

# **A culture change: learning objects to support self-directed learning in teacher education.**

In 2009, a new teacher training model was introduced at the Zurich University of Teacher Education which envisages a share of 50% of the students' time to be devoted to self-directed studies. In order to support this large proportion of non-attendance learning, a common electronic knowledge base was to be developed according to the vision of the university's Executive Board. This easily accessible online repository should be more than a collection of pdf documents and Powerpoint slides. Interactive multimedia learning objects were aimed to introduce glimpses of real school environments into the teacher training programmes at the university and to illustrate the theoretical subject matter with the help of practical examples. About 70 learning objects have been developed up to now. They are distributed through the learning management system ILIAS and can be used by all students and lecturers at the Zurich University of Teacher Education.

The Zurich University of Teacher Education had built up a good technical infrastructure prior to 2009, but it was used by few lecturers for individual learning scenarios only. The key challenge for the university-wide project "media-supported self-directed learning at the Zurich University of Teacher Education" was not in the technical domain. Rather, the strategic decision by the Executive Board to implement the knowledge base was tantamount to a culture change on several levels: a considerable number of lecturers had a sceptical attitude towards a high share of self-directed learning in teacher education. Moreover, the prospect that self-directed learning would be based on electronic learning materials partly met with resistance. There had been hardly any tradition so far to exchange or share study materials across subjects and departments. In addition, the demands of a knowledge base which would be accessible to all members of the institution triggered various fears. Even the term "knowledge base" was subject to criticism and prompted discussions on principles, which were, seen from a distance, certainly important but did not advance the project by much.

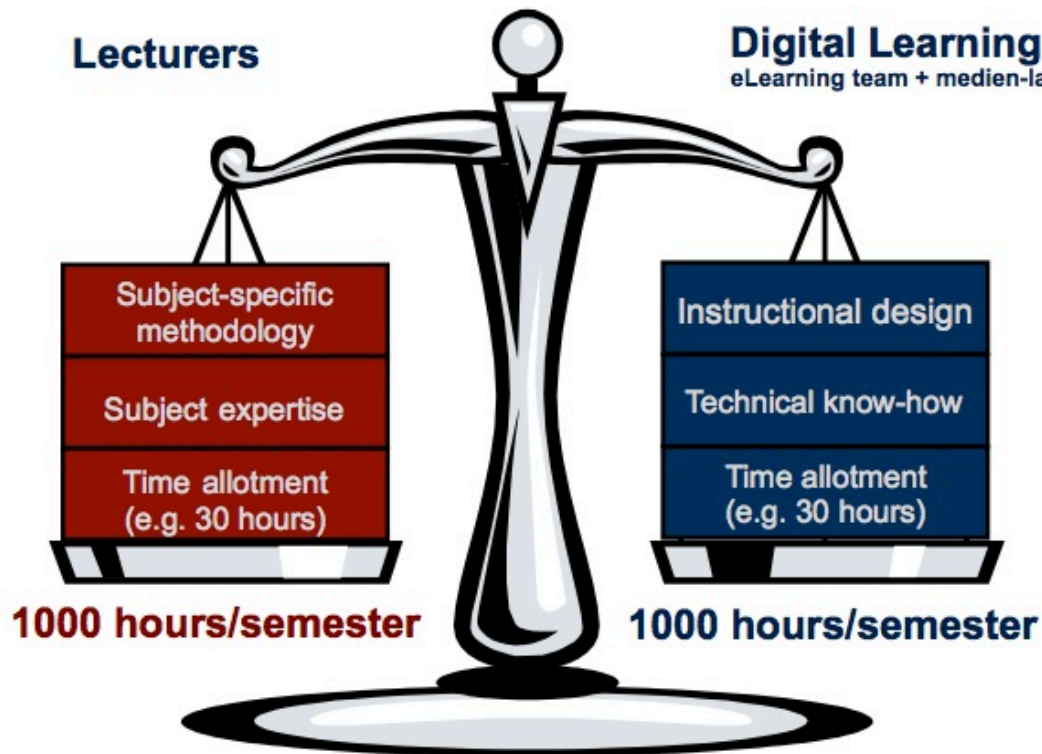
As a reaction to this sceptical attitude among many lecturers and in order to reach a common understanding of this new form of electronic learning resources, an approach with a low threshold was consciously chosen: the notion of knowledge base was replaced by the term "learning objects" as a handy name for multimedia learning resources. However, the term is conceptualised as more open and less technical than is customary in e-learning circles. A set of four key features of learning objects was defined in order to keep a low entry threshold and make it easily understandable for all people concerned. Learning objects should be ...

1. methodologically structured
2. flexibly deployable
3. easy to find
4. close to actual practice.

Despite the provision of a generously defined framework and a comprehensive support offer by the e-learning support team, the first steps toward implementation did not turn out to be very encouraging. A great deal of lecturers remained reticent about the publication of their learning materials. As a result of a lack of time and know-how, no multimedia objects were developed. Instead, there were more or less well-structured repositories of pdf documents and Powerpoint slides, in other words exactly what the Executive Board and the e-learning support team had wanted to avoid with their initiative.

These sobering experiences in the pilot phase of the project led to the development of a more detailed concept which centrally describes five factors to be considered for a promising implementation of media-supported self-directed studies at the Zurich University of Teacher Education:

1. Success factor 'time': The pilot phase showed that the lecturers lack the time to develop multimedia learning resources simply on the side. The concept therefore makes provision for interested lecturers to be allotted additional working hours for the development of learning objects. In addition, the lecturers receive a guaranteed number of hours of consultancy and help with production from the e-learning support team. In this way, a system of incentives for the development of learning objects is to be created for the benefit of lecturers.



2. Success factor 'quality': Common quality criteria for learning objects at the Zurich University of Teacher Education are to be defined which will be used as a compulsory part in the evaluation of learning objects. In addition, a quality assurance process is to be established which, on the one hand, respects the lecturers' freedom of teaching, and which, on the other hand, ensures a unified quality standard for all learning objects.

3. Success factor 'terms of use': As a reaction to the lecturers' fears concerning the publication of their materials, binding conditions and rules for the use of learning objects are to be set up. Moreover, learning objects are to be developed in such a way as to be eligible for publication under a Creative-Commons Licence.

4. Success factor 'teacher training': Some lecturers are unaware of the potential offered by the use of learning objects in their courses. On top of that, some lecturers lack the media competencies needed for conceptualising and implementing learning objects. Developing a learning object is to be seen by the lecturers involved as an opportunity for learning on the job.

5. Success factor 'support': The existing offer of support in e-learning and media production is to be expanded and adapted to the needs of the lecturers who develop learning objects.

At the end of 2009, the Vice-President of Initial Teacher Education approved the concept “media-supported self-directed studies at the Zurich University of Teacher Education”, commissioned its implementation and provided the necessary resources for the lecturers as well as the support teams.

On the basis of this concept, roughly 70 learning objects have been created over the last two years which are at the free disposal of students and lecturers at the Zurich University of Teacher Education. A unified half-year planning and development process and the required budget resources will enable the production of about 20 new learning objects each year as well as the general sustainability of the project in future. A group of lecturers from different disciplines has developed a brochure with quality criteria for the creation of learning objects, which, thanks to a Creative-Commons Licence may be used by any university. The heads of departments accompany the development within their departments and carry out the final quality control. The Zurich University of Teacher Education is planning to evaluate the use of learning objects in teacher training more thoroughly in the future. First results hint at a positive outcome.

Learning objects are no longer „nice to have“, but are used as standard and compulsory elements of teacher education. The project has turned out to open doors to other e-learning initiatives (e.g. personal notebook computers, mandatory use of the ILIAS platform for every course).

In recent times, several lecturers have begun to adapt their teaching materials so that they can be used as learning objects – some even without receiving additional working hours. In this way, the project has come full circle with the original vision of the Executive Board.