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**Competence measurement in vocational education and training
Kompetenzmessung in der beruflichen Bildung**

Berufsbildung in Wissenschaft und Praxis – BWP 39 (2010) 1, p. 10

Over the course of recent years, the term “competence” has become an established part of the debates surrounding the objectives and outcomes of vocational learning processes. Competence is, however, depending on the societal sub-system involved (policy-making, trade and industry, academic research), associated with a number of different theoretical constructs. This means that no generally and broadly accepted definition of competence may currently be assumed. The present paper provides an insight into the various ways of accessing and approaching the measurement of competences in vocational education and training and clarifies a range of contexts and fields of application. The authors conclude by stating prospects for future developments in terms of moving towards a methodologically robust system of competence measurement.

STEPHAN ABELE, TOBIAS GSCHWENDTNER

Computer-based identification of employability skills

Concepts, opportunities and prospects, taking motor vehicle mechatronics as an example

Die computerbasierte Erfassung beruflicher Handlungskompetenz

Konzepte, Möglichkeiten, Perspektiven am Beispiel der Kfz-Mechatronik

Berufsbildung in Wissenschaft und Praxis – BWP 39 (2010) 1, p. 14

The correlating professional competence dimensions of specialist knowledge and the ability to deploy such specialist knowledge in complex application contexts have thus far been empirically established as autonomous dimensions within the technical sector in terms of the measurement of employability skills. Although a number of procedures are available for the purpose of competence diagnostics, only a few of these meet psychometric standards and are practicable. The present paper takes motor vehicle mechatronics as an example in order to demonstrate that computer simulations are psychometrically high-quality and practicable procedures for the measurement of central professional competences. A high degree of correlation between practically related professional knowledge and diagnostic competence is also revealed. This is in line with the findings on the structure of professional competence, although the amount of correlation suggests that the two facets should not be combined.

ESTHER WINTHER, FRANK ACHTENHAGEN

Specialist vocational competence: measurement instruments and empirical findings on the multi-dimensionality of occupational employability skills

Berufsfachliche Kompetenz: Messinstrumente und empirische Befunde zur Mehrdimensionalität beruflicher Handlungskompetenz

Berufsbildung in Wissenschaft und Praxis – BWP 39 (2010) 1, p. 18

The measurement instruments and findings presented in this paper take their starting point from debates surrounding the implementation of an international Large Scale Assessment on Vocational Education and Training (VET-LSA), within the context of which issues relating to the operationalisation of the concept of employability skills were subjected to a new focus which also involved adopting a more theoretical measurement perspective. The aim is to develop and pilot instruments which will be able to identify the ability to undertake independent and autonomous actions in the workplace. The present paper focuses on training for industrial clerks and shows how the construct of “occupational employability skills” has been translated into a measurable form and how occupational work and business processes can be implemented in test situations with the assistance of computer-based company simulations.

FELIX RAUNER

KOMET – measuring vocational competences in the occupational field of electronics

KOMET – Messen beruflicher Kompetenz im Berufsfeld Elektronik

Berufsbildung in Wissenschaft und Praxis – BWP 39 (2010) 1, p. 22

Three years of test experience in the area of large-scale competence diagnostics in the occupational field of electronics permit initial conclusions to be drawn on the opportunities and limits of this new instrument for the identification of employability skills. In contrast to examinations, this enables the competence levels and profiles of test groups from various forms of vocational education and training to be determined in a comparative manner. The

prerequisite is a competence and measurement model which has been psychometrically tested. The paper presents the basic design concept principles and findings of the KOMET Project conducted by the Institute for Vocational Training (iBB) in Bremen.

AGNES DIETZEN, TANJA TSCHÖPE, STEFANIE VELTEN

Looking into the black box – measuring competences, securing training quality

In die Blackbox schauen – Kompetenzen messen, Ausbildungsqualität sichern

Berufsbildung in Wissenschaft und Praxis – BWP 39 (2010) 1, p. 27

The aim of a new longitudinal cooperation project conducted by the Federal Institute for Vocational Training (BIBB) and the Department of Vocational, Economic and Technical Pedagogy at the University of Stuttgart (BWT) is to investigate correlations between training conditions and training outcomes in the occupations of mechatronics fitter and information technology specialist. The focus is on the measurement of professional competence as a training outcome and as a significant aspect of occupational employability skills. In addition to this, information on the conditions which may exert an influence on the training process is also being surveyed, and a systematic investigation into the relationships with the development of professional competence is being conducted. The present paper expounds upon the two key concepts of “quality” and “competence” and outlines the planned research project.

DANIELA ROHRBACH-SCHMIDT, MICHAEL TIEMANN

(Mis-)matching in Germany

An analysis on the basis of formal qualifications and skills of employees

(Mis-)Matching in Deutschland

Eine Analyse auf der Basis formaler Qualifikationen und Fähigkeiten von Erwerbstätigen

Berufsbildung in Wissenschaft und Praxis – BWP 39 (2010) 1, p. 34

Employees do not always exercise an occupational activity which is a perfect match for them. The traditional response to the question as to what constitutes a good match is based on the correspondence of the formal qualification of employees and on the formal qualification requirements in the workplace. An up-to-date analysis of matching aligned towards the knowledge and skills of employees has been absent for Germany thus far. The present paper undertakes such an analysis based on the representative survey of employees carried out by the Federal Institute for Vocational Education and Training (BIBB) and the Federal Institute for Occupational Safety and Health (BauA). The analysis presents the extent of formal and skills-oriented matching as well as investigating the extent to which perfectly matched employment varies with regard to socio-demographic, qualifications-related or activity-based characteristics.

RUTH BAMMING, FRIEDEL SCHIER

Training reporting – more transparency via an integrated approach

Ausbildungsberichterstattung – Mehr Transparenz durch einen integrierten Ansatz

Berufsbildung in Wissenschaft und Praxis – BWP 39 (2010) 1, p. 39

After the end of general schooling, young people seek vocational training opportunities in order to make a successful transition to the world of work and gainful employment. They have a choice between a multitude of educational pathways. In some cases, they also need to content themselves with replacement solutions or select alternative routes into working life. The diversity of possible pathways and the highly heterogeneous nature of the data basis render it extremely difficult to obtain a clear overall picture of the situation. The Federal Institute for Vocational Education and Training (BIBB) will enter into cooperation with the Federal Statistic Office and the Statistical Offices of the federal states in order to establish a training reporting system to provide a better description of these pathways by the end of 2010.