Permeability Between Vocational Education and Training and Higher Education

Examples from Austria, Czech Republic, Germany, Malta, The Netherlands and Slovenia

Karin Luomi-Messerer (Ed.)
3s Unternehmensberatung GmbH

December 2008

www.VocationalQualification.net

Project VQTS II / LLP-LdV-TOI-2007-AT-0017

Table of content

The VQTS II project is funded with the support of the European Community and the Austrian Federal Ministry of Education, the Arts and Culture (bm:ukk). The content of this publication does not necessarily reflect the position of the European Community or the bm:ukk, nor does it involve any responsibility on their part.

1 Introduction and Overview

Karin Luomi-Messerer[1]

LLL project VQTS II

This report has been prepared in the context of the project 'Vocational Qualifications Transfer System – VQTS II'[2] funded within the Lifelong Learning Programme of the European Commission and coordinated by 3s Unternehmensberatung GmbH, Vienna, Austria[3]. VQTS II is the follow-up project of the successful Leonardo da Vinci project VQTS. The VQTS project resulted in the VQTS model, which serves as the basis for 'transfer of innovation' within the VQTS II project.

VQTS model

In order to enhance transparency, the VQTS model uses a learning outcomes approach for describing training programmes and does not focus on the specificities of national vocational education and training (VET) systems. The VQTS model provides a 'common language' to describe competences and their acquisition; also, the model provides a way to relate these descriptions to the competences acquired in national-level training programmes. On the one hand, the VQTS model focuses on work-related competences and identifies the core work tasks within the particular occupational field. On the other hand, the VQTS model follows a 'development logical' differentiation of a competence profile (known as a competence development or acquisition model) and thus can also describe the acquisition of competences.

The core elements of the VQTS model are the competence matrix and competence profiles:

- A competence matrix displays a table of competences in a specific occupational field. The competences are structured according to core work tasks in the respective occupational field and advancing levels of competence development.
- Competence profiles (including credit points) are formed from individual parts of this competence matrix. The 'organisational profile' identifies competences relevant for a certain training programme or qualification. The 'individual profile' notes the competences acquired by a person in training.

The VQTS project originally intended to develop a systematic competence-transfer procedure that can be used to enhance a person's mobility: to compare competence profiles from VET programmes of different countries and to identify similarities and differences. The VQTS model and, in particular, the description of work-related competences can support understanding between the world of education and the world of work. Hence, the approach developed can be used not only for the transfer of competences acquired internationally, but also for other purposes where the transparency of competence profiles is highly important.

1 In co-operation with Monika Prokopp.
2 www.vocationalqualification.net
3 www.3s.co.at – contact: luomi-messerer@3s.co.at

Competence profiles (in addition to other documents) can, for example, provide future employers or personnel managers with important information about knowledge, skills and competences acquired by graduates of VET schools or colleges. This is particularly important when curricula primarily focus on input criteria, and not much information about learning outcomes is available.

Enhancing permeability between VET and HE by using the VQTS model

The transparency of competence profiles is also highly important on the interface between VET and higher education (HE). We assume that the VQTS model can also be used for making visible the overlapping areas of the competence profiles of VET and HE qualifications. This is the focus of the follow-up project VQTS II, which will further elaborate and develop the VQTS model and, thus, enhance permeability and progression between VET and HE. By using the VQTS model, the project seeks to adjust VET and practice-oriented HE programmes to increase their compatibility with each other. Recommendations will be developed on how to enhance permeability and progression between VET and practice-oriented HE.

Examples from the partner countries

The VQTS II project is carried out through cooperation between six partner countries: Austria, Czech Republic, Germany, Malta, the Netherlands and Slovenia. The report includes descriptions of examples (cases) for ensuring permeability between VET and HE at national level from the partner countries. The examples describe cases of good practice in accreditation of learning outcomes from VET in HE and consider possibilities of applying the VQTS model in these cases. The structures of the country reports therefore include:

- Information about permeability between VET and HE
- Examples for ensuring permeability between VET and (practice oriented) HE – 'Cases':
- First ideas how the VQTS model can be used in this context.

The Austrian partners describe accrediting the learning outcomes from VET colleges in order to shorten study programmes at the University of Applied Sciences Technikum Wien.

The partners from Czech Republic discuss the possibility of shortening studies and reciprocal recognition of credits for persons who study simultaneously at a tertiary professional and secondary technical school and at a university's bachelor study programme.

In Germany, the project partners sought to identify the 'value' of vocational competences in HE. For this purpose, they conducted two career-related interviews with students at a university of applied sciences who had followed different educational and professional pathways. Apart from these differences, the interview partners graduated from a technical college of further education.

The Maltese partners describe a case concerning a qualification from the VET college MCAST which is, in combination with one or more A-level certificates, accepted as 'special entry requirement' at the *University of Malta*.

The project 'Golden Gate' is the case study of the partners from the Netherlands. The *Koning Willem I College* and *Avans Technische Hogeschool* cooperated to support progression from VET to HE; their specific activities include providing occupational information, organizing mentorships of HE students for VET students and teaching practice-oriented lessons for HE and VET students together.

The Slovenian case describes the transition from the Master Craftsman of Electronics certificate to study programmes at the Faculty of Electrical Engineering at the *University of Ljubljana*.

Conclusions

The last chapter of the report identifies some aspects to be considered when adjusting VET and HE and summarises the ideas about the possibility of using the VQTS model in this context.

2 Example from Austria

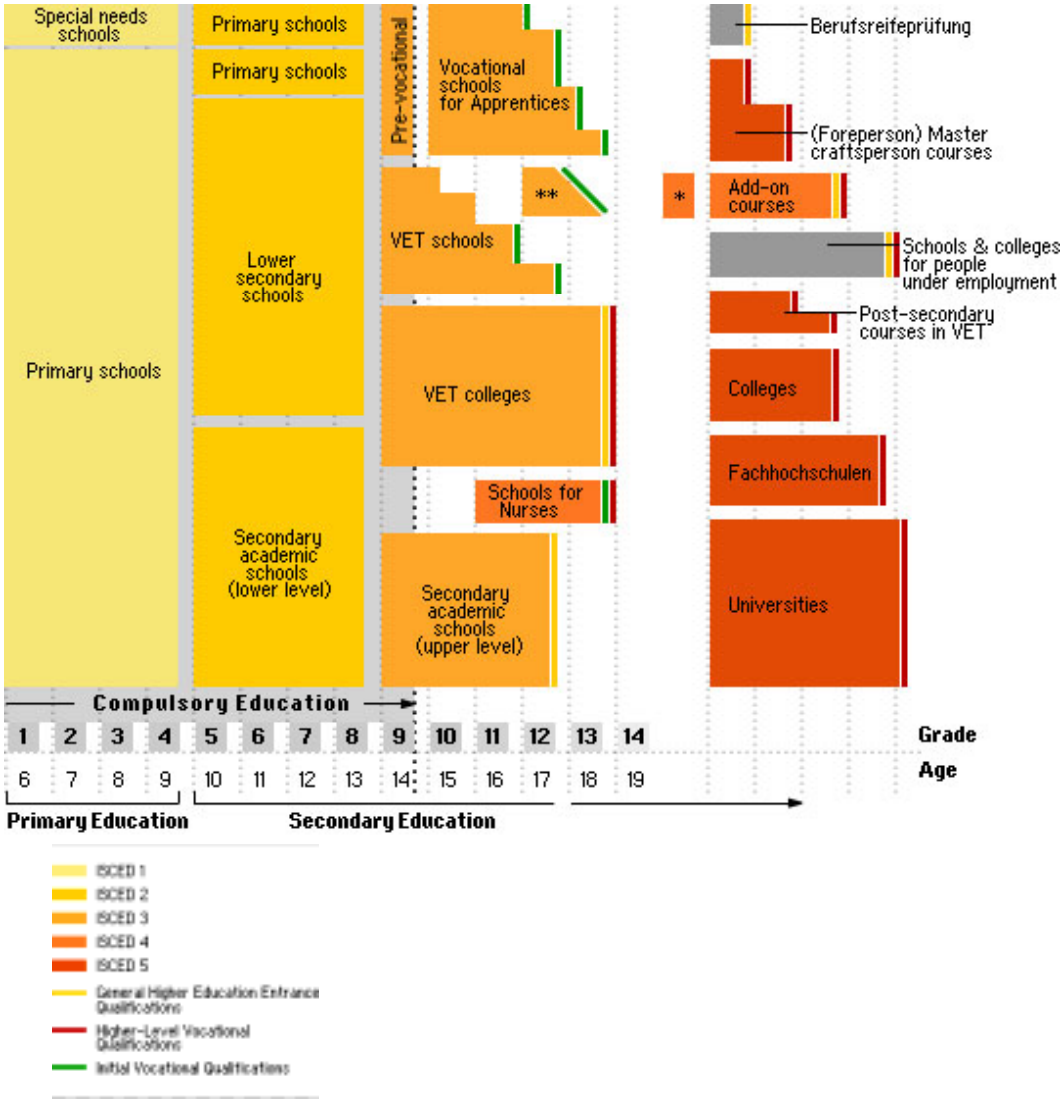
Monika Prokopp & Karin Luomi-Messerer

Table of content

2.1 VET system in Austria

2.1.1 Overview[4]

Compulsory education in Austria consists of nine years of schooling and starts at the age of six years. After four years of primary school, a decision must be made between lower secondary school and secondary academic school. A fourteen-year-old has several possibilities: secondary academic school at an upper level, VET schools and colleges or a pre-vocational year. Apprenticeship follows compulsory education and starts at the age of fifteen years. Graduates of apprenticeships and vocational schools are entitled to practice their professions based on their initial VET qualification. They can obtain higher professional qualifications in foreperson or master craftsperson courses, in add-on courses or in schools and courses for employed people. Graduates from secondary academic schools and VET colleges have direct access to higher education programmes. In addition, graduates of VET colleges hold a higher professional qualification and have direct access to a number of regulated professions.



4 The graphical presentation of the educational system in Austria can be found at the following website: www.bildungssystem.at.

2.1.2 Description of 'formal' pathways from VET to HE

Graduates of **apprenticeships** and **VET schools** must complete the Berufsreifeprüfung[5] (special VET diploma) subsequent to their education to receive unrestricted access to tertiary education in Austria or pass the Studienberechtigungsprüfung (higher education entrance examination) for access to specified subjects or subject areas in universities.[6]

The universities of applied sciences have specific admission regulations. Access is possible for persons with 'relevant professional experiences', which usually indicates that graduates of secondary technical and vocational schools or apprenticeships with professional experiences have access without a Reifeprüfung[7]. Generally, they must pass additional examinations (for example, in mathematics, German and English) in the first year of study.

In a new initiative called 'Lehre mit Matura' (apprenticeship with special VET diploma), apprentices can attend preparation courses for the special VET diploma parallel to the apprenticeship, take three of the four parts of the exam during the apprenticeship. Thus, they can finish both the apprenticeship and the Berufsreifeprüfung (special VET diploma) nearly at the same time when they have reached the age of 19. The federal government has decided on a model to offer these parallel courses free of charge, the pilot phase will start in autumn 2008. It is estimated that 1.600 apprentices per year will take part in that project.[8]

Graduates from **VET colleges** have direct access to higher education programmes.

2.1.2.1 Types of accreditation of prior learning

There are several types of accreditation of prior learning from VET for HE:

- a) access to courses of study at universities of applied sciences without a Matura (upper secondary school leaving exam) but with relevant professional experiences;
- b) individual exemption of single courses or semesters based on certificates from other study courses or on non-formal and informal learning;
- c) generalised (blanket) exemption of semesters for graduates of certain VET colleges.

ad a) The Fachhochschulen (universities of applied sciences) have specific admission regulations. Access is possible for persons with 'relevant professional experiences', which usually indicates that graduates of secondary technical and

5 Examination providing general access to higher education for skilled workers and graduates of three to four-year fulltime VET schools

6 The exam can only be passed for a specific study course at a university. However, graduates of this exam can also gain access to universities of applied sciences with corresponding subjects. Österreichischer Fachhochschulrat (2008b)

7 This upper secondary school leaving exam provides general access to higher education.

8 bm:ukk (2008), Regierung beschließt Lehre mit Matura. Online: http://derstandard.at/druck/?id=3361831 (05.06.2008)

vocational schools or apprenticeships with professional experiences have access without a Matura (upper secondary school leaving exam). Generally, they must pass additional examinations (for example, in mathematics, German and English) in the first year of study.

Several universities of applied sciences[9] offer preparation courses for apprentices or persons in foreperson courses specifically designed to provide access to study programmes in these institutions.

ad b) and c) VET college graduates can start in relevant study programmes in the second or third semester at universities of applied sciences. At universities, they can have their certificates accredited for exemption from examinations.[10] This can be handled individually, but depending on the institutions involved there are also blanket exemptions. The extent of exemptions varies depending on the institutions.

2.1.2.2 Obstacles regarding permeability between VET and HE

The main obstacles regarding permeability between VET and HE in Austria are related to

- financial issues,
- lack of transparency and consistency, and
- insufficient information.

Financial issues

Graduates of a vocational school or an apprenticeship training have no direct access to university studies. They have to pass special external exams (Berufsreifeprüfung -special VET diploma, Studienberechtigungsprüfung - higher education entrance examination[11]), and usually students attend preparatory courses. Tuition fees must be paid for these courses: At an Adult Education Center e.g. costs can be from 600 Euro to 1,000 Euro for the Studienberechtigungsprüfung (higher education entrance examination) and between 1,900 Euro and 2,430 Euro for the Berufsreifeprüfung (special VET diploma).[12] Several possibilities for financial support are available. For all applicants, there are further education grants from the federal countries that cover a part of the costs for the courses[13]. Persons in preparation courses for the Studienberechtigungsprüfung (higher education entrance examination) can get a regular grant for students in need that covers subsistence costs, too.[14] Courses for the Berufsreifeprüfung (special VET diploma) are organised in a modular form to fit to the employed students' needs.[15] Preparation courses for the

9 E.g. FH Oberösterreich, FH Campus Wien. Cf. FH Campus Wien (2008), Land Oberösterreich (2007)
10 cf. HTL Klagenfurt (2008). Legal basis for this practice is the University Law (Universitätsgesetz) 2002, §78 (1), cf. Bundesministerium für Bildung, Wissenschaft und Kultur (2006)
11 bm:ukk (2008b)
12 VHS Floridsdorf (2008), VHS Floridsdorf (2008b)
13 BIBER Salzburg (2008)
14 Studienbeihilfenbehörde (2008)
15 Markowitsch, Benda-Kahri, Prokopp et al. (2007)

Studienberechtigungsprüfung (higher education entrance examination) can be attended full-time or part-time.[16]

Lack of transparency and consistency
The educational system definitely lacks transparency, consistency and logic in regard to the ISCED classification. For example, the Berufsreifeprüfung (special VET diploma) is open for skilled workers, forepersons and also master craftsperson. The Master Craftsperson Examination is ISCED level 5B, graduates have to pass the Berufsreifeprüfung (special VET diploma) on ISCED 3A in order to obtain access to a university or university of applied sciences on ISCED 5A.

According to the relevant law (Fachhochschul-Studiengesetz § 12 Abs 2 Z6 – Universities of Applied Sciences Studies Act)[17], accreditation of prior learning should be possible at universities of applied sciences. However, these legal regulations are rather general, so different programmes accredit different amounts of subjects or semesters. Graduates from vocational colleges can, for example, start in the second semester in one university of applied sciences but in the third semester in another university of applied sciences. Accreditation is also handled differently in various courses of study, even at the same institution: some courses of study have precise definitions of what can be accredited; in others, accreditations are based on individual agreements.[18]

Insufficient information
Information on access and accreditation is insufficient; for example, there is no overview on what subjects or how many semesters are accredited for graduates of certain schools. Information can only be obtained from the individual study programmes, and accreditation is often handled for individual cases.

2.1.2.3 Needs to be addressed

The results of the VQTS II project could enhance more transparency in the accreditation processes and will thus enhance permeability.

The further development of the VQTS model must be seen in the context of current processes on national and European level such as creation and implementation of NQF, EQF and ECVET, the shift towards learning outcomes, piloting and implementing educational standards and modularisation in VET. Due to these processes, the Austrian educational system is in a phase of transition.

16 bm:ukk (2008b)
17 Österreichischer Fachhochschulrat (2008)
18 At the University of Applied Sciences FH Joanneum such definitions are available for the study programme ‘electronics & technology management’ but not for any other study programme. Cf. FH Joanneum (2008).

2.2 Description of the 'case': Permeability from VET colleges to the University of Applied Sciences FH Technikum Wien

2.2.1 Introduction

For our case study, we decided to describe accreditation practices at the University of Applied Sciences FH Technikum Wien, member of the VQTS II partnership. This example reflects good practice in an Austrian HE institution which is based on stakeholders´ experiences. With the VQTS model, it will be possible to describe the practice in further detail, make it more transparent for stakeholders from other institutions and describe it as an example for the development of innovative accreditation practices.

Practices at the interface between VET and HE are described in two aspects: access to HE for graduates of an apprenticeship or a VET school without a Matura (upper secondary school leaving exam) and exemption from semesters or subjects for graduates of VET colleges or persons with other relevant experiences.

The case describes accreditation practices at the study courses 'electronics' and 'electronics/economics' at the University of Applied Sciences FH Technikum Wien. Exemptions were first practiced for graduates of the VET college TGM Wien (Technisch-gewerbliches Museum), but now there are exemptions for graduates of various VET colleges. Since the VET College HTL St Pölten is also partner in the VATS II project, we are referring in particular also to this VET institute.

VET colleges (duration: five years) are classified as ISCED 4A.[19] The high (or one could even say 'actual') level of education and training at VET colleges is reflected in two legal regulations:

- Because of the European Directive 2005/36/EU on the recognition of professional qualifications, diplomas from VET colleges correspond to the directive's diploma level and thus provide access to regulated professions in other member countries, even if access is based upon diplomas for up to four years of tertiary education.[20] This confirms that graduates of VET colleges acquire professional qualifications for which in other EU countries training at post-secondary level would be required.
- Exemptions from courses based upon equivalence of knowledge, skills and competences acquired in VET are a requirement for the accreditation of courses of study as described in § 12 (2) Fachhochschul Studies Act. At universities, graduates from VET colleges can have their certificates accredited for exemption from examinations on an individual basis or as blanket exemption.[21]

19 Statistik Austria (2008)
20 Official Journal of the European Union (2005)
21 cf. HTL Klagenfurt (2008). Legal basis for this practice is the University Law (Universitätsgesetz) 2002, §78 (1), cf. Bundesministerium für Bildung, Wissenschaft und Kultur (2006)

College of Electronics – HTL St Pölten

At VET College HTL St Pölten, students in the first two years acquire general and basic technical knowledge and practical skills in workshops. From the third year on, they specialize in telecommunication or technical computer science.[22]

The certificate supplement lists 'skills and competences' of graduates of the VET school for electronics:[23]

- knowledge of the theoretical and practical principles of electronic components and circuits
- production and application of principles of electronic components and circuits
- knowledge and application of the subject areas microelectronics (measurement of open- and closed-loop control systems, sensors), broadcasting technology (audiovisual media, analogue and digital broadcasting), computer technology (microprocessors and controllers, development of hard- and software)
- application of principles of quality, project and product management
- subject-relevant CAD-applications
- construction, dimensioning, design and production of electronic products
- employment of the principles of marketing, staff guidance, negotiation skills, contracting and financing
- oral and written communication on business-relevant subjects in the mother tongue and one foreign language

The profile for specialists in technical computer science further includes

- knowledge of software-and computer-aided engineering, computer networks as well as data transfer, micro-electronics and software optimisation
- subject-relevant skills and knowledge of components in electronics and digital engineering, of measuring -, device and system-technology, their relevant materials, procedures, product and system development

The profile for specialists in telecommunication further includes

- substantive knowledge of the areas of radio, mobile phone, satellite and communication technologies, consumer electronics
- development, production, sales, operation and maintenance of means of telecommunication
- skills and knowledge of components in electronics and digital engineering, of measuring-, device- and system-technology, their relevant materials, procedures, product and system development

For both specialisations, the range of occupation includes employment in fields of activities with a high degree of responsibility as an employee or entrepreneur in various branches of power engineering, industrial electronics, measurement and control technology.[24]

Specialists in technical computer science can, with relevant professional experience, work as office communication engineers, electronics engineers, radio

22 HTL St. Pölten – IT, Elektronik (2008)
23 Europass Österreich (2008), Europass Österreich (2008b)
24 Europass Österreich (2008), Europass Österreich (2008b)

and video electronics engineers and, after passing a test of suitability, work in a technical office.[25]

Specialists in telecommunication can, with relevant professional experience, work as electronics engineers, electrical machinery engineers, radio and video electronics engineers and, after passing a test of suitability, work as office communication engineers or in a technical office.[26]

Bachelor study programme 'electronics' – FH Technikum Wien
The Bachelor study programmes 'electronics' and 'electronics/economics' (duration: 3 years) at University of Applied Sciences FH Technikum Wien are classified as ISCED 5A.[27]

The course of study 'electronics' includes electronics and information technology, practical work, electronic project work and hardware and software design as well as business and management education, foreign languages and personal development. In depth, students deal with of information and communications technology, microelectronics, embedded systems, audio and video technology, innovative and practical project work (working on industry and research projects) as well as problem based learning. Graduates are qualified for jobs in the electronics-industry and trades. There is an emphasis on innovative information technology and telecommunications technology. Professions include, according to the study subject, either, product development and services or, the operation, design, service and marketing of electronics and communication systems.[28]

Students of 'electronics/economics' deal with industrial economics, quality management, project management, business management, personal development, English, mathematics, physics, information technology, electronics design, measurement, process measurement and control technology, automation control, telecommunications, technology management, embedded systems and industrial electronics. Graduates work in leading positions in electro-technology and the electronics industry, as well as in other areas of information and communication technology.[29]

According to the diploma supplements, these diplomas (in the sense of directive 89/48/EEC) grant access to academic professions according to the professional regulation. Graduates are qualified to apply for admission to a relevant master degree programme at a university of applied sciences or a university.[30]

25 Europass Österreich (2008b)
26 Europass Österreich (2008)
27 Statistik Austria (2008)
28 FH Technikum Wien (2008)
29 FH Technikum Wien (2008b)
30 FH Technikum Wien (2008c), FH Technikum Wien (2008d)

2.2.2 Description of the case

2.2.2.1 History and regulations

As a fundamental principle, Austrian universities of applied sciences all allow access to courses of study without a Matura (upper secondary school leaving exam). Exemptions for graduates of specific VET colleges are mostly granted by universities of applied sciences or universities with a focus on technology. In 1994, FH Technikum Wien first granted such exemptions in the 'electronics' study programme. After 1997, this practice was expanded to particularly include target-group-specific study programmes for employed students. No general overview identifies which courses of study grant exemptions for graduates of which VET colleges, information must be obtained individually from the relevant institutions. Generally, these institutions cooperate on a regional level.

Access to universities of applied sciences – with or without Reifeprüfung – is regulated in the §4 Fachhochschul-Studiengesetz (Universities of Applied Sciences Studies Act[31]). Exemptions from courses based upon knowledge, skills and competences acquired in VET are a requirement for the accreditation of courses of study as described in § 12 (2) Fachhochschul Studies Act.

2.2.2.2 Procedures

In this section, we describe accreditation practices related to 'electronics' in courses of study at the University of Applied Sciences FH Technikum Wien. The description is based on an interview with the institution's director, DI Dr. Fritz Schmöllebeck, who also managed the 'electronics' study programme for several years.

As mentioned previously, there are three types of accreditation:
a) access to courses of study without a Matura (upper secondary school leaving exam), but with relevant professional experiences;
b) individual exemption based on certificates from other courses of study or on non-formal and informal learning;
c) generalised (blanket) exemption for graduates of certain VET colleges.

ad a) Access without Reifeprüfung (upper secondary school leaving exam)

For access without Reifeprüfung (upper secondary school leaving exam) to universities of applied sciences, applicants apply using the regular application procedure, a written test and an interview. Before studies start in autumn, these prospective students attend a 'summer school' to grow accustomed to learning again in a school-based system and to brush up their knowledge in mathematics, physics and other natural sciences.

31 bm:wf (2008)

Even though the law is not precise about the kind of relevant professional experiences that grants access to universities of applied sciences without Reifeprüfung (upper secondary school leaving exam), in general this refers to skilled persons who have finished an apprenticeship or a VET school and have several years of professional experience. Usually the study programme director knows the company where these applicants were employed, and he or she has an idea of what kind of knowledge, skills and competences might have been acquired there. There is a 'dual coach' for counselling graduates from the 'dual system' (apprenticeship). Interested graduates of an apprenticeship can ask the 'dual coach' for counselling and gaining information on studying, 'summer schools' or also recommendations for preparation courses for the HE entrance examination in other institutions. For some time, the 'dual coach' was prominently promoted on the website because FH Technikum Wien wanted to attract more persons from the dual system. In the meantime, this possibility of access to universities of applied sciences has become widely known.

ad b) and c) Exemption/accreditation

History

In some cases, graduates of relevant VET colleges can start their studies in the second semester or even the second year of the study course at a university of applied sciences, when a place becomes available, usually because other students have dropped out. The director of the course of study cooperates with lecturers from the university of applied sciences and teachers from VET colleges to decide on these exemptions. They check the curriculum of the respective VET college and discuss equivalence of knowledge, skills and competences with the teachers, mostly those who are responsible for relevant departments. In the beginning, there was a co-operation with a single VET college that had been partner in other forms of cooperation, too. Later, because other VET colleges in Vienna were also interested in cooperation for accreditation, the Stadtschulrat Wien, the city's overall school authority, contacted the course of study, and further co-operations were created. Such co-operations always depend on the individual institutions and actors and their experiences with the relevant practices. In some cases, possible co-operations are prevented because the actors cannot agree on extent or contents of accreditations.

The universities of applied sciences and the VET colleges started cooperating because the universities of applied sciences wanted to attract VET college graduates as students. The schools, meanwhile, were more attractive for students because they offered exemption from one or two semesters of study.

When exemptions were first provided at FH Technikum Wien, several teachers from VET colleges were also lecturers at this university of applied sciences. Thus, from their own experiences, they could estimate equivalences of knowledge, skills and competences quite well. In the meantime, the system of exemptions is built upon experiences of graduates from certain schools, thus the procedures are somewhat standardised.

Exchange of experience and cooperation
Information on and experiences with accreditations are exchanged between the various universities of applied sciences. When representatives of the institutions meet, the content and extent of accreditations are discussed regularly, probably because only very vague overall regulations exist. Some universities of applied sciences have a reputation of quite generously handling accreditations. However, there are regional differences in the number of relevant VET colleges; i.e., when there are more relevant VET colleges, there are more possibilities to co-operate with them on accreditation. Accreditations also seem to depend on the number of applicants for courses of study.

Application and accreditation process
The application process is the same for all persons who want to study at universities of applied sciences. If there is a written application, then all persons who meet the access requirements are invited to sit for a written test, which leads to a ranking of the applicants. Finally, in an interview, they must explain their motives for choosing this subject. With this application procedure, not only the student's knowledge, skills and competences are identified but also their ability to study.

The accreditation process starts at the very beginning of the application phase. Applicants are informed about possibilities for accreditation. Decisions on accreditation are taken according to the ranking in the written examination. Graduates of VET colleges who do not perform so well in this examination are recommended to start in the first semester without any accreditation.

Accreditation is practiced differently for graduates from VET colleges or persons who seek individual accreditations. Graduates from certain VET colleges have a clear 'path' because there are routines for exemptions, based on the experiences made with the students from the individual institutions. At FH Technikum Wien, all study programmes have a list noting which VET colleges and VET college departments are considered for exemptions and in which study programmes.

Exemptions from certain courses are individualised: the student considers for which subjects he or she could get accreditations and on which basis; for example, by comparing the curriculum with his or her own knowledge, skills and competences. Then he or she discusses it with the relevant lecturer who also, in this case, serves as a counsellor. In particular, when accreditation should be granted for non-formal or informal learning, the lecturer and the director of the study programme try to gain an overall view of the student's knowledge, skills and competences, not only regarding the most recent job or education – this would not convey a comprehensive picture of the student's knowledge, skills and competences – but also if the student has other relevant experiences; for example, from other trainings or schools, professional practice from internships or even hobbies. Thus, the content or the exemption is clarified with the lecturer while the study programme director has to confirm it formally. This focus on the individual educational pathway is deemed to correspond more to application practices in the industry than testing practices in school-based systems.

Counselling and trust

Comprehensive counselling and trust in the students' abilities are central elements in this case. Students are assumed to know what they have learned, what their competences are and which educational path they choose to pursue. Their active participation in the process and their reflection on their own abilities are essential. Students know that the accreditation procedure cannot guarantee a total congruence of the knowledge, skills and competences acquired in other contexts and those acquired at the university of applied sciences. However, since the ability to study is evaluated and ascertained in the application procedure, there are routines for filling possible knowledge gaps. When students realise that they lack certain knowledge, they usually organise their own learning by looking up what they do not know in books or scripts, in their own records from school, or they ask colleagues. Mixed work groups in the laboratory or other courses ease the integration of students who start in the third semester. This simple measure provides a framework for information exchange and also functions very well for social integration. When students do not find relevant literature themselves or with help of their colleagues, lecturers also help. They provide such information or other forms of help; for example, access to the laboratory beyond regular opening hours, or individual counselling.

Changes

Over the years, the application procedures have changed. In the beginning, additional tests to the ranking tests checked applicants' basic knowledge in relevant subjects. Special 'bridge courses' assisted those students whose prior knowledge from VET colleges allowed them to start studies with the third 'regular' semester of the study programme. These courses focused on developing soft skills and were extra work for those students with exemptions. Now, these measures are no longer deemed necessary because experiences with many students from various schools have shown that graduates of certain schools or departments can study and get along well even when they start at the second-year level. Thus, individual counselling resulted in a routine handling of exemptions.

Roles and responsibilities

There are several groups to be targeted. Access to courses of study without a Matura (upper secondary school leaving exam) is relevant for graduates of a VET school or an apprenticeship training, blanket exemptions are relevant for graduates of VET colleges, and persons who want individual exemptions based upon other certificates or non-formal and informal learning. On the side of the university of applied sciences, relevant lecturers and the director of the course of study are responsible for accreditations. Students consider with the help of the lecturers the content and extent of accreditations. The director confirms the accreditation formally. This form of accreditation is based on co-operations between FH Technikum Wien and several VET colleges, but there are also individual exemptions.

2.2.2.3 Further aspects

Quality assurance
For the exemptions, there is continuous internal quality assurance through an exchange of experiences of lecturers involved in accreditation processes and the director of the courses of study.

If necessary, quality assurance is also provided by defining certain restrictions for blanket accreditations. As an example, the first-year curriculum at the university of applied sciences study programme includes a course of study with certain 'safety certificates' necessary for work on industrial robots. In this case, VET college graduates cannot receive an exemption for the whole year because they need this certificate in the second year. Thus, the so-called blanket exemptions are checked for such indispensable competences or certificates.

Quality assurance takes place automatically because students have to prove their knowledge, skills and competences throughout the study programme. Therefore, possible lack of knowledge, skills and competences can be identified and filled during two or three years of study. Final certification recognises knowledge, skills and competences at a certain level; however, of course, students can have individual strengths, according to their prior education or special interests.

Labour market needs for graduates of the study programmes could be regarded as external means of quality assurance for all kinds of accreditation. By the end of their studies, approximately 90 per cent of students in the fulltime study programmes (or in IT in some years even 100 per cent) have been offered a job. Differences between 'regular' students and those who started in the second year have not been observed.

Tools
In our case study, no specific tools or instruments are used during the accreditation process.

Learning outcomes
For the *FH Technikum Wien*, describing qualifications or VET programmes through learning outcomes is not relevant for the accreditation process; the responsible actors trust in their experiences with graduates from certain schools and in the individualised application and counselling processes.

Informal learning
Informal learning experiences are seen as difficult to compare, thus nearly all accreditation is based on formal qualifications or certificates. Though the law could be interpreted as allowing for accreditation of informal learning, no one has yet gained entrance to a university of applied sciences only because of competences acquired informally in a professional context. Such an accreditation would probably require extensive examinations. Again, counselling is the central issue; for example, explaining access requirements and the content of the study programme, and trusting in the students' abilities. Deciding whether an applicant could learn the required materials and then succeed in the study programme

cannot be fully covered by specific criteria but is an implicit estimate by an expert. However, one should not raise unrealistic expectations about possible accreditation of non-formal and informal learning.

'Informal' learning in the broad sense can be relevant for access and accreditation procedures; for example, when a person's abilities from formal education do not correspond to the curriculum at the university of applied sciences as much as those of persons from other educational pathways. In such cases, the applicant's personal interests and experiences are considered.

Informal learning is relevant for access to universities of applied sciences without *Matura* (upper secondary school leaving examination). However, even this case requires a formal certificate below Matura level and preparation courses.

Modules/units
What a module is or should be can be understood in different ways. Even if all VET colleges and study programmes at universities of applied sciences were structured in modules, it should not be assumed that, for example, modules from the fifth year of a VET college can be comprehensively matched to those in the first year of a course of study for a bachelor's degree. In the latter, basic contents could have been taught in the first year of a VET college, but more compactly and from an academic viewpoint.

Credit points
European credit transfer system (ECTS) points are used for accreditations in an international context; there is also no exact matching of credit points. One must trust that the credits refer to equivalent, not identical learning outcomes and that students are able to make up for content they might have missed individually if they need them later. There is not credit transfer system in VET and the European Credit Transfer System for Vocational Education and Training (ECVET) is not yet implemented in Austria.

EQF/NQF
An Austrian National Qualifications Framework (NQF) is being created. It should enhance permeability in the Austrian educational system and, in the long term, it should also substantially assist the construction of a 'strategy of lifelong learning'. The NQF consultation document stresses that all education sectors (including general education, vocational training and higher education, adult education, further education will be included and that the NQF will be based on the principle of equivalence but not equality of qualifications: qualifications on one level of the qualifications framework are considered as *equivalent but not equal*. The NQF is intended to have a guiding and not a regulatory function. However, in current discussions the HE stakeholders have noted the importance of rights or entitlements connected with different levels and certificates. They strongly demand that the NQF should really serve as orientation but not regulation, and qualifications on a certain level should not automatically lead to certain rights and entitlements.

Relevance
Differing numbers of students have had their prior learning accredited. The FH Technikum Wien has had most accreditations in electronic-related courses of study. Reasons for this might include the large number of cooperating schools, the sharing of information on accreditation at the schools and the possibility to match knowledge, skills and competences.

In the fulltime courses of study of 'electronics' and 'electronics/economics', around a fourth to a third of the 60 students in a study course start in the second year; in part-time programs for employed students, the proportion is even higher. Remarkably, many students in the part-time track have graduated from VET colleges for employed persons and are accustomed to studying alongside job and private life. The percentage of students without a Matura (upper secondary school leaving exam) is also higher in the part-time track, 10–15 students out of 60 in a year. Thus, permeability is higher in the part-time track for they are adapted to employed students' needs.

Experiences
Accreditation of prior learning is regarded as an important practice for enhancing permeability. In the interview, different basic attitudes were noted towards people who want to learn: support or selection. The *FH Technikum Wien* clearly chose support. The test in the application procedure provides minimal standards for access. People who pass this test receive individual counselling, if necessary, and if they can demonstrate their ability to study, for example, through relevant professional experience, they are trusted to be able to reflect on and organise their learning, fill possible knowledge gaps and reach the goals of the course of study.

Additional comments
The accreditations routines in this case have been working very well, both with the exemption from a whole year for graduates of certain schools and the access to the course of study without a Matura (upper secondary school leaving exam). Individual exemptions work very well, too, but as far as accreditations from formal education and training are concerned, enhanced transparency of qualifications and learning outcomes could ease the assessment of equivalence.

2.3 How can the VQTS model be used in this context?

In the context of the example described in this paper, the VQTS model could be used for a first *identification of equivalence of learning outcomes* of the VET programme and the HE programme. Further more it could serve as a starting point for *establishing new partnerships* between VET and HE providers.

Identification of equivalence of learning outcomes
A competence matrix useful in identifying equivalence of learning outcomes of VET and HE programmes should make visible at least some parts of competence profiles of HE programmes and therefore must include some steps of competence

development relevant for HE. All competence areas and steps of the competence development do not necessarily need to be included in competence profiles because, in this context, the only relevant areas are those that overlap between outcomes of prior learning and learning outcomes in HE.

An important question will be the 'granularity', i.e., the degree of detail and precision of the steps of the competence development. In order to enable the use of the VQTS model for accreditation of prior learning, one should ensure that the scope of the single steps of the competence development is not too broad. One single step should not be too 'high' because this would make it difficult to identify equivalence between learning outcomes of VET and HE programmes.

Competence profiles can be formed using procedures similar to that described in the first VQTS project. Depending on the purpose, the competence profiles can show either the relevant competence areas and steps of competence development of a VET programme or an individual's competencies gained in non-formal and informal learning environments. After identifying the relevant steps of competence development of the study programme in HE, the overlapping areas and thus equivalence can be identified.

Establishing new partnerships

The results of this process can not only be used to recognise learning outcomes on an individual basis but also to promote sustainable advancement from VET to HE by establishing new partnerships between VET and HE providers. Examples would include:

- a joint definition of competence profiles for the admission into training programmes/courses at HE,
- tuning or adapting training programmes/curricula in VET and HE to be more compatible,
- coming to an agreement about the possibility of giving credits for already acquired learning outcomes that will count towards an HE award.

2.4 References

BIBER Salzburg (2008): Finanzielle Förderungen für Weiterbildung. Online: http://www.biber.salzburg.at/foerderung.htm (05.06.2008)

bm:ukk (2008): BM Schmied, Hundstorfer, Leitl, Sorger und Tumpel: Zukunftschancen sichern. Perspektiven geben. Beste Bildung für die Jugend. Online: http://www.bmukk.gv.at/ministerium/vp/pm/20080122a.xml (05.06.2008)

bm:ukk (2008b): Zweiter Bildungsweg. Online: http://www.erwachsenenbildung.at/bildungsinformation/bildungsangebote/zweiter_bildungsweg/zweiter_bildungsweg.php (05.06.2008)

bm:wf (2008): Fachhochschul-Studiengesetz –FHStG. Bundesgesetz über Fachhochschul-Studiengänge. Online: http://www.bmwf.gv.at/wissenschaft/national/gesetze/organisationsrecht/fhstg/ (13.05.2008)

Bundesministerium für Bildung, Wissenschaft und Kultur (2006): Universitätsgesetz 2002. Online: http://www.bmwf.gv.at/uploads/media/0oehs_ug02.pdf (05.06.2008)

Europass Österreich (2008): Diploma Supplement - Reife- und Diplomprüfungszeugnis der Höheren Lehranstalt für Elektronik - Ausbildungsschwerpunkt Telekommunikation. Online: http://zeugnisinfo.punkt.at/file_upload/2_tmpphpgmlgz3.pdf (05.06.2008)

Europass Österreich (2008b): Diploma Supplement - Reife- und Diplomprüfungszeugnis der Höheren Lehranstalt für Elektronik - Ausbildungsschwerpunkt Technische Informatik. Online: http://zeugnisinfo.punkt.at/file_upload/2_tmpphp9Qt3QE.pdf (05.06.2008)

FH Campus Wien (2008): Elektronik – Bewerbung. Online: http://www.fh-campuswien.ac.at/studium/technik_und_management/bachelor/angewandte_elektronik/bewerbung/ (05.06.2008)

FH Joanneum (2008): Quereinstieg ins Studium. Online: http://www.fh-joanneum.at/aw/home/Info/News_Events/News/~beba/ne_quereinstieg/?lan=de (05.06.2008)

FH Technikum Wien (2008): Electronics. Online: http://www.technikum-wien.at/study_program/bachelor/electronics/ (04.06.2008)

FH Technikum Wien (2008b): Electronics/Economics. Online: http://www.technikum-wien.at/study_program/bachelor/electronics___economics/ (04.06.2008)

FH Technikum Wien (2008c): Diploma Supplement - Electronics.

FH Technikum Wien (2008d): Diploma Supplement - Electronics/Economics.

HTL Klagenfurt (2008): Anrechnung – HTL/Studium. Online: http://www.htl1-klagenfurt.at/htl/index.php?option=com_content&task=view&id=98&Itemid=91 (27.05.2008)

HTL St. Pölten – IT, Elektronik (2008): Gegenstände. Online: http://elektronik.htlstp.ac.at/index.php?option=com_content&task=view&id=29&Itemid=51&limit=1&limitstart=1 (04.06.2006)

Land Oberösterreich (2007): OÖ bundesweit Vorreiter mit neuem Ausbildungsmodell: Von der Lehre über die Werkmeisterschule zum Fachhochschul-Studium. Online: http://www.ooe.gv.at/cps/rde/xbcr/SID-

3DCFCFC3-98901839/ooe/PK_Sigl_Fachhochschule_22.5.2007_Internet.pdf (05.06.2008)

Luomi-Messerer, K. & Markowitsch, J. (Eds., 2006): VQTS model. A proposal for a structured description of work-related competences and their acquisition. Vienna: 3s research laboratory.

Luomi-Messerer, K. (2008): From Vocational Education and Training to Higher Education: Possibilities for enhancing permeability by using the VQTS model. In: Bernd Baumgartl & Michele Mariani (eds.): From Here to There: Relevant Experience from Higher Education Institutions Series navreme|publications No. 7c, Vienna / Modena (Forthcoming)

Markowitsch, J., Benda-Kahri, S., Prokopp, M. et al. (2008): Neuausrichtung der berufsbildenden Schulen für Berufstätige. Eine Studie im Auftrag des bm:ukk. Krems. Forthcoming.

Official Journal of the European Union (2005): Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications. Online: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2005:255:0022:0142:EN:PDF (05.06.2008)

Österreichischer Fachhochschulrat (2008): Anrechnung nachgewiesener Kenntnisse. Online: http://www.fhr.ac.at/fhr_inhalt/03_studium/anrechnung.htm (05.06.2008)

Österreichischer Fachhochschulrat (2008b): Studienberechtigungsprüfung. Online: http://www.fhr.ac.at/fhr_inhalt/03_studium/zugangsvoraussetzungen.htm#studienbp (27.05.2008)

Regierung beschließt Lehre mit Matura. Online: http://derstandard.at/druck/?id=3361831 (05.06.2008)

Statistik Austria (2008): Bildungsklassifikation International Standard Classification of Education – ISCED 1997. Online: http://www.statistik.at/web_de/klassifikationen/klassifikationsdatenbank/weitere_klassifikationen/bildungsklassifikation/index.html (04.06.2008)

Studienbeihilfenbehörde (2008): Studienberechtigungsprüfung. Online: http://www.stipendium.at/stbh/studienfoerderung/sonstige-foerderungen/studienberechtigungspruefung/ (05.06.2008)

VHS Floridsdorf (2008): Berufsreifeprüfung. Online: http://www.vhs21.ac.at/2.bw/eBeratung/faq/faq_brp.htm (18.06.2008)

VHS Floridsdorf (2008b): Studienberechtigungsprüfung. Online: http://www.vhs21.ac.at/2.bw/eBeratung/faq/faq_sbp.htm (18.06.2008)