

Elk Test in Austria. Evolutions of a Large-Scale LMS Change and Its Consequences. A Critical Outline

The following article outlines the switch of the central e-learning system at one of the largest universities in the German-speaking area, the University of Vienna. The partial migration of content, especially the learning modules and test questions from Blackboard, within an already projected concurrent operation of both learning management systems right up to the scheduled shutoff of the Blackboard software could be considered a special challenge.

E-Learning at the University of Vienna

The University of Vienna with its 72,000 students and approximately 6,200 teachers is considered a large-scale University. E-learning at the University of Vienna is mainly used in form of blended learning scenarios. So far all lecturers could register their courses voluntarily for the e-learning system and offer them online incidentally to the attendance time. Having started with e-learning courses from 130 multipliers in the winter semester of 2004, more than 1800 e-learning-based courses per semester were registered for the winter semester 2008.

Why does a university change the learning platform ¹

The change of an LMS is a project affecting the whole university; such a decision is not made with levity. It is therefore no wonder that a switch was sought by no means at the beginning. Occasion for the first consideration was the merge of the software companies Blackboard and WebCT in the year 2006, which after a two-year operation of WebCT Vista promised an uncertain future, facing the University of Vienna with worsening support conditions and software quality meaning a major loss of confidence.

Today universities often no longer use one single learning management system exclusively but many tools and often they even have an own open source platform operating as a second leg for a failure scenario as it is the case with the University of Vienna, where with the winter semester 2007 the open source learning platform Moodle started running. Often lacking specific adjustments (e.g. database integration for user authentication) such a 'monolith' is missing the embeddedness in the specific system landscape. Teachers and students want unified approaches, *one* entry-URL to the systems and then only *one* login procedure. This requires open interfaces, content interoperability through standards such as SCORM, IMS Simple Sequencing and QTI, Internet2/MACE standards, Web 2.0 applications and, even if the costs of resources are difficult to calculate: the support and integration of open source.

Not at least the expiry of the license agreement by February 2009 led to the decision for a Europe-wide tender, which would not exclude a platform change but give Blackboard the chance to participate as well. It would also provide the opportunity to fit the system into the specific system landscape of the University of Vienna which means the requirements of very heterogeneous faculties and study programmes captured and prioritized in a binding specification.

¹ The terms of learning platform and learning management system (LMS) are here used synonymously.

How to choose a new learning platform

The change of an LMS has initially very little to do with didactics and technology, but with tedious legal and organizational preparations. Even before the year 2007 a project team began to collect the requirements of the several faculties to create a comprehensive wish list. Special attention was laid on an appropriate price-performance ratio.

The software should primarily cover the requirements demanded from the Blackboard software. In addition to a listing of basic functionalities special emphasis was put on: scalability (150,000 users in the cluster operation), supported client versions, interoperability of content and data exchange. Emphasis was also put on appropriate interfaces to fit the specifications of the administration system. The connection to the comprehensive system for university administration, particularly to the central application system and the grade export was an important requirement for the university. A new platform should also fulfil the long claim to map curricular structures in the LMS.

In addition to an appropriate user and rights management features should be rewarded that had often been criticized for their absence in Blackboard: Accessibility, groupware functionalities, multilingualism, editors and authoring tools, testing and evaluation, a suitable assignment tool as well as the flexibility of the system being adjustable via style sheets and templates.

Particular attention was laid on development and documentation, specifically on the disclosure of the source code and the influence of the University of Vienna on the roadmap. The tender already covered the negotiated conditions including the terms of use and deadlines for the provision of services and their payment. During the participation process, the initial applications were evaluated. Next to a formal review they had to provide sufficient technical and economic productive capacity for a reference screening.

The initial bids of the five best bidders were sighted until March 2008. The subsequent negotiation procedure allowed to take a first impression on the teams of the enterprises and concretize the services and arrangements. In the meeting of the advisory board on 6 June 2008 a clear winner was nominated: Fronter - the Norwegian software could win by a clear margin with the best price-performance ratio. Fronter's business model is called "commercial open source", which has no direct legal meaning but consists in the complete disclosure of the source code in addition to a perpetual license fee and an annual maintenance and support contract.

How to make the change

A very short implementation period of just eight weeks requires pragmatic solutions. Approximately ten employees of the central IT-service centre including administrators, programmers, support staff, editorial, web designers and instructional designers had to put in all their forces; given the tight deadline excellence efforts by the company were requested. In reality it took weeks to build the Single Sign-On solution, due to the time pressure bugs were fixed single-handed, in absence of clear specifications for self-hosted customers a version control of the software changes was simply tracked in a local SVN repository.

Review and prospects

Meanwhile the situation has stabilized: On 28th February 2009 Blackboard was shut down. At the same time, by 1st March 2009, eGate as the central access to all e-learning services at the University got in operation. It connects the two learning management systems to the central application systems of the administration to establish an absolute novelty. Fronter developed migration tools for the learning modules and test questions from Blackboard, Moodle also absorbed parts of it since import modules for Blackboard formats already existed. The permanently installed support desk at the ZID with 6 full-time positions guaranteed technical support for teachers during the transition period. These multifactorial consolidation efforts allowed a migration that processed almost without friction losses.

It is positive to note that Fronter has always worked in an open, constructive and solution-oriented way under the greatest possible involvement of the client and always requested intensive feedback. Under the current, initially described circumstances, Fronter is a good solution for the University of Vienna, because it has flexibly been integrated in the university landscape in a relatively tight deadline. The company Fronter took chances to receive Vienna as a client, but has finally moved a lot to make the implementation a success. Although, we do not want to conceal it, the support was - thanks to "commercial open source"... mutual.

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