Distance learning meets Open Source

or

Future-oriented Distance Learning

from the point of view of a practician

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Most of the current German concepts for distance learning are still based on written study material with complementary face-to-face sessions. Modern e-learning tools are not as frequently in use as one might think or as it is often demanded. This article focuses on the obstacles that occur in the daily work with e-learning tools and which hinder the further spreading of e-learning on college level. One of the main problems is that study material as well as concepts have to be transformed in a way that makes sense in terms of multimedia and didactics. This requires a lot of time, energy and thus money. One approach in overcoming these obstacles might be the use of networks which are a key component of the Open Source movement.

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1. INTRODUCTORY REMARKS ON THE TERM 'DISTANCE LEARNING'

Most of the college-level distance learning courses in Germany, above all courses leading to a bachelor's degree, use written study material that considers the special didactic situation distant learners are in. They need to study independently, at their individual pace. Complementary face-to-face sessions are offered to consolidate the subject matter and to go trough exercises and examples. Accordingly, it does not come as a surprise that many working persons take these programs to good advantage and enroll for a distance learning course.

Other than regular colleges which impart knowledge and skills to their students mainly via lectures and seminars, distance learning distinguishes between written material and additional face-to-face sessions. The written material has been edited for these learners' special needs, the face-to-face sessions are only for consolidation of the subject matter. Therefore, students are to organize themselves in a way that enables them to internalize the content before face-to-face sessions. Similar to regular colleges, exams have to be taken to prove the success of the learning process; University of Applied Sciences usually have their students usually the exams at the end of each semester.

2. THE CORE PROBLEM WHEN USING E-LEARNING-TOOLS IN DISTANCE LEARNING

Most people will think that distance learning is predestined for computers, internet and multimedia – for e-learning, in short. But in practice, some obstacles occur the causes of which are not of a technical nature but rather of an economic one. In the following, deviating from common classifications, a few tools will be explained and then be combined to 'problem groups'. We will find that the adaptation of the material to e-learning requirements is the biggest obstacle.

Video recordings and likewise 'preserves'

Video recordings have only one advantage: students can follow a lecture wherever and whenever they want to. It is controversial though, if recordings are a suitable means for distance learning along a wide front. Considering the special situation of working persons, it is the approach which costs them comparatively the most amount of time while requiring a lot of follow-up course work. Results do not improve significantly.

Learning-Management-Systems (LMS)

Those systems organize contents, learners and teachers as well as exams. Most colleges can transform their administrative processes to an internet-based platform without major problems. The difficulty begins when one tries to integrate study material in this system, even if machine-readable material is already available. In most cases, those papers were made to accompany lectures and are not suitable for self-organized studying. In order to employ them in a distance learning context they would have to be restructured and revised carefully. For a complete course of studies that would mean an expenditure that most institutions cannot afford. So what is in use today are purely administrative platforms while contents are still to be sought.

One positive side effect, however, is the fact that in many cases contact between learners and tutors takes place on this platform as well. If tutors are carefully trained for this new task, students can profit because they get significantly more support than before.

Online Conferences

Using virtual classrooms via the internet (with the help of web-cams and headsets) would make sense for distance learning programs. Seminars and tutorials could be held this way. Unfortunately, current solutions are only available at a high price while putting technical restrictions on users. They depend on specific platforms, and conferences are laid out for a small number of participants only. Economic and organizational aspects inhibit the employment of online conferences on a large scale.

CBT/WBT/Multimedia Courses?

In general, these terms mean a way of editing the study material so that self-organized studying is possible. To meet requirements, revision on a large scale is necessary, sometimes maybe even a whole new conception (see LMS).

Thus, the tools are available, and sooner or later most people will have access to online conferences at a reasonable price. The – yet unsolved – core problem is that the contents and concepts are not available in a way that would allow to tap the full potential e-learning. Even if the contents are available – as it is the case with distance learning suppliers on college level – they were originally made for self-organized studying and not for a multimedia context. Again, revision would be necessary. Chances for a stronger linking-up of contents should not be passed up, the more so as the technical facilities are given.

The one and uppermost problem therefore is that, while technical facilities are principally given, the study material as well as the conception would have to be thoroughly revised in most cases. The teaching staff would have to cope with this demanding task on top of their day-to-day work. In most cases, this makes an efficient adaptation simply impossible.

There is an additional problem for courses on college level: there is no generally accepted opinion on how to revise such complex and extensive contents for multimedia purposes. Without a basic scheme like this, every single institution has to try for itself in regard to its own study programs. Once put into practice, a concept has to prove its worth every day. Else it has to be changed and tested again. This process, as one can easily recognize, does not help to limit costs.

3. THE OPEN-SOURCE CONCEPT AS SOLUTION

The first thought that comes to mind when thinking of the Open Source movement is the publication of the contents. This first and easiest step merely includes the publishing of the study material in use. There are already smaller networks in which partners allow mutual access to contents. Well-known institutions like the MIT have drawn attention to themselves by publishing their material. MIT's comments, however, explain why this step will not be the ignition to success: The actual added value for the students does not lie in the information itself but in the way of imparting the knowledge and in putting it in the context of the overall curriculum. This means that the material reveals its actual benefit only in the interaction with other material and in combination with the entire, logically structured concept. This, by the way, is an experience that many of us have made when trying to integrate someone else's material in one's own concept. Nothing more than the actual writing down has been saved, the work on the concept still remains to be done.

The analogy to the Open-Source movement is obvious because its success, too, is not based on the uncoordinated publishing of isolated parts of programs. Rather all participants work together on one concept and contribute bigger or smaller parts to the whole. No aspect is developed irrespectively of the concept of which it is to

be part in the end. This is the reason why publishing the contents is a first and helpful step for orientation. To solve the above mentioned core problem in using e-learning tools, i.e. lifting the economical barrier, however, it is necessary not only to collect contents but to co-ordinate activities with the intention of result-oriented development.

As above mentioned, the development of content and of the related concepts for the application in e-learning needs a substantial and recursive process of development. There are Open Source approaches for the respective aspects of e-learning: there are collections of contents as well as there are attempts to standardize the description and presentation of contents, and there are even LMS that were developed on an Open Source basis. But what is still missing is an overall concept. As long as one supplier must carry this weight alone, the production of a course is extremely costly and thus hardly viable. Just as with Open Source software, it is necessary to bring together all efforts and insights. Only the sharing of the trial-and-error stages will help to bring forward the development and lower costs for every single participant. A course taken out of this collection comes along with detailed experiences of other users and can be adjusted to one's own needs or even be employed without any changes. The changes, experiences and insights concerning the conception, the contents and the presentation of the content as well as usability aspects will be reported to a central co-ordinating office to sum up this knowledge. Through the co-operation with other suppliers when working on the modules further co-operation might arise in the fields of conception and application so that the synergetic effect is reinforced. On the whole, this might be a win-win situation for everyone involved.

Critics of this approach often state that the contents constitute the main asset of colleges and that they should therefore be treated confidentially. These arguments fall far short, however. In subjects like economics, for example, most of the contents are identical. Standard works are called 'standard works' because they set standards in that they contain generally accepted knowledge, and correspondingly everybody uses them as a common basis. Up to now the competitive advantage of a University of Applied Sciences offering economics as a subject was not in the contents of undergraduate courses, but in the way how studies are organized, in the quality of the teaching staff, in the network of contacts the college offers, and so on. These aspects have been and still are the reasons for taking up one's studies on college A and not on college B. This decision does definitely not depend on every supplier developing its own module on the topic of the gross national product.

Others are afraid that only a few persons do the work while those who do not commit themselves reap the benefits. Open Source proves the opposite: the ones who do the work profit the most. Not only do they influence the course of the development and its pace, but they belong to the circle of developers and users already in the first stadium of development. The history of Open Source-Software shows how efficiently even complex problems can be mastered with this approach. Without the Open Source approach, it would have taken one single company to develop an operating system like Linux. This company would have had to be ready to bear the whole risk alone and to pre-finance the development. This in view of an other operation system dominating the market and thus uncertain prospects of success. The conception and above all the further development of whole courses of studies is an enormously complex venture that is suitable for an Open Source-style allocation of tasks. For every supplier will give up at the sight of the overall expenditure of time, money and energy that is necessary, but a joint venture might bring success for e-learning in distance learning.