
Functional Differentiation of Incentives for E-teaching at Universities

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Raising university teacher commitment to develop and use new media in teaching is a great challenge for a broad implementation of e-learning at universities. Rather than creating administrative pressure, the university management is supposed to provide functionally differentiated incentives in order to increase the acceptance for e-teaching among the different status groups of universities. This contribution depicts adequate financial, infrastructural, workload-related and other incentive measures that are effectively applied in a combined or in a separate way at German universities.

Keywords incentives for e-teaching; increasing e-teaching acceptance; target group-oriented incentives

1. The Challenge: Increasing Faculty Acceptance for E-teaching

Incentives for e-teaching consist of measures encouraging faculty and staff to contribute visibly and significantly to the university's goal of integrating information technology into teaching, learning, scholarship, and administration. They provide motives for the use of e-teaching tools and practices in order to increase the (e-)teaching and (e-)learning productivity and effectiveness of lecturers and students. In practice, a lack of acceptance for e-teaching on the side of lecturers often inhibits an effective use of e-teaching as a means of improving the teaching quality at universities. But why do a lot of academic teachers find it difficult to engage in media-based teaching? Frequently the need to learn how to produce e-content which implies specific IT knowledge deters lecturers from using e-teaching. The subordinate importance of teaching within academic careers (as opposed to publishing, acquiring third-party funding, etc.), the overall workload and the disinterest of lecturers, a lacking familiarity with the additional values of e-teaching, other reform processes (Bologna process), deficient support infrastructures, inadequate didactical, technical and financial support and a lack in dialogue partners within the faculty contribute to a sceptical attitude towards e-teaching among lecturers.

Since an initial interest in e-teaching does not materialize automatically, it is fundamental for the university's senior management to apply effective incentive structures and programs in order to increase the use of e-teaching without imposing pressure on deans, lecturers, administrative staff, students and other potential e-teaching/e-learning users. This paper focuses on these intramural e-teaching incentives that can be established by the university management. In general, quite a number of different incentive systems have been adopted and tested at German universities. These incentives can be categorized as follows:

- a) Financial Incentives
- b) Infrastructural and Technical Incentives
- c) Accounting and Reducing Workload
- d) Distinction as Incentive
- e) Competitive Advantages for Universities
- f) Creating a Climate Conducive to E-teaching

2. Target-group Oriented Incentives for E-teaching

The effectiveness of incentives as a means to achieve an active commitment to e-teaching/e-learning not only by the intrinsically motivated e-learning pioneers depends upon the reasonable customizing of incentive measures for the demands of different status groups. An *adaptation of incentive mechanisms to the specific requirements* of the university's opinion-leaders, the university management (which parameters determine the process of decision-making?), professors (which systems facilitate a straightforward course organization?), research assistants (what enhances their career?), administration (how can administrative data be processed most easily?), central service institutions (how can widely accepted e-teaching applications be provided?), students (how do I achieve good course/learning results?), etc. is necessary. Though the following categorization of incentives is predominantly concentrated on the lecturer's perspective, measures for different target groups have to effectively be combined to make them work. According to the typology of incentive systems introduced above, successful incentive systems prevalent at German universities are portrayed below without rating or measuring their potential outcome.¹

2.1 Financial Incentives (Internal Project Funding, Revenues from Content Marketing)

Various funding programs of the European Commission, the German government, several German Länder (states) or different foundations have fostered the development of e-teaching. These programs have made several hundred million euros available for e-teaching at universities. Financial support for e-teaching activities is a strong incentive that contributes directly to faculty knowledge on how to integrate ICT into teaching and scholarship. Most e-teaching incentives (providing infrastructures and staff, announcing e-teaching awards, considering e-teaching within performance-related salary allotments, etc.) contain financial elements in one or another way. Two forms of internal monetary incentives deserve particular attention: *internal project funding* and revenues from content marketing.

At some universities e-teaching activities have benefited from general funds for fostering the quality of teaching (Teaching Awards). Some universities have announced internal funds for e-learning-projects as well. The Freie Universität Berlin (FU) tenders subsidies within an intramural project competition for several dozen projects each year that aim at the further use of existing content within regular FU courses through Blackboard, at the production of new content for regular FU courses or at the continuation of successful previous projects. Besides individual lecturers, inter-divisional or cross-faculty teams and larger central institutes can file an application. The incentive grant program initiated in 2002 currently encompasses 300.000 euros p.a.

In recent years, the University of Stuttgart pursued an e-learning strategy called "Campus Online Education" that was awarded the MedidaPrix in 2005. Core of this strategy was an intramural tender to fund e-learning projects. The implementation of new media in classroom teaching was funded with non-assigned internal funds of 5,000 euros per project since 2001. While this initiative visibly fostered acceptance for elementary e-learning applications among the faculty, the required infrastructure did not develop at the same pace (implementation of the learning management system ILIAS not until 2004).²

High expectations have been oriented towards the development of *revenues from the marketing of e-learning content*. Nonetheless, these expectations have not been met by far. Among different conceivable business models for e-learning [1], only the marketing of postgraduate web-based education (full-time or part-time) is currently prospering up to a certain degree. At German universities several online study programs covering information systems (Master of Science in Information Systems, WinfoLine; International Master of Business Informatics, Virtual Global University; etc.), new media (Master of

¹ Some examples of e-teaching incentives (particularly in section 2.5: Competitive Advantages for Universities) are taken from [3].

² Similar intramural incentive grants have been tendered e.g. at the Universities of Darmstadt, Dresden, Frankfurt am Main, Kassel and of Saarland. – With regard to the complex legal position for content production at universities, negative incentives should cautiously be avoided by the university management. If the e-teaching producers' copyright for their products and content automatically passes over to the university, monetary e-teaching incentives in form of grant programs may easily be neutralized and thwarted.

Arts in Educational Media, University of Duisburg-Essen; Master of Science in Multimedia and Computer Science, onCampus GmbH; etc.), and an increasing number of M.B.A. programs and study programs in other areas are currently available.

The marketing of Internet-based knowledge resources underneath study program level (courses with ECTS credit points, with certificate, etc.) however is less well developed due to the small emphasis on the continuing education sector at universities, a strong competitive pressure through commercial providers and a lack in demand-orientation of university teaching. Peer to peer content exchange and sharing within networks of lecturers is even more exceptional.

Very often, basic challenges of marketing online content developed at universities are not adequately met and universities are not prepared for running a demand-driven business. Furthermore, the marketing efforts are negatively affected by the lack of infrastructure such as a marketing agency or a sales portal for marketing and distributing continuing online education programs.

2.2 Infrastructural and Technical Incentives (E-teaching Support Centers and Teams, Consulting Services)

The availability of infrastructures for the use of media-based teaching modules is a fundamental prerequisite and stimulus for applying technology enhanced teaching and should exceed making available basic technological infrastructures (multimedia lecture halls, WLAN, learning and content management systems, licences for authoring tools, integration of campus management and e-learning systems, etc.). Since only restricted content production capacities and skills are commonly disposable in the lecturer's working environment, multiple consulting services of *e-learning centers* or online education agencies are required and are most welcome to many lecturers. Change Agents actively supporting the process of academic cultural change, university-wide instructional technology staff and media production services should be put at the lecturers' disposal through the cooperation of an e-learning center (if there is one) with other support centers or through establishing a *pool of media-versed students*. E-teaching production services offered by e-teaching consultants and media-design assistants include the *individual counselling* of lecturers regarding conceptual, technical, didactical and design aspects, training and qualification in groups, disseminator trainings, public relations services for projects, etc.³

The Coordination Office New Media of the University of Freiburg volunteers a media team consisting of some six media-versed student assistants. These students participate in software-related training courses of the university's computing center. Lecturers from eleven departments can request these assistants for support and consulting with regard to authoring tools, content editing, picture processing, XML, databases, digitizing, etc. Since the student support services are accounted for on an hourly basis, institutions requesting these services have to pay the usual hourly rates for student assistants. After exceeding a certain contingent of work hours and projects, students may acquire a certificate on the specific consulting knowledge that has been applied. The University of Frankfurt am Main offers similar student consulting services for their 16 departments. The Frankfurt group of student assistants is being qualified in several areas (technical aspects, design, evaluation) and supports lecturers in putting their e-learning ideas into practice for hourly rates of some 15 euros per assistant.

2.3 Accounting and Reducing Workload (Surplus Values, Teaching Load Regulations)

An important incentive for e-teaching is the chance to reduce the administrative burdens of teaching. The facilitation of teaching-related administrative processes (self-acting course registration and course assignment procedures, managing the rising number of examinations, easy course modularization, redundancy of fixed consultation hours, easy launch of research and teaching networks, etc.) through the

³ Creating acceptance for e-teaching requires strong activities to communicate e-teaching as a strategic aim and a central university value as well as activities to promote and make visible available e-teaching support services. This aim can be realized through measures such as involving opinion leaders within the university, organizing e-teaching promotion days at the departments, multiplier courses and tutorials, presenting media-based courses on a specific e-learning-website, etc.

use of learning management systems and other e-learning tools is attractive even to lecturers deprecative of e-teaching. These *convenience aspects* are more likely to convince lecturers (even those who have never taken an interest in the didactical possibilities of e-teaching before) from availing themselves the surplus values of e-teaching. Additionally, the effects achieved through interoperability or the successive integration of general campus management and learning management systems (synchronization of student administration and e-learning systems e.g. for the transfer of examination data, single sign-on or single login for services of the computing center, media center, library, etc.) will accomplish an increasingly positive effect on the acceptance of IT-based teaching management methods.

Some Länder like Baden-Württemberg, Bavaria, Saxony and Saxony-Anhalt offer release time for lecturers that produce e-teaching material as part of their teaching practice. Such an arrangement was made in Bavaria in 2001 by the published amendment of the *teaching load regulation*. This amendment makes it possible to reduce the teaching workload up to a maximum of 25 per cent of the total workload for activities as producing multimedia material and teaching courses online. However, since resources are not automatically made available for a replacement teacher when this ruling is invoked, the effects of this incentive structure have remained limited.

2.4 Distinction as Incentive (Media Qualification Programs, E-teaching Awards)

A distinction of media-versed lecturers and of universities with strong e-learning profile takes place on many different levels, e.g. through faculty compliance with agreements on e-teaching objectives or on fixed proportions of e-teaching courses (in percent), internal benchmarkings between departments, media coverage of exemplary e-teaching solutions, excellent evaluation results, and through further attention mechanisms. From a lecturer's perspective, two systematic measures of distinction deserve a closer look: The distinction as an excellent lecturer through strong media competency and e-teaching awards.

While some universities demand and apply media competency as a criterion for appointing someone to a professorship or for allocating funds to a professor and while they honor the media competency of lecturers within an achievement-oriented salary system, they can just as well contribute to cultivating the media competency of lecturers. Several universities offer specific *media qualification programs*. Lecturers and research assistants participating in advanced training measures for applying new media in lecturing and for online tutoring can acquire an *e-learning certificate* (Technical University of Brunswick, University of Frankfurt am Main, University of Potsdam). These certificates form strong career enhancing incentives in particular for research assistants and reduce the widespread barriers for using e-teaching.

High quality e-teaching modules can apply for a broad number of *teaching awards* sometimes connected with considerable trophy money. Alongside general awards for the outstanding performance of lecturers tendered by the Länder or universities, several specific e-teaching awards have been set up. Besides renowned international awards such as the World Summit Award, the EureleA and the MedidaPrix, several German institutions⁴ and universities offer their own awards. At the Technical University Darmstadt (TUD) a "Best E-Teaching Award" has been initiated in 2004. The E-Teaching Award bestowed upon lecturers of the TUD that use e-teaching in a particularly gainful manner for their students, is endowed with a trophy of 6,000 euros from foundation means.⁵

2.5 Competitive Advantages for Universities (E-teaching Profile, Seals of Quality)

In the context of the current endeavors to harmonize the university education in Europe, offering e-learning programs, courses and services constitutes a substantial competitive advantage for the recruit-

⁴ Established German e-teaching awards include the Digita (TU Berlin, initiated in 1995), the Deutscher Multimedia Award (DMMK, BVDW etc., initiated in 1996), the monthly eLearning-Award (eLearning-Journal, initiated in 2005), etc.

⁵ Similar awards have been set up at the University of Freiburg (Media Award, initiated in 2004), the Charité Berlin (eTeaching-Award, initiated in 2005), the University of Frankfurt am Main (criteria: networking within the university; initiated in 2005), the Competence Center VISU (Best Practice Award, University of Saarland, initiated in 2004/05) and at the Technical University Munich (TUM eLearning-Award, initiated in 2006).

ment of excellent students through universities with different research, teaching and service profiles. Media-versed lecturers facilitate an easier instigation of (international) cooperations, assure good teaching quality and self-contained learning processes. Some universities pinpoint their *e-teaching profiles* through quality assurance measures. While several universities identify media-based and media-enriched courses through an *e-learning label* (e.g. a graphic icon in the university calendar), a stronger marketing effect is achieved by *seals of quality for media-based teaching*. Such an e-teaching-related seal of quality has been developed at the TUD („Gütesiegel für computergestützte Lernarrangements“) since 2004, alongside providing relevant criteria for the “Best E-Teaching Award” of the TUD. The Darmstadt seal acts as an instrument of quality inspection and reviews 130 quality criteria in the four categories user, learning object, cost effectiveness/sustainability and technology. Another broad-based initiative for defining quality standards for e-learning within a corporate context is realized at the University of Duisburg-Essen („Qualitätsinitiative E-Learning in Deutschland“ QED).⁶

2.6 Creating a Climate Conducive to E-teaching

While funding programs have triggered awareness and competencies for e-learning on a reasonable scale in recent years, now complementary resource-based incentives, the promotion of workload reducing-effects of e-teaching applications and publicity or advertence mechanisms assume decisive importance for creating an *e-teaching friendly university climate* and for stimulating the intrinsic motivation of e-learning users. Effectively, many incentives for applying e-teaching (e.g. e-teaching as an element of the career development of lecturers, a spirit of technological curiosity, demand for e-teaching through students, good course evaluations, mutual comparison of lecturers, e-teaching windfall gains among lecturers, etc.) are rather difficult to control and to influence purposefully because they affect the academic culture as a whole. All different instruments to raise motivation for e-teaching should therefore complement each other in terms of an advanced teaching and learning culture that is conducive to innovation. This advanced teaching culture should build on the *intrinsic motivation of e-learning developers and users* coming from satisfactory work processes and resulting in good teaching and learning. Motivational elements such as a general attitude of open-mindedness towards new technologies and didactics and advertence effects such as the communication on and the approval of good teaching among lecturers play a commonly neglected role in stimulating successful e-teaching practices.

Finally, the ultimate incentive should be and will be the profitable use of stable, easy-to-use technology itself. Within the next five or ten years, e-teaching (at least on a basic technological level) will become as common as writing on a blackboard. This development will not only abolish the name “e-teaching”, but also a lot of incentives for taking first steps in the field of media-based education. Nevertheless, the task of teaching “e” in a didactically reasonable way will remain.

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⁶ A similar activity is offered on a European level through the European Foundation for Quality in E-Learning (EFQUEL) in form of the service portal www.qualityfoundation.org.