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The concept of competence in the development of vocational education and training in selected EU member states

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Abstract

This contribution reviews how four European countries: England, Germany, France and the Netherlands use the concept of competence in the process of developing vocational education and training. Competence in England is set in the context of the National Vocational Qualifications; in Germany within action competence and the approach to learning areas; in France within the ETED and the bilan de compétences; and, in the Netherlands, the concept is strongly linked to the development of a competence-based qualification structure for senior secondary vocational education. The nature of this review is rather descriptive as it aims to present a comparison of the meaning and use of the concept of competence within these respective countries. It can be concluded that despite a certain amount of diversity, especially at the instrumental level, there is enough conceptual convergence within the four
abovementioned countries to posit some common principles of competence and competence-based VET.

In a subsequent contribution Mulder, Weigel & Collins (2006, this issue) will present a more critical analysis of the literature on the competence concept and its use. To avoid unnecessary overlap, the list of references for this article will be included in that second critical literature review.
Introduction

The presence of the concept of competence in training and development literature dates back to the 1970s, when the first experiments with competence-based reforms in higher education were conducted (Grant et al, 1979). During this period Zemke (1982) also presented his work on designing better training by means of job competencies. Various other works followed such as Burke (1989), Fletcher (1991), Blank (1992) and Dubois (1993). While they all emphasised competence-based performance improvement in society, organisations, and education and training, it was the latter, like Gilbert (1978), who linked competence explicitly to performance.

The influence of the competence concept has now moved beyond the original spheres of education and training and crossed into corporate strategy development (core competence), human resource management (competence management) and innovation (sectoral competence). Currently, the concept of competence is widely used in the development of vocational education and higher education (González & Wagenaar, 2003; 2005) and has been adopted by many EU member states but with mixed experiences (Kotnik, 2006).

Biemans et al (2004) explored the wide diversity of the concept in education and its potential pitfalls; including possible solutions. However, although the theoretical part of that article focused on international literature, the empirical part concerned the authors’ practical experiences of introducing competence-based vocational education and training (VET) in the Netherlands. Therefore, in order to expand this empirical scope a follow-up study was conducted in four selected European countries: the United Kingdom (with a focus on England), Germany, France and the Netherlands. This study sought to examine the competence concept in terms of the development of vocational education and training and to review the critiques of the concept in use.
This article will begin with England and its use of the concept within the system of the National Vocational Qualifications (NVQ); then to Germany and the introduction of action competences (Handlungskompetenz) and the approach to learning areas (Lernfelder). In France we describe the ETED and the bilan de competences and in the Netherlands competence and education are seen in the development of the competence-based qualification structure for senior secondary vocational education (MBO).

The various approaches within these countries will then be compared and the main characteristics of the competence instruments used for implementation of the concept will be elaborated. From our international comparison we conclude that although the diversity of the concept of competence in VET is stressed repeatedly, and our comparison confirms this, there is enough commonality and convergence in its use to speak of common principles of competence and competence-based VET. In the instrumental elaboration of the concept, such as the national qualification frameworks in the UK, and also at the level of the European Qualification Framework, there are differences.

In a follow-up contribution a review of the critiques of the concept will be presented.

**Competence in England**

The UK has no single coherent system of education with national differences emerging between England, Scotland, Wales and, Northern Ireland. Because of this diversity we will only concentrate on the use of competence in England. Historically institutional links or forms of social partnership in VET in the UK have been relatively weak, therefore, it is not surprising that no record exists of agreements on
competence in initial VET (IVET). In England, for example, IVET is regulated by the Department for Education and Skills (DfES) via the Qualifications and Curriculum Authority (QCA). Therefore competence in this sense connects education to skills. Skills development in the UK is currently led by the SSDA (Sector Skills Development Agency) with the Skills for Business Network (www.ssda.org.uk). The SSDA is responsible for funding, supporting and monitoring the SSC (Sector Skills Councils). These councils work on sector qualification strategies (SQS). The SSC identify the skills needs of sectors and the SQS outline current and future learning needs of employers in different sectors. The match between education, training supply and employment needs should thus be improved by the SQS. Within the SQS competence is used as a measure through the NOS (National Occupational Standards) and within VET competence is represented by the NVQs (National Vocational Qualifications), which are based on the NOS.

The NVQs emerged during the 1980s when the UK was the first to introduce a new approach to VET based primarily on competence-based outcomes (Winterton et al, 2005). The vocational qualifications that were created under the new framework were known as NVQs. Their introduction was justified by the changing nature of the notion of competence in modern societies as a result of work systems change.

The goal of the NVQs was to raise the standards of performance of Britain’s workforce (Handley, 2003; 57). The NVQ was thus designed to meet long-term labour market requirements; and at the same time increase flexibility, transferability, transparency and improve access to vocational qualifications in general (QCA, 2002).

A necessary characteristic of qualifications according to Jessup (1991), who formulated the NVQ, is that they allow free access to assessment; meaning that assessment is independent of the learning process (Jessup, 1991; Eraut, 2003). Therefore an essential facet of the NVQs is that they are defined in terms of outcomes, demonstration and assessment rather than in
terms of the learning process leading to them. This should promote access, recognition of prior learning and candidate choice of learning mode.

While the NVQ-system does not offer an official definition for competence it claims to utilise an ‘occupational-type competence’. The UK Department for Employment and Learning defined the occupational standards, on which the NVQs are based, as a ‘description of something which a person who works in a given occupational area should be able to do’ (NCVQ, 1991). Thus the focus is on an employee’s ability to perform to the standards required of their occupational position.

These occupational standards are determined by a set of ‘units of competence’ that are subdivided into ‘elements of competence’ that comprise each NVQ. The standards describe all the job functions in a given occupation and are classified into five occupational levels:

- Level 1: Competence which involves the application of knowledge and skills in the performance of a range of varied work activities.
- Level 2: Competence which involves the application of knowledge and skills in a significant range of varied work activities, performed in a variety of contexts.
- Level 3: Competence which involves the application of knowledge and skills in a broad range of varied work activities performed in a wide variety of contexts, most of which are complex and non-routine.
- Level 4: Competence which involves the application of knowledge and skills in a broad range of complex, technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy.
- Level 5: Competence which involves the application of skills and a significant range of fundamental principles across a wide and often unpredictable variety of contexts.

(Source: http://www.qca.org.uk/610_1744.html [19.01.2006])

These levels are defined by the complexity of the work activities and the level of responsibility the job requires.

Assessment in the NVQ includes requirements for both knowledge and performance. Performance in this sense is twofold: firstly, products of the candidate’s work are examined and secondly candidates carry out activities to demonstrate the competence as defined by the
NVQ (Handley, 2003). Since the assessment process is separate to the learning process, the former is decentralized and can be individually tailored. Assessment occurs in centres approved by awarding bodies such as colleges, private training organisations or by the employers themselves. As a legacy the NVQs have provided a framework for the evolution of further programmes such as the Accreditation of Prior Learning (APL) which should lead to the development of competence-portfolios (Bjørnåvold, 1997; Ertl 2003). The APL provides formal accreditation in the shape of a diploma/certificate or through partial recognition (credits) of the relevant learning units needed to achieve a diploma. Workers with at least five years of professional experience have the possibility to have their non-academic learning recognised thereby gaining exemption from part of the examinations required. The APL should ease access to education, reduce training times and increase the number of people with formally recognised qualifications.

Despite initial aspirations to have the NVQs as the sole vocational qualification awarding bodies in England, they currently account for only 50% of the total vocational qualifications awarded (Oates, 2004, p.54).

**Competence in Germany**

In Germany, unlike England, a dual system exists that is based on a negotiation process to discuss competence and its role in VET development between representatives from the state, chambers of commerce and different employer organisations. More than three hundred occupational profiles are registered within the dual system. Whereas at the beginning of the 1990s approximately 70 % of all age group cohorts took part in an accredited examination in the dual system, the numbers have declined to the extent that in 2005 it was, for the first time, below 60% (Ulrich et al, 2006). Assessment in the dual system is carried out in the
form of mid-term and final examinations fixed by federal and/or local examination boards. These examination boards include representatives from the social partners. In general the examinations are performance related consisting of demonstration of tasks and testing theoretical knowledge (Straka, 2004).

In Germany competence in VET was initially implemented through the concept of key qualifications (‘Schlüsselqualifikationen’), first appearing in the 1970s and continuing to be influential even today (Mertens, 1974). It brought about a renewal of vocational education by promoting de-specialisation and a higher degree of abstractness of knowledge and skills (Lauer-Ernst, 1983; Dubs, 1995, 174). In addition in 1996 the German system started to follow an action competence (‘Handlungskompetenz’) approach. Competence in this sense is expressed as ‘vocational action competence’ or the readiness and capacity of the individual to act thoughtfully, individually and in a socially responsible manner in professional, societal and private situations (KMK, 2000, 9). The vocational action competence is divided into three categories by the KMK (‘Kultusministerkonferenz’ = Conference of the Education Ministers of the Bundesländer). These categories are domain or subject-competence (‘Fachkompetenz’), personal competence (‘Personalkompetenz’) and social competence (‘Sozialkompetenz’). This categorisation of domain, personal and, social competence forms the basis of the German VET system (Arnold & Schüssler, 2001; Rauner & Bremer, 2004; Breuer 2005) and has allowed for the development of another competence: the methods and learning competence (‘Methoden-, Lernkompetenz’). This is competence in the field of methods (the competence to work with methods, techniques) and learning (the ability to learn new things).

To implement an action competence approach Germany introduced a curricular framework in the form of Learning Areas (‘Lernfelder’) in 1997. Learning areas are thematic units defined by designating targets, content and specific teaching times. They follow professional tasks and actions (KMK, 2000, 14). An essential criterion for learning areas is that they should be
derived from occupational fields; they should be related to work and business processes and
ey should describe competencies (Bauer & Przygodda, 2002, 2). Furthermore the learning
areas and their contents should be structured towards the needs of the individual persons; in
other words they are subject-orientated by nature (Rauner, 2004a, 3).
The introduction of learning areas in Germany marked a turning point in the traditional
German curriculum which, up to that point, had been organised into core subjects by
discipline. The learing area approach changed this by following the international trend
toward the creation of competence-based and work-related curricula. The Learning area
approach was intended to link both the curricula and learning process to the work activity
and to promote action learning at the curricular level (Bauer & Przygodda, 2002, 2). The
learning area approach is supported by the concept of work process knowledge because of
the strong connection between learning and work processes. The concept of work process
knowledge was originally used in CVET (Continuing VET) as a way of describing the
knowledge that employees needed for working in organisations with flexible structures
(Fischer & Boreham 2004). Nowadays work process analysis is also used for the
development of vocational profiles, qualification requirements and corresponding vocational
training plans (Rauner 2004b, 252). The challenge for curriculum developers and VET
teachers in following the learning area approach is to identify situations that are significant
both for work activity and the potential for learning.

Developmental theory forms the theoretical backdrop for the learning area approach. A key
assumption for the learning areas is that competence can be developed. If somebody is not
able to do something because of a lack of developed competencies, he or she will learn it in
confrontation with the task itself (Rauner, 2004a, 3).

In June 2002 the Federal Ministry of Education and Research decided to develop the German
system further by establishing national standards of education. However, the realisation and
assessment of these standards have yet to be clarified in the context of VET (e.g. Sloane & Dilger, 2005).

**Competence in France**

The routes for VET in France are fairly diverse. In French initial VET there is no extant framework for qualifications and several routes can be followed (Leney, 2004). The attainment of VET diplomas is generally a governmental decision resulting from negotiations with sectoral social organisations.

In initial VET the competence concept is used in an approach called ETED (*Emploi Type Etudié dans sa Dynamique* translated by Céreq as *Typical Employment Studied in Its Dynamics*). ETED is a sociological work analysis method and it includes an analysis of the job-holder’s activities, the creation of guidelines for certification and the development of job activities guidelines (Rault, 1994). The approach was developed in 1990 by Céreq (Centre for Research on Education, Training and Employment), initially, with the intention to analyse professional activities and the competences they required. In the following years Céreq was asked to use ETED to rebuild national diplomas and their content. Nowadays it is also used to assess individual achievements (Mériot, 2005).

The principle of ETED lies in its double dynamic approach – of analysing jobs and relationships between jobs in job families. The job in this view represents the meeting point between the ‘individual’ level and ‘organisation’ level and is analysed in this double context. Thus, the ETED, on the one hand, wants to ensure individual mastery of job requirements and, on the other hand, the presence of an infrastructure that could be of significance for occupational development (Mandon & Sulzer, 1998).

The ETED method is strongly related to competence development because it allows the analysis of the competencies needed for different jobs. It focuses on the links between job
content and competencies or, the professional activities and their corresponding
competencies, linked to professional contexts and aims. The notion of competence thus
serves a heuristic function; it cannot be viewed separately from its context. It is consistent
with the basic assumption of ETED: the nature of change and the role of the individual in it
(Mandon & Sulzer, 1998).
Within a specific job the ETED can be used to distinguish activity blocks and the ways to
progress within them through training and experience. In general ETED analysis consists of
seven parts (Ginesté, 2002). Part one comprises the designation of the job and part two is a
summary of the job, which includes the general tasks the job holder has to perform. Part three
describes the typical activities the job involves and part four the methods for carrying out
these activities. Part five defines the relations between the employee and employer or
colleagues. The sixth part makes a distinction between knowledge, know-how, relational
know-how and know-to-be. The final part consists of an interview with the employee
currently performing the job and includes the creation of an employee profile.
All vocational programs of study in France have common requirements, referred to as
general knowledge, which rarely change. Other requirements are specific to their fields and
tend to evolve. So the ETED needs collaboration among trainers from various disciplines to
make decisions and to transform activity descriptions into training programs. This
transformation can only be successful if competencies are defined simultaneously in terms of
action, professional context, and professional aim (Mériot, 2005; Kirsch & Savoyant, 1999).
Otherwise competencies would describe actions without any information concerning their
significance, complexity or importance and the work analyses would have to be totally
rewritten to meet training purposes.
Competence and VET in France were legislatively enshrined on the 31st December 1991
(Ministère Education Nationale, 2001) through the method of the ‘bilan de compétences’ or
competence management. The system is based on cooperation, with a legislative base,
between social partners and state authorities (Gutschow, 2001; Tresanini, 2004). The
meaning of the bilan is to develop the competencies of workers. There are more than 100
inter-institutional assessment centres, which offer everyone the possibility of competence
evaluation. The ‘bilan de compétences’ document belongs to the person taking part in the
bilan (competence management process) and only they can provide others with information
of their results (Colardyn, 1996). Single uniform methods of assessment do not exist; instead
a number of different approaches are used. As well as the formal qualifications and
certificates possessed by the individual the knowledge and skills they have acquired during
working life are considered. These considerations form the framework for the creation of a
competence-portfolio. This process consists of three steps (Bjørnåvold, 1997):

1. A preparation period in which the candidate should explain and analyse his/her
   needs;

2. An exploration period in which the candidate should be supported by his/her local
   CIBC (Centres Inter Institutionnel de Bilan de Compétences ) in finding out about
   his/her values, interests, ambitions, knowledge, skills and motivation;

3. A final period in which talks are held and the results of the former initiatives are
   analysed together with the candidate. After that, the assessment centre gives a
   summary of the candidate’s performance.

In addition to these competence implementation measurements in French VET, the chambers
of commerce and industry of Paris/Ile-de-France are a very important VET provider. They
employ and ensure training for adults and students, representing 320,000 enterprises in a
region of 12 million inhabitants and are involved in various international cooperation
programmes (Bertzeletou 2006).
Competence in the Netherlands

The use of the competence concept in the Netherlands can be dated as far back as the 1970s, at a time when the American debate on competency-based teacher education versus humanistic-based teacher education was in full force. It did not take long to learn that the competency-based approach in teacher education was too behaviouristic, and was relatively ineffective for realising innovative and professional teacher education. This was the time when the U.S. guidelines for formulating educational objectives were imported and implemented in vocational and higher education (De Groot, 1974; Gulmans, Van Loon & Pelgrum, 1981). It soon became clear that detailed lists of job specific curriculum content items were difficult to handle in curriculum development and teaching-learning processes, so the concepts of qualification (‘kwalificatie’) and basic skills (‘basisvaardigheden’) became popular. The qualification concept was related to labour market studies, and the concept of basic skills to work process knowledge and curriculum development. Basic skills were conceived of as attainment targets (‘eindtermen’) that also covered knowledge and attitudinal components (Nijhof & Mulder, 1986). Since the knowledge, skills and attitude domains are all integrated in the current conceptualization of competence, the term basic skills was an early version of the present concept of competence. The law on vocational education (‘Wet Educatie en Beroepsonderwijs, or WEB’), enacted in 1996, included the implementation of a qualification structure for senior-secondary vocational education (‘Middelbaar Beroepsonderwijs, or MBO’). It also established and regulated the, at that time, approximately twenty sectoral bodies responsible for the definition of the qualification structure, the examination bodies responsible for the quality assurance of examination procedures and the inspection service conducting the quality control for the Minister of Education.
The evaluation reports about the WEB, that were published five years after its implementation, concluded that the policy concept behind WEB was not compatible with the requirements of a knowledge-based economy (Nieuwenhuis & Shapiro, 2004; 80). Vocational education policy should put a greater emphasis on flexibility and expertise of colleges of vocational training (‘Regionale Opleidings Centra, or ROC’s’) to enable them to organise pathways towards the competence of young professionals.

To overcome the problems of over-detailing in the syllabus of vocational education, in 1999, a proposal called ‘shift to core competences’ of the Advisory Committee Education and Labour Market (ACOA, 1999) was published, in which the concept of competence was introduced as the core concept for VET development. The stakeholders involved agreed upon the concept and the COLO, the central association of sectoral knowledge centres, received the task to coordinate the development of the competence-based qualification structure (COLO, 2002). Standards of occupational competence in each industry sector were developed, forming the basis for vocational credits. Together with that a system, for accreditation of non-formally acquired competencies, was created, by which assessment and learning trajectories were decoupled.

At present, the development of the competence-based qualification structure is fully underway, and this structure will be implemented as of August 2007. In this, the holistic approach is advocated. Competence in this respect means the integrated abilities that are required to cope with complex tasks (Biemans et al, 2004).
Comparison of the international perspectives

Comparing initiatives regarding the use of the concept of competence in VET policy development is by no means easy because of the complexity of the various national approaches highlighted here. In fact we may not even speak of national approaches because of the intra-member state variation in the governance of VET and the use of the competence concept within them. Nevertheless we will now try to highlight some of the more remarkable differences.

Place Box 1 about here.

1. England. VET development is driven by the objective of improving productivity. Since the best way to do this differs by sector, a sector skills development strategy is followed. Initiatives are also strongly outcome-driven, which is directly related to opportunities and procedures for assessment and accreditation. Competencies are embedded in National Occupational Standards, in which five levels of competence are distinguished, and in National Vocational Qualifications.

2. Germany. VET in Germany is characterised by the dual system. We will not elaborate on the system here but, we will just mention that it is a strongly regulated system of vocational training with a theoretical and practical part, in which workplace learning plays an important role. Over time emphasis has been put on those general competencies (key qualifications) with a higher level of abstraction and better transfer potential. At present five competence fields are distinguished: action, subject, personal, social and methods or learning competence. Furthermore, learning areas
have been introduced. Competence development is aimed at work activity, or work process knowledge.

3. **France.** In France a method to study occupations and to formulate competencies that are relevant for VET is the ETED. Competence development has a double focus in this approach: the individual, who tries to master a certain occupation; and structural characteristics, that determine the way in which occupations develop. Furthermore, in France, the use of the competence concept is represented by the bilan de compétences. Based on a long-standing tradition of regulating continuing VET (CVET), France has also regulated this competence management process. There is a strong emphasis on competence assessment to acknowledge informally acquired competencies.

4. **Netherlands.** In the Netherlands there is a long tradition of using attainment targets in VET, but these should be general, have transfer potential, and contribute to flexibility and mobility. When a legally recognised VET qualification structure was implemented it led to many complaints citing the mismatch between the skills demand of the labour market and the skills supply of the VET system. Therefore, at present, VET development is aimed at introducing a competence-based qualification structure. The VET system is aimed at preparing new generations of students for more effective performance in their jobs. A system for the acknowledgement of non-formally acquired competencies has been introduced as well. Many VET institutions are now trying to implement competence-based learning and competence assessment. Their experiences are mixed.

If we try to give some general labels to the competence approaches in the states studied (which is dangerous, because of the complexity and internal differentiation already mentioned), we could say: VET development in England is characterised by sector specific
productivity improvement, and competence is used instrumentally to enhance that. In Germany, the concept of competence is used more in a learning psychological way. Competence fields and learning areas form the basis for curriculum development. This is all related to the nationally regulated occupational structures. In France the emphasis of the use of the competence concept is on the balance between personal and occupational development. The most common use of the competence concept in France is the bilan de compétences. In the Netherlands competence is aimed at performance improvement (which means application oriented) and is used in competence-based qualification structures, competence-based VET and, competence assessment. All of these measures should support the school-to-work transition, career development, upward mobility and life long learning.

Together with these comparative results, we can identify common trends in the countries under study:

In all countries a noted change in approach was observed from an input to an output basis. Together with this change the notion of ‘competence’ in education has become highly popular with a shift from a discipline or subject orientation to competence-based education. Finally, attention in all countries has increasingly been directed towards the accreditation of informal competencies acquired outside the formal educational setting.
Conclusions

We can conclude that there has been, and still is, considerable variation in the meaning of the competence concept. However, we do not think that the concept is useless as a result. The concept is particularly relevant in the current discussion about the qualifications and skills requirements for the knowledge economy but in this respect knowledge alone is not enough. The new generation of graduates cannot simply be introduced to various knowledge domains, no matter how deep this goes. For their employability and position in society they need to be able to apply knowledge in a specific context. For instance, for effective job performance it is necessary to have problem solving and entrepreneurship skills that can be utilised within the real-world context of changing value patterns; eroding public service systems; intercultural tensions; societal risk; labour law related deregulation; and uncertainty. That does not mean knowledge will no longer be needed. On the contrary, the complexity of work is increasing faster and faster and a solid knowledge base is required by every citizen. There is great pressure for more students to reach higher levels of education. Competence in this respect is additional and integrative. Competence is also connected to the certification of capability, to ensure that new professionals have the capability for appropriate performance in a complex reality. The importance of the concept of competence is related to issues like occupational and professional attitudes, reflection on one’s own behaviour, capability, employability, career development, the alignment of education and work, recognition of informally acquired competencies, learning path independent assessment, independent functioning in society, and the capability to cope with constant and profound change.

An important element of competence-based VET is to combine a mix of sector and occupation oriented approaches to reveal future needs for competence development. A purely sector oriented approach is impossible because of the wide variations in occupations within
sectors. It is, for instance, quite difficult to determine common competencies for logistics workers and research experts within the chemical industry. Common competencies do exist but the context of these occupations differ so much that these competencies have totally different meanings. A purely occupational approach would not be realistic because the occupations in which VET graduates are being employed vary widely. There is no one-to-one relationship between the domain of study and field of work. Furthermore, some occupations are becoming obsolete (mine workers and textile workers in certain regions, farmers in certain specialisations), and other are emerging (ICT, call centre operators, telecommunications, biotechnology, nanotechnology). So we think job profile research is essential, and should be aimed at determining the most essential generic and specific competencies that are required for job performance (Mulder, Wesselink & Bruijstens, 2005).

For the development of VET, it is necessary that sectoral organisations are involved. When it comes to the implementation of competence-based VET, they can, and should, play a role in the identification and articulation of competence development needs; providing learning-working places for students and student-workers, good coaches and practical instructors. They should also provide good case materials, guest lecturers, and learning opportunities for teaching staff, help in assessment and also in setting up competence-based training and competence management plans. Many large organizations have extensive experience with this. This is not only important for VET structure, but also for mobility and development programs. We have seen that, in this respect, a lot can still be done (Mulder, 2006).
References

### Box 1 Main characteristics of and critiques on the use of the concept of competence in VET development in selected EU member states

<table>
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<tr>
<th>UK</th>
<th>Germany</th>
<th>France</th>
<th>Netherlands</th>
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<tbody>
<tr>
<td>- No single coherent system of education but differences between England, Wales, Scotland and Northern Ireland</td>
<td>- Dual system as overarching framework</td>
<td>- Government makes the decision for most VET diplomas</td>
<td>- Movement from empirical attainment targets in the 1970s to basic skills in the 1980s, with a more generic character and a lesser subject specificity and domain-dependence to increase the transfer potential of skills</td>
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<tr>
<td>- No agreements on competence in initial VET by all stakeholders</td>
<td>- Key qualifications (‘Schlüsselqualifikationen’)</td>
<td>- Sociological work analysis in initial VET: ETED - Emploi Type Etudié dans sa Dynamique</td>
<td>- Next movement was to shift attention to competence as important requirement for effective performance</td>
</tr>
<tr>
<td>- Focus on productivity improvement of the economy; raising performance standards of workers</td>
<td>- De-specialization</td>
<td>- ETED provides analysis of the job-holder’s activities, the creation of guidelines for certification and the development of job activities guidelines</td>
<td>- System for the acknowledgement of non-formally acquired competencies was created</td>
</tr>
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<td>- Wide differences across sectors; therefore: sector skills development</td>
<td>- Higher level of abstractness of knowledge and skills</td>
<td>- Double dynamic approach: individual advances in mastering job, structural movements significant for development of occupations</td>
<td>- In late 1990s all stakeholders in VET development agreed upon implementation of a competence-based qualification structure, which will be introduced in 2007</td>
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<td>- Sector qualifications strategies are being implemented</td>
<td>- Action competence (‘Handlungskompetenz’)</td>
<td>- Analysis of competencies needed for different jobs through ETED</td>
<td>- Tendency to change the character of VET education towards competence based learning</td>
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<td>- These are based on National Occupational Standards (NOS)</td>
<td>- Subject-competence (‘Fachkompetenz’), personal competence (‘Personalkompetenz’) and social competence (‘Sozialkompetenz’); methods and learning competence (‘Methoden-/Lernkompetenz’)</td>
<td>- Heuristic function of competence</td>
<td>- Competence-based assessment is being implemented</td>
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<td>- Five competence levels used in NOS</td>
<td>- Work process knowledge</td>
<td>- Bilan de compétences: examines personal and occupational competencies of workers</td>
<td>- Character: employment measure, employability development, employment training</td>
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<td>- NVQs based on NOS, competence levels are integrated</td>
<td>- Learning areas (‘Lernfelder’) as basis for curriculum framework</td>
<td>- Character: employment measure, employability development, employment training</td>
<td>- Cooperation between state and social partners for bilan</td>
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<td>- NVQs consist of units and elements of competence</td>
<td>- Challenge for curriculum developers and VET teachers: identify situations that are significant for work activity and which have a potential for learning at the same time</td>
<td>- Stable legislative and broad institutional basis of bilan</td>
<td>- Stable legislative and broad institutional basis of bilan</td>
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<td>- Character of NVQ: outcome oriented, occupational competence in the center</td>
<td>- Key assumption for learning areas is that competence can be developed</td>
<td>- Document ‘bilan de compétences’ is private property of the person taking part in the bilan</td>
<td>- Document ‘bilan de compétences’ is private property of the person taking part in the bilan</td>
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<td>- Learning process independent of the assessment</td>
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<td>- Assessment consists of testing knowledge and performance</td>
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<td>- Accreditation of prior learning</td>
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