

E-Learning Strategy: Findings from an Empirical Study of “Innovative” Higher Education Institutions

Franziska Zellweger, Center for Educational Computing Initiatives, MIT, USA, franziska.zellweger@unisg.ch

Abstract: The integration of e-learning into university teaching requires more than just cosmetic adaptations and needs to be approached strategically. The goal of this research is to provide insights from studying the organizational approaches towards e-learning from selected American higher education institutions (HEI) with qualitative methods. Eight exploratory interviews were conducted.

Results show that the organization of educational technology support structures and the effect on faculty behavior are not well understood. This relationship is problematic and of great importance for HEI and has therefore to be studied more in depth.

E-learning at Swiss Universities – The Starting Point

Today a great number of experiences with educational technology in higher education exist worldwide, resulting in valuable insights on how students learn with information and communication technology (ICT). However, some major failures have also occurred. Shirley summarizes the present state of the e-learning development as follows: “Regardless of the reason for the investment decisions, much of the activity in e-learning is taking place at the level of development of courses and their resources. Only a small number of institutions have recognized that successful e-learning takes place within a complex system, composed of many interrelated parts, where failure of only one part of that system can cause the entire initiative to fail” (Shirley 2001, p. 241).

The University of St. Gallen, representing an atypical Swiss example, follows a university-wide strategy and links the implementation of e-learning to a didactical reform. The newly established e-learning platform supports primarily the adaptation of self-guided learning skills (Euler & Wilbers 2002). The implementation process of the learning management system is characterized by numerous difficulties. The main difficulty is the creation of sustainable e-learning environments that will enhance student learning. It is a challenge to foster acceptance of the platform and to encourage faculty to invest in the redesign of their learning environments. As a consequence, the creation of support structures and suitable steps towards competence development are crucial (Wirth 2002). These difficulties are not solely due to insufficient implementation of e-learning; rather they originate from an abbreviated strategizing process. *The development of sustainable e-learning strategies at universities is the focus of this research project.*

Why an E-Learning Strategy?

A strategy reflects the definition of institutional goals and the relevant variables that support the achievement of these goals. Rowley identifies key strategic questions for higher education institutions, such as “Who will our students be? What should we teach?, and How should we teach it?” (Rowley, Lujan, & Dolence 1997, p. 11). The discussion about strategic planning in the university context is not a new one. Several higher education institutions followed the trend emerging from the business sector, but the experiences have not been particularly positive (Rowley et al., 1997, p. 40). Still, a strategic provisional approach adjusted to the realities of an HEI is crucial, in particular with regard to the new challenges of adopting educational technology.

In the context of this research e-learning is understood as the integration of mainly web-based technology into teaching at the higher education level in order to reach a variety of goals such as offering distance learning or the enhancement of the on-campus learning experience.

In Fig. 1 a conception of an e-learning strategy derived from the literature is suggested: It consists of an outer shell that represents the antecedent reflections necessary before deciding on the goals to pursue with e-learning. Before an

HEI can think about the content of the e-learning strategy, it is recommended to thoroughly consider the learner needs, the institutions core competences, and its core values.

The inner parts of the shell represent an e-learning strategy, which consists of two parts: The **core** of the strategy requires decisions on the selection of learner groups and on the curriculum and learning environments with regard to educational technology, which is illustrated by the product-market combination in the center of the model (Rowley et al. 1997). In order to achieve a sustainable integration of e-learning a number of **accompanying factors** have to be adjusted or put in place. Following the e-business literature (e.g., Bieger, Rüegg-Stürm, & von Rohr 2002), the most important factors are identified as the organization to be put in place, the selection of activities from the value chain, the cooperation concept, the communication concept and the revenue model. Technology and competence development were added later as a result of the empirical findings.

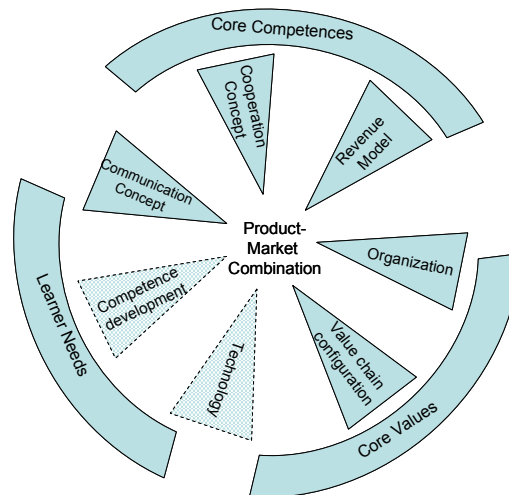


Figure 1: Conception of an E-Learning Strategy

Methods

In order to gain meaningful insights into the complex phenomenon of an e-learning strategy for a HEI the author studied selected universities in the American context since many of these institutions embraced e-learning as early as 1992. The author has chosen a qualitative approach and conducted explorative interviews at eight universities that are innovative in terms of integration of educational technology. The main selection criterion was the early integration (1995 or earlier) of educational technology into teaching. Among the selected universities were two state universities, three small private universities, one larger private university and two Ivy League private universities. The interviews were guided by broad categories derived from the literature mentioned above. The interview data, field notes, and available documents, such as strategy papers or publications documenting a university's experiences, were organized using qualitative data analysis software. The data analysis process was guided by a codifying procedure in order to provide further insights (Miles & Huberman 1994).

These data does not allow deriving generalized conclusions but they permit initial rich and stimulating insights. This paper constitutes the first step of a thesis project; and a detailed analysis with a narrower focus must follow.

E-Learning Strategies of American Higher Education Institutions

Only a selection of the most meaningful insights from the research project are presented here due space restrictions. Explanations of the communication concept and the revenue model will be omitted even though they are of great importance within the strategizing process.

The most salient insight is the **diversity of approaches** taken by towards e-learning the selected American universities. The goals to pursue with e-learning include: enhancement of on-campus experience, support of a student-centered teaching approach, supplying of flexible and convenient education, providing of access to new learner groups, creation of a life-long-learning proposition to the university community members and the prospect

more students and financial gains. Even though the goals illustrated are intertwined, every institution puts the emphasis on a different goal.

Some trends emerged: The four private colleges with a traditional focus on undergraduate education avoid entering distance learning for their undergraduate students but make heavy use of educational technology to enhance the on campus experience. They provide some highly specialized graduate courses at a distance in order to enlarge their potential student body on the graduate level.

In contrast the public universities focus on offering distance learning mainly at the undergraduate level within their continuing education programs targeting adult learners. There is a tendency to treat learning content as a commodity. For example at one institution content “production” is separate from the learning “delivery” in a way that conventional faculty provide syllabi and learning materials from their on-campus courses and hand it over to adjunct faculty that are hired to only teach at a distance.

The two Ivy League universities hesitate to quickly enter the distance learning market for fear of diluting their brand with low quality online offerings. They tentatively embrace continuing education.

Most of the traditional higher education institutions seem to offer a traditional **value chain**, which means that they fulfill every activity within the university from selecting the learners, developing the curriculum, developing content and media, teaching the content to the students, assessing through alumni services.

As already indicated above the different institutions (small private, public, Ivy League) focus on different learner groups and so to speak operate on different “markets”. Educational technology influences these markets in different ways with different intensity with regard to the value chain. Public universities traditionally tend to be strong in adult education, which is a fast growing market now and attracts a huge number of for profit institutions. Those tend to specialize on certain elements of the value chain. Many public universities reacted with proactive strategies and embraced online distance education. According to the most recent report from NCES 90 percent of public 2-year and 4-year institutions offered distance education courses (U.S. Department of Education 2003, p. 3)

Interestingly none of the studied cases has chosen to build on significant **cooperation** with other higher education institutions in terms of educational technology and there is even lower interaction with business companies although many cooperation models are well documented in the literature (e.g. Western Governor University (Kinser 2003)). Most of the studied institutions engage actively in a number of groups, which are dedicated to knowledge exchange in the field. There are also a number of cooperations on the technological level. For example the open source movement is rather important in particular among the larger private universities.

An interesting aspect is the **organization** of educational technology support. Universities organize their educational technology activities in very different ways: Every university established a unit such as an “Educational Technology Center” in which the necessary competences to support e-learning efforts are brought together. All institutions engage a number of instructional designers and in addition most of them tend to have more technical competences in their team (e.g. multimedia producers) than pedagogical competences. At some institutions there are teaching and learning centers that were in charge of faculty development before the EdTech wave. This relationship has to be investigated more closely. Another challenging interface is the relationship between the EdTech centers and the IT departments since a good quality IT department is an important precondition for a smooth implementation of EdTech applications.

Many institutions considered **competence development** of faculty as one of the most delicate problem in order to disseminate the use of educational technology. Many institutions reported that the inclusion of educational technology is more time consuming than conventional teaching. It also seems that achievements in teaching don’t get the same recognition as other scholarly activities. One research university reported that all efforts in the field of e-learning are done by tenured faculty since assistant professor couldn’t afford to spend too much time on teaching. The issues concerning faculty motivation have to be considered more in depth and institutional differences have to be taken into account.

Refined Conception of an E-Learning Strategy

On the basis of the data collected two additional accompanying factors were added the existing illustrated in Fig. 1 (organization, value chain configuration, cooperation concept, communication concept, revenue model): The consideration of **technology** related issues as a necessary but not sufficient precondition turned out to be of far greater

importance than assumed. Not only the disposition of a suitable infrastructure but also the integration of appropriate educational software and the integration of well ordered support processes have to be approached ahead of time from a strategic point of view.

The second factor added is **faculty development**. Teaching with educational technology requires new technical and pedagogical competences from faculty. For many institutions faculty development on this scale is a new requirement and calls into question an established culture of teaching and therefore deserves attention already in an early stage of planning.

The faculty represent the core resource of a university. The author observed that in particular the small private universities successfully manage to put in place distance offerings in fields where faculty created a superior knowledge basis. State universities focus more on the undergraduate distance learning and this kind of course content is more and more seen as a commodity. The creation of excellent learning environments is here the key competence. Both superior content and excellent learning environments are dependent on an engaged faculty body and a superior organization that empowers them to reach the goals in a sustainable way.

The focus of the future research will lie on the nature of educational technology support structures in the context of the strategic intent of an institution and its effect on faculty as the triangle in Fig. 2 illustrates. This area after ten years of experimenting is still not well understood though highly relevant for Swiss and American universities.

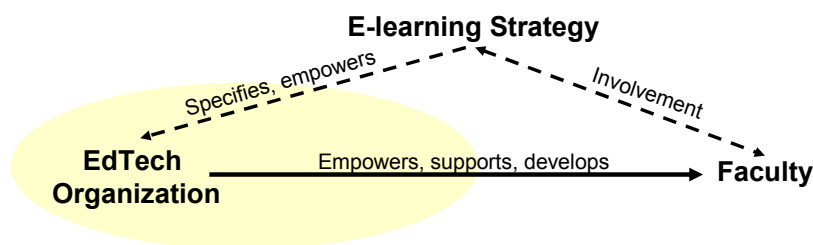


Figure 2: Future Research Focus

Faculty are the linchpin of the achievement in regard to a sustainable integration of educational technology into university teaching. The key to the translation of goals formulated within the strategizing process is the planning of support structures and the establishment of a supporting culture that empower faculty to achieve the aimed goals.

References

- Bieger, T., Rüegg-Stürm, J., & von Rohr, T. (2002). Strukturen und Ansätze einer Gestaltung von Beziehungs-konfigurationen - Das Konzept Geschäftsmodell [Structures and Approaches towards the Creation of Relationship Configurations]. In T. Bieger, N. Bickhoff, R. Caspers, D. zu Knyphausen-Aufsess & K. Reding (Eds.), *Zukünftige Geschäftsmodelle. Konzept und Anwendung in der Netzökonomie [Future Business Models. Concepts and Application in a Neteconomy]* (pp. 35-61). Berlin: Springer Verlag.
- Euler, D., & Wilbers, K. (Eds.). (2002). *Selbstlernen mit neuen Medien didaktisch gestalten [Creating self-directed learning with new Media]* (Band. 1). St.Gallen: Institut für Wirtschaftspädagogik.
- Kinser, K. (2003). Taking WGU Seriously: Implications of the Western Governors University. *Innovative Higher Education*, 26(3), 161-173.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook* (2nd ed.). Thousand Oaks, CA; London: Sage.
- Rowley, D. J., Lujan, H. D., & Dolence, M. G. (1997). *Strategic Change in Colleges and Universities : Planning to Survive and Prosper* (1. ed.). San Francisco, CA: Jossey-Bass.
- Shirley, A. (2001). E-learning Developments and Experiences. *Education + Training*, 43(4/5), 240-248.
- U.S. Department of Education. (2003). *Distance Education at Degree-Granting Postsecondary Institutions: 2000-2001* (No. NCES 2003-017). Washington, D.C: by Tiffany Waits, Laurie Lewis.
- Wirth, M. (2002). *Kritische Faktoren, Probleme und Gestaltungsansätze im Implementationsprozess von e-Learning (mediengestütztem Selbstlernen) an Hochschulen [Critical Factors, Problems and Solution Approaches Escorting the Implementation Process of e-Learning at Universities]* (Unpublished Manuscript). St.Gallen: Institut für Wirtschaftspädagogik.