

## **eLearning in vocational training**

With the exception of individual projects, eLearning does not yet play a major role in initial training in vocational schools within the dual system. Concerted action, or a stringent common strategy with regard to a systematic integration of the advantages of eLearning into the individual professional training courses is not discernible. There are a number of reasons why this integration is so hesitant. These include the infrastructural equipping of the vocational schools as well as reservations on the part of the trainers.

Empirical studies on the prevalence of eLearning in vocational training – although there have been few of these to date – show in principle that companies require planning and action aids in order to implement the new vocational training regulations as well as their underlying modularisation. What is central here is appropriate teaching and learning methods, new media, as well as concepts for the organisation of learning and examination of process-oriented vocational training, which are still not specified in the vocational training regulations. It can already be seen, that dynamic, process-related qualification can only be provided if the technical possibilities of eLearning are completely and comprehensively used. The learning programmes generally used in organisations predominantly apply concepts involving programmed instruction which are thus contradictory to the tried and tested methods of activity orientation in operational practice. There is therefore a need for clarification as to what extent the tried and tested learning task concepts in activity-oriented vocational training can also be effectively assisted by electronic media.

The evaluation of the support programme »New Media in Education« showed that the technologically-triggered developments have led to qualitative improvements in vocational training. Added value was created in particular through the improvement in flexibility of the organisation of learning, the increase in participation in the further training, the effectivisation of the learning costs, the practical relevance through modularisation and the development of practical communities. Opportunities for improvement were seen in the following areas: The division of learning into small parts (self-contained learning content), a lack of pedagogic functionality in the learning platforms, a continuing partial overestimation of the technology instead of focussing on the didactic style, inadequate qualification of the trainers and tutors and a lacking of implementation strategies related to organisation and use. The recommendations for action which derive from this refer essentially to the necessary support for the development of

- the vocational teaching and learning culture through clarification, orientation to target groups, integration of methods and self-organised, informal expert community in companies (»Community of Practice«),
- trainers' media-didactic competencies for counselling, online support/presentation and administration,
- virtual learning locations for learning location co-operation on the task-based integration of theory and practice as well as didactic models for virtual learning.

## **eLearning in vocational further training**

The eLearning instruments play an important role in vocational further training, in particular in areas alongside the existing »classical« forms of conveying necessary knowledge in a company, where on-the-job measures as well, such as the systematic transfer of job assignments for employees within an organisation are increasingly coming to the fore. Here eLearning influences the type and scope of the qualification terms with a »Just-in-Time-Qualification approach«. The focus of the further training measures will no longer lie with the previously so-called »block conveying structures« which were principally used. In future the qualification process will be more involved in the respective work situations and carried out in an analogous manner to the production process. The conveying of particular knowledge modules at the time they are required with the aid of the opportunities provided by eLearning will transform the entire existing structure of vocational further training in the medium term.

eLearning does not however mean that other (known) further training instruments will be completely replaced, but rather qualitatively supplemented. This will be accompanied by a new orientation in the training management system: The development of training management from a course to a media-based system will be complemented by integration-based training management. Its characteristics are:

- the integration of eLearning instruments into the company strategy;
- the establishment of a corresponding knowledge management system;
- the close interleaving of learning and business processes;
- organisational and technical reproduction in the operational IT landscape.

This is why interest is growing in many companies, in virtual qualification groups using a common training network, to set up, use and maintain process-oriented learning databases (so-called data warehouses).

A forward-looking principal use is developing in the form of so-called Online Communities, informal groups or networks of people, who as a result of common interests communicate with each other via the Internet over a long period of time and co-operate, exchange knowledge and experience, create new knowledge and learn from each other. Online Communities allow the users to undergo transformations, they impart assistance for the acquisition of new knowledge, they build up trust, create a sense of community spirit and support lifelong learning. The benefit for organisations and companies lies in the informal absorption of information, the increase in productivity, the speeding up of innovations and the strengthening of strategic thinking.

### **SUMMARY:**

The opportunities and modalities of eLearning will probably transform the vocational education system seen as a whole in much the same way that “eBusiness” has already transformed the entire economy. However eLearning will not replace other training instruments, but will rather qualitatively complement them. And even if eLearning is perhaps able to establish itself in future in a broad sense as a significant training instrument, the expectations that were raised several years ago through analyses of Potentials have to date been only partially met on the basis of current experience. The preparation, representation and quality of the eLearning content make up the decisive success factors for both facilitators as well as the learners, and there is still considerable potential for development in these areas.

eLearning will only then be able to assert itself in the long term in everyday operational life as well, when acceptance and implementation is ensured and the eLearning courses provide all concerned with the desired added value. In order for this to be achieved there is a requirement for firstly, a significantly more detailed insight into the embedding of learning processes in the habitual or working world, and secondly for instruments, which ensure the quality of eLearning content is not only realised in retrospect, but can be guaranteed during its creation or application. Not until these hurdles are cleared will eLearning be able to develop its potential for vocational training and further training.

In order to provide evidence of the practicability of the sustainable integration of regulated vocational training into operational procedures (and thereby also an improvement in acceptance and legitimisation), would initially require in future an in-depth analysis of currently available approaches to process-oriented vocational training as applied knowledge management systems in companies. Through needs analyses and models, important contributions towards the anchoring of new forms of learning in companies could also additionally be made leading to a dynamic qualification process using electronic media.

As it is unrealistic and hardly conceivable that a institutionalised network for the development of competencies should be built up in competition with the institutionalised vocational training system, specific assistance and instruments for the integration of new approaches in (super)operational training management systems need to be developed and tried out in the vocational training institutions as well.

The by far largest sector of the vocational training system (vocational training but also further training) comprises the »dual system« combining learning at the workplace and in public vocational schools. Measures taken here would therefore have far-reaching effects on a large number of learners. One option for action to promote eLearning in the dual system would, for example, be to select a suitable number of those professional training courses most in demand, to identify overlapping learning content within the selection and to produce high quality eLearning modules within the framework of a model project. Such a course of action could result in a large audience within the vocational training area of the dual system being addressed at a manageable cost and the success (or failure) could be meaningfully evaluated.

A special investigation could be instigated, the object of which being to identify exactly what common learning content allows itself to be particularly well-conveyed through eLearning modules, as well as specifying potential barriers.

The essential characteristics of the change in vocational training include:

- a transformation in the *determination of functions*: the discontinuous »stockpiling of knowledge« is being replaced by continuous further training in the sense of lifelong learning.
- a shift in *content*: in addition to specialist knowledge and abilities, competencies and job specifications which focus on problem solving, self-organisation ability, co-ordination and communication skills are becoming increasingly necessary.
- new *means of conveying knowledge*: the importance of informal learning processes (e.g. collegial discussions) and non-formalised learning (e.g. quality circles and project work) as well as the use of new media is increasing.

- a new *training/learning culture*: self-organised learning and the didactic principle of individual motivation to learn is coming to the fore as the most important characteristic.

The use of new media in further training is intensifying globally, not least in order to be able to implement the necessary change. »New« forms of conveying learning content in a company are therefore increasingly gaining in importance alongside existing »classical« forms. Computer aided learning using offline methods is used by 29 % of companies in the meantime. Web-based training – meaning online learning in the Internet, Extranet or Intranet – is used by 13 % of companies.

In view of the opportunities and requirements of eLearning, the training personnel ultimately also gain a new importance. Those responsible for education are transforming themselves from imparters of knowledge to facilitators of learning processes. Here the appropriate qualifications and experience with eLearning methods is of central importance for training staff, and the trainers are also subject to the necessity of continual further training.