ECOMPETENCE: FOSTERING SUSTAINABLE USE OF ELEARNING AT THE UNIVERSITY OF DUISBURG-ESSEN

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Introduction

The University of Duisburg-Essen is fostering the widespread use of digital technology in teaching, research and administration. An overall strategic goal of the university is to become an E-University, where daily routines of teachers, researchers and administrators are based on digital technology. In this strategy, digital technology is perceived as a tool to enhance the quality of the university's core processes and as a key feature of its profile and strategy. We do not aim to foster the use of technology *per se*, but to implant the "intelligent" use of digital technology into the university's core processes to improve its overall efficiency. Essentially, our concept of building an E-University is part of our strategy to gain a competitive edge nationally and internationally. Since 1998 a *Multimedia-Development Plan* has been in effect as a guideline for the university as a whole. [1] It has been updated continuously and is part of an overall E-Strategy that will be formulated in 2006, in order to integrate eLearning and all other activities relating to digital technology and digital assets at the university.

In the 1990s most of the activities relating to eLearning were organised as "projects" primarily for the production and testing of eLearning products and received funding from public agencies. Several members of the University of Duisburg-Essen succeeded in attracting considerable sums of funding for their projects, some of which were integrated in larger national efforts with several partner universities participating. As in other institutions of higher education, the entity acting primarily was the individual scientist with his/her interests in research. Several of these projects demonstrated the various potentials of eLearning for alternative approaches to teaching and learning in different subject areas quite vividly. A whole plethora of eLearning courses and multimedia projects had been set up and developed over the last eight years[2]. The university has several research groups at different departments that belong to early adopters in the field of eLearning that are visible in their communities and receive high national and international recognition.

But since these activities were bound to projects, funding diminished rapidly at the end of the 1990s. Furthermore, besides these pioneers, the vast majority of the teaching staff did not join a "caravan" heading towards eLearning. Therefore, despite these substantial investments, only an estimated 5% of teaching staff at German universities had been using digital media at the beginning of the new century. This was also the situation at the University of Duisburg-Essen.

Furthermore, several studies in Germany have pointed out the changes necessary to implement sustainable use of eLearning in higher education. One crucial dimension relates to teachers and their competencies. Teachers do play a decisive role in the process of disseminating eLearning into higher education. They can be perceived as gate-keepers for the sustainable use of eLearning. Therefore,

[1] See http://www.uni-duisburg-essen.de/hrz/service/hrz08136.shtml for the current version

[2] Examples include: Study Course Educational Media http://www.uni-duisburg-essen.de/home/fb/presse/presse_allg/presse_24.02.2006_18402.shtml; LINSE Linguistik-Server http://www.linse.uni-essen.de/linse/index.php; VAWi Virtuelle Aus- und Weiterbildung Wirtschaftsinformatik, http://www.vawi.de; COLLIDE – Collaborative Learning in Intelligent Distributed Environments http://www.collide.info/

The Challenge of eCompetence in Academic Staff Development, Mac Labhrainn, I., McDonald Legg, C., Schneckenberg, D., Wildt, J., Galway: CELT, 2006. Released under Creative Commons licence. Attribution Non-Commercial 2.0. Some rights reserved. www.ecompetence.info

attracting teachers and supporting them to gain the necessary competencies on the level of knowledge, attitudes and skills is a major aspect of the eStrategy of a university. In the following section, the university's eCompetence Initiative will be outlined in more detail.

1. The eCompetence Initiative

The e*Competence Initiative* (2003-2005) implemented an innovative approach to attract and qualify individual lecturers for eLearning and thus to expand the base of competent teaching staff throughout the university[3]. eCompetence was started in the summer of 2002 as a project from the federal state Ministry of the Northrhine-Westfalia Lander, granted to the universities in Duisburg, Essen and Wuppertal, to act as pilots for such services in other universities[4]. Furthermore, a partnership with the Bertelsmann Foundation and the Heinz-Nixdorf Foundation was established in order to launch an Internet portal ("e-teaching@university") for supporting these activities[5]. The pilot universities collaborated in the implementation of the portal.

Essentially, the eCompetence Initiative was based on a new approach to supporting, qualifying and motivating lecturers, to encourage them to develop or adopt eLearning scenarios. The initiative relies on a dedicated team that was established ("eCompetence Teams") to address lecturers directly and pro-actively, marketing the university's digital services and offering consulting plus coaching on all aspects of eLearning. eCompetence thus marks an important departure from traditional methods used at service units in the past to attract university lecturers to eLearning.

Traditionally, lecturers were supported by more or less full-service offerings, say, of media centres, creating for example, video-films or streams of lectures and seminars, delivery of animations and transformation of materials into digital and/or multimedia-form. These centres typically work "on demand", publishing their offerings, but wait until a lecturer comes up with an idea for a production. In a typical case, lecturers would receive some eLearning products without necessarily adding to their eCompetence.

Secondly, standard courses on applications for eLearning are offered by central service units (Computing/IT Infrastructure and Media Centres, Library) etc. These courses, however, have not reached high levels of attendance. Furthermore, even if the individual lecturer has gained some knowledge in eLearning, there is still the gap towards applying this knowledge in the teachers' classrooms.

The eCompetence Initiative has not replaced these traditional offerings, but includes them into its portfolio.

2. Results of eCompetence at the University Duisburg-Essen

The University of Duisburg-Essen has around 550 professors plus 1,700 scientific/research staff and 33,000 students. The eCompetence team in 2002-5 consisted of five people (4 full-time posts). They work closely with several support units within the university that offer eLearning related services.

From summer 2002 to the end of 2005, 454 lecturers have been addressed by the eCompetence team. This resulted in 944 consulting and coaching sessions or workshops. In the break-down of groups, 25% of clients are professors and PDs, 65% other research staff, the remainder is made up of student

[3] http://www.uni-duisburg-essen.de/eCompetence

[4] In 2003 the Universites of Essen and Duisburg merged.

[5] http://www.e-teaching.org , since January 2005 continued as the project PELe, supported by the Federal Ministry of Education and Research and led by the Knowledge Media Research Center, Tübingen

assistants, administrative staff and academic staff not involved in teaching. Roughly one third of these lecturers are using the results of eCompetence consulting and coaching in structured and somewhat complex eLearning scenarios consistently, 55% are using different separate or changing applications.

The break-down according to topics, applications and scenarios, on which support was asked for, is shown in the following table:

N sessions	topic / scenario	remarks
175	groupware / BSCW	
131	eLearning (LMS, Online Tests)	significant rise especially during last year of the project
118	MS Powerpoint	
115	presentation of eCompetence services	in most cases, this was the initial consulting session
80	digitisation of learning / teaching materials	
75	electronic reading lists and material collections	
67	Interactive Lectures, Mobile Scenarios (Notebooks, WLAN, Tablet PC)	
37	web development / CMS	
26	videoconferencing	
22	forum/chat	
15	multimedia facilities in lecture halls	
15	copyright issues	
14	recording lectures for streaming	
57	other	

Table 1: Topics, applications and scenarios that support was asked for

The Table shows a high proportion of teachers asking for information on more complex scenarios such as the groupware BSCW and Learning Management Systems. In a breakdown of the different years since 2002, the picture shows an increasing demand for eLearning/LMS, starting quite low in 2002 and 2003 and gaining momentum especially in 2005. On the one hand, this is due to the higher awareness of eLearning, on the other hand it is due to the introduction of *Moodle* as a strategic Learning Management System officially supported by the university.

3. Conclusion

The eCompetence Initiative played a key role in breaking the barrier between eLearning pioneers as early adopters and the remaining majority of university teachers. The university recognised the achievements of this approach and the importance of continuing this effort as an integral part of its E-strategy and turned eCompetence into a permanent service as a cooperation of the *Centre for Information and Media Services* (ZIM) and the University Library (UB).

The *E-University* project (2005-2008) will deepen the commitment of faculty to eLearning by supporting "innovation projects" on the level of departments and will further the vision of the "digital campus" by providing a "study portal" as an integrative platform and information access point for students, faculty, services and administration.

4. Summary

The eCompetence approach rests on the following elements[6]

- eCompetence is strictly user-oriented: individual lecturers are contacted pro-actively and continuously; eLearning projects are defined and implemented individually according to needs, as perceived by individual lecturers or groups of lecturers in an institute.

- Continuous efforts of marketing eLearning and informing lecturers in all media available (website, electronic newsletters, articles and presentations in other media, as well as papers presented to conferences etc.)

- eCompetence acts as an agency for support services for the university's customers: it "sells" the – continuously updated - portfolio of all IT/eLearning services from the central service units of the university (computing/Internet connectivity, media, library). It brokers and mediates between requirements of lecturers, service offerings and the university's E-Strategy, in order to foster sustainable eLearning solutions. Furthermore, it networks with and takes up innovative solutions and concepts from individual teachers or scientific departments to promote good and successful solutions.

- Accountability/regular evaluation: eCompetence records all its consulting and coaching activities. These are continuously evaluated and reported upon, in order to spot trends, imbalances or gaps and to make adjustments in the operation not only of eCompetence, but the central services as a whole.

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[6] Engert/Hennecke/Schulte/Traxel/von Danwitz 2005