

International Expert Conference  
**New Approaches for Lifelong Learning in Vocational Education and Training**  
**Certified IT Qualifications and Blended Learning**

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**Session 5:**  
**Blended Learning In Process Oriented VET**

Summary of statements and discussions

**James Jacobs / AACC**

In both the United States and Germany there has been substantial interest in this topic, in education, policy, and private sector areas. Many commercial enterprises have targeted e-learning technologies for substantial investment, producing both computer-based products and Internet services. In both education and business circles, there are many general discussions about the use of e-learning, but still far too few case studies on how these e-learning technologies are actually used, much less an understanding of their effectiveness and cost efficiencies. Panel No. 5 presented some interesting specific usage of e learning within one important private sector for both nations: the automobile industry. Before turning to these rich case studies, I would like to make some observations from the United States perspective why e-learning technologies might become even more utilized in the future.

The adoption of E-Learning in United States industry is directly related to three important human resource development practices by United States firms. First, despite all the rhetorical commitment to long term human capital management strategies, the major emphasis on education and training within United States private sector firms remains on short-term, job specific training, which is initiated to solve immediate problems facing the firm. Certainly compared to Germany there is little commitment on the part of industry to the establishment of systematic work-based training and education system. Nor is there anything equivalent to the concept of “social partners” that is the foundation of the dual system—training and education of incumbent workers is control by the firm alone and thus is often part of the competitive strategy of the business. Normally, it is a cost to the firm—which if possible, the firms seek to lower through hiring of educated workers, ‘deskilling’ jobs, or placing work in counties whose costs are less expensive. .

Since training and education is viewed by firms as an issue of cost, in periods of economic difficulty, this function of the firm is one of the first to suffer cut backs and diminished support. Firms often rely on outside institutions—such as American higher education to provide their trained individuals. Training departments in large American companies are smaller in comparison to their foreign counterparts, and almost non-existence is small and medium size firms. There is a less private investment in training and thus less “blended learning” by the companies. From the perspective of the firms e learning is a costly investment, which they seek, help from outside vendors, to provide.

This explains the growth of large training companies, which are hired by major American firms to management training and educational programs at substantial profits. It also explains what many community college workforce development programs has developed sustained and deep “partnerships” supplying firms with training programs.

Third, and perhaps most important, there is an increasing trend on the part of firms to eliminate training and education functions as a business cost, by making these activities a cost to the individual as opposed to the company. The human resource strategies of firms are focused upon assessment and hiring the “correct” person for the job—who is already trained or better yet, has the past work experience which will be compatible to the needs of the firm. Selection and screening techniques are perfected. In the United States auto industry, even small supplier firms will commit thousands of dollars to the selection of individuals, and the large Original Equipment Manufactures will send over \$10,000 per work in the selection process. This process by which the firm transfers its education and training costs to the individuals and the rest of the society has important implications for all learning policies.

While the impact of these trends are very mixed upon e-learning strategies. E leaning becomes important to companies who rely on short-term infusions of training to solve their particular problems. There is a need for “job aids” or computerized help systems that can be quickly recalled, and menu driven products that can source immediate information rapidly. However, if training is increasingly seen as an individual, as opposed to company or even society concern, then e-learning devices become ever more popular with working adults who need to upgrade their skill sets in the times that are convenient to them. Still, the implementation of e learning is confronted with the issue of costs. There are considerable fixed costs or start-up costs involved; the economic issues are not trivial. Finally, if e-learning strategies are to be utilized, the necessary skills both for the users and the developers that needs to be in place before the effectiveness of these strategies can be realized. There will be a demand for “adaptive learning skills” so individuals can use e learning to prepare themselves for the workplaces of the future. All of these suggest a greater usage of e-learning strategies.

All of these issues still leave untouched two fundamental questions. First is the issue of equity. Will all citizens, particularly adults have access to these technologies and be able to use them. This is an important policy issue particularly in the United States where access to informational technology is heavily weighted by class and race. Second and perhaps most important: does e-learning work? I believe the original designs of e learning have given way to some forms of “blended approaches” that take e-learning platforms and integrate them into traditional education. These seem to work i.e. people learn and utilize them within their learning strategies. Most of our presenters take this approach. Yet, we still do not know how effective are these strategies in terms of whether the increase the “productivity” of learning? It still remains an open question and further research into the applications can help us in the future. However, as the examples discussion in the session indicate: e learning is an important new development for educators and businesspeople concerned with workforce education.

## Michael Härtel / BIBB

Germany has a powerful option for activating resources at the national level for the large-scale implementation of “e-learning scenarios” in enterprises. That option is the programmes supported by the federal government in the context of the action programme for “Innovation and Jobs in the Information Society of the 21<sup>st</sup> Century” that can be applied for with appropriate projects by consortiums consisting of enterprises, research establishments, educational providers and facilities of the social partners. In the years from 1998 to 2004 the federal government supported such programmes as “New Media in Education”, “Learnet” and “MobilMedia” in the order of magnitude of about 500 million €.

Technological change is constantly accelerating, calling for new ways of facilitating intelligent information and knowledge management on the job, since the skills needed for specialised work in enterprises can be developed by using this ICT-based potential.

Specialised work in enterprises and work processes are increasingly geared to flexible, regularly changing product lines, since business finds itself confronted with a buyer’s market that is highly individualised in comparison to the earlier seller’s market.

In view of this trend, initial and continuing training processes and services, e.g. in the technical field (diagnosis, maintenance, servicing) require the availability of technical data (with learning content) that can be kept in readiness for what are called “just in time” or “on demand” applications for ongoing work processes.

With the help of IT-assisted “digital companions” (mobile terminals) the requisite information with learning content can be provided at the workplace. The fruitful use of these “digital media”, however, depends on target group specific teaching and learning concepts; these are currently being tested and evaluated in various (pilot) projects.

The development of media-didactically processed, work process-related information and learning units that are imparted in initial and continuing training processes by training personnel with up-to-date media competence (blended learning) and can then be employed in skilled work in a responsible and target-oriented manner is therefore one of the key challenges facing vocational education and training.