

National of Qualifications Framework for Tertiary Education as a Tool of Knowledge Society

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Abstract. The knowledge society includes both functioning of the knowledge management and undoubtedly also relevant development of education, quite logically based on the knowledge - not only the taught knowledge, but also the knowledge acting on the system of education itself. This paper aims to introduce the preparation and concept of a National Qualification Framework in the Czech Republic. Implementation of the European qualifications framework in the CR is not only necessary but it represents also a strategic opportunity to improve the quality, international clarity and competitiveness of Czech tertiary education.

Keywords - Qualification framework for the higher education in European area, National qualification framework, Dublin descriptors, National descriptors, knowledge society.

I. INTRODUCTION

At today's time of the knowledge society the requirements of the companies upon its employees are all the time growing - especially in the fields of new attitudes to the education. The ability to continue in learning and applying new methods and tools during solution of the problems is supporting the development of the education employees.

Creation of the National Qualifications Framework in the field of tertiary education is one of possible directions; the NQF will represent the basis for:

- Restructuring of syllabi for the tertiary (higher) education area in the prevailing majority of European countries within the Bologna Process
- Communication between the tertiary education systems as the mean for understanding
- Support to diversification of the study offer with adequate transparency and vertical and horizontal throughput
- Attractiveness with respect to rising competition and search for high-quality students

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The National Qualifications Framework is

- the tool for classification of qualifications, based on the set of criteria for certain levels of the reached education;
- the objective is to integrate and coordinate the national partial systems of qualifications and to improve transparency, availability, development and quality of qualifications with respect to labour law and civil society
- an important tool enabling to reach compatibility and transparency and to facilitate mobility of the students within the tertiary education area and between individual tertiary education systems. The NQF should also assist the universities to elaborate the modules and syllabi based on results of the study and on credits and to improve recognition of qualifications as well as all preceding (lower) forms of education.

The qualifications frameworks should be designed so that they may support higher mobility of students and teachers and improve possibility of their employability.

II. THEORETIC PIECES OF INFORMATION OF THE KNOWLEDGE SOCIETY AND QUALIFICATION FRAMEWORK FOR THE EUROPEAN HIGHER EDUCATION AREA (EHEA), EUROPEAN QUALIFICATIONS FRAMEWORK FOR LIFELONG LEARNING (EQF)

The knowledge society means that the knowledge became the decisive factor of the life quality.

Usage of knowledge belongs into the knowledge economy. The fact that the knowledge plays very important role in economics isn't new idea. [2], [4], [5]

Knowledge is capability of the human being or another intelligent system to store, communicate and process the information into systematically and hierarchically arranged knowledge structures. Knowledge is characterized thorough abstraction and generalization of the information and data. [1], [6]

Knowledge is generated in minds of the people, who "know". We can break down the knowledge into **tacit** and **explicit**. Under tacit (also implicit, silent) we understand the

knowledge that has not been spoken for different reasons and therefore it is also not shared. Under explicit we understand the knowledge that has really been spoken and often already recorded in the existing information systems.

The basic requirements raised for the knowledge management system are as follows: awareness, availability, timeliness, safety and openness. [3]

System implementation can be divided into five degrees :

1. muddled knowledge,
2. realization of the need of knowledge management,
3. occurrence of individual knowledge management activities,
4. their mutual coordination,
5. integrated system.

National qualification framework is a tool for the classification of qualification based on a set of criteria for specified attained levels of education. The aim is to integrate and coordinate national sub-systems of qualification and improve the transparency, accessibility, development and quality of qualification in relation to the work and Civil Society. It is an important tool for achieving consistency and transparency and to facilitate mobility of students within the university system and also between systems of higher education. They should also help to universities to prepare modules and curriculum programs based on the results of the study and the credits and improve recognition of qualification as well as of all forms of prior learning. Qualification frameworks should be designed to promote greater mobility of students and also of teachers and to improve their employment opportunities.

In this paper we focus on the **Qualification framework for the European Higher Education Area** (European Higher Education Area – EHEA) in the framework of Bologna-process, further on the **European Qualifications Framework for lifelong learning** (European Qualifications Framework – EQF), including the **National qualification framework** (National Qualification Framework – NQF) and development of **National descriptors in the CR**.

By adoption of the Bologna declaration in 1999, the country in the Bologna process committed to „to adopt a system of easy readable and comparable degrees for higher education ..“ , so that there will be possible employment in the framework of EU and competitiveness of European higher education system. [7] , [8]

In the framework of Bologna process originated independently two European frameworks covering the **Framework of qualifications for the European Higher Education Area** one of three pillars of the European Higher Education Area. It was adopted in 2005 in the Bergen Conference of ministers responsible for higher education. The second framework **European Qualifications Framework for lifelong learning** at EU level originated

from about 2005 on the recommendation from the European Parliament and from the Council of April 23rd 2008. [9]

The framework of qualifications for the European Higher Education Area EHEA is described by so-called Dublin descriptors (2002, 2004) where were adopted common standards for bachelor's and master's cycle and later for the doctoral cycle. [10]

- *knowledge and understanding,*
- *applying of knowledge and understanding ,*
- *making judgments,*
- *communication,*
- *learning skills.*

There was started usage of designation for bachelor, master's and doctoral cycle as , **first, second and third cycle**.

The sense of the EHEA is to frame a future national system of qualifications of the member countries of the Bologna process with a single methodology, uniform procedures and a common core architecture. The framework is based on study with 3 cycles, for each cycle are defined general descriptors (so-called Dublin descriptors) based on results of learning (*learning outcomes*) and acquired competencies.

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III. PROPOSALS NATIONAL FRAMEWORK OF QUALIFICATIONS TERTIARY EDUCATION , NATIONAL DESCRIPTORS, DESCRIPTION OF EDUCATION FIELD ECONOMY ND ECONOMICS IN THE CZECH REPUBLIC

European framework makes sense only if there will be created National qualifications frameworks. *National Qualifications Framework* is a tool for classification according to a set of criteria for specified levels of educational attainment; the aim is to integrate and coordinate national sub-systems of qualifications and to improve transparency, accessibility, development and quality of qualifications in relation to work and civil society. (Recommendation about ERK, 2008)

The advantage NQF is to bridge the „old“ / current approach using the methodology of „*learning outcomes*“ which will led to innovation in degree programs, as well as

to ensuring their compatibility, the National Qualifications Frameworks will be validated (certified by themselves). [11]

National framework of qualifications for tertiary education will include both existing frameworks at European level. The national system of qualifications for tertiary education with an emphasis on learning outcomes can help to evaluate how restructuring of degree programs took place, if they meet the requirements from practice, but also whether the restructuring was implemented effectively, whether they don't teach the same in several degree programs. [13]

Usage of methodology based on learning outcomes and ECTS-credits may lead to improved methodology for evaluating the quality of degree programs.

National descriptors connect the Czech system for tertiary education with the Qualifications framework in the European Higher Education Area (Bologna Process) and with the European Qualifications Framework for Lifelong Learning (European Union) and they will be specified by industry-specific descriptors (in the framework of graduate profile) – **Descriptors of educational areas**.

National descriptors are basis for National Qualifications Framework and provides the required learning outcomes at different levels of tertiary education, that means definition of knowledge, *skills* and competencies

National descriptors will be mandatory for tertiary education institutions in terms of types of learning outcomes and level of exigency to be achieved at the level of education attained by all graduates.

Descriptors of education areas will refer to a typical graduate of the main field of education and they will be balanced to take account of academic and professional purposes of education.

The field of education is defined by descriptors describing the learning outcomes that reflect in a standardized form the goals of education and also reflect the common theoretical methodological, and possibly also the philosophical value basis of the given field of education. It is natural that education fields will include a wide and variable range of disciplines with varying degrees of academic or in contrary of professional targeting, where some of the field will be at border of other areas of education. Therefore the purpose of formulation of the descriptors for areas of education can be obviously neither setting up of minimum standard applicable to all disciplines in the field of education, nor setting of academically optimal graduate profile.

Descriptors of education fields in the CR are currently 39 – specifications of the „core curriculum“ for a wider group of degree programs with common general objectives of education

- Descriptors of education fields express a relatively non-binding standard (*benchmark*) as expected outcomes of learning for a typical graduate of main subject in the given field.

- A high degree of autonomy and responsibility of institutions in determining the expected outcomes of learning in degree programs. [12]

PROPOSAL DESCRIPTION OF EDUCATION FIELD ECONOMY AND ECONOMICS

The subject of education field Economy and the economics is a phenomenon of wealth in terms of flow and status.

It includes both theoretical (conceptual) as well as application aspects. The most important components of education field Economy and economics are the economy and the economics.

The aim is to analyse and understand allocation, distribution and use of resources and their implications for economic and social well-being, both at micro and at macro level; acquire the ability to decide on limited resources and unlimited needs. It is about understanding how resources are used and how economic actors behave, also in mutual interaction.

In the field of education Economy and economics the international aspect of the problems plays an important role; attention is paid to the current situation but also to its possible change in the future; the analysis is carried out both static and dynamic. During the evaluation there are applied various aspects – economical, ethical, statistical, mathematical, environmental, psychological, social, technological or other.

BACKBONE FIELDS

Major components of the field of education Economy and Economics are **Economy and Economics** with their full width of content.

DEFINITION OF LEARNING OBJECTIVES

The aim of education in the field of economy and economics is to provide education for graduate, which includes the knowledge, skills and understanding of phenomena and processes from main branches of economy and economics and the related cognitive and transferable skills with the dominance of the economic approach. These goals are usually developed by branches or across the fields.

PROPOSALS DESKRIPTORS IN THE FIELD OF EDUCATION OF ECONOMY ND ECONOMICS

PROFESSIONAL KNOWLEDGE

Graduate of the degree program show at graduation:

type of qualification: **higher professional education**

- understanding of the methods required for the exercise of independent professional activities in a narrower range of specialized occupations,



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

- overview about theories and concepts on which are based the field methods, and environment of their implication in practice,

type of qualifications: **bachelor's degree programs**

- broad knowledge of theories, concepts and methods of the field ,
- understanding the possibilities, conditions and restrictions for use of theories, concepts and methods in the field of practice,

type of qualifications: **master's degree programs**

- broad and profound knowledge and understanding of theories, concepts and methods corresponding to contemporary state of knowledge in field,
- Understanding the possibilities, conditions and restrictions of use of knowledge related fields,

type of qualifications: **doctoral degree programs**

- deep understanding of theories, concepts and methods that are at the forefront of recognition at the international level,
- understanding of science system and research issues on the border between disciplines,

PROFESSIONAL SKILLS

Graduate of degree program can after graduation:

type of qualification: **higher professional education**

- using the expertise and on the basis of a defined task to solve independently common practical problems in the field ,
- find and use information needed for a defined problem,

type of qualifications: **bachelor's degree programs**

- using expertise based on a roughly defined task to solve practical problems in the field,
- find and organize information relevant to solving the defined practical problem,
- use some field research procedures in the extent necessary to address practical problems in the field,

type of qualifications: **master's degree programs**

- using its own expertise also independently define, recognize and creatively solve theoretical or practical problem in the field,
- independently and creatively solve complex problems using the selected theories, concepts and methods of study,
- apply basic research methods in the field at the way capable of gaining new original information,

type of qualifications: **doctoral degree programs**

- design and apply advanced research procedures in the field in a manner allowing to expand knowledge of the main field by original research,

- develop and evaluate theories, concepts and methods of study including establishment of branches or their classification in a wider area,

UNIVERSAL COMPETENCE

After the degree program the graduates are able to:

type of qualification: **higher professional education**

- made independent and responsible decisions in familiar contexts based on defined assignment,
- to coordinate its activities according to the assignment and allocation of resources with other team members and bear responsibility for the result,
- recognize the ethical dimension of the solved problems,
- clearly and persuasively communicate their professional opinions to other team members,
- act within the limits of their knowledge, skills and proficiency in at least one foreign language,
- under skilled supervision acquire additional professional knowledge, skills and competences based primarily on practical experience and its evaluation,

type of qualifications: **bachelor's degree programs**

- make independent and responsible decisions in the context of only partially known relations based on rough specification,
- based on the general assignment and allocation of resources to coordinate the activities of the team and take responsibility for his results ,
- to solve problems include consideration of their ethical dimension,
- clearly and convincingly communicate to professionals and laymen information about the nature of professional issues and their own view on their solution,
- comprehensively summarized the professional opinions of other team members,
- act within the limits of their knowledge, skills and proficiency in at least one foreign language,
- independently acquire additional expertise, skills and competence based on practical experience and in particular its assessment, but also on separate study of theoretical knowledge from industry,

type of qualifications: **master's degree programs**

- independently and responsibly decide on new or changing contexts or fundamentally changing environment, taking into account the wider social implications of decisions,
- according to the evolving context and available resources define the specification for professional activities, coordinate them, and assume ultimate responsibility for their results,

- separate ethical problem solving,
- clearly and convincingly communicate to professionals and wider public own professional opinions,
- act within the limits of his knowledge, skills and proficiency in at least one foreign language,
- plan, promote and manage with use of theoretical knowledge, acquisition of additional expertise, skills and competencies and capacities of other team members,

type of qualifications: doctoral degree programs

- evaluate new knowledge and ideas with regard to long-term social consequences of their use,
- extensive planning of creative activities and acquire and plan resources for their implementation,
- independent solution of complex ethical problems during creative activities or using their results,
- clearly and persuasively communicate own knowledge in the field to other members of the scientific community at international level and to general public,
- act within the limits of his knowledge, skills and proficiency in at least one foreign language,
- acquire new expertise, skills and competence of their own creativity and influence conditions, and other learning contexts.

IV. CONCLUSION

Umbrella qualifications frameworks for the European Higher Education Area should allow for greater transparency in the European Higher Education Area. Therefore, to this European framework were assigned and there are tools such as ECTS-credits or Diploma Supplement. Qualifications obtained at any university in the European Higher Education Area must be clear, must be possible to be compared – and this is very difficult without a „simplified“ architecture of qualifications, i.e. without a three-levels model of study at European level and without a common methodology, which will be consistently and correctly used by all countries in the Bologna Process. The resulting system will also facilitate the recognition of qualifications based on mutual understanding of learning outcomes and competencies that a student received. So it will be easier and better to recognize qualifications as for the need of further study or lifelong learning, as well as for employers' needs. There is also expected improvement of student mobility. An important element of mobility in recent years have become programs of the type „joint degree“. A similarity of such cooperation between universities in two countries is so-called „double degree“. This form of study in

a European context has encountered and is encountering many challenges during the development and recognition of achievements. Also in this case it is expected that with support from the national system of qualifications and from the European framework there will be simplified recognition of this type of qualifications.

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