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**Transfer of innovation and new methods for identifying  
vocational competence within vocational education in the metal  
and electrical sector as illustrated by two vocations**

**COMMET**

**Competence –based job descriptions and vocational profiles in  
Hungary**

**History :**

The first National Qualifications Register (hereinafter: NQR) was initiated by the new Vocational Training Act, in 1994 and was overviewed annually . Within the framework of the First National Development Plan, in 2005 a special task was to modernise the NQR to offer solutions for major problems related to vocational secondary education.

- *Quantitative problems: capacity shortage*

The older version of the NQR did not facilitate the issuing of state-recognised vocational qualifications in a sufficient number. Nearly 250,000 qualifications were issued annually within the framework of adult education and of the school education system. However, much more are needed, as there are two and a half million employees whose jobs require vocational secondary education and about one million people of active age, having no kind of qualification. Therefore, the 250,000 qualifications are not enough. The establishment of other educational institutions is not a solution, either. The structure of secondary education must be transformed to shorten the length of education to facilitate the issue of more qualifications.

- *Quality problems: lack of content development*

There were 807 qualifications in the older version of the NQR and the legal regulations specified the output requirement of each. If a content requirement is not in line with the labour market expectations, it is possible to modify the examination requirements of the qualification concerned within the framework of an administrative procedure, but this may take months. Laws must be passed or amended and the qualification concerned will thereby be transformed in accordance with the needs, but the adequacy of those with which the transformed one has a common content will remain uncertain. For this reason, the system is not flexible or efficient.

Difficulties related to taking into consideration earlier examination results, length of earlier study, knowledge obtained earlier.

Another problem was that the results of earlier examinations, the length of earlier studies, or the knowledge obtained earlier were not properly taken into account. Except for one or two qualifications, typically, it was impossible to take the examinee's knowledge obtained earlier into consideration in the examinations; exemption in respect of certain parts of the examination could only be obtained if the examination requirement of the qualification concerned referred seriatim to another. But as the modular structure was not a typical structure, this could rarely happen.

## **The new National Qualification Register**

All qualifications included in the new version of the NQR consist of a limited number of well distinguishable modules of requirements. Each module of requirements comprises a group of competences characteristic of the qualification concerned. For each module there is a description of competences classified according to :

- professional competences
- personal competences
- social competences
- methodological competences.

What determines how many modules of requirements a qualification comprises? What rule was applied to the division of all competencies into modules of requirements, and what is the benefit of introducing the modular structure in general in the rules applicable to the qualification output?

Output modularisation ensures the possibility of mobility between qualifications, that is, if somebody has a qualification characterized with competencies some of which are common with the competencies characteristic of another qualification, then it will be much simpler for this person to obtain the new qualification, it may take less time and less examinations to pass. In the course of output modularisation related to qualifications, the experts investigate how the full lists of competencies of two or more qualifications overlap.

The analyses show that there is a considerable overlap between competencies in occupations and jobs. It is an everyday experience that colleagues otherwise employed in different jobs and sometimes even having different qualifications are able to substitute each other for shorter or longer periods with no severe problems arising in the working processes, which means that they have competencies in common.

If in the course of the analysis of jobs and occupations it becomes obvious that there is an overlap, the NQR - which must meet the labour market demand, consequently the overlapping competency demand - must be structured, as well and the relations system between related qualifications must be clearly documented. The question is what procedure or method can be used to compare two or more qualifications and find the overlapping competency groups.

## **New element of the NQR: partial qualification**

A new concept has been born: the so-called partial qualification. A partial qualification is a state recognised qualification which makes an employee suitable for employment in at least one job. Partial qualifications are not separate from the

system of qualifications, but constitute a part of the structure ( there are more than 400 partial qualifications in the new NQR).

A partial qualification constitutes a part of a qualification, it is a thematic part of the competences related to the qualification concerned, sorted according to certain criteria. And what is the sorting criterion? An employee having a partial qualification has to be suitable – in spite of the smaller competency content – for filling the job concerned.

### **Introduction of modular education**

Modular education was introduced on 1 September 2006. Naturally, this is not the date on which the education was fully introduced, but this was the date on which the educational process started at the Regional Integrated Centres for Vocational Education. At the 16 Regional Integrated Centres for Vocational Education, in two trade groups, education started in the first year of vocational education in relation to a total of 14 qualifications. The possibility for this type of education was created by the two ministers responsible for qualifications, who passed the decrees regulating the vocational and examinational requirements applicable to these 14 qualifications and approved the central educational programmes of these qualifications.

### **Modularisation of the educational process, curricular units**

We have now arrived at the second level of modularisation, namely the modularisation of the educational processes. What has been said before applies to output modularisation, that is, to the relations systems applicable to the qualification-related output requirements. The key term is the module of requirements. When we speak about the organisation of the educational process, the curriculum, modularisation has its own role – it enables us to help students master the competencies required for the qualification within the framework of the so-called curricular units.

In the school system education it is common that the teaching-learning process can be characterised by a subject structure organised around scientific areas. Process organisation around curricular units instead of different subjects is more efficient as regards students.

The problem is that the criteria essentially defining output modularisation cannot be used for the division of the curriculum into curricular units. In this case pedagogic and didactic aspects dominate and teachability, hierarchy, the characteristics of the student's age group, the knowledge obtained earlier, as well as the characteristics of the school or educational institution are the major criteria. Still, the two concepts of the term module and the two types of modularisation must meet and the relationship between them must be obvious. It had become obvious already at the early stage of development that it is impossible to assign a curricular unit to each module of requirements. This approach would not satisfy the requirements applicable to the teaching and learning processes. In order to make the relationship between the two kinds of modularisation obvious, it is worth clarifying certain characteristics of curricular units.

### **Characteristics of the curricular units**

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As curricular units are processes and constitute a part of the entire teaching and learning process, therefore it is important to define the purpose of curricular units. The goal in the case of each curricular unit is to develop some kind of human characteristics or to improve characteristics already possessed. This is the goal of all teaching processes, thus in addition to school system education, this applies to adult education, as well. The question is how to define the goal of these curricular units and how to infer the characteristics to be developed or improved. Here is the first connection between curricular units and modules of requirements, as competencies in the modules of requirements are defined partly in terms of tasks and partly in terms of characteristics. Therefore, in order to define the goals of a curricular unit, we must start from the competencies defined in the modules of requirements, more specifically, from the characteristics included in the modules of requirements. As a reminder, these characteristics can be of a vocational nature (vocational knowledge, vocational skills), social nature, methodological nature and even of a personal nature. If the goals specified for each curricular unit in a certain process are put together, that is, we make a list of the characteristics to be developed or improved as a goal of education, then these goals must completely cover the required characteristics as specified in the modules of requirements.

Another important feature of curricular units is the so-called form of student work. The form of student work is the description of all activities through which students can attain the goal set, that is, the characteristics specified in relation to the goals of each curricular unit.

In other words, the form of student work specifies those procedures and tasks which must be performed by the student in the course of the curricular unit concerned. Here is another connection between curricular units and modules of requirements, as the forms of student work must cover the task lists specified in the modules of requirements. The appropriate procedure in the course of education is to have students perform all activities included in the list of tasks in respect of each module of requirements. The harmony between the goals of the curricular units and the range of characteristics specified for each module of requirements and between the forms of student work specified in respect of each curricular unit and the range of tasks defined in respect of each module of requirements is important because this harmony creates the basis for a successful vocational examination.

### **Social partners involved in the formalisation of requirements in vocational education**

At the moment the Ministry of Labour and Social Affairs is responsible for all matters regarding vocational and adult education. The ministry is supported by the National Council of Vocational and Adult Education consisting of the following members :

- a) representatives of each ministry responsible for qualifications,
- b) one representative of the non – governmental organizations,
- c) experts of vocational education, adult education and higher education,
- d) representative of the professional ngos operating in the field of vocational education,
- e) representative of the higher education institutions,

- f) 9 representatives of the Employers' Federations and 6 representatives of Employees' Federations
- g) representatives of national economic chambers
- h) representatives of organizations responsible for the maintenance of schools (municipalities, foundations, churches)

After the decision of the Council, the ministry in charge of the given qualification, assign the preparation of the requirements of the new qualification to the National Institute of Vocational and Adult Education or other competent institutes .