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Competency-based training: different perceptions in Australia and Germany

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The German dual apprenticeship system has traditionally been viewed as an effective system for generating a highly skilled workforce in the trades, crafts and service sectors. In addition, countries and systems looking to improve their own approaches to vocational education and training (VET) have considered as exemplary the main features of the 'dual system' (that is, two learning sites and shared responsibility between private employers and public vocational schools). Nevertheless, competency-based training (CBT) as it has been implemented in the Anglophone countries has increasingly attracted the attention of public officials, vocational educators and VET researchers in Germany. This attention has been especially focused on the modularisation of curriculum and the importance of vocationalism in education and training systems. Comparative studies of these dual concepts (for example Deissinger 2002, Ertl 2000) have been used to inform

policy and practice. This paper focuses on the competency-based approach to VET in Australia and examines how reforms aimed at developing a national system, and implementing CBT in curriculum, training delivery and assessment are evaluated by stakeholders (for example, representatives of government, educators and academics). It also compares reforms to VET in Australia with those used in Germany for reforming and restructuring the dual system. This analysis is used to generate conclusions about the extent to which aspects of the Australian CBT model might be successfully applied to dual system reforms in Germany.

Introduction

In times of internationalisation and globalisation, social and economic systems are no longer operating independently of each other, but are increasingly influenced by different international and national policies. With regard to vocational education and training (VET), it can be observed that similarities in VET systems are more and more prevalent despite their different historical backgrounds. This is particularly evident in current reform approaches addressing new economic, technological and demographic structures. International and comparative VET research plays an important role in this respect and the question of what can be learnt from different approaches in VET has been raised in numerous studies. A comparative perspective is the basis for this paper about the Australian and German VET systems. Striking aspects of both systems are highlighted and juxtaposed to elaborate similarities and differences at various levels. For both systems it is interesting to reveal how structures of the competency-based system and the German dual system have developed and been accepted, and whether significant changes can be located. Furthermore, it is important to look at how policy and organisational issues have changed and

what impact these have had on learning processes. The question here is how political objectives and reforms are realised in learning processes and whether there is a discrepancy between theoretical demands and the reality practitioners are facing, especially in the Australian context. In the German context, examples of current reform approaches that impact mainly on curriculum development, delivery and assessment of training are presented and similarities to competency-based training (CBT) as it has been implemented in Australia are illustrated.

The study

This paper is part of a comparative, multi-level study on the German and Australian VET systems. At the macro level, the political and organising frameworks of the German and Australian VET systems are compared. At the level of curriculum development, didactic and curricular guidelines are depicted. At the micro level, the comparison focuses on the realisation of these guidelines in learning processes. The research objective is to discover the differences and similarities in the VET systems, namely, a competency-based system and a system based on vocationalism, that are often considered as opposites due to their different underlying philosophies and different historical, political and economic contexts. Data about the systems were collected using a qualitative empirical method, validated by a broad literature review. Data on the Australian system were derived from 33 expert interviews with an average length of 45 minutes that were conducted in March and April 2005. Experts were categorised in three target groups: practitioners, academics and representatives of State and Commonwealth institutions. Practitioners provided their views and experiences within the competency-based system in order to obtain a picture of how CBT is actually realised. Academics who had undertaken influential research on CBT were interviewed to underline the theoretical view on CBT concerning didactic and pedagogical issues. Representatives of State and Commonwealth

institutions provided information on policy and organisational issues of CBT. Selected findings from these interviews are presented in this paper to illustrate different perceptions of CBT in Australia. The findings are structured according to selected criteria used as a basis for comparison with the German VET system. (Due to space constraints, a complex comparison between the German and Australian VET systems involving all relevant aspects cannot be provided here.)

Findings and discussion

VET in Australia: Organising frameworks and institutional structures

The macro level of the Australian VET system is characterised by two levels of organisation, namely, the Commonwealth and the States/Territories. Organisational and institutional structures of the Australian VET system are determined by the Commonwealth Department for Education, Science and Training (DEST) as well as the State and Territory authorities. With the establishment of the Australian National Training Authority (ANTA) in 1993 a national institution was called into being that was solely in charge of VET operating outside the Commonwealth government (Pickersgill 2004, p. 21). ANTA's role was supposed to be a broker between the States/Territories and the Commonwealth. Different interests were to be integrated within a national coherent VET system enabling mutual recognition of vocational qualifications and promoting the mobility of learners across State and Territory borders. There is a consensus among VET researchers and public officials about the purpose of such a national institution and what it should contribute to VET in Australia. However, different views exist on whether ANTA achieved these objectives or not. In some views ANTA is more or less regarded as a failure, because it is perceived as a highly bureaucratic organisation pre-occupied with administration and funding arrangements rather than policy. Furthermore, ANTA is not considered successful in getting greater involvement of small and

medium enterprises in decision-making processes, for example in the development of competency standards. Another important issue that is regarded as not having been sufficiently addressed by ANTA is elevation of the status and prestige of VET in Australia. ANTA is seen as having had the opportunity to raise the acceptance of VET and vocational qualifications as distinct from school and academic qualifications, but according to experts' statements it missed that opportunity. Despite these criticisms, there is also acknowledgement of the successes ANTA had especially with regard to its efforts in establishing and maintaining national frameworks for a coherent VET system. Most experts state that there is more of a national system now and ANTA contributed to this development. Answers to the question on what would happen after ANTA was abolished¹ reveal considerable insecurity about the future of VET in Australia. Many experts appreciate the fact that the responsibilities of ANTA are now vested in the Commonwealth department (DEST). They express hope for the potential for more transition between schools, higher education and VET, with all these sectors now under one umbrella. But they also fear that VET could be marginalised without an external organisation addressing the needs of VET and that the dominance of higher education would be increased. The question on whether more centralisation with DEST being responsible for VET would be positive was also answered ambiguously. On the one hand, experts appreciate the attempts towards achieving a national VET system, but on the other, there seems to be a danger of politicising the VET system by driving a central national agenda that is primarily focused on funding arrangements between the Commonwealth and the States and Territories. Furthermore, there seems to be the risk that the States and Territories are moving away from the national agenda and the efforts undertaken so far will be rendered ineffective.

¹ Following the Prime Minister's announcement in October 2004, ANTA was abolished on 1 July 2005 and its responsibilities and functions transferred to the Commonwealth Department of Education, Science and Training.

Another important structural issue in the Australian VET system that impacts on the realisation of CBT at the macro level is the policy of an open training market. Much research has been done in this context (e.g. Anderson 1997) and the focus in the expert interviews is set on the efficiency of and the quality resulting from an open training market. The open training market is regarded as efficient with respect to the establishment of private providers in niche markets where public providers cannot supply sufficient training. According to experts, cooperation between private and public providers has increased and enterprises that had delivered non-accredited in-house training became registered training organisations. However, problems are expressed concerning the quality of training. The open training market caused a considerable increase of private providers who often did not have adequate equipment and facilities to provide high quality training. A competitive market demands great efforts in advertising, marketing and managing training to attract clients. There is the view that this is often done at the expense of delivering high quality training.

VET in Germany: Organising frameworks and institutional structures

The macro level of the German VET system is characterised by two levels of regimentation, namely the States or *Länder* and the Federal Government. Similar to the Australian system, *Länder* are responsible for school and higher education, whereas VET is regulated at the federal level. The most important institutes are the Federal Ministry for Education and Research and the Federal Institute for Vocational Education. Training regulations for all nationally recognised qualifications achieved in the dual system are developed and endorsed at the federal level. Curricula for part-time vocational schools in the dual system are developed and endorsed by public officials from the *Länder*. Chambers play an important role in the German VET system, functioning as monitoring, consulting and controlling institutions.

The training market in Germany is regulated by the Vocational Training Act of 1969, which includes training regulations for all nationally recognised skilled occupations and requirements for trainers and training companies. In order to assure the quality of training in the dual system, the chambers monitor training and the qualification of trainers. According to the Vocational Training Act, chambers are responsible for the standardised final examination all apprentices have to take (Deissinger 2004). There has always been a great commitment from companies and employers to offer apprenticeships, which are funded mostly by employers. Companies provide 27.68 billion euros every year for training in the dual system. Public funding by the Federal Government and the State governments for the part-time vocational schools was 2.814 billion euros in 2004 and 3.157 billion euros in 2003 (Federal Ministry of Education and Research 2005, p. 139). Nevertheless, the supply of dual apprenticeships decreased from 654,454 (1999) to 572,452 (2003) (Federal Ministry of Education and Research 2004, p. 9). The situation on the training market reached a critical state in 2003 with more than 20,000 lacking training places. As a consequence the Federal Government offered a so-called training pact to employers, which obliged them to increase the supply of training places. The pact has been successful and the number of training places increased in 2004 by 2.4%, that is, a total of 586,374 training places. This increase saved employers from the threatening training levy, which would have been introduced if the training pact had failed. However, the situation on the training market continues to be critical, since the supply remains below the demand for training places and in 2004 almost 30,000 applicants could not find a training place (Federal Ministry of Education and Research 2005, p. 313).

Although the structural surfaces of the Australian and German VET systems appear similar, differences are evident in terms of regulation, funding and responsibilities. The dual apprenticeship system is the major pathway for VET in Germany. Its underlying principles,

such as the dualism of learning sites, the vocational principle and the principle of consensus among social partners and stakeholders, shape the macro level of the German VET system (Deissinger & Hellwig 2005, p. 314). In contrast, the Australian VET system is more heterogeneous in terms of pathways and consequently in terms of funding arrangements and responsibilities.

CBT in Australia: Developing and implementing training packages

Training packages have continued to be the format of CBT in Australia since 1996. In the following section, development and implementation issues with training packages are analysed. According to Australian VET researchers, there are different understandings of what competency and CBT actually mean. However, aspects such as a focus on outcomes rather than on inputs as well as an, at least initially, underlying behaviouristic tenor are articulated. Critics of CBT argue that a theoretical dimension was absent, because CBT was more about management and organisation than education and learning theories. Following this argument, there has not been a major change to CBT and it is still focused on managerial issues of being able to measure and account for performance. Although measurable and observable outcomes still seem to be at the centre of CBT, a more holistic understanding and approach is prevailing now. Cognitive skills (that is, underpinning knowledge and generic skills) are increasingly being acknowledged in current concepts of competency. It is interesting to note that, despite behaviouristic perceptions, the initial concepts of CBT did in fact address these issues. In one of the early guides on developing competency standards, Heywood, Gonczi and Hager (1992, p. 25) claimed competency to be holistic and to include knowledge, skills and attributes. And according to the Report of the High Level Review of Training Packages (Schofield & McDonald 2004, p. 17), competency is also considered a broad concept that includes performance, application of skills and knowledge, transfer of skills and knowledge

and combination of higher order skills. Thus, theoretical concepts have always incorporated a broad and holistic understanding of competency and CBT, although perceptions and implementation have often been rather narrow.

Experts agree upon the fact that through the implementation of training packages, CBT has become a new format and its basic ideas have been reinforced. Training packages corroborated the political target of a national VET system by determining competency standards, qualifications and assessment guidelines that are in accordance with the Australian Qualifications Framework. According to Schofield and McDonald (2004, p. 14), training packages have both an “enabling and regulatory function” to provide flexibility for learners, providers and employers and to allow for national recognition of vocational qualifications. The objectives of training packages are perceived as important and necessary, however different problems with regard to the development and review processes are articulated. The major concern is that the processes are too slow and too focused on the *status quo* of workplace requirements (see also Schofield & McDonald 2004, p. 20). Another difficulty seems to be that industry is solely in charge of determining competency standards and that practitioners have been left out of decision-making processes. Only in a few cases can it be claimed that practitioners have been consulted. Most experts agree upon the fact that industry can define best what is required in the workplace currently and ideally in the future. However, they also state that educators should contribute their expertise in teaching and learning as well. Since these experiences are not broadly taken into account, training packages are primarily designed for workplace training.

Another important issue in a so-called industry-led system seems to be the question of who is industry and who is actually in charge of developing training packages. According to the interviewed experts, it is mainly “big industry” that is responsible and small

and medium enterprises are often not included in decision-making processes. Therefore, training packages seem to be most suitable for big enterprises that have the appropriate facilities and equipment. For small and medium enterprises the implementation of training packages is claimed to be more difficult. Following this argument, there are small, medium and large enterprises as well as public and private providers delivering training. All of them rely on the outcomes of the same training packages, although the environment is diverse. This tends to result in a perception of training packages being a “one size fits all” approach. It is quite evident that this causes difficulties for implementation. Thus, the adjustment, or tailoring, of training packages to the specific needs and facilities of the learning sites is increasingly stressed as important.

Competency-based approaches in the German dual system: Increasing flexibility in curriculum and training regulations

The dual apprenticeship system is traditionally rather rigid and highly regulated. Various attempts to increase flexibility in curriculum and training regulations have been undertaken. One example is the so-called satellite model (*Satellitenmodell*) of the Association of German Chambers of Industry and Commerce (DIHT 1998). The model suggests three flexibilities for the dual apprenticeship system, namely, flexibility in duration, flexibility in core and elective modules and flexibility in assessment. First, the duration of an apprenticeship should be variable and range between 24 and 42 months depending on the performance of the apprentice and the needs of the employer. Second, with a flexible duration the apprentice and the employer should be able to select core and elective modules in addition to the foundation training. This should lead to nationally recognised qualifications comprising standardised basic modules and additional specific modules selected by the individual. However, there are rules for the combination of elective modules to avoid heterogeneous qualifications and to assure the delivery of relevant knowledge and skills. Furthermore, employers should have the flexibility to define

enterprise-specific modules that can be delivered on-the-job, but only in addition to, and not instead of, the required core and elective modules. Third, assessment procedures should be made more flexible. Individual assessment in the electives should be allowed and the complex final examination should be broken up. In the traditional model of a dual apprenticeship, there is one final assessment at the end that covers all skills and knowledge the apprentice has to acquire. The German chambers of industry and commerce suggest that the final assessment should be stretched over a longer period of time to have a number of smaller assessments both on- and off-the-job that cover the contents of each module in more depth. However, the assessments should still be under the authority of the chambers to secure the objectivity, reliability and validity of assessment. Thus, within the objectives of the new model by the chambers, apprentices and employers should be able to decide individually how long the apprenticeship will take, which modules will be acquired and when assessment will take place. The similarity between the satellite model and CBT lies in this flexibility, which is inherent in CBT and suggested by the German model. However, the degree of flexibility demanded by the German model is lower than in CBT, as it reinforces that existing structures cannot be easily overcome and that reform approaches as illustrated in this example remain within certain boundaries.

Although the satellite model has never been implemented in practice, it had an impact on the restructuring of existing and the development of new training regulations for skilled occupations, for example in the area of chemistry, varnishing and in the IT sector (Clement 2002). The background of the restructuring in the IT sector was the rise of new information and communication technologies and the lack of skilled employees. Enterprises demanded more flexibility in vocational curricula to adjust to economic and technological changes. Training courses should be designed more individually and focus on the needs of employers and learners (Müller, Häussler & Sonnek 2000, p. 8). These demands were realised in the new IT occupations,

which consist of two components – a core component with compulsory training modules and a flexible component with optional modules that allow for individual specialisation within certain areas (Baethge 2001, p. 63). The modules are derived from work processes and therefore represent workplace requirements including technical skills, underpinning knowledge as well as social and personal attributes. As part of the optional modules, the learner has to work on a project given by the employer that deals with a current problem in the overall context of the enterprise. This underlines the practical relevance of the IT training and reflects the increased influence employers have over the design of tasks for their learners. This example reveals similarities to the competency-based approach in two respects. First, as in the above-mentioned examples, the structure of the training course is made more flexible with compulsory and optional training modules. Second, the intervention of employers is strengthened by defining enterprise-specific projects as part of the final assessment. From these examples, one can conclude that CBT can function as a model for the German dual apprenticeship system. However, all attempts to modify current curricular structures must consider organising frameworks as well as the historical, economic and social context of German VET. Otherwise, reform approaches are likely to fail.

Applying CBT to the delivery and assessment of training in Australian VET

In this section, questions concerning the application of CBT to the delivery and assessment of training in Australian VET are analysed. Here, the study focuses on the perceptions of teachers and trainers. According to the majority of practitioners, teaching has changed with CBT and now with training packages, mainly in three aspects. First, the delivery has become more industry-focused, since the competency standards comprise workplace requirements and therefore are more practical. Teachers state that the amount of theory has been reduced to a greater and lesser extent depending on the industry, but generally the focus is now set on practice.

Second, training packages allow for more flexible delivery and self-paced learning. Most teachers appreciate the flexibility they have in the design of learning processes and in applying different methods according to their learners. According to the practitioners, self-paced learning is now being frequently used in most learning processes. However, the amount of self-paced learning varies depending on the institution, the equipment, facilities and the availability of learning material that allows for self-pacing (for example, online resources).

Third, with CBT and especially with training packages, the focus on outcomes rather than inputs has been reinforced and assessment has become a major issue for practitioners. Competency-based assessment requires not only continuous, on-demand assessment, but also the assessment of practical skills in the workplace. Difficulties with competency-based assessment are expressed mainly concerning the required amount of time and effort. Owing to time constraints, competency-based assessment can sometimes be reduced to a checklist approach, where competencies are ticked off without valid, reliable and objective evidence. But if the learner fails in a real workplace situation, although he/she has been formally declared as competent, the credibility of both the institution and the teachers is being put at risk. Thus, the other extreme can easily occur, namely, that competencies are over-assessed to make sure the learner is competent. Practitioners state that they experience tension between being under pressure of time to assess large numbers of learners individually and generating a highly skilled workforce. Employers rely on employees who are not only declared competent, but are able to do all required tasks successfully. According to experts in the area of professional development, this dilemma can only be solved by preparing practitioners explicitly for competency-based assessment. Furthermore, practitioners should be assisted in making decisions about whether a person is competent. Another difficulty the majority of practitioners sees in competency-based assessment is that a learner is deemed either ‘competent’ or ‘not yet competent’,

and that there is no distinction between the performances of the learners. Competency-based assessment provides information only on whether a person is able to do certain tasks, but it does not make transparent how well the performance is undertaken. Teachers' experience is that, without such distinction, learners are often not motivated to do more than what is necessary, since they do not get credit for it. Furthermore, employers and universities require graded systems to distinguish between applicants, which is not usual with competency-based assessment. As a consequence many providers establish their own grading system to give a distinctive judgement on the performance of their learners. Although graded assessment is not inherent in CBT (Schofield & McDonald 2004, p. 19), the demand for it seems to be growing. Especially when transition between schools, universities and the VET sector is high on the agenda, instruments to grade performances to facilitate movement and to enable credit transfer seem to be necessary.

General difficulties in the implementation of competency-based learning processes are expressed in various respects. The main challenge from the perspective of most teachers is the understanding and translation of training packages into deliverable teaching and learning resources. This requires both technical expertise in the occupational field and also didactic knowledge, since training packages are often perceived as "wordy documents". The successful implementation of training packages seems to rely heavily on the quality of these resources. Practitioners who do not develop their own material, but depend on external resources, particularly criticise their low quality and the inappropriateness for the learning process. They argue that a mechanism to assure the quality of these resources should be developed and applied. Another difficulty in the realisation of training packages is the decision about which elements of competency could be combined in order to deliver and assess more holistically. A more holistic approach is generally perceived to be necessary because it gives the learner a broader understanding

of processes and interrelations of tasks. Additionally, generic or employability skills as demanded by employers should be included as well. However, a common instrument for their delivery, assessment and recording is not provided. As a consequence the realisation of generic skills varies to a great extent (see also Schofield & McDonald 2004, p. 19). Summarising the views of practitioners, generic skills are either explicitly delivered, assessed and recorded or they are implicitly assessed with respective technical elements of competency. In some cases generic skills are even entirely ignored and ticked off without any form of assessment. This approach cannot be regarded as valuable, since the importance of generic skills is increasingly stressed by all stakeholders and especially by employers.

Practitioners perceive that CBT and training packages changed the structures of VET, and therefore it is not surprising that most practitioners see their roles as teachers changed and broadened. This result is in accordance with several studies by Australian researchers who have analysed the changes that CBT has generated for teachers and trainers (see for example, Harris, Guthrie, Hobart & Lundberg 1995, pp. 270, Smith, Lowrie, Hill, Bush & Lobegeier 1997, p. 92; Billett, McKavanagh & Hayes 1999, p. 121). Practitioners see themselves more as facilitators, as mentors, as workplace assessors, as negotiators with learners and employers and in some cases as developers of learning resources. The tasks and responsibilities have become wider and the picture of a traditional teacher giving input seems to be rare. Only a few teachers state that they teach as they always taught and the structural and didactic changes have not had any impact on them. The reason for this is that the subjects they teach are theoretical and the delivery takes place in the classroom, which allows them to apply more traditional teaching methods. The role of learners seems to have changed less significantly, however practitioners state that learners are now more responsible for their own learning, which requires that they understand what and why they learn. Especially if self-paced learning is the prevailing approach,

learners have to organise their learning process themselves and learn more independently. This is a major change for many young learners coming from a school environment and they often struggle with it. However, according to the experiences of practitioners, learners become used to the new self-directed environment and many of them progress enormously.

Applying CBT to the delivery and assessment of training in German VET

Delivery and assessment of training in the German dual system is distinguished in two forms according to the two learning sites: workplaces and compulsory part-time vocational schools. Outcomes and assessment for the practical on-the-job learning processes are determined by training regulations. Learning targets, assessment guidelines and suggestions for teaching methods for the school-based learning processes are determined in school curricula. An attempt to make existing school curricula more “competency-based” in terms of professional action competence (*berufliche Handlungskompetenz*) was the re-structuring of vocational curricula into so-called learning fields (*Lernfeldkonzept*). Professional action competence is a concept resulting from the discourse on generic or employability skills and defines four components that are required in order to be considered competent within an occupational field: technical competencies, methodical competencies, social and personal competencies (Schuler & Barthelme 1995, Erpenbeck & Heyse 1996, Belz & Siegrist 2000). This concept is set as a target for the new curricular design of learning fields. School curricula for the dual system used to be based on and structured according to general and technical subjects. Each subject was taught and assessed separately by teachers in a traditional classroom environment.

The new curricula are now based on interdisciplinary learning fields which are curricular units based on work situations and processes (Huisinga, Lisop & Speier 1999, Kremer & Sloane 2001). They require skills and knowledge as well as general abilities across traditional

school subjects. The introduction of these new curricula triggered changes for organising frameworks, curriculum development and the design of learning processes in the German dual apprenticeship system (Kremer & Sloane 2001). At the macro level, the national committee of ministers for education (*Kultusministerkonferenz*) defines learning fields and the numbers of hours that ought to be spent on each field. Learning fields are divided into units specifying the required skills and knowledge. This curricular structure should enable more flexibility and adaptability to economic, technological and social changes. Vocational schools are given more responsibility and flexibility in the organisation of learning processes. The implementation of learning fields ought to be prepared and evaluated by working teams and aligned to the specific profile of each vocational school. Furthermore, a closer cooperation between vocational schools and training companies should be fostered. Thus, the separation of the two learning sites – school and workplace – ought to be reduced and the separation of theory and practice should be approached in a more holistic and integrative way. On the level of learning processes in vocational schools, learning fields are to be implemented in so-called learning situations (*Lernsituationen*). These learning situations are complex learning environments in which interactive, learner-centred teaching methods should be applied. Learning environments should be developed by teachers in cooperation with each other to realise interdisciplinary learning processes. Although the concept of learning fields is implemented in all vocational school curricula in the dual system, there is still resistance and criticism among teachers. This is partially due to the fact that the concept has been implemented as a top-down approach, that is, the decisions were made at the policy level and teachers were not well enough prepared. Another problem with the concept is the required cooperation and interdisciplinary teaching methods. Teachers who are used to teaching their subjects independently now need to cooperate with other teachers and design a conjoint learning processes according to the required skills of the

learning field. This requires organisational and managerial skills as well as adequate school facilities, which cannot be taken for granted.

In conclusion, there are three main similarities in the concepts of learning fields and training packages. First, the objective behind both concepts is to provide more flexibility. The design and organisation of delivery and assessment of training should be made more flexible. Furthermore, the adaptability of learning content to changes in technology and work should be increased. Second, both concepts are structured according to requirements of activities in workplace situations. The modular structure – although more strongly developed in the concept of training packages – should enable the desired flexibility and adaptability. Third, difficulties in the implementation of both concepts reveal similarities, for example, regarding the top-down implementation, the increased responsibility of teachers and learners as well as the required cooperation among teachers and between teachers and employers.

CBT and future challenges for VET in Australia and Germany

All experts were asked what they regarded as the main challenges for the future of VET in Australia. Since the range of answers is quite broad, only the most common responses can be summarised here. The most frequently stated challenges are skills shortages and an ageing population. According to these experts, skills shortages do not result from the fact that there are not enough people in VET seeking employment. The problem seems to be that they do not want to work in certain fields such as the trades and crafts sectors, where skills shortages are most prevalent. The problem is that schools and universities have a higher profile than VET, which often seems therefore to be a second-best option for young people who generally tend to seek a university degree and not a vocational qualification. The transition between the three sectors of the educational system should be fostered and the prestige and social

status of VET, especially the traditional trades, should be elevated to attract more learners into these areas. The challenge for the VET sector is to solve the skills shortage problem, but in fact it is facing a skills shortage of its own staff. Experts in professional development argue that it is difficult to recruit qualified teachers and trainers to provide the training demanded by industry. It seems necessary to attract more teachers and trainers by focusing more on the professional development of the teaching workforce. Furthermore, it is important to have a closer link between industry and providers to generate a highly skilled workforce. The challenge is to ensure that competency standards are up-to-date and in line with current and future workplace requirements and that all industries cooperate both with public and private providers. Thus, the VET system should on the one hand attract young people into VET and raise the status and acceptance of vocational qualifications, and on the other, be responsive to the ageing population by retraining and up-skilling people who stay longer in the workforce.

An ongoing challenge is the establishment and consolidation of a national VET system with regard to accreditation of qualifications as well as consistent realisation of quality standards and training packages. Despite national frameworks there remains inconsistency in the mutual recognition of certificates and credits, which is partially due to the heterogeneous quality of training that is delivered. Thus, the challenge is to establish better cooperation between providers and to apply quality assurance mechanisms efficiently. In this respect it is regarded as important to get the balance right between national policy-making and local decision-making. Although there has been a national push towards more centralisation and policy-making at the Commonwealth level, the States and Territories like to pursue their own interests and follow their own strategies, especially with regard to VET. Concluding from these statements, difficulties that need to be addressed in the future are mostly concerned with the organising framework of the Australian VET system. Organisational issues such

as better cooperation between industry and providers as well as finding the most appropriate balance between the Commonwealth and States/Territories seem to be the prevailing challenges.

Although the dual system as the main pathway in the German VET sector has always been regarded as a successful way of training people in skilled occupations that range from traditional trades and crafts to the service sector, several challenges can be identified (see Deissinger & Hellwig 2004). The biggest challenge is the sufficient provision of training places especially in traditional trade and craft sectors. Although the “training pact” showed promising effects, there is still a considerable lack of training places (Federal Ministry of Education and Research 2005). In terms of quality, it is an ongoing challenge to keep vocational curricula up-to-date and attuned to new technologies and changes in work processes. Although attempts have been undertaken in this respect (for example, the concept of learning fields and the restructuring of IT occupations), the German system is still being criticised because of its rigid and inflexible structures. These structures result in consistency of qualifications and learning processes, however, adjustments to new technologies, new demands and structures are inhibited (Clement 2002, p. 395). Thus, the key aspect about CBT that is perceived as holding promise for the German system is the flexibility both in terms of delivery but also in terms of the modular structure of learning targets that can be adjusted to current and future conditions.

Conclusion

From this analysis of the different perceptions of CBT within these VET systems, a quite heterogeneous picture evolves. Regarding the policy and organisational level, there is considerable criticism of the competency-based approach with respect to learning and educational theories and also structural and managerial issues. However, concerning application, the competency-based approach has been

implemented broadly and the views on it are quite positive. The majority of practitioners claim CBT to be working for them and they appreciate the flexibility they have. However, the degree of successful implementation of CBT depends, on the one hand on the facilities and equipment at the institution, and on the other on the learning materials that are provided.

Especially for the German context, the flexibility CBT provides is highly attractive, as illustrated in the examples in this paper. Rigid structures, determined curricula and guidelines restrict innovative and individual processes and make the German system less responsive to the demands of learners and employers as compared with the Australian VET system (Rauner 1997, p. 125). Thus, further attempts to enhance the flexibility of existing structures should be undertaken with regard not only to the dual apprenticeship system but also to adult education. The German VET system is focused on initial qualifications gained for example through an apprenticeship, however the provision of continuing education and training under the premise of lifelong learning should be addressed to a greater extent (Federal Ministry of Education and Research 2001). Most commonly employees work in the occupation where they gained their first qualification and a change to other fields of entirely different occupations is rare. Thus, the structures of the German VET system might provide nationally recognised and prestigious qualifications, but the provision of lifelong learning is underdeveloped. As a conclusion it can be stated that, despite the critiques articulated in Australia, CBT has potential for the German VET system especially with regard to more flexibility in initial and further education and training.

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About the author

Silke Hellwig is an assistant lecturer in the Faculty of Economics at the University of Konstanz in Germany, and currently undertaking her doctorate on comparative VET research. In her work, she focuses on different approaches to skilling people in VET, in particular on competency-based training as realised in Australia and training based on vocationalism as realised in the German dual apprenticeship system. As part of her research, Silke spent time in Australia visiting different TAFE institutions and universities as well as NCVER, ANTA and DEST to collect data from experts on CBT.

Silke has a masters degree in business and economics education from the University of Konstanz and is a member of the management team of the EU Leonardo da Vinci project, "Support of persons in the accreditation process of non-formal learning".

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