air France-KLM Group was created in 2004 and has more than 103,000 employees throughout the world. The Group is the world leader in terms of international passenger traffic. Its priority is to draw on existing synergies between Air France and KLM. This leads to important training efforts.

Like most leading airlines, Air France implemented new technologies in training early on to ensure maximum efficiency and reduce costs. Historically, the introduction of distance learning was started by the massive worldwide deployments and upgrades of new IT applications. A very simple question then arose: how do you simultaneously train thousands of people, not only in France, but in 180 destinations throughout the world, prior to implementations. The Learning Management System has been used as a change management tool, and provides an effective method for tracking of learning during ramp-up prior to software roll-out.

In addition to these "top-down" actions, new training opportunities were offered to employees through self-training formulas, and they were successful very quickly. The benefits most valued were the "just-in-time", the "just-enough" training, as well as the assistance of a dedicated team of local or distance tutors. Among the key factors, which have won the support of employees was the capability to enable diagnosis of needs, and adaptive delivery of tailored contents.

Since that period, starting in the late 90s, e-learning was mostly limited to the IT field for a long time, before becoming mainstream in all sectors of the business today. The reasons for this slower than expected growth are found in the feedback of most of large French corporations: the technological limitations are still important (bandwidth, complexity, sometimes the gap between the tool provided by the market and needs), but the most important are cultural: new reflexes to acquire, rigidities due to legal issues, lack of management involvement, and so on.

Today, dozens of e-learning projects are currently under development in all Air France divisions: conmmercial, inflight and ground services, engineering and maintenance, flight academy, HR and finance, IT, etc.
New issues are emerging, whose common feature is, through a corporate organization, to integrate e-learning and knowledge management into business processes.
For leading companies, the main challenge might be the ability to build and bring to life a learning and knowledge acquisition system reconciling five requirements:

1) Highly flexible solutions to adapt to a wide variety of needs. The context of working and learning for a pilot, an engineer, an airport employee, or an executive are very different. The diversity comes too from the geographical separation of learners in the world: culture, learning habits, HR status... Also there are different behaviors according to age, depending on whether they are "next-gen" or "silver employees"... Fortunately, using a LCMS offers some solutions: the identification of the learner's

E-Learning in the Corporate and Company Context

Meeting the Needs, A Company is Preparing for Virtual Teamwork

Dr. Marion Bruhn-Suhr, University of Hamburg, Germany

Summary
A fast growing company in the pharmacy sector with a couple of new subsidiary companies is in need for the efficient use of an in-house platform. In co-operation with the central institution for university continuing education of Hamburg University (Arbeitsstelle für wissenschaftliche Weiterbildung - AWW) a three and a half weeks course to train the employees was designed. The outcomes are discussed and results conclusions of the first presentation of the course are given followed by a series of recommendations for follow-up projects.

Introduction
A fast growing company in the pharmacy sector with a couple of new subsidiary companies had introduced an intranet platform to provide the necessary facilities for working in virtual teams. They had been using email and face to face meetings widely for their communications as long as there was only one location. The situation of a joint filing system was not satisfactory and became even more difficult with external subsidiaries not only because of security issues.

The management had observed that hardly anybody used the platform and teamwork was only realised among those who had known each other before and then mostly face to face. There were complaints about poor contributions by the new colleagues from the subsidiaries

In this situation the centre for continuing university education and distance learning of Hamburg University (AWW) was asked to develop and run an e-learning course on virtual teamwork on the in-house platform.

The course "Virtual Teamwork"
The course concept was based on one of the modules in the blended learning programme OLIM (Online Learning in Management), a professional management programme for postgraduates. It was adapted to the specific needs of the company given the following agreed learning targets:

Participants should
- recognise the value added of (virtual) teamwork in connection with processes of development, agreements and decisions.
- experience that working in virtual teams is possible and can be advantageous in comparison with face to face collaboration
- learn to use their platform as a tool to put virtual teamwork into practice
- can sensibly use the communication tools like email and forum discussions via their platform
- learn basic needs and concepts for a joint filing-system for their e-documents
- learn about do's and don'ts of successful virtual teamwork and e-communication
- learn how to recognise upcoming difficulties and how to meet these challenges

The overall workload for participants was calculated to be 15-20 hours.

Rethinking University Learning Environments and Methods

Prof. Bodil Ask, University of Agder, UiA & Harald Haugen, Stord/Haugesund University College, Norway

New situation

Well established universities around the world have their traditions and ideals, aiming for academic reputation and research based education. Lectures, textbooks, demonstrations and group sessions have always been core essentials of the learning environment. During the last decades there have been growing demands for higher education to perform more complex work and manage everyday situations. Industry, businesses and public administration demand higher knowledge and skills for their employees. Some decades ago professional skills and knowledge were assumed to last for a lifetime with only minor updating and renewal. Today the changes in society, new professions, new technologies etc, require new skills - in short, there is a huge demand for lifelong learning, and it is expected that universities can change or convert their studies to meet these expectations.

In this situation the universities have difficulties in coping with growing student masses and rapidly changing curricula and new content demands. Campus facilities are not made to cater for the large student masses - and perhaps most important: Lifelong students can not remain campus students all the time; they have work, families and other commitments to meet, thus more flexible arrangements are needed.

Recognition of competence

The labour markets as well as the student society are developing towards globalisation. Enterprises and institutions frequently employ workforce from other countries, and students are roaming between institutions and across borders. Exams, credits, certificates and competences are not always recognised abroad. The Bologna Declaration outlines a process to create a European Higher Education Area, EHEA, by 2010. An overall goal here is the recognition of competence through a common academic system, including a credit transfer system (ECTS) and an accepted quality assurance system. This will facilitate mobility of both students and workforce, and also ensure transparency and level of skills and qualifications.

Modernising learning environments

ICT is assumed to have a high potential in educational settings. So far it has not quite met its expectation in higher education, despite political initiatives and large investments. Conservative academics, rigid organisations, laws, regulations and fear of loosing control are all factors mentioned to explain the slow process of modernisation.

The online learning environment, based on ICT for communication between students, tutors and professors, turns out to be a major challenge to well established academic staff. Learning material that includes online lectures, videos, websites, printed material etc. seems scary, and at first sight, less personal. But this offers a flexible solution for students, particularly in lifelong learning settings. It may also be a more flexible situation for tutors and professors, not being bound to a particular location at fixed hours. But it often requires more structure, planning and development of material well in advance. Universities may benefit by offering net based and distant learning, especially where the number of students increases beyond campus capacities. The focus of investments may be shifted from new buildings and expansion of auditoriums to improved infrastructure, updating of key personnel and *time* for staff to develop and improve new learning environments.

Learning from the Future

Prof. Gilly Salmon, University of Leicester, UK

"Imagination is the beginning of creation."
George Bernard Shaw

"The best way to predict the future is to invent it."
Alan C. Kay Fellow at Apple Computer Inc

Why Learning Futures
In the early 21st Century, we have opportunities and responsibilities that no other educators have had before now. Within the complex changes occurring in Higher Education (HE) emerging from knowledge-technology-society transformations of the early 21st Century, we need to create viable and preferred futures for learning. In 1900, there were 500,000 students in HE worldwide. Now there are 100,000,000. Universities have become highly competitive and driven by technological possibilities. Learning technology is a way of reaching such vastly increased numbers without loss of quality.
Technology has become one of the most important features of the national and international economic, social and cultural landscape - and somewhat of a battlefield for beliefs, research and practical actions. Outcomes must now include commentary and modelling of the student learning experience, change in educational institutions and the future for learning and technologies.

The hype around e-learning, dominant at the turn of Millennium, resulted in many mistakes being made. Some were failures of investment in big consortia and huge project but there were many more small disappointments that happened quietly and painfully inside institutions. Now managers and teachers are desperately searching for structured ways forward that are affordable, worthwhile and impact directly on student learning. However, universities change slowly for a variety of historical reasons and mistakes cannot be easily rectified. New, effective and fast models of change are needed!

The physical environment of our universities includes the means to research, the archives of past learning and the presentation of new knowledge, the resources for learning and living, the people and the (for many) unparalleled and pervasive 'atmosphere' of scholarship. The first kinds of off-campus were field trips, clinical practice, gallery visits. However...'online' is a learning environment too. The scope, depth and breadth of possibilities have grown exponentially over two decades. Millions of people experience electronic networked environments as communities and as libraries, each providing access to untold riches for knowledge generation and sharing. The online space is less organized or controlled compared to the physical academy. Time works differently. Interdisciplinarity is the norm not the exception. Contributions are scrutinized for their usefulness rather than the status of their author. Hierarchies are less obvious. The importance of personal identity (and the associated potential for discrimination) is more complex, often with different constructs in different contexts. Ownership is based less on monetary benefactors and more on commitment and knowledge. One way communications media such as radio and TV have been swamped by interactive and participative approaches - the creative, collaborative, communicate Web 2.0 take the stage! Web 3.0 is waiting in the wings. We have to put more effort into design for successful learning as a result.

It's difficult to get a holistic picture of our present... even harder to get a realistic or plausible vision of our future. Adoption of Web 2.0 technologies by learners in their everyday lives has already outstripped understanding of appropriate pedagogical and systems approaches in our universities.

Help Me! Online Learner Support Through the Self-Organised Allocation of Peer Tutors

Dr. Wim Westera & Leo Wagemans, Open University of the Netherlands, The Netherlands

The natural need for teacher support

This contribution is about a self-organised social networking mechanism to arrange instant online coaching by peers. The availability of instant support for learners who got stuck in their learning activities is an important determinant of study success. In online learning contexts, however, frequent one-to-one communication with students strongly raises the workloads of tutors and teachers. Through the internet connection students, indeed, expect instant support when they experience any problems with their learning tasks. Also, the diversity of the calls for help increases dramatically because of highly individualised learning routes and different paces of learning, which are advocated as the distinguishing features of online delivery. Contemporary constructivist pedagogies, which suggest complex, open learning tasks, seem to worsen things, because they require intensive, tailored tutoring rather than standardised support. Simply appointing more tutors would make online education unaffordable; limiting the amount of support would inevitable harm the quality and effectivity of online learning. In practice, online students cannot always be given the required support at the right volume and at the right time. While students may be working energetically on their study assignments and the associated learning materials, they may run up against a problem that needs to be solved first to be able to proceed. Naturally, students will try to figure it out themselves (which can be very informative as such), but after a while a remote teacher will be necessary to provide support in order to avoid pointless wasting of time. Indeed, the permanent availability of some service which preserves the effectivity of learning, is the essence of education.

Exploiting the (invisible) community of fellow-learners

The consultation of peers may be an interesting alternative. Even when online learning may incorporate some group work or communities of learners, the common notion of student cohorts is not necessarily preserved, which positions online learning as a quite solitary, individualised mode of learning: peer groups and peer consultation are not self-evident. Although a synchronised cohort of learners not always exists in online education, there may be many students working at the same domain or module, who are possibly not aware of each other and may not know each other. They may follow different learning routes, have different learning objectives and study at different paces and times. This invisible community of fellow learners, however, engage in the same subject matter and share the same interests and the same problems. It yields the social and intellectual force to provide peer tutoring as a powerful means to address the ever-growing need for support. Importantly, peer support is not just a sly trick of shifting the teachers' workloads to the students: indeed, various researchers report that peer tutoring often is found to produce higher learning outcomes (Fantuzzo 1989; Gyanani 1995; King 1998; Wong 2003) and to have positive effects on motivation, reflection, self-esteem and commitment (Fantuzzo 1989; Anderson 2000). By exploiting the (invisible) community in a convenient way, peer tutoring can be applied to preserve appropriate and affordable online tutoring services within a population of students. To this end, a self-organised peer-coaching mechanism has been developed to deal with individual calls for support by allocating the most appropriate fellow students for providing support.

The intelligent allocation of peers

We consider a population of students that are individually working on a number of domain tasks (learning modules, assignments, domain nodes or learning units) that make up the curriculum. It is assumed that individual learning routes and progress of students are logged by the system, that is, each time a student completes a learning module and starts with a new one the learner positioning data are updated. When a student of the population calls for support, the allocation mechanism uses the learner positioning data to select the most appropriate peer tutor

Enabling Teachers in Higher Education to Develop Their Own Simulations: The Virtual City of Cyberdam

Pieter van der Hijden, Foundation LawOnline (Stichting RechtenOnline) & Sofos Consultancy, The Netherlands

Welcome to Cyberdam

Welcome to Cyberdam, the Dutch virtual city with its history of 12 centuries, its old city centre, its variety of old and new neighbourhoods, its industrial area's, inland harbour and its surroundings with their interesting social and economic potentials. This city is populated with about one hundred firms, institutions, government agencies and households.

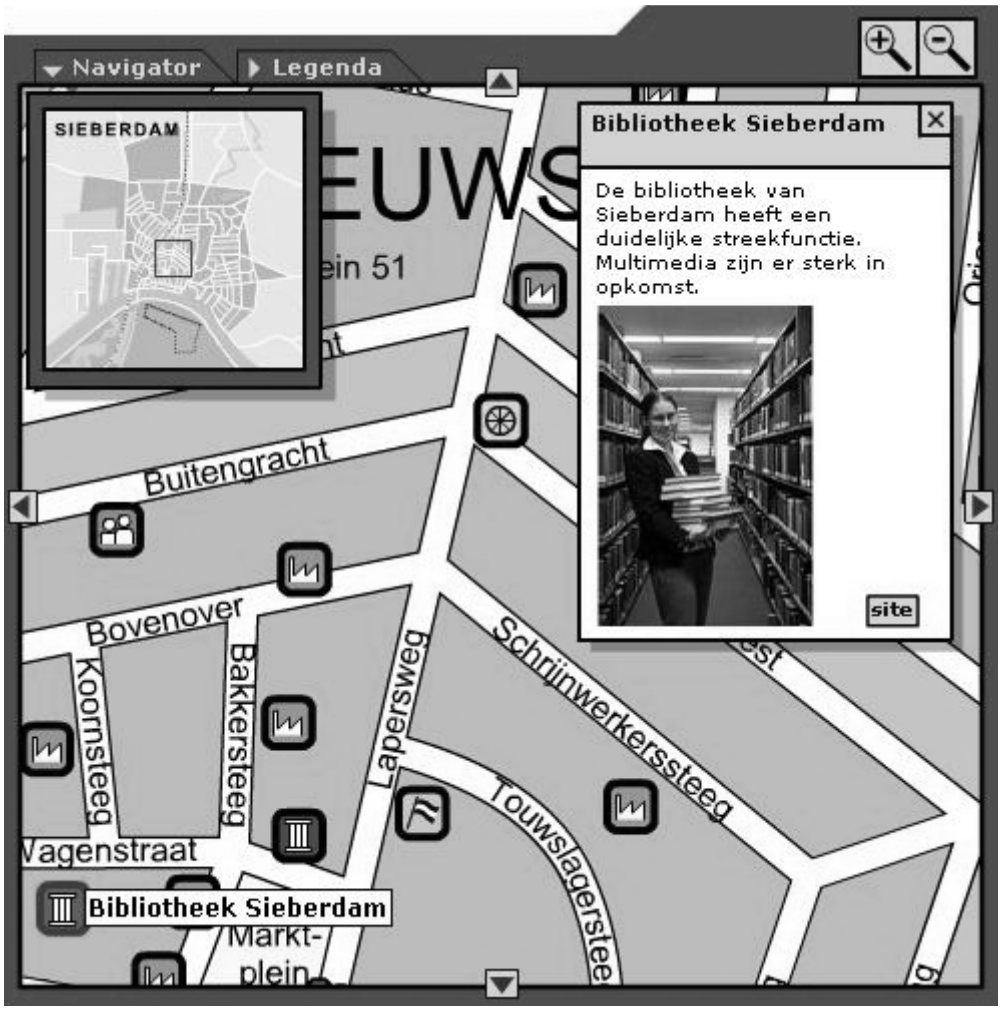

***Figure 1**: The interactive city map of Cyberdam.*

Teachers and lecturers from different disciplines send their students to the virtual city of Cyberdam. There the roles of burgomaster, shopkeeper, nurse, lawyer, or one of the other inhabitants are allocated to them. They receive a briefing on the goal they have to reach, and then it's is up to them to proceed. Via their Internet browser they have access to their "dashboard" where they can read their instructions and send and receive messages to and from other roles. These other roles are played by their peers, maybe by their teacher or even by an external expert. As the game session proceeds, the instructions may change. The game session