



Federal Ministry
of Education
and Research

Vocational education and training

Digital learning on and for the job



Viable solutions for new learning and teaching formats

The Internet and digital media have become an integral part of our everyday personal lives, our work and our learning. But which media are best suited to which purpose? When is digital assistance especially helpful in learning? The Federal Ministry of Education and Research's funding programme "Digitale Medien in der beruflichen Bildung" (Digital Media in Vocational Training) examines these issues.

We aim to:

- open up new educational paths and continually optimise learning,
- increase the proportion of people learning and working digitally and the quality of digital content as well as to develop measures to improve media literacy and
- use digital media to optimise working environments, helping to accelerate innovation processes.



“Digitisation is affecting many aspects of our lives. Digital media are increasingly also being used in education. We support the testing and use of new teaching and learning formats to enable people to use media-based learning directly in their education or training. It's important to point out not only the possibilities, but also the limitations. Digital learning cannot entirely replace classroom teaching and analogue media in vocational education and training. ”

A handwritten signature in black ink, which appears to read 'Johanna Wanka'. The signature is written in a cursive style.

Prof. Dr. Johanna Wanka
Federal Minister of Education and Research

Vocational training in Germany

Vocational training in Germany is largely regulated by the Vocational Training Act (Berufsbildungsgesetz, BBiG). Its main components are preparatory vocational training, vocational training and vocational further training.

Due to its practical components, the German system of dual vocational training is widely regarded as a success factor for a good start in working life and for secure employment.



Typically, theoretical and practical knowledge are taught in parallel at different training locations: companies, inter-company vocational training centres and vocational schools. This presents a major advantage because it ensures that vocational training is practical and demand-oriented. And it forms a crucial basis for commercial success and economic growth in Germany.

Vocational further training enhances vocational skills, adapts them to meet growing requirements and facilitates career progress.



To ensure that vocational further training is effective, it must be directly linked to developments in business and industry and to employers' training needs. At the same time it should also focus on the individual's personal development and the development of methodical and social skills.

Getting viable learning solutions underway

This is precisely what the funding programme "Digital Media in Vocational Training" is doing. The Federal Ministry of Education and Research supports projects that develop viable solutions for learning with digital media in vocational contexts. These include for example learning with mobile technologies such as smartphones or tablets, improving the media literacy of trainees and training personnel, or play-based learning in virtual learning environments. Good examples will be applied in as many industries as possible.

A clever combination of the wide range of existing stand-alone solutions which systematically takes advantage of the potential of digital media will contribute significantly to Germany's status as a powerful "Education Republic".

In addition to enabling flexible and individual use, digital media can make processes and facts accessible in ways that would be almost impossible otherwise: they can for example render actions visible that cannot be seen in real life, allow learners to practice complicated tasks in advance using simulations without putting themselves in danger, and support learning using play-based methods. The examples on this and the following page show what is already possible.

Play-based practice for emergencies:
computer- based training game for internal
emergency management in hospitals.

See more:
www.tracy.gamechanger.institute



Examples of practical projects



View inside a printing press: visualising ink distribution with 3-D technology in vocational training for media engineers



Safely controlling 20 tons with virtual machines: driver's cabin with virtual reality visor for machine operators undergoing training in the building trades.



Controlling light and heat in your home via your mobile phone with Smart Home & co: concept for mobile learning in further training to become an expert in building systems integration.



Clothing with built-in virus protection, or smart textiles with integrated electronics: lab technicians in the textile industry learn directly in the workplace how to handle new high-performance fibres and how they are manufactured.

Competent choices

Media literacy is necessary for example in order to decide

- when the use of digital media in vocational training makes sense, and when it doesn't,
- which media are best suited for which purpose or
- how I can save my content and ensure its quality.

This kind of media literacy does not come naturally. The media themselves must therefore be taught as a learning subject. The aim must be to arrive step by step at a self-managed and independent use of digital media.

Teaching and learning staff are crucial to media education with these goals. As advisors in the learning process, they assist learners in developing media literacy. Ideally they promote usage habits that make learning with digital media easier, enable a healthy critical attitude to media and show learners how to find their way in the knowledge society of today and tomorrow.

Media literacy includes reflecting critically on one's own media use. The project Competence Lab also examines questions of changing values in the age of digital media or the importance of respect in social networks



More information

More information on learning with digital media in vocational training is available at www.qualifizierungdigital.de.



See more!

See more project examples and interviews in our video.

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