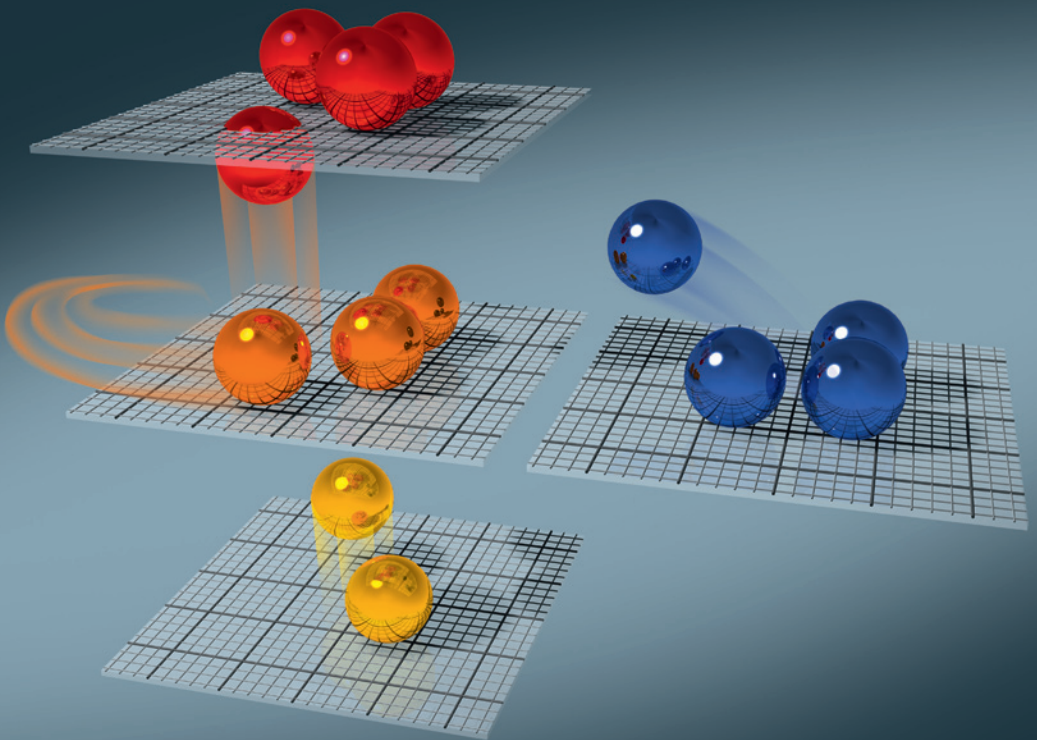




Federal Ministry  
of Education  
and Research

# The DECVET pilot initiative

**Crediting competences – improving permeability**



**EDUCATION**

**Igniting ideas!**



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Vocational Education  
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### Authors

Thomas Bergzog; Prof. Andreas Diettrich;  
Christiane Köhlmann-Eckel; Dr. Egon Meerten

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of Education  
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# The DECVET pilot initiative

**Crediting competences – improving permeability**



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# Preface



Demographic developments are creating major challenges for our country. The changes they are bringing in their wake are already clearly discernable in many areas. Apprenticeships remain unfilled, for example, because there are too few applicants. There are clear signs of a shortage of skilled workers, and this is a trend which will exacerbate in future. In order to ensure that Germany's existing workforce potential is able to meet most of the skills requirements we face, the Federal Government is according the very highest priority to the education and training of the citizens of our country.

In order to enable competences to be described and credited, the Federal Ministry of Education and Research has instigated a pilot initiative for the development of a credit transfer system for vocational education and training (DECVET). The aim is to use this as a vehicle to make the training system more transparent, more permeable, more flexible and more attractive for a range of vocational training. The initiative will also enable the avoidance of time-consuming waiting loops, redundant training and educational cul-de-sacs.

The DECVET initiative will further enhance the German system of vocational education and training and help us secure the skilled worker potential within our country. The present brochure describes the results of the development phase of the DECVET initiative. The competence assessment and evaluation instruments and the credit transfer models which have been developed from them are currently being piloted in practice.

Further stages are planned before the project term ends in 2012. Alongside the processing and evaluation of the test results, the focus is also on synchronising this national initiative with European processes.



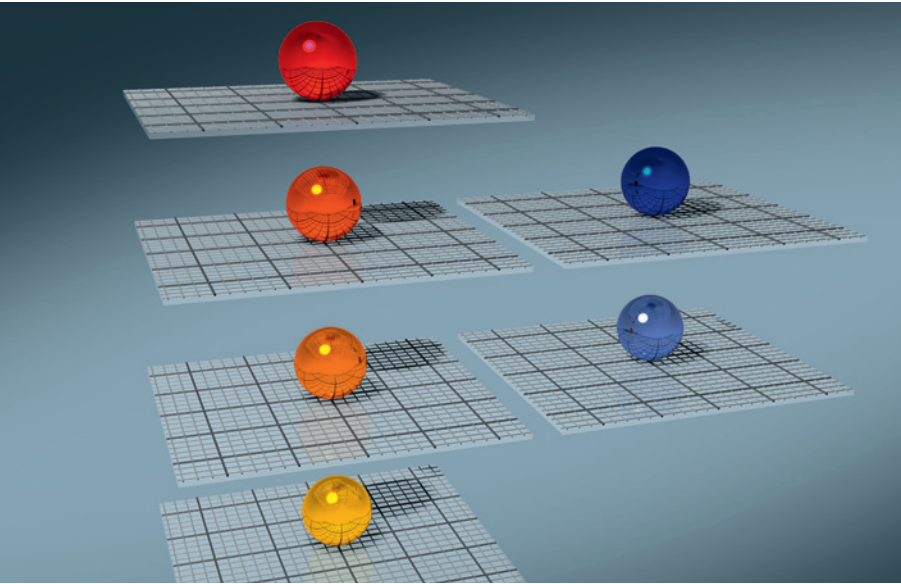
**Prof. Dr. Annette Schavan, MdB**  
Federal Minister of Education and Research

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# The DECVET pilot initiative – A credit system for vocational education and training



## **Crediting competences facilitates transitions**

Vocational knowledge, skills and competences acquired at various institutions are frequently not capable of comparison with one another in Germany. For this reason, the aim is to make the German educational system more transparent and to improve permeability between various areas of vocational education and training. In order to implement this objective, a German Credit System for Vocational Education and Training (DECVET) is currently being piloted.

The DECVET pilot initiative has been fully tailored to the German vocational education and training system. The initiative takes its impetus from developments in European VET policy. In the wake of the European Union “Bruges-Copenhagen Process”, for example, strate-

gies have been developed with the aim of leading to a comparable European Education Area. These strategies include improving the transparency of vocational qualifications within the national systems. A further objective is for the establishment of a European Credit System for Vocational Education and Training (ECVET) to serve as a vehicle for facilitating transnational recognition of qualifications gained in initial and continuing training.

By way of contrast, the educational policy aim of DECVET is the systematic development and piloting of a credit transfer system within a German context. This will enable improved recording, transfer and crediting of learning outcomes from one part of the VET system in another area of the system. DECVET strives to increase horizontal and vertical permeability, meaning between equivalent educational sectors as well as between educational phases with different levels (Fig. 1).

In order to achieve this degree of permeability, ten branch specific projects have been ongoing since 2007. These have been developing and piloting credit transfer procedures and models on a nationwide basis. These projects have been supported by the companies providing training, by educational providers and by the vocational schools as well as receiving assistance from the social partners at a Federal Government and state level.

### **ECVET**

The European Credit System for Vocational Education and Training (ECVET) serves as an instrument for the transfer, accumulation and recognition of learning achievements in the field of vocational education and training. The aim of ECVET is to foster transnational mobility, comparability and compatibility in VET.

### **DECVET**

DECVET is not the direct implementation of ECVET in the form of a national credit transfer system. The initiative is currently piloting models for crediting competences at the interfaces of the German vocational education and training system. Core elements of ECVET such as outcome oriented learning units or credit points are being addressed within this process and consideration is also being accorded to the particular characteristics of the national VET system.

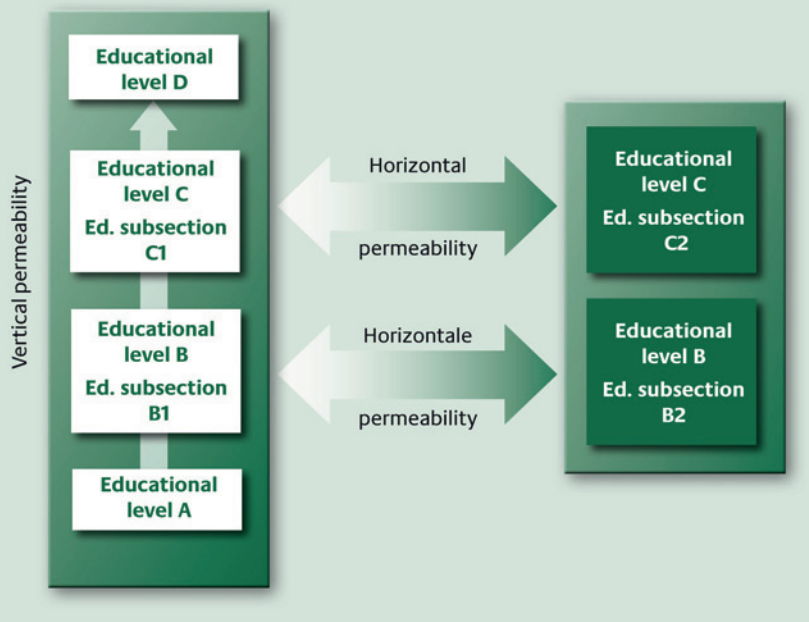


Fig. 1: Permeability between educational levels

DECVET makes transitions easier for learners and the borders between the various VET areas therefore become more fluid. This applies equally to learners in vocational training preparation, to learners in dual and full-time school based VET and to persons undergoing advanced vocational education and training.



## EQF

The European Qualifications Framework (EQF) serves as a reference framework for lifelong learning. It maps the qualifications and competences of the respective national educational systems at a European level at eight reference levels. The aim therefore is for the EQF to act as a vehicle for fostering

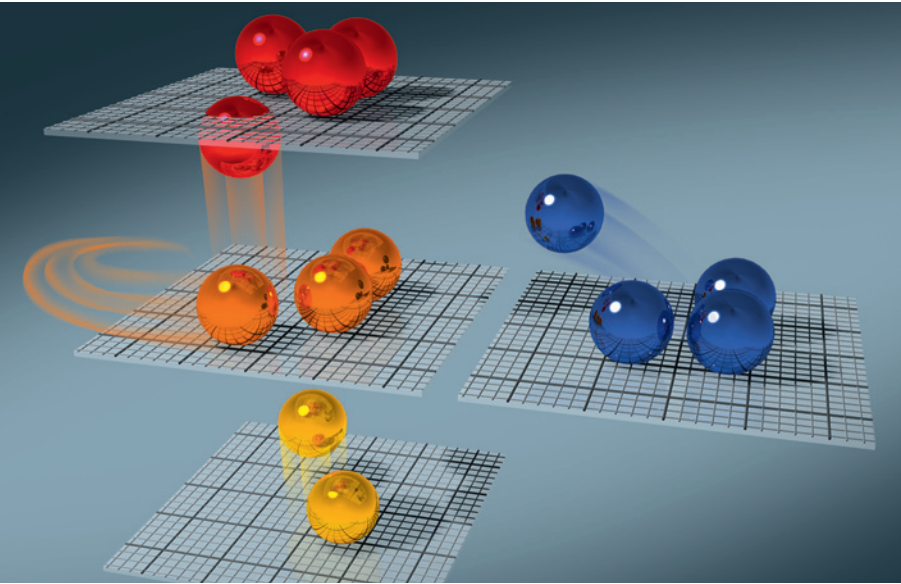
international understanding and comparability of learning outcomes across all educational sectors. In Germany, the Federal Government and the states (Länder) have jointly agreed on the development of a German Qualifications Framework (known by its German language abbreviation of DQR).

This provides young people moving for example from full-time school based training to company based vocational education and training with a better opportunity to obtain credit transfers for learning outcomes already achieved. The same also applies to young people who wish to switch from one training occupation to another. Vocational education and training has thus far had no system in place to enable learning achievements to be described and credited in a standardised way. The BMBF pilot initiative for the development of a credit transfer system aims to remove this deficiency.

The initiative is aligned to the prevailing facts and circumstances of the German vocational education and training system and takes into account such factors as the dual VET system, the principle of the regulated occupation and the Vocational Training Act (BBiG). Existing programmes for the credit transfer of competences within the German educational system (such as AnKOM) or programmes which map competences acquired in Germany across educational sectors (such as the German Qualifications Framework, DQR) also provide models to follow. The pilot initiative also incorporates general conditions and benchmarks which have been developed at a European level. These include both ECVET and the European Qualifications Framework (EQF).

Improving permeability and the credit transfer of competences not only increases the attractiveness of vocational training pathways. Such an approach also particularly assists in the avoidance of waiting loops, of redundant training and of “educational cul-de-sacs”.

# The testing ground: four interfaces in vocational education and training



The DECVET projects are taking place at four interfaces (Fig. 2) within the German vocational education and training system.

1. The interface between vocational training preparation and dual training
2. The interface between dual training courses within an occupational field
3. The interface between dual and full-time school based vocational education and training
4. The interface between dual VET and advanced vocational training

Each of these interfaces focuses on different target groups and exhibits particular problem areas which will be described in more detail below.

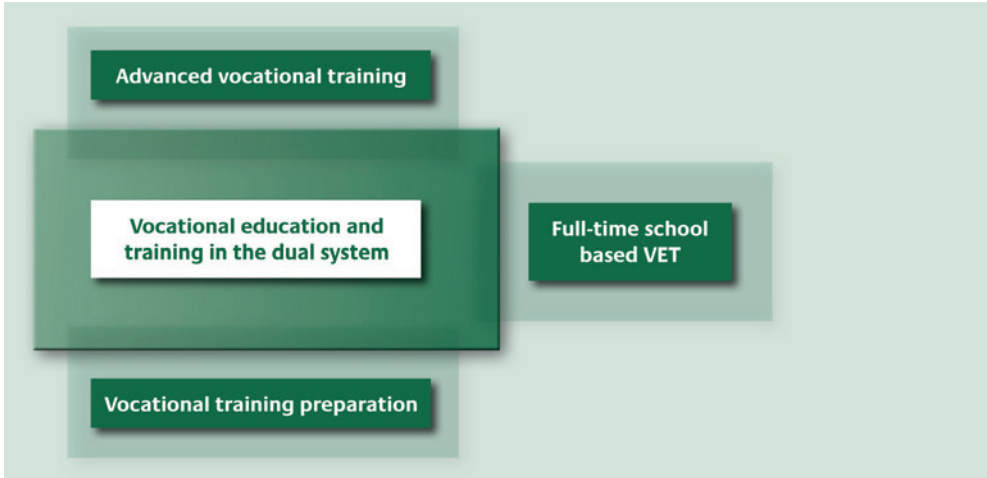


Fig. 2: Interfaces in vocational education and training

## Interface between vocational training preparation and dual training

Pursuant to Section 1 (2) of the Vocational Training Act (BbIG), the purpose of vocational training preparation is to impart basic employability skills and thus lead into vocational education and training. Vocational training preparation is aimed at young people who are prevented from taking a direct route into training. These include young people with learning difficulties and young people who are socially disadvantaged as well as extending to encompass



young people who lack vocational orientation or who are at a disadvantage in the market.

For this reason, vocational training preparation provision needs to take the requirements of an extremely heterogeneous target group into account. Possible gaps in educational provision need to be closed at various learning venues such as educational providers, vocational schools or companies. The focus is on motivating young people, on offering them the necessary vocational orientation and on fostering the process of gaining maturity. Alongside these measures, a further objective is to facilitate the transition to training by imparting initial vocational competences.

This means that the chances of obtaining a training place may improve for the young people concerned. Acceptance and credit transfer of learning outcomes already acquired during vocational training preparation on the part of the companies providing training and the

*“The Darmstadt Employment Agency has adopted a thoroughly positive attitude towards the ‘DECVET’ pilot project since its inception in 2007. The piloting of a credit transfer system in vocational education and training does not in any way derail the dual training system. Its effect has been to facilitate better comparability of qualifications and the provision of credit transfers for periods of dual training. A differentiated assessment of performance enables learning outcomes at the dual training level to be better documented and perspective-ly evaluated. Such conditions are bound to exert a positive influence on the motivation of participants. Relevant evidence of competence*

*could also potentially improve the transition from school to work. In the semi-skilled and unskilled sector, recognised certifications which are provided within the scope of a vocational preparation scheme improve chances of integration on the labour market. The use of a standardised system would also ensure an increase in awareness on the part of all training market stakeholders (companies, educational establishments, participants) and thus lead to greater acceptance.”*

Susanne Berneit,  
Darmstadt Employment Agency

chambers could assist in the upgrading of vocational preparation schemes.

## Interface between dual training courses within an occupational field

The main characteristics of the dual system are practically related training within a company and the imparting of theoretical knowledge at a vocational school. Care needs to be taken that the respective curricular foundations and the structure of the examination system are interlinked.

In the dual system, different training occupations such as those occupations included within the metalworking and electrical sector are consolidated into overarching occupational fields. Despite high degrees of curricular overlap in some cases, very few provisions are in place for the crediting of cross-occupational competences already ac-

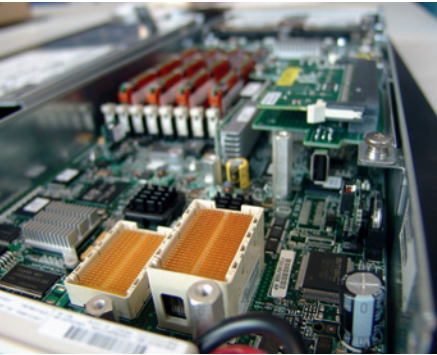
*“The definition of learning units enables individual training pathways to be structured in a more flexible and more efficient manner. This provides a number of benefits for trainees. First of all, the crediting of completed modules makes it easier for them to change training occupations if they wish to seek a new vocational direction, or indeed if they are forced to do so by such occurrences as the insolvency of a company providing training. The description of learning units enables standardisation of the procedures for the transfer of learning outcomes from one VET course to another. At the same time, greater transparency is created. A system of learning units also, however, makes it easier to add further*

*qualification modules to training occupations.*

*The organisation of training can be more closely aligned to the individual predispositions and strengths of the trainees and training can be linked to the competence requirements of the company. Learning which extends beyond the actual training occupation can be clearly made visible and better used in further working life.”*

Representatives of the partner companies Audi AG, BMW Group, Brose GmbH & Co. KG, Bosch GmbH and Daimler AG within the “EDGE” Project





quired. The only area where credit transfers have thus far been possible has been for second training courses where one to two years are taken into account. This applies, for example, to second training courses in the updated industrial metalworking and electrical occupations.

Regulation regarding credit transfer options where no course of vocational education and training has been completed is rare. For trainees, this means unnecessary repetitions when they change occupation or company providing training. This is an area in which a credit transfer system can provide a remedy by enabling credit to be given for competences already acquired. This would enable horizontal mobility to be facilitated.

### **Interface between dual and full-time school based vocational education and training**

Comparable training occupations which are imparted both within the dual system and on a full-time school basis, such as commercial occupations, are held in varying regard. Although those who have completed full-time school based training courses have already acquired relevant occupational competences at the time they make the transition to a dual training course, the credit transfer of school achievements to a dual course of training very rarely occurs in practice.

Although Section 7 BBiG allows state governments to make provisions for the credit transfer of school-based training periods, very

*“The ‘Eurolevel’\* Project enables half of the theoretical training content of the training occupation to be imparted by attending lower vocational school (Berufskolleg I) and full theoretical training content to be delivered at upper vocational school (Berufskolleg II). In addition to this, attendance at a school-based practice company and a four-week practical placement ensure that trainees gain an insight into company reality. We greatly welcome the basic idea behind this project. It provides a model via which pupils can gain a credit transfer to the training period and content of a dual training*

*occupation via attendance at a vocational school. If, for example, full credit transfer is given for attendance at upper vocational school, young people no longer need attend vocational school as part of their dual training course. This means that the chamber may admit them to the final examination once they have secured a training contract and completed one year of practice in a company providing training. This project demonstrates an extremely good pathway via which better linking can take place between full-time school based training courses and the dual training system.”*



Werner Stepanek  
Principal of the  
Commercial School  
of Göppingen

\*The “Eurolevel” Project is being conducted by a consortium of the Association of Baden-Württemberg Chambers of Industry and Commerce, the Association of Baden-Württemberg Chambers of Crafts and Trades and the Ministry of Education and Cultural Affairs, Young People and Sport of the State of Baden-Württemberg.





little use is currently being made of these options in the states. For this reason, it is usual for decisions to be taken on an individual case basis in the event of a transition from full-time school based training to dual training.

More transparent certifications for full-time school based training and better comparability of competences acquired in school based and dual VET may enable inhibitions regarding credit transfer to be reduced or even avoided altogether. As was the case with the interface described above, the focus here is on improving horizontal mobility within the dual system.

### **Interface between dual VET and advanced vocational training**

The fourth interface relates to the transition between dual vocational education and training and advanced vocational training (Sections 53 and 54 BBiG). Upgrading training in particular offers a route into middle management for those in employment. The tradition in Germany is for this middle tier of management to be recruited via vocational education and training. Advanced vocational training is provided to those who have completed initial VET in order to enable them to take on higher level specialist and management tasks within companies.

There are, however, no regulated training courses for advanced vocational training. Only the examination is statutorily defined. Aims

*“We need competence assessment procedures in order to make occupational experience visible. Or in other words: informally acquired competences which are of significance in occupational contexts should be demonstrable. This will then enable us to take a more precise view of where we*



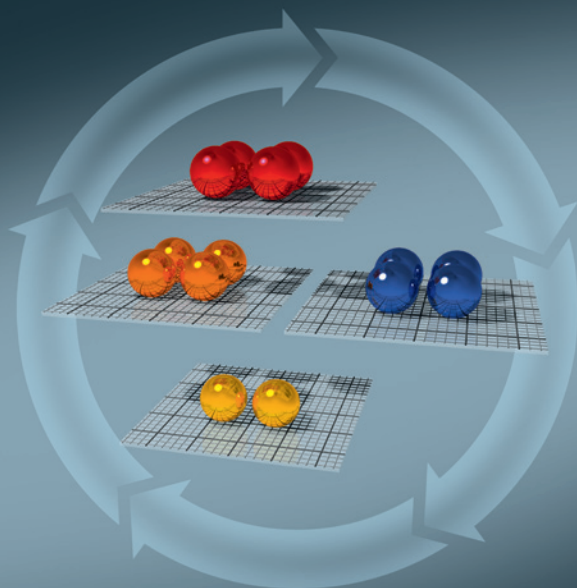
Prof. Gerhard Syben  
BAQ Research  
Institute for  
Employment, Work  
and Qualification  
Bremen

*recognise occupational experience and what we are able to credit it to. In order to achieve effective recognition and credit transfer of informally acquired competences, they need to be linked with personal continuing training plans. Such plans can assist in avoiding having to hear what has already been heard, thus opening up more time for the acquisition of knowledge which cannot or cannot easily be learned in an informal manner. This also provides us with indications as to the areas in which experience is especially required alongside knowledge in order to achieve full employability skills.”*

and content are stipulated and procedure and conditions for admission to the examination are governed by regulation. In addition to this, admission to an advanced vocational training examination mostly requires candidates to have completed initial vocational education and training and a minimum period of practical occupational activity.

Workers aiming to complete advanced training measures are in possession of broadly based knowledge by dint of their occupational experience. This is not restricted to the kind of formal knowledge imparted during initial vocational education and training. Non-formal learning outcomes acquired via such procedures as additional training and courses play a particular role at this interface. Notwithstanding this, it is also important to accord due consideration to informally acquired competences which are the result of occupational experience. A credit transfer system makes it possible to record these competences. It may additionally lead to an interlinking of initial and continuing training in curricular terms whereas the taking into account of occupational experience may deliver added value to the competence acquisition.

## Creating the prerequisites for credit transfer



Various stages of work were required at the four interfaces stated in order to create the necessary prerequisites for credit transfer. The initial aim was to determine the credit transfer potential. This led to the crystallisation of feasible applications for the credit transfer system. As a consequence, it was then possible to define the stages along the route to a credit transfer procedure (Fig. 3).

### **Determining and describing learning outcome units**

The individual parts of an occupational profile are stipulated via the definition of learning units. The foundations on which these learning units are based are the regulatory instruments and the work requirements of the companies.

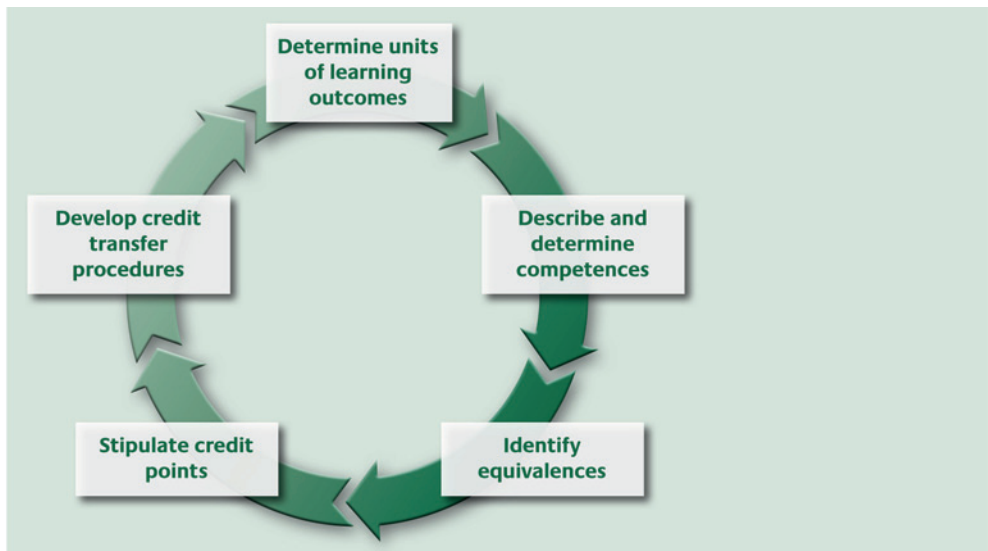


Fig. 3: Stages of development of a credit transfer procedure

In terms of content, the learning units are mainly determined and dimensioned by fields of activity and tasks typical to the occupation. These include work and business processes as well as complex work situations usual within the respective area of deployment. The principle which applies to all learning units is that they should map complete work activities.

The stipulations and requirements thus determined serve as the basis for describing competences, skills and knowledge (Fig. 4) required for the execution of the respective work typical to the occupation in question.

### Learning units

A learning unit is a component of a qualification and comprises various knowledge, skills and competences. The results of a learning unit may be evaluated

and monitored. A qualification fundamentally consists of several learning units which learners may complete individually.

*“The development of learning units provides companies with additional support for the quality assurance of their training. In defining the learning units, an extremely specific description is provided of which learning outcomes should be achieved in which stage of the vocational training. This leads to a more sophisticated set of instruments which can*

*be used to record and document the learning outcomes achieved. Companies providing training are able to impart the required competences in an even more targeted way.”*

Representatives of the partner companies Audi AG, BMW Group, Brose GmbH & Co. KG, Bosch GmbH and Daimler AG within the “EDGE” Project

Ausbildungsberuf	Kaufmann/-frau im Groß- und Außenhandel			
Lerneinheit 9	Marketing planen, durchführen und kontrollieren			
Kurzbeschreibung der Lerneinheit				
Stellung der Lerneinheit	Nach der Zwischenprüfung, BK2			
Stellung der Lerneinheit in der Gesamtausbildung	Voraussetzung: Nachfolgend:			
Umfang				
Kompetenzfeststellung				
Niveaustufe		Anzahl der Leistungspunkte		

	Berufliche Kompetenz	Fertigkeiten	Kenntnisse	Bezug zu ABB	Bezug zu BIP
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Durchführen	xxx				
Bewerten	xxx				

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Fig. 4: Example presentations of learning units



## Determining competences – what should count is what someone “can do”

Once the learning units have been defined, the focus is on evaluating the competences described and on monitoring the learning outcomes achieved. Procedures, recording instruments and examination types are developed, adapted and combined for this purpose. Due consideration is accorded to the specific characteristics of the respective interfaces whilst this takes place.

In this way, various examination methods and instruments are currently emerging within the individual pilot projects. These include employment oriented situation-based tasks within the field of occupational activity, company tasks, project assignments involving a presentation and specialist oral examinations or simulation tasks. The procedures used make it possible to record competences in an employment oriented manner.

### Learning Outcomes

Learning outcomes are defined as knowledge, skills and competences which learners possess after the completion of a learning process. This means that

they are in a position to apply and demonstrate the knowledge they have learned in relation to their own life world.



## Competence

Competence is defined as a person's ability and willingness to apply his or her knowledge, abilities and personal, social and methodological skills in work and life situations. Competence also means using such knowledge, abilities and skills for occupational and personal development. Competence is understood to refer to employability skills within this context.

The pilot projects have adopted this understanding of occupational competence in describing the

learning outcome units. This understanding is individually differentiated in the respective projects. The definitions of competence used include that of the European Qualifications Framework (EQF), which draws a distinction between knowledge, skills and competences. The German Qualifications Framework (DQR) also serves as a template. The DQR defines employability skills as comprising knowledge, skills, social competence and self-competence.

In order to implement such competence assessment procedures, however, specific training courses are required for examination staff. This is the only way of ensuring that examiners are in possession of the relevant skills.

## Determining areas of congruity and overlaps between the subsystems

A further task of the individual projects is to determine equivalences between the vocational qualifications and training courses forming the object of investigation. Clarification is required with regard to which learning units within different qualifications are equivalent and thus capable of comparison. Tests undertaken include whether the learning outcomes in vocational training preparation and dual training exhibit congruity in terms of depth and breadth. Information in this respect is provided both by the regulatory instruments of the individual occupations and by the learning units defined.



## Assigning credit points

Within the scope of the DECVET initiative, a debate is also taking place as to whether and to what extent credit points can act as a “common currency” in assisting to facilitate permeability in vocational training on the basis of credit transfer for competences already acquired or at least to make such permeability easier to achieve.

For a complete programme of initial or advanced training, this process involves the stipulation of a total number of points of which individual learning units form sections. For this reason, the number of points to be achieved in the learning units constitute subsets. The respective number of points depends on the relative (quantitative and qualitative) proportion which the learning unit makes up within the qualification as a whole.

### Credit points

Credit points are defined as a set of evaluated learning outcomes for an individual person. They are achieved by completing learning units, although they

are subject to different weighting. Credit points may be accumulated in order to obtain a qualification or else transferred to other training courses or qualifications.



This means that the credit points provide a weighting of the learning units as compared with the whole qualification.

### Developing and piloting credit transfer procedures

An equivalence comparison is deployed in order to determine the possible credit transfer potential for the training course in question. This takes place via such means as mapping regulatory instruments

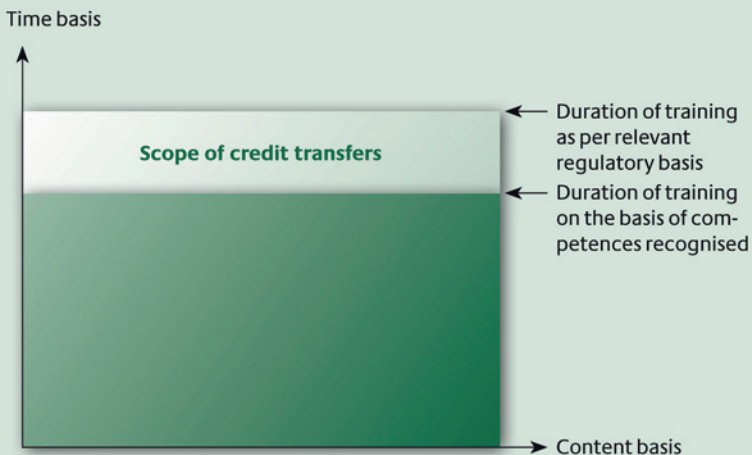


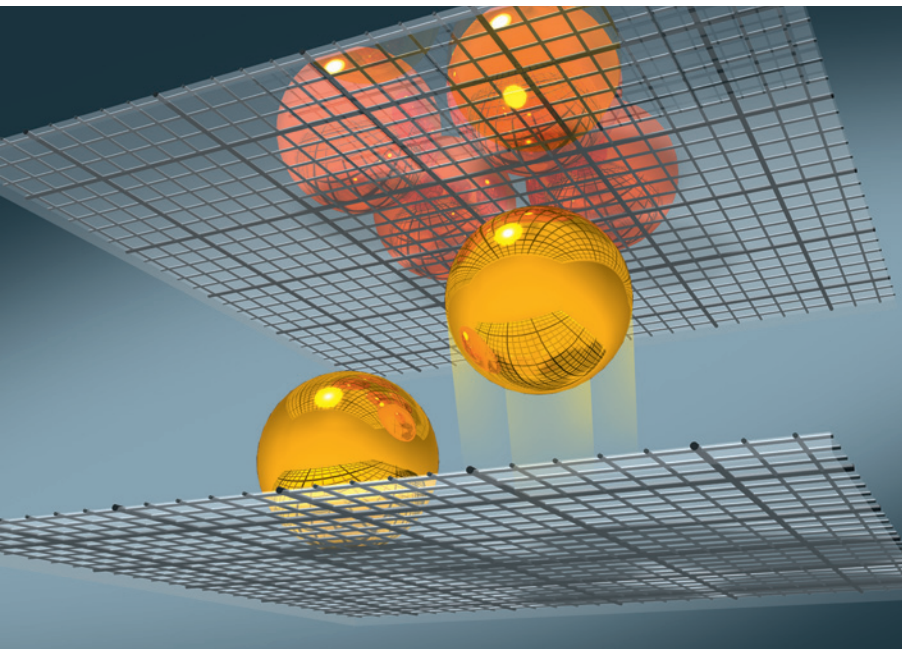
Fig. 5: Credit transfer of competences in terms of time dimension



or on the basis of the competences demonstrated. The credit transfer potential means the scope of equivalent learning outcomes which are comparable in terms of breadth and depth. This process is conducted in close coordination with the chambers involved, the companies providing training and schools operating at the respective interfaces.

The consequences arising from a credit transfer of learning outcomes may be very different. Aspects such as a shortening of training times are conceivable (Fig. 5). Further possibilities are the omission of completed learning units whilst other learning units are dealt with in greater detail or the recognition of additional qualifications. Debate in this area has not yet been concluded. The expectation is that credit transfer procedures will differ in a way specific to the interface in question.

## Credit transfer models in practice



In order to develop usable models for the purpose of crediting learning outcomes in practice, due consideration needs to be accorded to the particular characteristics of each interface.

The projects relating to the first three interfaces offer opportunities to credit existing learning outcomes to dual courses of training in particular. This involves taking learning outcomes from vocational training preparation, full-time school based training or a related dual course of VET into account. In such cases, a time-based credit transfer such as that outlined in Fig. 5 could be deployed.

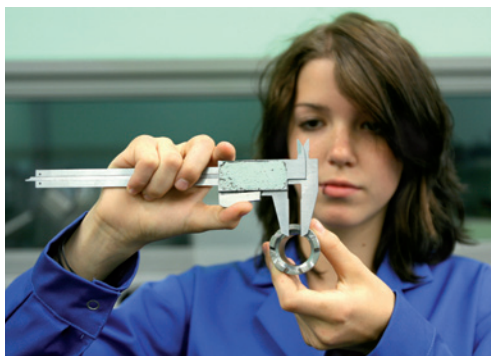
The credit transfer system developed by the DECVET initiative aims to retain the principle of the regulated occupation. This needs to be taken into account during practical piloting. With regard to the develop-

ment of credit transfer models which shorten the period of training, particular attention needs to be paid to general organisational conditions. This means, for example, that company content needs to be coordinated with vocational school based content and with the time structure of the examination system.

Alongside the possibility of reducing the period of training for the continuation course, there is also an option to offer learners individual support by providing additional training. This may take place via such means as the acquisition of (cross) specialist competences or additional qualifications or by spending periods of time abroad.

The crucial factor within the dual system is that the companies providing training agree to the credit transfer and that they act jointly with the trainees in making application to the competent body. It is the responsibility of the competent body to make a decision on the approval of the application.

In contrast to the first three interfaces, the fourth interface offers opportunities to improve the transition from the dual system to advanced vocational training. Since no binding curricula exist, the challenge initially comprises describing learning outcomes. In this area, only examination procedures and conditions for admission to the examination are statutorily prescribed. In order to receive a credit transfer, candidates need to provide evidence that they have completed a course of vocational education and training and that they are in employment. This means that informally acquired competences should also be included in the development of credit transfer procedures.





In the wake of the development work conducted in DECVET, it became apparent that the particular characteristics of the respective interfaces require different credit transfer procedures. The aim of the following section is to present models to serve as examples in indicating the possible nature of credit transfer of learning outcomes at the respective interfaces. The examples outline opportunities which arise both for the learners and for the companies providing training which are involved.

### **Increasing the chances for credit transfer between vocational training preparation and dual vocational education and training**

The precondition for crediting learning outcomes to a higher level training course is to identify appropriate procedures for the assessment of competences acquired. Whereas an established examination system already exists in dual vocational education and training, such a system still needs to be implemented for vocational training preparation. The quality of the competence assessment procedures is a crucial factor within this process. High quality procedures in this regard may be of major assistance in creating or increasing mutual trust between stakeholders.

Figure 6 illustrates the competence assessment procedures used in DECVET projects conducted by Deutsche Bahn AG (German Railways), the Inter-Company Training Association (ÜAG) of Jena and the

Educational Institute of Hessian Trade and Industry (BWHW) working in conjunction with the Institute for Vocational Training, Labour Market and Social Policy (INBAS). These instruments are deployed for the monitoring of learning outcomes in vocational training preparation. The projects have also proposed instruments for the structuring of the learning process. Learners keep a structured report book, for example (Fig. 7). The young people ultimately demonstrate their competences on the basis of a combination of written, oral and practical tests. Matrices are used to assist in the evaluation of work processes and work results (Fig. 8).

Kathrin has also benefited from such a competence assessment procedure. Her example will be presented below. Kathrin does not initially succeed in gaining direct entry to company-based training. For this reason, she is assigned to a vocational preparation scheme by the Federal Employment Agency. During the vocational preparation scheme, Kathrin completes the two learning units “Basic principles of

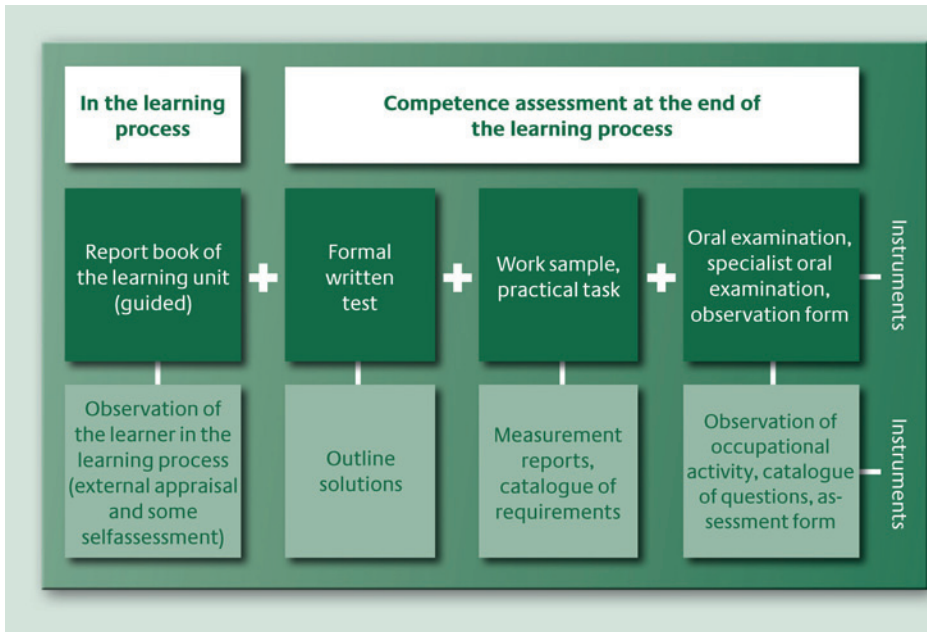


Fig. 6: Instruments for the recording of competences at the interface between vocational training preparation and dual VET



**DECVET**  

**Anhang Nr. 1.1 Berichtsheft**

Lerneinheit: Grundlagen der manuellen Metallbearbeitung unter Verwendung einfacher maschineller Fertigungsverfahren.

Arbeitshandlung: Herstellung eines Werkstückes nach Zeichnung.

Turnus: Das Berichtsheft wird nach einer Werkstatteinheit ausgefüllt.

Name: \_\_\_\_\_ Vorname: \_\_\_\_\_

Lernort/ Klasse: \_\_\_\_\_ Datum: \_\_\_\_\_

ARBEITSCHRITTE EINER VOLLSTÄNDIGEN ARBEITSHANDLUNG	Kenntnisse und Fertigkeiten
Arbeitsvorbereitung und Gesundheitsschutz	<p>Welche relevanten Sicherheitsbestimmungen wenden Sie an?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Welche vorgeschriebene persönliche Schutzausrüstung verwenden Sie?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Auf welche Sicherheits- und Gesundheitskennzeichnungen sowie Gefahrensymbole haben Sie geachtet?</p>

Fig. 7: Structured report book (developed by BWHW/ INBAS)

Fig. 8: Matrix for the evaluation of acquired competences (developed by Deutsche Bahn AG)

**Praktischer Aufgabenteil**

Ort, Datum: \_\_\_\_\_

LE C: Kunden betreuen			
Station & Service		Lern-ergebnis	Bewertung
Kunden im Bahnhof beraten und betreuen	Der Lernende beantwortet Kundenanfragen unter Berücksichtigung der Servicegrundsätze. Er ermittelt den Kundenwunsch und informiert über die Angebote der DB.	C2	Erreicht
			Überwiegend erreicht (50%)
			Nicht erreicht
Bemerkung/ Begründung:			
LE D: Arbeiten im Bahnhof			
Station & Service		Lern-ergebnis	Bewertung
Technische Hilfsmittel, Serviceeinrichtungen kennen und bedienen	Der Lernende bedient den Neuen Ticketautomaten (NTA) und unterstützt Reisende bei der Bedienung. Er bedient die Informationssysteme HAFAS (Fahrplanauskunftssystem) und nutzt sie als Informationsquelle. Der Lernende geht sorgfältig mit den Geräten um. Störungen meldet er den entsprechenden Stellen.	D2	Erreicht
			Überwiegend erreicht (50%)
			Nicht erreicht
	Der Lernende beschreibt und bedient die technischen Hilfsmittel und Serviceeinrichtungen seines Einsatzbahnhofes sicher und kann diese in der Kundenberatung anwenden. Störungen meldet er den zuständigen	D3	Erreicht
			Überwiegend erreicht (50%)
			Nicht erreicht



manual metalworking” and “Basic principles of machine metalworking”. These learning units address theoretical and practical focuses of the various occupations in the metalworking sector.

Once joint agreement with the trainer has been reached, the positive development Kathrin displays in terms of personality and performance leads to a competence assessment registration. There could also be the prior option of using an assessment questionnaire to evaluate apprenticeship entry maturity and to record this in writing. The process concludes with a competence assessment which is carried out in the same style as a final examination in the occupational field of metalworking and confirmed or conducted by the respective chamber. At least two trained examiners carry out the competence assessment. As well as the practical part of the assessment, during which Kathrin produces a workpiece and explains her work in a situative oral examination, she also answers written questions relating to specialist theory and business and social studies. Evaluation takes place on the basis of a standardised matrix which accords a different weighting to the individual thematic areas. Kathrin fulfils the requirement and successfully completes each learning unit.

Following the competence assessment, the learning outcome is documented via a certificate. This enables learners such as Kathrin to receive a reliable document. This assists host institutions, generally the companies providing training, to recognise the competences demonstrated and offer a credit transfer.

The certificates and the evidence they provide can serve as a vehicle for significantly improving the chance of finding a training place. In Kathrin's case, the company recognises the certificate and waives the aptitude and recruitment test. Further opportunities for a credit transfer can also be agreed between the companies offering training, the learners and the chambers. Such opportunities could include exemption from aptitude or recruitment tests or from the initial phases of basic training.

### Project principals

**Educational Institute of Hessian Trade and Industry (BWHW) Institute for Vocational Training, Labour Market and Social Policy (INBAS GmbH)**

Occupations from the occupational field of metalworking technology, e.g.

- Plant mechanic
- Industrial mechanic
- Construction mechanic
- Tools mechanic
- Metalworker

**Deutsche Bahn AG (German Railways), DB Training, Berlin/ Frankfurt a. M.**

- Commercial and service oriented occupations
- Metalworking and electrical engineering occupations
- Transport occupations

**Inter-Company Training Association and Employment Development Agency (ÜAG) of Jena**

Main focus on occupations in the metalworking sector

- Industrial mechanic and
- Metalworker

but also covering other training occupations within the metalworking occupational field.

## Improving the credit transfer of competences within an occupational field in dual training

Daniel has completed the first two years of training in the three-and-a-half year dual training programme in the occupation of electronics technician for automation technology and has achieved a good degree of success.

Financial difficulties at the company providing training mean that he is unable to complete his training. When he searches for a comparable position he is offered a training place in the occupation of mechatronics fitter.

Conditions to enable a smoother transition from one occupation to another are currently being created. The DECVET pilot project conducted by the Research Institute for Vocational Education and Training (f-bb) has cooperated with companies from the automobile sector on the joint identification of learning units for eight training occupations. For this purpose, the learning outcomes which trainees possess at the end of the respective VET courses have been described. This makes credit transfer opportunities between adjacent occupations visible. Within this context, the equivalence of the learning



Electronics technician for automation technology (EAT) – Mechatronics fitter (METRO): Joint units in the first year of training	Average learning duration (months)	
	METRO	EAT
Produce mechanical components using manual procedures	3	1–2
Construct and use electronic sub-assemblies	1	3
Construct and commission electro technology installation circuits	2	2
Construct and commission hard-wired control systems	1	2
Construct and commission pneumatic and hydraulic subsystems	2	1

Table 1: Example of joint learning units in two dual training occupations in the first year of training

units was evaluated in terms of depth and breadth. This makes it possible to achieve better identification of curricular intersections of the various occupations. The results of this process included joint units in the first year of training in the occupations of electronics technician for automation technology and mechatronics fitter.

The first two years of training in the occupation of electronics technician for automation technology comprise eight units. A credit transfer of up to 100% for the occupation of mechatronics technician can be awarded for some of these units due to the equivalence which has been ascertained (Table 1). The individual units are described in terms of knowledge, skills and competences. Daniel is able to prove that he has completed the learning units because the company relinquishing his training contract has issued competence certifications. This gives the new company providing training with a precise picture of the competences Daniel brings with him from his previous training.


A competence assessment procedure could take place in the following manner. The learning units for training in the occupation of electronics technician for automation technology are concluded by means of a complex examination. This examination is conducted by the companies he is leaving and joining in agreement with the voca-




tional school responsible. In order for this to take place, the chamber will need to have confirmed aptitude to conduct the competence assessment on the part of the company providing training. In order to ensure that there is effective coordination between companies and the vocational school and that the learning outcomes of the individual units can be documented, the EDGE Project conducted by the Research Institute for Vocational Education and Training (f-bb) in Nuremberg has developed a Competence Pass. If this pass is filled in by trainees and countersigned by the contact partners in the company and at the vocational school on an ongoing basis, it is possible to see at any time which parts of training have been completed and which unit contents have been imparted at the two learning venues.

An appropriate certificate can also provide information in this regard, as is the case in the ASKU Project conducted by the Schwerin Training Centre (SAZ) (Fig. 9). This certificate is issued in conjunction with an assessment form which documents the competences which have been ascertained.

The final result for Daniel is that he is able to receive a credit transfer for two thirds of the training he has completed in the occupation electronics technician for automation technology once submissions have been made to the competent chamber. Because of his previous levels of achievement, an agreement is reached that missing content can be imparted parallel to ongoing training. This means that Daniel can enter the third year of training in the occupation of mechatronics fitter without any loss of time.



**CERTQUA**  
Zertifikat



**SAZ**  
SCHWERINER  
AUSBILDUNGSZENTRUM

**Staatlich anerkannte Einrichtung der Weiterbildung**

---

**Zertifikat**

**Herr/Frau**


# Manni Mustermann

*hat in der Zeit vom 08.03.2010 – 26.03.2010 an der berufübergreifenden Lernereinheit teilgenommen.*


*Lehrangsinhalte:*

## Mess- und Prüftechnik, Qualitätssicherung


- Allgemeine Grundlagen der Mess- und Prüftechnik
- Bauteile, bzw. Produkte mit verschiedenen Mess- und Prüfmitteln prüfen
- Anwenden von Prüflisten und Prüfvorschriften
- Statistische Verfahren zur Qualitätssicherung



Michel  
Geschätsuhr




Siegel



Ibrix  
Lernbegleiterin

Schwerin, 26.03.2010

**Schweriner Ausbildungszentrum e.V., 19057 Schwerin, Ziegeleiweg 7**  
Tel.: 038614802-0 Fax: 480215 - E-Mail: info@szaw.de - Homepage: www.sazev.de



**SAZ**  
SCHWERINER  
AUSBILDUNGSZENTRUM

**Staatlich anerkannte Einrichtung der Weiterbildung**

	sehr gut	gut	befriedigend	ausreichend	mangelhaft	ungenügend
Siegel						
Sie führen Berechnungen zur Fertigungs- und Prüftechnik durch.						

Der Kennzettel wurde mit xx von 100 Punkten absolviert.

### 1.2. Bewertungsliste Fertigkeiten

Ausprägung	In vollem Umfang, schnell und zuverlässig	zuverlässig	mit Anleitung	noch nicht dazu in der Lage
Sie sind in der Lage, die Arbeitseinheiten für Messungen unter Wiederholbedingungen auszuordnen.				
Sie können Prüfliste aus einzelnen Verfahrensanweisungen bestehend, von der Warenangabe über die Prüfung in der Fertigung bis zur Endprüfung erstellen.				
Sie sind in der Lage, Maßnahmen bei Störungen im Fertigungsprozess zu erkennen und zu analysieren.				

### 2. Personale Kompetenzen (Sozialkompetenz, Selbstkompetenz)

Bewertungsliste Sozial- und Selbstkompetenz

Ausprägung	In vollem Umfang, schnell und zuverlässig	zuverlässig	mit Anleitung	noch nicht dazu in der Lage
Die Teilnehmer:innen können Informationen und Anweisungen aufnehmen und in ihre Tätigkeit integrieren und einen erfolgreichen Informationsaustausch mit anderen gestalten.				
Die Teilnehmer:innen können ihre Arbeit protokollieren, mit Mess- und Prüflisten zuverlässig umgehen.				
Sie können ihre Ergebnisse dokumentieren und integrieren / präsentieren.				
Sie können selbstständig und mit hoher Gewissenhaftigkeit ihr Wissen und ihre Kenntnisse auf neue Situationen übertragen.				

Die ausbildungsgerechte Betriebsaufgabe mit dem Thema „Qualitätssicherung und Ermittlung der Prozessfähigkeit“ wurde mit xx von 100 Punkten absolviert.

Unterschrift Betrieb
Unterschrift Auszubildender
Unterschrift Lernbegleiterin

Fig. 9: Certificate and assessment form after completion of a learning unit (issued by the Schwerin Training Centre, SAZ)



Daniel's case makes it clear how credit transfer can assist in increasing horizontal permeability. The prerequisite for this is to identify curricular intersections within an occupational field. In developing a credit transfer procedure at this interface, it is important to investigate joint learning outcomes within a whole occupational field. Results thus far show that overlaps exist during the first years of training in particular. Notwithstanding this, the findings also demonstrate that increasing specialisation in the later course of training reduces credit transfer potential.

For trainees at this interface, however, credit transfer offers a considerable benefit in every case due to the fact that it enables the avoi-

### Project principals

#### Research Institute for Vocational Education and Training (f-bb), Nuremberg

- Machine and plant operator
- Production mechanic
- Vehicle mechatronics technician
- Motor vehicle body and vehicle construction mechanic
- Mechatronics fitter
- Industrial mechatronics technician

- Electronics technician for automation technology
- Industrial mechanic
- Tools mechanic

#### Schwerin Training Centre (SAZ)

- Mechanic in plastics and rubber processing
- Tools mechanic
- Mechatronics fitter



dance of unnecessary waiting loops after a change of training occupation within an occupational field.

### **Facilitating the transition from full-time school based training to dual VET**

The reduced level of practical relevance of full-time school based training courses is sometimes viewed as inhibiting credit transfer. Despite such objections, an equivalence comparison shows that overlaps certainly exist between related school based and dual training occupations. This particularly forms a foundation for the possible awarding of a time-based credit transfer. This enables training time to be waived for learners who wish to commence dual training following completion of a school-based course. This thus saves them from having to pursue an extended training pathway.

This can be demonstrated in the case of Isabel, who having completed training as a state certified business assistant specialising in information processing, commences dual training in the occupation of office management clerk. A credit transfer procedure permits her to avoid redundancies in training.

After obtaining a good intermediate school leaving certificate, Isabel initially completes the two-year vocational training programme in the occupation of state certified business assistant at a vocational school in Saxony. This occupational profile contains the precise areas of activity in which she later wishes to work.

At the full-time vocational school, learning objectives are addressed in an employment oriented and situationally related manner which mostly involves use of the computer. Parallel to this, Isabel has the opportunity to deploy and expand her diverse skills in company placements.

In the final company in which she undertakes an internship, the opportunity arises to take a position as assistant to a head of department in two to three years' time. Nevertheless, such a role in this family-owned SME traditionally requires a vocational qualification in the occupation of office management clerk.



The Head of Human Resources at the company offers Isabel the chance to begin dual training as an office management clerk at the company once she has successfully completed her qualification at the full-time vocational school. It would be conceivable to shorten the period of training required. In order to be able to achieve the training objectives within this shortened period, however, it is important to obtain a precise picture of the competences which have already been acquired and of those competences which are still missing.

The summary of the learning units at the full-time vocational school enables the Head of Human Resources to recognise that there is potential for credit transfer in numerous fields of activity which have been covered. The specialist competences depicted, for example, allow the conclusion to be reached that learning outcomes of a comparable breadth and depth will be present once the vocational training has been completed.

The learning outcomes of both VET courses are described in terms of professional competences (skills and knowledge) and personal competences. A specialist commission has drawn up a relevant credit transfer recommendation. This tells the Head of Human Resources that equivalent learning outcomes exist. For this reason, a transfer of credits is possible for the respective professional competences. In order to plan company-based training over a shortened period, Isabel's Head

Empfehlung zur Anrechnung von Lernergebnissen

Wirtschaftsassistent/in FR Informationsverarbeitung (120 ECVEY-Punkte) Lerninhalten und Fachkompetenz		Informationsverarbeitung für kaufmännische Anwendungen (35)	Betreuung von IT-Systemen (15)	Organisation marktorientierter Leistungsprozesse (35)	Buchführung u. Controlling (20)	Personalmanagement u. Entgeltabrechnung (10)	Projektmangement (5)	Anrechnungsempfehlung (ECVEY-Punkte)
<b>Bürokauffmann/-frau</b> (180 ECVEY-Punkte) Lerninhalten und Fachkompetenz	Kfm. Schriftverkehr bearbeiten u. Geschäftsverordnungen erlassen, auch in engl. Sprache (15) Kfm. Probleme mit Hilfe von Tabellenkalkulation u. Datenbanksystem lösen (15) Kfm. Sachverhalte präsentieren u. kfm. orientierte Webanwendungen einsetzen (5) Wesentliche Funktionen von IT- u. Betriebssystemen analysieren u. anwenden (10) Routearbeiten bei der Administration, Instandhaltung u. Wartung von IT-Systemen durchführen (5) Beschaffungsprozesse durchführen u. buchhalt. erfassen, Produktionsvorgänge planen (15) Absatzvorgänge gestalten, durchführen u. erfassen, Instrumente des Marketing anwenden (15) Investitions- u. Finanzierungsprozesse vorbereiten u. buchhalt. erfassen (5) Bücher mit Hilfe kfm. Software führen u. dem Jahresabschluss erstellen (10) Jahresabschluss u. Kosten- u. Leistungsrechnung zur Durchführung des Controlling auswerten (10) Grundlegende Aufgaben im Personalbereich bearbeiten (5) Entgeltabrechnungen unter Einsatz entsprechender Software bearbeiten (5) Wirtschaftliche Aufgaben- u. Problemlösungen in Projekten bearbeiten (5)							
<b>Auftrags- und Rechnungsbearbeitung (30)</b>								<b>10-15</b>
Anfrage-, Auftrags-, Rechnungsbearbeitung planen, durchführen und kontrollieren (25)								10-15
Aufgaben in der Lagerwirtschaft ausführen (5)								-
<b>Personalverwaltung und Entgeltabrechnung (30)</b>								<b>5</b>
Bei der Personalplanung, -verwaltung und -entwicklung mitwirken (15)								10
Bei der Entgeltabrechnung mitwirken, Vorgänge buchhalterisch erfassen (15)								5
<b>Buchführung und Kostenrechnung (30)</b>								<b>15-20</b>
Bücher nach rechtlichen Grundfragen führen, Geschäftsfälle buchhalterisch erfassen (20)								10-15
An kaufmännischen Steuerungs- u. Überwachungsaufgaben mitwirken (10)								5
<b>Informationsverarbeitung für kaufmännische Anwendungen (30)</b>								<b>25-30</b>
Geschäftsbriefe normgerecht gestalten u. den kfm. Schriftverkehr bearbeiten (15)								15
Kfm. Aufgaben u. Probleme mittels Standardsoftware bearbeiten (10)								10
Informationen übermitteln u. Bürokommunikationstechniken anwenden (5)								0-5
<b>Büroorganisation (20)</b>								<b>-</b>
Arbeitsplätze unter Berücksichtigung fachlicher u. ergonomischer Grundsätze gestalten (5)								-
Büroabläufe u. Arbeitsabläufe planen, durchführen u. kontrollieren(15)								-
<b>Organisation betrieblicher Arbeitsprozesse (20)</b>								<b>-</b>
Einzel- und gesamtwirtschaftliche Prozesse analysieren u. bewerten (10)								-
Betriebliche Aufbau- u. Ablauforganisation analysieren u. gestalten (10)								-
<b>Organisation marktorientierter Leistungsprozesse (20)</b>								<b>-</b>
Beschaffungs-, Produktions- u. Absatzprozesse analysieren u. buchhalterisch erfassen (15)								-
Finanzierungs- und Investitionsprozesse analysieren u. buchhalterisch erfassen (5)								-
Entsprechung der Lernergebnisse: X... >25%								

Fig. 10: Recommendation for the credit transfer of learning outcomes (left) and equivalence comparison of learning outcomes (right), developed by AFBB Dresden

Vergleichbare Lerninhalte und Fachkompetenz (ECVEY-Punkte)	Wirtschaftsassistent/in (WAI) <b>Buchführung und Controlling</b> Bücher mit Hilfe kaufmännischer Software führen und den Jahresabschluss erstellen (10) Jahresabschluss und Kosten- und Leistungsrechnung zur Durchführung eines effektiven Controllings auswerten (10)	Bürokauffmann/-frau (BK) <b>Buchführung und Kostenrechnung</b> Bücher nach rechtlichen Grundfragen führen, Geschäftsfälle buchhalterisch erfassen, beim Jahresabschluss notwendige Buchungen vorbereiten (20) An kaufmännischen Steuerungs- u. Überwachungsaufgaben und Berichtswesens mitwirken (10)
Einschätzung der Lernergebnisse	20 ECVEY-Punkte auf DQR-Niveau 2 <b>Aufwand für den Erwerb der Lernergebnisse:</b> laut Lehrplan ca. 280 Ustd. im 1. und 2. Jahr <b>Komplexität und Umfang der Lernergebnisse:</b> Die Absolventen verfügen über grundlegendes Fakten-, Regel- und Begründungswissen (wenige Kenntnisse, Beschreibung vorwiegend durch „kennen“ und „verstehen“) sowie über grundlegende kognitive und praktische Fertigkeiten zur Ausführung von Aufgaben der Buchführung und des Controlling (nur wenige berufliche Fertigkeiten, z.B. „buchen“ und „erfassen“), sie können deren Ergebnisse nach vorgegebenen Maßstäben beurteilen sowie Zusammenhänge herstellen.	35 ECVEY-Punkte auf DQR-Niveau 2 <b>Aufwand für den Erwerb der Lernergebnisse:</b> laut RLP ca. 200 Ustd., laut Lehrplan im 1. Jahr, 2-4 Monate im 2. und im 3. Jahr <b>Komplexität und Umfang der Lernergebnisse:</b> Die Absolventen verfügen über ein breites Fakten-, Regel- und Begründungswissen (viele Kenntnisse, Beschreibung vorwiegend durch „kennen“ und „verstehen“) sowie über kognitive und praktische Fertigkeiten zur Ausführung von Aufgaben der Buchführung und des Controlling (viele berufliche Fertigkeiten, z.B. „buchen“, „erstellen“, „durchführen“), sie können deren Ergebnisse nach vorgegebenen Maßstäben beurteilen sowie Zusammenhänge herstellen.
	Die Aufgabenbereiche des betrieblichen Controlling sind ein zentraler Bestandteil eines	Die Kostenstellenrechnung ist ein mehrstufiger Betriebsabrechnungsbogen (BAB), der die Kostenstellen des Betriebs in die Kostenstellen des Controlling überführt.

*“Within the scope of the Eurolevel Project, we are piloting a so-called “learning document” as a competence assessment instrument in craft trades occupations. The learning document is a significantly expanded report book which presents the solution of work tasks in a substantiated manner. This enables it to deliver a proven effect*



Karin Häcker from the Baden-Württemberg Association of Chambers of Crafts and Trades

*in terms of increasing quality in dual training. It clearly fosters the exchange of information between trainers and apprentices. Companies are better able to assess the competences of their trainees and the apprentices themselves approach their work tasks in a committed manner. Although this detailed presentation of solutions and the support provided by trainers take time, all those involved confirm that the benefits delivered by the learning document far outweigh any expense of time incurred. Notwithstanding this, it is questionable that the instrument could serve as a basis for the awarding of credit points due to the fact that its validity is not secured.”*

of Human Resources seeks advice from the training consultant at the Chamber of Industry and Commerce. The foundation for the design concept of the shortened training is provided by the documentation of areas where competences are missing within the comparison of the learning outcomes (Fig. 10).

The tasks which Isabel needs to tackle in the final examination area of “Micro and macro-economic business processes/accountancy and controlling” include complex matters from the areas of procurement and bookkeeping. In addition to this, she is required to prepare and present a project which she subsequently must defend in a specialist oral examination. There is also an oral examination in business English. Having successfully completed her full-time school based vocational training, she is now entitled to call herself “state certified business assistant specialising in information processing”.

In order to credit the competences acquired in the school-based training to dual training, the DECVET pilot project conducted by the Aca-

demy for Vocational Training (AFBB) in Dresden has developed a set of competence assessment instruments.

Further opportunities for competence assessment at this interface are discussed in the Eurolevel Project. The method of the specialist oral examination is currently being piloted in order to be able to identify competences in the training occupation of wholesale and foreign trade clerk. A further possibility under discussion is the “learning document”. This involves the assignment of a company-related task by training staff which the learners are then required to tackle. The learning document records material data relating to the fulfilment of the task. This enables the acquisition of knowledge, skills and competences on the part of the trainees to be identified during the training period.

The specific example of Isabel displays the following aspects. The completion of her first course of vocational training enabled her to lay down a solid foundation for her future career path. When signing the training contract for the occupation of office management clerk, Isabel and the Head of Human Resources agree on a credit transfer of one third of the total points for the training. This means that the remaining period of training is reduced by twelve months.

### Project principals

#### **Academy for Vocational Training (AFBB) in Dresden**

- State certified business assistant specialising in information processing
- Commercial clerk for office communication
- Office management clerk
- International tourism assistant
- Travel agent

#### **Consortium of the Association of Baden-Württemberg Chambers of Industry and Commerce, the Association of Baden-Württemberg Chambers of Crafts and Trades and the Ministry of Education and Cultural Affairs, Young People and Sport of the State of Baden-Württemberg.**

- Wholesale and foreign trade clerk
- Plant mechanic for sanitary, heating and air conditioning systems

## **Identifying and crediting competences between dual vocational education and training and advanced vocational training**

The potential for credit transfer is located in significantly different areas in the dual system and in advanced vocational training. The main reason for this is the fact that no statutorily regulated training courses exist for advanced vocational training. This means that the DECVET projects conducted at the fourth interface are confronted with the task of developing appropriate procedures to assist in the identification of competences and of areas of potential for credit transfer.

The competence assessment procedures required in this regard may prove to be very different in nature. Possibilities include project work, company-related assignments, situation-based tasks and business simulations. The objective fundamentally remains the same: making competences already acquired visible regardless of whether such competences have been gained formally within a course of vocational education and training, non-formally within the scope of other courses or informally via occupational experience.

One of the participants in such a competence assessment procedure was Jens, who successfully completed training in the occupation of mechatronics fitter three years ago. The company which had provided him with training was, however, unable to offer him permanent employment. He has attended various courses to extend his knowledge in the fields of technology and organisation and would now like to undertake the advanced training required to become a certified industrial foreman. Because he is unable to demonstrate the sufficient level of occupational practice needed he completes a competence assessment procedure. This also constitutes an integrated analysis of potential conducted by the educational provider. Alongside the usual examination forms such as formal written exams, situation based tasks and specialist oral examinations, the analysis also includes a complex case study or a system simulation activity.

Personal competences, social competences and management skills in particular may also be acquired in other life and learning contexts such as via the exercise of responsible tasks in clubs. The procedures enable account to be taken of this.



One possible way of identifying these competences is via system simulation activities. These investigate employability skills by simulating a real area of activity. This is a particularly suitable way of identifying and demonstrating individual knowledge, skills and the status of abilities with regard to the cross-disciplinary competences of a candidate. Once the results have been evaluated, competences are documented in an individual “strengths and weaknesses profile”. It emerges that Jens already has very good knowledge and skills with regard to technical issues in particular whereas he needs to undergo further development in the areas of human resources and management. The educational provider uses this detailed information as the basis for working together with Jens on drawing up his own individual competence development concept. This possibility has been developed by the Bremen Centre for Mechatronics (BCM) acting in conjunction with the Bremen Institute for Work Science (aib). It is, however, only one method of identifying competences.

Another concept is provided by the BAQ – the Research Institute for Employment, Work and Qualification in Bremen. This involves activity-based situational tasks to ascertain the competences of up and coming foremen. The challenge here is to use situational tasks as a vehicle for mapping the complexity of the construction sector and of its task areas and work processes. The parties involved in a cooperation project are also addressing the requirement to identify competences which provide the ability to deal with complex work tasks. The Halle based Training Promotion Association for the Chemical Sector (QFC) and the Saxony Educational Association for Environmental Protection and Chemical Occupations (SBG) have joined forces with the Technical

University of Darmstadt to pursue work in this area. Their aim is to facilitate a credit transfer for the advanced vocational training leading to a qualification as certified (chemical) industrial foreman. A team task, a company project task and documentation enable competences to be demonstrated in real work environments.

The competences documented in this fashion can be credited in different ways. If certain prerequisites are fulfilled, Section 56 (2) of the Vocational Training Act (BBiG) provides a possibility for individual examination components in some advanced training regulations to be waived on application. Alongside this exemption from examination elements, credit transfer options also exist below the regulatory level. Individualisation of examination preparation presents one route. Learning outcomes achieved can be credited towards preparation courses. This would provide high time and financial benefits for participants. Regulations governing admission to the examination are a further alternative which is the object of debate. It may transpire, for example, that candidates do not fulfil the formal requirements because they do not have the necessary minimum period of occupational experience. In such a case, educational providers may issue a recommendation for admission to the examination. Such an approach would be possible if a candidate were to subject him or herself to a competence assessment in order to provide evidence of the necessary practical skills in the occupation.

### Project principals

#### **BAQ Research Institute for Employment, Work and Qualification, Bremen**

- Foreman
- Skilled worker

#### **BCM – Bremen Centre for Mechatronics & aib – Bremen Institute for Work Science, University of Bremen**

- Certified (mechatronics) industrial foreman

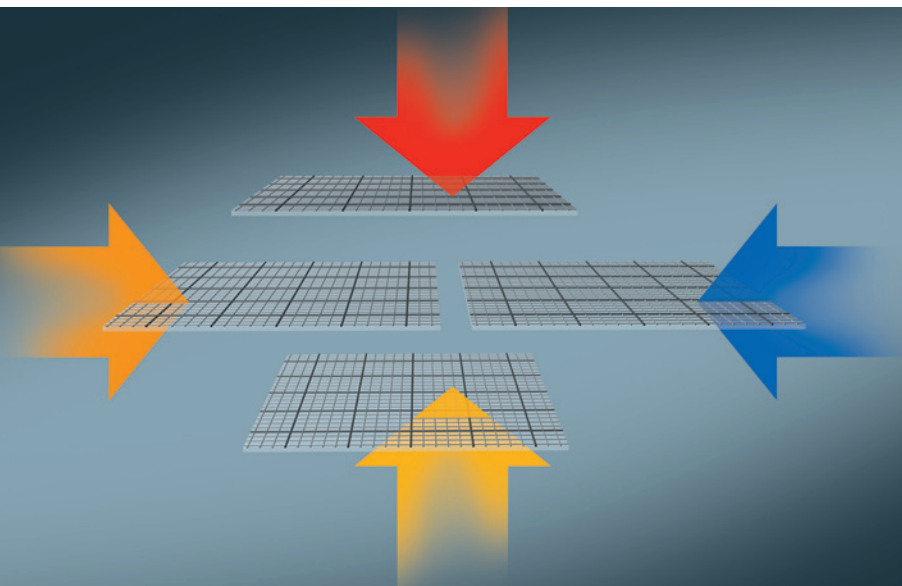
- Systems technician in mechatronics
- Mechatronics fitter
- State certified mechatronics technician

#### **QFC – Training Promotion Association for the Chemical Sector**

- Chemical technician
- Chemical laboratory technician
- Certified (chemical) industrial foreman



## Success has its basis in joint action and mutual trust



The DECVET initiative is breaking new ground with its development of credit point and credit transfer models in vocational education and training.

In order to implement an innovative project in practical terms, there needs to be a willingness to embrace new developments, change processes and creative risk. The initial focus needs to be on agreeing joint objectives and on establishing the rules which govern cooperation in order to create a reliable basis. Cooperation, participation and trust are indispensable if all stakeholders are to work together in an effective way.

These principles are also of fundamental significance to the DECVET projects. The initiative is creating trust by allowing effective scope to



be accorded to the various positions, functions and vested interests involved in a differentiated and equivalent manner. The requirements of all the stakeholders are taken into account: the educational providers, the vocational schools, the chambers, the examination boards, the ministries and, last but not least, the companies.

*“The ‘ECVET Chemical’ project operates at the interface between initial vocational education and training and advanced vocational training. The aim is to use competence assessment as a vehicle for determining the employability skills of test persons with regard to the processing of routine work and problems on both*

*an individual and group level. One positive aspect of this approach from the point of view of trade and industry is that participants would be able to receive a current profile of their own strengths and weaknesses.*

*The fact that outcome oriented competence assessment still involves a high degree of expenditure is, however, perceived to be negative. With regard to the possible introduction of such a credit transfer procedure, a cost-benefit analysis is an urgent necessity. Advanced vocational training examinations need to remain possible to organise and affordable.”*



Dr. Simone Danek  
Managing Director  
of Initial and Continuing Vocational  
Education and Training at the  
Chamber of Industry  
and Commerce of  
Halle-Dessau

*“From our point of view, before a credit point system is introduced on a national basis it will be essential to subject objections to serious investigation and to continue to adopt the current dual training system as our reference point. The dual system must not be replaced or drastically*

*altered in any way. The aim of vocational training must continue to be to provide full occupational qualifications.”*

Susanne Berneit  
Darmstadt Employment Agency

The regional steering groups and advisory boards of the projects provide participants with an opportunity to bring their ideas regarding the development and piloting process to the table in a timely manner. They are able to coordinate action plans, undertake interim evaluations and agree on corrections or adaptations to the projects. These may then be discussed and consulted upon in the National Advisory Council of the DECVET initiative. The focus is on using the experiences of these cooperative efforts to gradually establish a basis of trust. This means that the DECVET pilot initiative can set an example for the future dissemination and implementation of the credit transfer models.

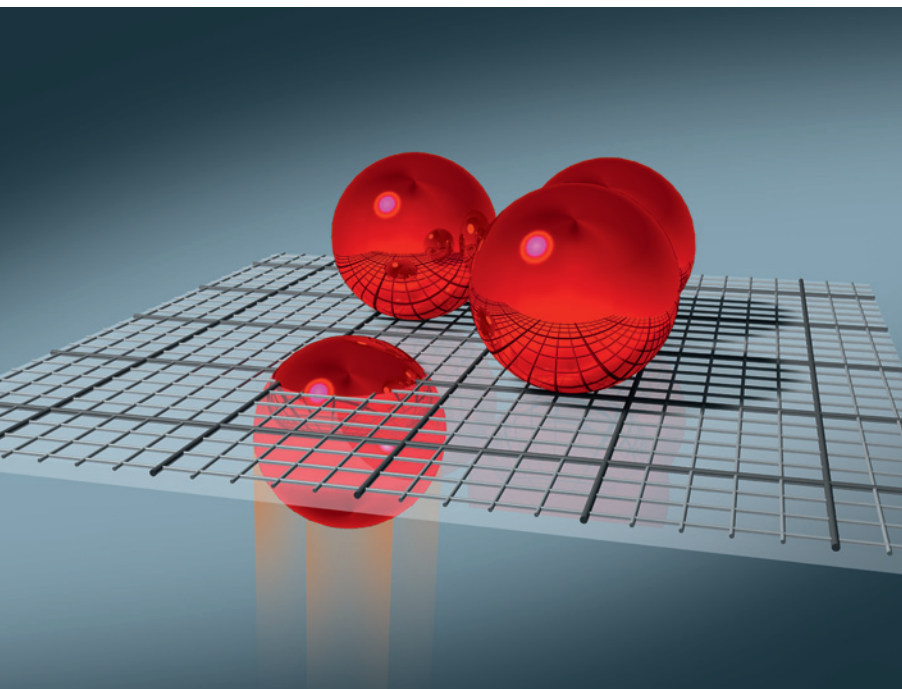


*“There is no doubt that the idea of the credit transfer system offers sufficient inherent potential. This particularly applies against the background of demographic development in the training sector and the increasingly vehement protestations of trade and industry that they are unable to find suitable applicants and in the light of the associated intention to recruit young skilled workers from the ranks of those who participate in vocational preparation schemes. The difficulty lies in the conscious implementation of the idea rather than in the route to a successful vocational qualification via vocational preparation and VET within a defined period of time. The dual VET system offers a good platform in this regard. Closer cooperation between “vocational preparers”, “human resources decision makers”, trainers and (not to forget) vocational schools is certainly of crucial significance. It may also be necessary to deploy the existing pedagogical tools in a more conscious and targeted way within the individual phases of training (and not in a manner which merely relates to vocational preparation and VET). This will enable the achievements,*

*the acquired skills and the existing social competence of participants in vocational preparation schemes to be certifiable and also be rendered more transparent by the credit transfer system. This is where I perceive the intersection to be, the prerequisite for the necessary degree of acceptance by VET. If we succeed in moving beyond arguing from the point of view of necessity and achieve and sustain a stable level of quality in professional and social core areas, it will be possible in the medium term to use the credit transfer system as a means for facilitating rapid access to and completion of VET for participants in vocational preparation. Those who doubt the wisdom of this approach – possibly with regard to their own company culture – will need to be integrated into the implementation of this project via good and well-founded cooperation at the interface between vocational preparation and VET.”*

Klaus-Peter Wintzler  
KEMPFER & KOLAKOVIC  
Berufsausbildungs GmbH  
Jena

## A look ahead



The BMBF pilot initiative makes a contribution towards the reform of vocational education and training in Germany in many respects. It incorporates European stipulations and ideas and is actively integrated into the educational policy and academic debate on reform.

One of the focuses of the present debate is to create greater permeability and transparency by using a credit transfer system to credit learning achievements. This applies vertically between educational levels and horizontally between different areas of vocational education and training. The DECVET initiative uses its credit transfer system to implement this stipulation. In conjunction with the results from the ANKOM initiative, it provides important findings and usable credit transfer models for the various interfaces. It takes account of the prerequisites and general conditions which are important for the respec-

tive implementation. This includes stipulating the general conditions relevant to the use of a credit system at institutional and regulatory level. This is the only way of determining where the opportunities – and the limitations – of a generalisation of cooperation forms and procedures lie. This means that DECVET provides educational policymakers and VET stakeholders with results which may serve as the foundation for further decision making and structural processes.

A second educational policy stipulation is to make learning outcomes and competences verifiable in order to achieve greater transparency and permeability in vocational education and training. Alignment towards learning outcomes and competences constitutes the basis for such permeability and credit transfer procedures. In future, it should be possible to credit and measure these learning outcomes in a better manner. For this purpose, the DECVET projects are also developing and piloting feasible concepts, methods and instruments for these requirements. As well as being used in credit transfer procedures, these results may also be of assistance in the further development of a competence based initial and continuing training system. The DECVET projects will deliver transferable work concepts and piloting findings and will respond to the following questions.

- How can learning outcome units be designed and dimensioned? Which dimensions have proved their worth in practice? How can skills defined in curricular terms be described in an outcome oriented way?
- Which approaches and criteria are suitable for equivalence comparisons between different training courses? How can equivalence comparisons be made useful for credit transfers and linking of training courses?
- Which competence assessment procedures and methods can be deployed effectively to meet the requirements of academic research as well as practical requirements in terms of work, time and procedural economics? Which new requirements do competence oriented examinations place on examination staff? How can these new examination requirements be imparted?

The first two areas of questions have been largely addressed. During the third phase, the DECVET projects will now concentrate on developing and piloting training concepts for examination staff. Various “crediting approaches” for credit transfer procedures will also

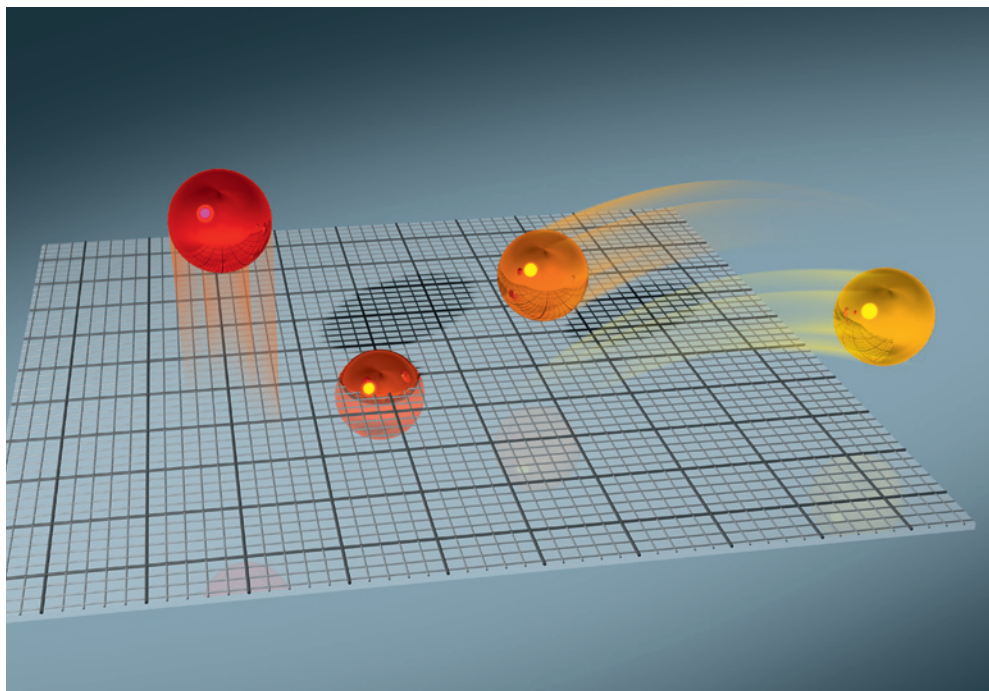
be drawn up and tested. In addition to this, further tests will be run on the competence based examinations which have previously been developed.

Once the test phase has been concluded, the results will serve as the basis for investigating the extent to which credit transfer models at the various interfaces are capable of standardisation and transfer.

Insufficient permeability is a structural weakness of the German educational system. There is also a lack of established procedures for the recognition of non-formal and informal learning. The development of a credit transfer system for vocational education and training provides an opportunity to address these weaknesses. The piloting of various credit transfer models and related conceptual work is also enabling the initiative to make a significant contribution in overall terms to the current debate on the modernisation of the German educational system. It is not the least of the achievements of the DECVET initiative that it is therefore having an impact on increasing individual educational opportunities in Germany.



# DECVET – the initiative in brief



## Term of the initiative

Term of the projects: 1 November 2007 until 31 March 2012 at the latest  
Evaluation research: 1 January 2008 until 30 June 2012

### Batch 1: Interface between vocational training preparation and dual VET

- **BWHW – Educational Institute of Hessian Trade and Industry**  
Dr. Cornelia Seitz, e-mail: seitz.cornelia@bwhw.de  
**INBAS GmbH – Institute for Vocational Training, Labour Market and Social Policy**  
Dr. Petra Notz, e-mail: notz@inbas.com
- **Deutsche Bahn AG (German Railways), DB Training, Berlin/Frankfurt a. M.**  
Jürgen Laubersheimer, e-mail: juergen.laubersheimer@deutschebahn.de  
Julia Jaspers, e-mail: julia.jaspers@deutschebahn.de



- **ÜAG – Inter-Company Training Association and Employment Development Agency of Jena**  
Ines Letsch, e-mail: ines.letsch@ueag-jena.de  
Nadja Semrau, e-mail: nadja.semrau@ueag-jena.de

### **Batch 2: Interface between joint cross-occupational qualifications within an occupational field**

- **f-bb – Research Institute for Vocational Education and Training, Nuremberg**  
Dr. Thomas Reglin, e-mail: reglin.thomas@f-bb.de
- **SAZ – Schwerin Training Centre**  
Prof. Helmut Ernst, e-mail: ernst@sazev.de

### **Batch 3: Interface between dual and full-time school based vocational education and training**

- **AFBB – Academy for Vocational Training, Dresden**  
Daniel Hauswald, e-mail: dhauswald@afbb-ggmbh.de
- **Consortium of the Association of Baden-Württemberg Chambers of Industry and Commerce, the Association of Baden-Württemberg Chambers of Crafts and Trades and the Ministry of Education and Cultural Affairs, Young People and Sport of the State of Baden-Württemberg**  
Dr. Thilo Lang, e-mail: thilo.lang@km.kv.bwl.de

### **Batch 4: Interface between dual VET and advanced vocational training**

- **BAQ – Research Institute for Employment, Work and Qualification, Bremen**  
Prof. Gerhard Syben, e-mail: institut@baq-bremen.de
- **BCM – Bremen Centre for Mechatronics & aib – Bremen Institute for Work Science, University of Bremen**  
Prof. Franz J. Heeg, e-mail: hee@aib.uni-bremen.de
- **QFC – Training Promotion Association for the Chemical Sector, Halle; Saxony Educational Association for Environmental Protection and Chemical Occupations, Dresden (SBG); Technical University of Dresden; Jena Institute for Vocational Education and Training Research & Consultancy (JIBB)**  
Eva Kotermann, e-mail: eva.kotermann@qfc.de  
Bodo Bastian, e-mail: bodo.bastian@qfc.de

## Evaluation research of the DECVET pilot initiative

Evaluation research for the projects of the pilot initiative is provided by a consortium of the Otto von Guericke University of Magdeburg and the Friedrich Schiller University of Jena.

### Otto von Guericke University of Magdeburg

Institute of Vocational and Business Education  
School of Vocational Education

#### Contact:

Prof. Dietmar Frommberger, e-mail: [dietmar.frommberger@ovgu.de](mailto:dietmar.frommberger@ovgu.de)  
Anita Milolaza, e-mail: [anita.milolaza@ovgu.de](mailto:anita.milolaza@ovgu.de)

### Friedrich Schiller University of Jena

Faculty of Economic Science  
School of Business Education

#### Contact:

Prof. Holger Reinisch, e-mail: [h.reinisch@wiwi.uni-jena.de](mailto:h.reinisch@wiwi.uni-jena.de)  
Stefanie Schiller, e-mail: [stefanie.schiller@uni-jena.de](mailto:stefanie.schiller@uni-jena.de)

## Project coordination and administration

The DECVET pilot initiative is being conducted on behalf of the Federal Ministry of Education and Research (BMBF). Coordination and specialist support is provided by the Federal Institute for Vocational Education and Training (BIBB).

#### Contact:

Christiane Köhlmann-Eckel, e-mail: [koehlmann-eckel@bibb.de](mailto:koehlmann-eckel@bibb.de)  
Dr. Egon Meerten, e-mail: [meerten@bibb.de](mailto:meerten@bibb.de)

### Technical management of Batches 1-4

- (1) Thomas Bergzog, e-mail: [bergzog@bibb.de](mailto:bergzog@bibb.de)
- (2) Prof. Andreas Diettrich, e-mail: [andreas.diettrich@uni-rostock.de](mailto:andreas.diettrich@uni-rostock.de)
- (3) Dr. Egon Meerten, e-mail: [meerten@bibb.de](mailto:meerten@bibb.de)
- (4) Christiane Köhlmann-Eckel, e-mail: [koehlmann-eckel@bibb.de](mailto:koehlmann-eckel@bibb.de)
- (5) Dr. Christiane Eberhardt, e-mail: [eberhardt@bibb.de](mailto:eberhardt@bibb.de)  
(Interdisciplinary issues regarding ECVET)

## Administrative management

Alexander Brandt, e-mail: brandt@bibb.de

Karl-Friedrich Thüren, e-mail: thueren@bibb.de

## Advisory Council

An **Advisory Council** has been convened by the Federal Ministry of Education and Research to support, advise and assist in the implementation of the pilot initiative.

- Federal Employment Agency (BA)
- Federal Association of German Employer Associations (BDA)
- Association of German Trade Unions (DGB)
- Association of German Chambers of Industry and Commerce (DIHK)
- IG Bergbau, Chemie, Energie (mining, chemical and energy trade union)
- IG Metall (metalworking trade union)
- German Confederation of Skilled Crafts (ZDH)
- German States (Länder)
- Federal Ministry of Education and Research (BMBF)
- Federal Institute for Vocational Education and Training (BIBB) (management of the Advisory Council)

**Information** on the initiative and the individual pilot projects is available at: [www.decvet.net](http://www.decvet.net)

The screenshot shows the DECVET website interface. At the top, there is a navigation bar with the DECVET logo and the text 'DECVET - Lebenspartnersysteme für die berufliche Bildung'. Below this, there is a main content area with a green header 'DECVET - Lebenspartnersysteme für die berufliche Bildung'. The main content area is divided into several sections: 'ZIELSETZUNG', 'AUFGABEN DER PROJEKTE', and 'INFORMATION & KONTAKT'. The 'ZIELSETZUNG' section contains a paragraph about the initiative's goal to develop a certification system for vocational training. The 'AUFGABEN DER PROJEKTE' section lists tasks such as developing a certification system and conducting pilot projects. The 'INFORMATION & KONTAKT' section provides contact information for the project. On the left side, there is a sidebar with navigation options like 'HOME', 'KONTAKT', 'BILDUNG', 'BERUF', 'BEREICH', 'PROJEKTE', 'LEBENSPARTNERSYSTEME', 'ZIELSETZUNG', 'AUFGABEN DER PROJEKTE', 'INFORMATION & KONTAKT', 'LINKS', and 'INTERNET BEWECH'. On the right side, there is a sidebar with a 'NEWS' section containing two news items: 'DECVET - Lebenspartnersysteme für die berufliche Bildung' and 'DECVET - Lebenspartnersysteme für die berufliche Bildung'.

## Further initiatives and projects relating to the structuring of transitions outside the DECVET pilot initiative

### **ANKOM – Credit transfer of occupational competences to higher education courses of study**

Further information is available at: <http://ankom.his.de>

### **JOBSTARTER CONNECT**

Further information is available at:

<http://www.jobstarter.de/de/1208.php>

### **Optimisation of training provision for the semi-skilled unemployed**

Further information is available at: <http://www.f-bb.de/projekte/ausbildung-und-bildungsplanung/ausbildung-und-bildungsplanungdetail/proinfo/optimierung-der-qualifizierungsangebote-fuergering-qualifizierte-arbeitslose.html>

### **3. The route into vocational education and training in North Rhine-Westphalia**

Further information is available at: [http://www.gib.nrw.de/arbeitsbereiche/jugend\\_und\\_beruf/3\\_weg](http://www.gib.nrw.de/arbeitsbereiche/jugend_und_beruf/3_weg)

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