#### MONIKA HACKEL

## Diffusion of new technologies for sustainable development

The rapid dissemination of new technologies to high-performing branches and the imparting of the necessary training content at all levels of initial and continuing training are important drivers of innovation for Germany as an economic location. The present paper describes how new technologies flow into vocational education and training and which stakeholders have an essential role to play in this regard.

### BERND DWORSCHAK, HELMUT ZAISER

# Sustainable vocational education and training – on the link between early recognition of skills and technology

A stronger and more systematic connection between early recognition of skills and technology may help create vocational education and training that is future oriented in terms of technology and therefore sustainable in this regard. The present article begins by using a model for the alignment of aspects such as the degree of maturity of technical innovations to explain how an interlinking of early recognition of skills can be realised. The interplay between both early recognition disciplines is then illustrated on the basis of a project for the early recognition of skills requirements via the "Internet of Things" in the field of "Smart House".

# JORG-GÜNTHER GRUNWALD, ROBERT HELMRICH, TOBIAS MAIER The energy transition in the construction sector – are there enough workers with the appropriate skills to meet requirements?

This paper discusses whether and the extent to which enough skilled construction workers are available for the energy transition. As part of its Intelligent Energy Europe (IEE) Programme, the European Union (EU) launched the "BuildUp Skills" Initiative in 2011 with the aim of identifying how many construction workers have which qualifications and which steps may be needed to increase the number of such workers and their skills levels in line with requirements.

# BARBARA HEMKES, WERNER KUHLMEIER, THOMAS VOLLMER The BIBB main funding focus "Vocational education and training for sustainable development"

A building block for the promotion of social innovation strategies The energy transition adopted by the Federal Government cannot be realised without the involvement of appropriately qualified skilled workers. The BIBB main funding focus includes the financing of projects that address various challenges thrown up by the energy transition within the context of the core principle of sustainability. This paper briefly presents objectives and results of the projects.

# FLORIAN KARL, VANESSA SCHMIDT, GUNTHER REINHART Learning factory for energy productivity

# A progressive training instrument for production technology

Manufacturing companies face the challenge of bringing about a sustainable reduction in their energy needs. The "Learning factory for energy productivity" (LEP) has been set up at the Institute for Machine Tools and Industrial Management (iwb) at the Technical University of Munich in order to impart the necessary know-how.

#### EVA HEINIMANN

# Competent for the green economy? Clean technology in basic vocational training in Switzerland

The term clean technology stands for a linking of ecological and economic objectives. Over recent years, it has developed into a strategic solution for global environmental and resources problems. For the Swiss economy, the area of clean technology represents enormous potential for growth. For this reason, competent skilled workers are required. Yet how are the necessary contents imparted and competences established? Are young people undertaking vocational education and training ready to meet the requirements of a green economy? These issues have been addressed by the Swiss Federal Institute for Vocational Education and Training (SFIVET) in a comprehensive study. More than 200 basic vocational training plans were analysed for the purpose. This paper summarises the methodological steps undertaken and the most important findings to emerge.

#### URSULA BEICHT

# Double upper secondary school leaving cohorts – changed opportunities for young people on the training market

In 2012, double upper secondary school leaving cohorts in four federal states meant that in overall terms there were significantly more young people in possession of a higher education entrance qualification seeking to pursue training in the dual system. The fact that the situation on the training market did not develop as favourably suggested that individual groups of applicants, especially those with lower school leaving qualifications, might have to fear a deterioration in their training opportunities. This paper uses the 2010 and 2012 Applicant Surveys to investigate which training place applicants were actually affected and in which way.

# BEATE SEUSING, RUTH HEINKE, ANDREAS BORCHERS Training support from Senior Experts – an evaluation of the VerA Initiative

The VerA Project (Prevention of Training Dropouts) is aimed at young people who experience problems during their training. VerA offers them assistance aligned to their own support needs. An external evaluation of the project, which has been running for four years, has now been undertaken by the Institute for Development Planning and Structural Research in Hanover.

# MARKUS P. NEUENSCHWANDER, MASCIA RÜFENACHT Early recognition of youth unemployment in Swiss vocational education and training

Entry to the labour market represents an occupational challenge for young adults. If they do not succeed in progressing to employment following completion of vocational education and training, the result may be considerable burdens for the young people themselves and for their professional career. It addresses the issue of the extent of the difference between those who are unemployed and employed following completion of training and of how the risk of youth unemployment can be recognised at an early stage during training itself.

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