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Accreditation of Prior Learning in Higher Education – General Findings of the German Initiative ANKOM

Abstract:
When it comes to permeability between vocational education and training (VET) and higher education (HE) and especially to accreditation of VET for HE programmes, the question of equivalence of learning outcomes of VET and HE is raised. To date, there has been no systematic analysis providing evidence that there is an equivalence of learning outcomes of VET and HE (or to be correct: there is none). This is now undertaken by the German federal initiative on “Accreditation of Prior (Certificated) Learning from VET for HE” (ANKOM), finished after almost four years at the end of June 2009. However, the results of the ANKOM initiative by analysing the pilot projects and their accreditation models have shown that there is considerable effort involved to make permeability within the educational system real when applying quality-assured recognition procedures. The article describes the general findings of the initiative regarding the evaluation of the accreditation models developed.

Key words:
Accreditation, recognition, prior (certificated) learning, accreditation of prior (certificated) learning (AP(C)L), formal learning, informal learning, non-formal learning, learning outcomes, qualifications framework, taxonomy of educational objectives, reference system, equivalence, methodology, evaluation, verification, lifelong learning, vocational education and training (VET), higher education (HE), permeability, credit system,

Author’s short biographical statement:
Ida Stamm-Riemer holds a Master’s degree in politics and English from the University of Constance (Germany) and has been doing research on the structural development of the German educational system by several European and national pilot schemes at various institutions for about twenty years now. She started off with focusing on the European influence on the German vocational education and training system (VET) in the 90ies of the last century while being employed by the Federal Institute for Vocational Education and Training (BiBB), and moved on to exploring the changes to the higher education area, triggered off by the Bologna process, since the turn of the millennium. These two strands have come together since she has been involved in the German federal initiative on “Accreditation on Prior (Certificated) Learning for Higher Education Programmes” (ANKOM) at the Higher Education Information System (HIS) for the last four years. This implies working on accreditation models, qualifications frameworks and quality assurance in order to make the German educational system much more permeable and thus foster lifelong learning.

Paper

1 A draft of this contribution will be presented and discussed at the Decowe Conference: Ljubljana, Slovenia, 24-25 September 2009.
1. The German Initiative on Accreditation of Prior Certificated Learning from VET for HE (ANKOM) - Objectives and Structure

In autumn 2005, the German Federal Ministry of Education and Research (BMBF) started the initiative on “Accreditation of Prior Learning for Higher Education” (ANKOM)\(^2\) to improve the transition from (further) vocational education and training (VET) to higher education (HE) by reducing the redundancies when changing learning pathways. It is part of the lifelong learning strategy to enhance individual potentials and competencies by further education at academic level and thus also meet the increasing demand of the economy for a more highly educated workforce. Accreditation of prior learning for higher education intends to transform learning outcomes of VET into credits for a study programme in order to reduce the time and resources spent to attain a HE degree. By this way it also brings about more and better permeability in the educational system.

The federal initiative ANKOM consisted of two parts with different length of time:

- 12 project consortia in order to develop and set up recognition procedures to identify equivalent certificated prior learning outcomes of VET and accredit them for higher education (Accreditation of Prior Certificated Learning, APCL), running from autumn 2005 until June 2008, and
- an accompanying research project, in order to give advice and coordinate the projects’ developmental work to meet the initiative objectives, and after that period, evaluate and process the projects’ results to a generalised approach to APCL, finished in June 2009\(^3\).

Additionally, an advisory board was set up, consisting of representatives of the relevant stakeholders of the educational system: the German Rectors’ Conference (HRK), the

\(^2\) In German: ANrechnung beruflicher KOMpetenzen auf Hochschulstudiengänge. For further information see http://annkom.his.de/initiative/index_en.php.

\(^3\) This part of the initiative is in the process of being prolonged for another two years in order to disseminate the findings and provide support to new initiatives.
Confederation of German Employers’ Associations (BDA), the Association of Chambers of Industry and Commerce (DIHK), the Confederation of German Trade Unions (DGB), and the Industrial Union of the Metal Workers (IGM), as well as the Board of Trustees of the German Economy for Vocational Education and Training (KWB), besides the Federal Ministry of Education and Research (BMBF) and the Federal Institute for Vocational Education and Training (BIBB).

Project Consortia

The twelve projects were carried out by eight universities and four universities of applied sciences, each of which worked in cooperation with providers of further vocational education and training as well as chambers and professional associations, respectively. Each developing project was supported by a council of stakeholders from the different fields of vocational and higher education, e.g. representatives of companies, trade unions, more chambers and professional associations, if appropriate, and representatives of the committees of the HE institution and of the ministries involved (e.g. Ministry of Sciences and Culture, Ministry of Employment and Further Education). The members of the project advisory board constituted a network which tried to bridge the different interests expressed by the organisations of the vocational education and training, the social partners (employers and trade unions), and the higher education institutions. So that highly complex structure of each project consortium ensured that the solutions found were broadly accepted and practical in operation.

The 12 project consortia worked on developing accreditation procedures in four fields:

- Business Sciences (4 projects),
- Engineering (2 projects),
- Health and Social Care (4 projects), and
- Information Technology (2 projects).

Accompanying Research

The accompanying research project, carried out by the Hochschul-Informations-System (HIS)\(^4\) and the VDI/VDE Innovation + Technik (VDI/VDE-IT)\(^5\) in cooperation with the Bundesinstitut für Berufsbildung (BiBB)\(^6\), also reflected the dual structure of the initiative by binding together research institutions specialised on VET (such as VDI/VDE-IT and BiBB) and HE (such as HIS) respectively. The tasks of the research project while accompanying the pilot

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\(^4\) Higher Education Information System (http://www.his.de/english/organization).
\(^5\) http://www.vdivde-it.de/eng/eng_wirueberuns.html/
projects form October 2005 until June 2008 were to:

- provide advice and support to the development projects,
- organise workshops and meetings to enhance the sharing of knowledge and experiences between the pilot projects,
- assess the project results,
- take steps which lead to trust between the stakeholders, and
- promote the APCL/APEL discourse and procedures in Germany.

After that, for the following the initiative concluding 12 months, the major goals of assessing the projects’ accreditation models were to identify

- generic approaches to accreditation of prior (certificated) learning (AP(C)L) as well as
- operational good practice, policies and infrastructure, and
- general principles of good practice in assuring and enhancing quality standards in AP(C)L.

Before describing the findings of the evaluation of the project results regarding generalisation in the next chapter, we need to bear in mind the tremendous task that lay ahead. This is shown by the following list of challenges concerning the co-operation of two separate parts of the educational system - VET and HE, such as

- understand each other,
- speak the same language,
- remove mental barriers (e. g. ignorance, prejudices),
- come to a shared understanding,
- make compromises to achieve the objectives,
- find and agree on cross-sectoral (VET & HE) solutions,
- meet the requirements of an assessment of equivalence to be appropriate, reliable, valid and transparent, and
- set up practical accreditation procedures.

Regarding these preconditions it is well comprehensible why the people involved were called “pioneers of accreditation/recognition”.

2. **General Findings of the ANKOM Initiative**
When evaluating the accreditation models of the pilot projects, the overall questions were what are the common features and what are the differences of the approaches, and is there a best practice model suitable for all cases?

**Matrix of the Meta Accreditation Model**

The projects co-operating within the initiative very closely by cluster work and bilaterally, at the end it was not surprising to find an identical approach to addressing the question how to set up accreditation procedures in order to identify, verify and recognise equivalent learning outcomes from VET for HE programmes. The general approach can be described as follows:

- First (Re-)Describe learning outcomes of both programmes (VET and HE) by a common reference system.
- Second: Develop and carry out a methodology to assess equivalence of learning outcomes from different educational settings referring to content and level.
- Third: Develop and set up a procedure to implement quality-assured accreditation of prior learning in the higher education institution.

Besides setting up a concept for each step, the procedure of implementing them must also to be taken into account (see fig. 1). This implies the necessity to consult and integrate all stakeholders of VET and HE institutions in order to ensure that the recognition system developed will be acceptable and work in practice.

**Fig. 1: Matrix of the Meta Accreditation Model**

**Describing Learning Outcomes**
Learning outcomes are the basis for aligning VET and HE. The concept of learning outcomes is the key to comparing the results of different learning processes and finding equivalent qualifications. Yet, learning outcomes are described by different reference systems in different learning environments which makes it difficult to compare them. That was the case when setting out to recognise specific VET certificates with HE study programmes in ANKOM. That problem was solved by using the same reference system to describe learning outcomes of VET and of HE. The pilot projects did not use the same classification system, but according to their objectives different ones of the following list:

• a qualifications framework, such as for example, the European Qualifications Framework for Lifelong Learning (EQF) (European Parliament 2008), the Qualifications Framework for the German Higher Education (KMK 2005), the German HE Qualifications Framework for Social Work (Bartosch et al. 2006),

• a taxonomy of educational objectives, for example by Bloom (1956), Anderson & Krathwohl (2001), Moon (2006), Dreyfus & Dreyfus (1986), or even developing a taxonomy for domain specific requirements based on the ones mentioned,

• a work task oriented approach which tries to derive the skills and competence needed from the job description, and

• a competence oriented approach which describes modules by competence based learning outcomes.

As the first draft of the German Qualifications Framework (DQR) was issued as recently as February 2009, it will be necessary to try to apply this classification system for describing learning outcomes of VET and of HE, too. This could possibly reduce the use of different kinds of reference systems to probably one?

Apart from the work task and the competence oriented approach respectively which both turned out to be very time-consuming and therefore not practical, the other instruments describing learning outcomes from different learning settings proved to fit the purpose. Whereas some projects used either a qualifications framework or a taxonomy of educational objectives, there were others which combined them to come to an elaborate description of learning outcomes of VET and of HE in order to be able to align them.

**Methodology of Verification of Equivalence**

No matter how sophisticated the way to verify the equivalence of learning outcomes from VET is, the decision as to whether to recognise them is always taken by an expert of the HE discipline based on empirical evidence of different complexity as regards content and level of learning.
outcomes. The types of verification methodology vary according to the number of experts from HE and VET involved and to the diversity of evidence-based sources used which together make up a different degree of structuredness. All in all three kinds of verification approaches set up by the pilot projects were found (see fig. 2):
- weakly structured,
- reasonably structured, and
- strongly structured.

<table>
<thead>
<tr>
<th>Type</th>
<th>Experts involved</th>
<th>Instruments used to support decision making</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weakly structured</td>
<td>HE teacher responsible for the module concerned</td>
<td>rather unstructured assessment of documents (portfolio)</td>
</tr>
<tr>
<td>Reasonably structured</td>
<td>more than one HE teacher involved, and expert(s) from VET</td>
<td>checklist, guideline with a list of criteria how to assess documents; questionnaires (VET participants, HE students), discussion of results</td>
</tr>
<tr>
<td>Strongly structured</td>
<td>more than one HE teacher, also from other HEI involved, expert(s) from VET</td>
<td>psychometric measurement procedure</td>
</tr>
</tbody>
</table>

Fig. 2: Types of Equivalence Verification Methodology

The verification process being weakly structured, then it is likely that just the HE teacher of the module to be substituted is involved, and his or her assessment of the portfolio of the student applying for recognition is supported with no or little methodological means. The portfolio comprised of documents like references, job descriptions, official documents like qualification certificates, and of working samples is (roughly) evaluated in terms of content described by learning outcomes and level of the study module concerned.

Regarding reasonably structured verification there is more than one HE teacher involved and also experts from VET are consulted. There might be more than one cycle of assessment taking place. And for transparency and validity reasons the alignment of learning outcomes of VET and HE is supported by different means, like a checklist, or a guideline with criteria how to assess the equivalence of the learning outcomes from different learning settings. Furthermore, students with a VET background and participants of a further vocational training course are questioned on their opinion whether there are equivalent learning outcomes of VET and HE. The findings of
these diverse empirical sources are discussed together by experts from HEI and of VET (for example teachers of vocational schools and VET providers, examiners of the chamber and representatives of companies). Finally, the decision of equivalence is made by the HE teachers appreciating the results of this consultation on empirical evidence.

A strongly structured and therefore most sophisticated verification method developed in the ANKOM initiative is a psychometric measurement procedure, such as the Module Level Indicator (MLI) by the University of Oldenburg, focusing on identifying the level of a learning outcome as to the classification of the European Qualifications Framework (see fig. 3).

<table>
<thead>
<tr>
<th><strong>Aims of the tool</strong></th>
<th><strong>Source / Basics</strong></th>
<th><strong>Characteristics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>comprehensive description of a module regarding multiple competence dimensions</td>
<td>EQF</td>
<td>8 scales (so far)</td>
</tr>
<tr>
<td>test theoretically constructed reliable scales</td>
<td>QF for German HE degrees</td>
<td>applicable from different perspectives:</td>
</tr>
<tr>
<td>applicable to different kinds of modules, disciplines/domains, teaching and assessment</td>
<td>EHEA-Framework</td>
<td>• teachers</td>
</tr>
<tr>
<td>• teachers</td>
<td>expert interviews</td>
<td>• experts</td>
</tr>
<tr>
<td>• VET graduate, HE student</td>
<td></td>
<td>• VET graduate, HE student</td>
</tr>
<tr>
<td>validity of a construct of an entire score as to EQF classification</td>
<td></td>
<td>each scale with 5-10 Items</td>
</tr>
<tr>
<td></td>
<td></td>
<td>items referring to learning outcomes proved</td>
</tr>
</tbody>
</table>

Fig. 3: Design of the Module Level Indicator (MLI)

The MLI draws on different qualifications frameworks and expert interviews for the design of the criteria to assess learning outcomes of VET and HE. The tool comprises three categories of learning outcomes, such as knowledge, skills and competence, each of which subdivided into two to three scales with 5 to 10 items each (see fig. 4).
Module Level Indicator (MLI)

### Knowledge

**Scope and Actuality**

„The module contains at least some in-depth knowledge on the actual state of research within the domain.“

**Critical Appreciation**

„The module provides an awareness for the limits of the knowledge acquired.“

**Inter-disciplinarity**

„The module contains interdisciplinary topics, requiring knowledge from different domains.“

### Skills

**Problem Solving Skills**

„The learning objectives or examination questions require comprehensive cognitive of practical skills.“

**Relation to Practice**

„The module provides knowledge with immediate practical application.“

### Competence

**Autonomy**

„The module contains learning objectives implying non-predictable changes.“

**Communication**

„The learners have demonstrated their ability to communicate their understanding of the domain to other learners.“

**Awareness of ethical and social issues**

„When solving problems, the learners take into account interests of others and show solidarity with people affected by the solutions.“

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Fig. 4: Scales and examples of Items of the MLI © Carl-von-Ossietzky-University Oldenburg/W. Müskens, 2007

Depending on the assessment of a learning outcome in regard to these evaluation dimensions, the MLI tool accounts for which level of the qualifications framework this learning outcome addresses.

### Levels of Verification and Types of Accreditation:

Looking for equivalent learning outcomes of VET and HE can be dealt with at different levels:

- to assess the individual person with his/her prior learning, and
- to assess the certificate with defined learning outcomes.

According to the level of assessment the following specific types of accreditation were identified:

- individual level (micro level): individualised accreditation,
- certificate level (macro level): generalised accreditation, and
- both levels integrated: combined accreditation.

These types of accreditation vary in terms of the kind of learning outcomes, application area, number and transferability of credits (see fig. 5).
<table>
<thead>
<tr>
<th>Type of Learning Outcomes</th>
<th>Individual Level</th>
<th>Certificate Level</th>
<th>Levels added</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>non-formal, informal learning and/or formal (all types)</td>
<td>formal (certificated) learning only</td>
<td>non-formal, informal learning and formal (all types)</td>
</tr>
<tr>
<td>Application Area</td>
<td>all areas, as the individual person is addressed</td>
<td>restricted to the specific VET certificate</td>
<td>all areas</td>
</tr>
<tr>
<td>Number of Credits</td>
<td>not fixed, as dependent on the individual person</td>
<td>fixed, as independent of the individual person</td>
<td>maximum amount</td>
</tr>
<tr>
<td>Credits transferable</td>
<td>not possible, as dependent on the individual person</td>
<td>possible, as fixed and dependent on the certificate</td>
<td>fixed number of credits only</td>
</tr>
</tbody>
</table>

Fig. 5: Types of Accreditation

Individualised accreditation can bring about the maximum amount of credits to be recognised, integrates formal, non-formal and informal learning, and is applicable to all disciplines as the learning outcomes of the individual person is considered. But it requires a lot of resources to do it this way by both the individual person and the HE institution. Hence generalised accreditation is more economic for both parties, as the identification of equivalent learning outcomes of a specific VET certificate to a specific HE programme is done prior to granting it and the result of this alignment is shared by all holders of the VET certificate assessed. This situation is shown by the application flow below (see chart 1). However, generalised accreditation also implies some limitation, as this option applies only to formal learning testified by VET certificates with a fixed number of credits to be acknowledged.

From the applicant’s point of view, the combination of individualised and generalised accreditation allows most of his or her prior learning accredited in the most efficient way.

**Application Flows**

The following chart shows which steps to take to apply for recognition of prior learning according to the type of accreditation.
The differences between the two application flows refer to the steps `information & counselling´ and to the (coloured) additional requirements concerning the preparation as well as the assessment of the individual portfolio which comprises the evidence of prior learning, and the decision of the accreditation based on these sources. For the whole process of individual accreditation guidance is needed which takes up further resources for all parties involved.

3 Conclusions

Drawing conclusions from the overall evaluation of the projects’ results regarding accreditation models, they are as follows:

- There is equivalence of VET and HE regarding learning outcomes (proof of concept). The pilot projects have developed and tested accreditation models and thus proved that different learning environments can procure equivalent learning outcomes.

- There are different approaches to address recognition/accreditation of prior learning: at individual level, at certificate level, and a combination of both options. There is not only one way of dealing with accreditation of prior learning. Depending on the aims pursued and the means available it seems likely to set up different approaches which fit the purpose. Accreditation at certificate level tends to be more economic regarding the cost-benefit ratio of resources spent and numbers of recognition cases possible, but it has its limitations in terms of excluding non-formal and informal learning. This might be a negligible point for the
time being in order to get accreditation of prior learning off the ground. Recognition at individual level includes all kinds of prior learning, and yet, the time and effort expended by both the individual person and the HE institution are considerable. So the question is to get the balance right and join forces to the benefit of VET and HE.

- So far there has been little practical experience with (enhanced) accreditation of prior learning for HE, and therefore support for HE institutions and other parties interested is needed to make a breakthrough.

The whole matter of accreditation of prior (certificated) learning is new to HE institutions. Although there has always been some practice of individualised recognition, it has never happened on a large scale. To change this unsatisfactory situation for the better, resources for competent and sustainable support in terms of information and counselling for HE institutions interested in granting accreditation of prior learning and for people seeking recognition are needed. With ANKOM finished now there are some really good examples to be spread and more sophisticated experience to be drawn upon which other HE institutions can benefit from and thus make it easier for them to set up accreditation procedures at an advanced level.

- Without adequate study programmes for persons gainfully employed, there will be no big demand for recognition of prior learning, and thus no real breakthrough in this matter.

However, the results of the ANKOM initiative show that there is considerable effort involved to make permeability within the educational system real when applying quality-assured recognition procedures. Moreover, this is not enough, as further steps need to be taken when it comes to an increased number of well-designed study programmes which meet the needs of employers and their employees to be qualified at academic level and thus provide highly-qualified specialists and executive staff for a knowledge-based economy. So it is necessary for both the HE institutions and the employers to co-operate and pool resources to the benefit of all parties involved.

**Literature**


   Internet: http://www.ku-eichstaett.de/Fakultaeten/SWF/downloads/HF_sections/content/QR%20SArb.pdf (access: 06.08.2009).


