

Project Career guidance game in a city full of occupations No 2019-1-CZ01-KA201-061204

National frameworks of occupation, skills and competencies in the Czech Republic, Slovakia, Greece, and Bulgaria

C-Game project, O1-1.5

Prague, June 2020











Contents

1	Introduction	3
2	Czech Republic	3
	2.1 National Qualifications Framework	3
	2.2 National System of Occupations	4
	2.3 National version of ISCO	6
	2.4 Comments (positives and negatives of usability)	6
3	Slovakia	6
	3.1 National Qualifications Framework	6
	3.2 National System of Occupations	8
	3.3 National version of ISCO	9
	3.4 Comments (positives and negatives of usability)	9
4	Greece	9
	4.1 National Qualifications Framework	9
	4.2 National System of Occupations	13
	4.3 National version of ISCO	13
	4.4 Comments (positives and negatives of usability)	13
5	Bulgaria	14
	5.1 National Qualifications Framework	14
	5.2 National System of Occupations	15
	5.3 National version of ISCO	15
	5.4 Comments (positives and negatives of usability)	16
6	Conclusions	16
7	Used sources	17

1 Introduction

This document is part of the Output_O1 of the C-Game project which aim is to develop a C-Game: CAREER GUIDANCE GAME IN A CITY FULL OF OCCUPATIONS. C-Game will be a new serious game providing pupils aged 12-14 with a fun tool of career orientation based on the gradual learning on different professions in five language versions (English, Czech, Slovak, Greek, and Bulgarian) and four countries (Czech Republic, Slovakia, Greece, and Bulgaria).

C-Game offers pupils the opportunity to get acquainted in an entertaining way with approximately 600 occupations, which would broaden their overview of the labour market, the necessary skills for the performance of occupations pursued, and stimulate them to thinking about their future careers and the educational path leading to it. C-Game is based on the assumption that getting to know the world of work in school age contributes significantly in shaping children's future career and professional identity, and that the most effective means to do so is a fun game.

C-Game is not designed as a substitute of career guidance, but it helps students in their professional orientation through play, broadening horizons of employment and thus influences their future career decisions.

2 Czech Republic

2.1 National Qualifications Framework

http://www.narodnikvalifikace.cz/

The National Qualifications Framework (Národní soustava kvalifikací, NSK) is an open public directory containing specifications of all professional qualifications recognized within the territory of the Czech Republic. It doesn't only contain the list of full qualifications, i.e. the qualifications obtained as a result of formal school education, but also partial qualifications which make up only part of a certain profession. The National Register of Qualification serves those who obtained their professional skills in addition to their originally acquired education but have no documentation for it. Single professions are described in the form of standards which allow the examination and a certificate to be issued. The comparison of foreign and local qualification is thus made easier. Standards of the National Register of Qualification were developed in accordance to the National Register of Occupation.

The basis of the system is the creation of professional qualifications that have a direct link to occupations applicable in the labour market. NSK has a practical application in the

verification and recognition of gained professional qualifications, which results in passing an exam and obtaining a nationally recognized certificate.

Number of qualifications: 1.337 (12.2.2020)

Figure 1: Overview of the Czech National Qualifications Framework

Field of qualification		
Transport and communications		
Ecology and environmental protection		
Economy		
Economics and administration	8	
Electrical engineering, telecommunication and computer technology	71	
Gastronomy, hotel and tourism	38	
Mining and mining geology, metallurgy and foundry	83	
Informatics courses	7	
Leather and shoemaking production and processing of plastics	46	
Store	50	
Fields of history	1	
Personal and operational services	53	
Pedagogy, teacher training and social care	15	
Printing, paper, film and photo processing	42	
Food and food chemistry	96	
Law, legal and public administration activities	12	
Journalism, librarianship and informatics	21	
Special and interdisciplinary fields	9	
Construction, geodesy and cartography	159	
Engineering and engineering production	119	
Technical chemistry and chemistry of silicates	105	
Physical culture, physical education and sport	17	
Textile production and clothing	54	
Art and applied art	44	
Veterinary and veterinary prevention	1	
Agriculture and forestry	132	
Manufacture of wood and musical instruments	64	
Total	1337	

2.2 National System of Occupations

https://www.nsp.cz/

The National System of Occupation (Národní soustava povolání, NSP) is an online catalogue of descriptions of occupations, skills and competencies that are practiced in the Czech Republic. Each occupation is defined by a list of activities that make up the content of the occupation, the competences necessary for its performance. It serves as an up-to-date, effective and flexible system for mapping labour market needs and serves as a practical and comprehensive source of information on employers' requirements for individual occupations. The NSP is administered by the MLSA, which "ensures the creation and, in accordance with the development of the labour market, the updating, and publishing in electronic form in a manner enabling remote access.

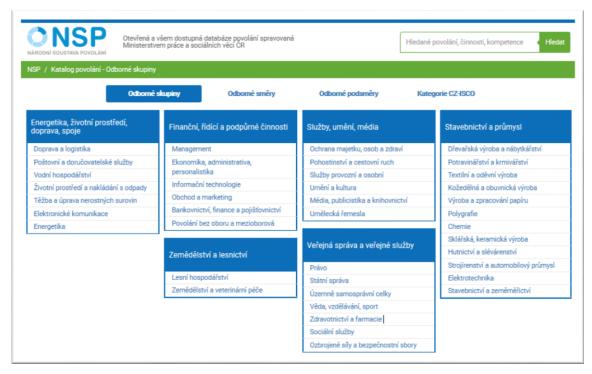
The reason for the establishment of the National System of Occupations was to create an important instrument of state employment policy in the field of labour and social affairs, which supports the mapping of labour market needs, serves for effective human resources development and deepens the link between the world of work and vocational education. It helps to solve questions in the area of choosing a study, profession, preparation for a profession, in deciding on changes in qualifications, changes in career paths and in finding a new job.

The occupations are described by:

- Work activities
- Examples of private sector work
- Qualification to practice formal education
- Competency requirements for the performance of the profession (professional skills, professional knowledge, general skills, soft skills
- Burdens and risks of the occupation
- Medical fitness to practice
- CZ ISCO and wages
- Job vacancies

Number of occupations: 2.461 (12.2.2020)

Picture 1: Introductory web page of online Czech National System of Occupations



2.3 National version of ISCO

https://www.czso.cz/csu/czso/klasifikace zamestnani -cz isco-

The CZ-ISCO National Classification of Occupations was introduced by the Czech Statistical Authority in 2011 for the purpose of monitoring individual groups (types) of occupations in the Czech Republic and the possibility of their international comparison. The CZ-ISCO National Classification of Occupations was created strictly on the basis of the international standard ISCO-08. It copies the ISCO-08 international classification job codes to the 4-digit job code level. At the level of the 5-digit code, it was expanded according to the needs of the Czech labour market.

2.4 Comments (positives and negatives of usability)

Positives of usability of information for C-Game development

- Information of both registers should be useful for adapting the C-Game to Czech language.
- The Czech ISCO is available in xls format with 5 digit codes and it is usable for the Czech version.

Negatives of usability of information for C-Game development

- The Czech national registers (NSK, NSP) do not offer possibility to download their database.
- The occupations in NSP have the ISCO code but to reach individual codes it is needed to do several steps.
- The occupations in NSP are not equipped with RIASEC codes.

3 Slovakia

3.1 National Qualifications Framework

https://www.kvalifikacie.sk/

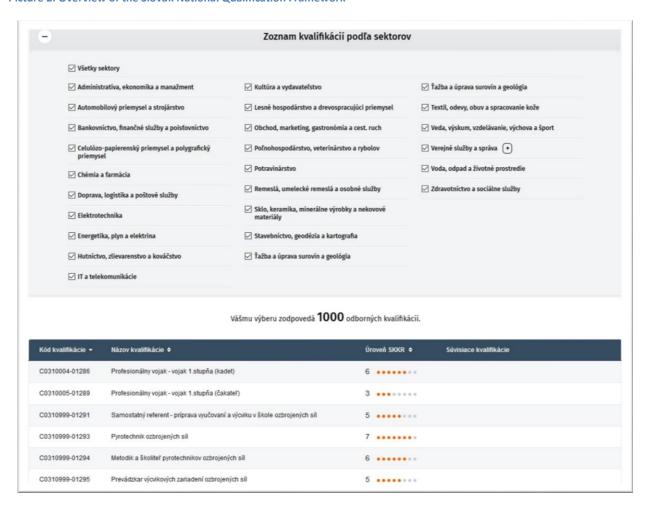
The National Qualification Framework – Národná sústava kvalifikácií (NSK) is a publicly accessible register that contains descriptions of qualifications differentiated and verified in Slovakia. Its aim is to create a unified and transparent system based on the premise that we can acquire the skills, knowledge and competences needed to obtain a qualification through different paths of education and learning.

The National Qualifications Framework unifies the requirements for individual qualifications and describes the various ways of obtaining them. It is creating a single, clear and transparent system of recognition of qualifications, from which it can benefit individuals,

employers, and educational institutions in designing their training programs. The main barer of the National Qualifications Framework are qualifications cards, in which the public will find qualification and assessment standards. This includes the Slovak Qualifications Framework (Slovenský kvalifikačný rámec, SKKR), which is a tool that assigns a certain level to individual qualifications from the National Qualifications Framework on the basis of predetermined criteria. The qualifications framework consists of descriptors expressed in three categories - knowledge, skills and competences, which are unique within each level. These are actually the performances that the individual has to demonstrate when verifying and recognizing the qualification at a given level of SKKR. Thanks to the connection of the National Qualifications Framework to the Slovak Qualifications Framework and the European Qualifications Framework, qualifications are more understandable in other European Union countries as well.

Number of qualifications: 1000

Picture 2: Overview of the Slovak National Qualification Framework



3.2 National System of Occupations

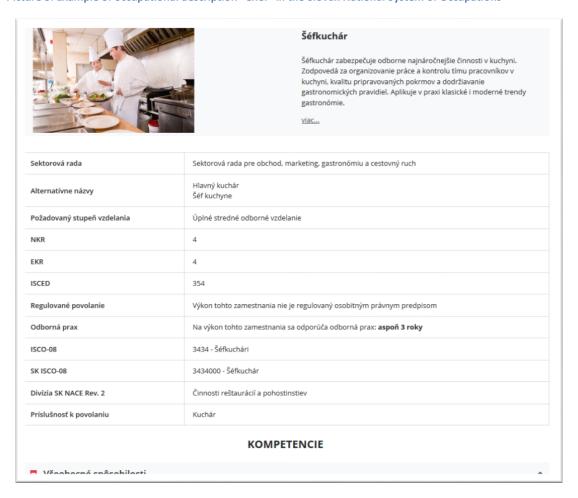
https://www.sustavapovolani.sk

The National System of Occupations - Národná sústava povolaní (NSP) is defined by Act no. 5/2004 Coll. on employment services as a nationwide, unified information system describing the standard demands of the labour market for individual jobs. The NSP determines the requirements for professional skills and practical experience required to perform work activities in the labour market. Its centre is the Employment Register made up of national employment standards, which describe employers' requirements for qualified employment.

The individual employment cards contain, in addition to the description of the profession itself, the required level of education, NKR, EKR, ISCED, necessary professional experience, ISCO-08, SK ISCO-08, SK NACE, also the required competencies for the profession (general competences, professional knowledge, professional skills) and other possible education in the profession (certificates and written certificates required for the exercise of the profession).

Number of occupations: 1606

Picture 3: Example of occupational description "Chef" in the Slovak National System of Occupations



Information from both registers should be useful for adapting the C-Game to Slovak language. The National System of Occupations also contains illustrations of some professions that could also be used in C-Game. Databases can't be downloaded and the occupations are not equipped with RIASEC codes.

3.3 National version of ISCO

https://slovak.statistics.sk/wps/portal/ext/metadata/

SK ISCO-08 represents the Slovak national classification of occupations based on the international classification ISCO-08 of the International Labour Organization (ILO). The last, so far used version of the ISCO-88 was implemented into the national environment under the name Job Classification, version 2001 (KZAM). KZAM defines jobs and their groups on the basis of the most common combinations of work tasks and responsibilities.

3.4 Comments (positives and negatives of usability)

Positives of usability of information for C-Game development

- Information of both registers should be useful for adapting the C-Game to Slovak language.
- The Slovak ISCO is available in cvs format with 5 digit codes and it is usable for the Slovak version.

Negatives of usability of information for C-Game development

- The Slovak national registers (NSK, NSP) do not offer possibility to download their database.
- The occupations in NSP have the ISCO code but to reach individual codes it is needed to do several steps.
- The occupations in NSP are not equipped with RIASEC codes.

4 Greece

4.1 National Qualifications Framework

The Hellenic Qualifications Framework (HQF) is a single tool or a mechanism, which facilitates transparency and comparability of qualifications in the Greek context. It will be a benefit for students, graduates and stakeholders of the Greek labour market. On the other

hand, in accordance with the common European strategy "Europe 2020", which aims at smart, sustainable and inclusive growth the Hellenic Qualifications Framework and its referencing to the European Qualifications Framework provides a tool for "translating" and comparing qualifications and aims at becoming an opportunity to help promote the mobility of learners and employees.

EONIXO ITALIZIO IPIOZONTON
The Hellenic Qualifications Framework

Home
Hellenic Qualifications Framework

European Qualifications Framework

European Qualifications
Framework

The 8 Level NOF
Implementation steps
Scientific Approaches
Hellenic Qualifications Framework (HQF)

The aim of the Hellenic Qualifications Framework (HQF) is to create a coherent and comprehensive system of classification of all qualifications obtained from formal, non-formal education and informal learning in Greeco. This will be done gradually. In this first phase, the objective is the classification of qualifications acquired through non-formal education and informal learning.

The Hellenic Qualifications Framework (HQF) is a single tool or a mechanism, which facilitates transparency and comparability in the Greek context. It will be a benefit for students, graduates and stakeholders of the Greek Labour markot. On the other hand, in accordance with the orman European strategy "Europe 2020", which aims at smart, sustainable and inclusive growth the Hellenic Qualifications Framework and its referencing to the European Qualifications Framework provides a tool for "translating" and comparing qualifications and aims at becoming an opportunity to help promote the mobility of learners and employees.

Picture 4: Introductory web page of the Hellenic Qualifications Framework

The structure of the National Qualifications Framework

The eight-level structure reflects the existing formal education and initial vocational training system in Greece. Levels are defined in terms of knowledge, skills and competencies. Work on level descriptors for HQF and on a qualifications framework for higher education has taken place separately, but the final objective is to have a comprehensive framework, covering all levels and types of qualification.

Its structure is defined by the following features:

Levels: Eight levels cover the entire range of qualifications, from compulsory education to higher education. Each level is defined by a set of knowledge, skills and competencies which determine the learning outcomes. The learning outcomes constitute the qualifications for this particular level

Learning outcomes: The qualifications have the form of learning outcomes and are classified into levels. Learning outcomes signify what a person knows, understands and is able to do upon completion of a learning process. They are classified into knowledge, skills and competencies

Descriptors: the learning outcomes which correspond to the qualifications of a specific level are defined by descriptors. These descriptors are defined by qualitative and quantitative grading of knowledge, skills and competences

Qualification Types: Qualifications are classified into qualification types. They represent groups of titles with common characteristics which are classified in the same level.

Picture 5: Levels of national and European qualification framework

LEVELS OF NATIONAL & EUROPEAN QUALIFICATIONS FRAMEWORK	VOCATIONAL EDUCATION AND TRAINING	GENERAL EDUCATION	HIGHER EDUCATION
1		PRIMARY SCHOOL CERTIFICATE	
2		LOWER SECONDARY SCHOOL CERTIFICATE	
3	VOCATIONAL TRAINING SCHOOL (SEK) 'DEGREE' (***) (post lower secondary level) (granted to graduates of the apprenticeship year of vocational training schools following certification) *VOCATIONAL TRAINING INSTITUTE (IEK) CERTIFICATE		
	(post lower secondary level) VOCATIONAL SCHOOL (EPAS)		
4	CERTIFICATE (granted to graduates of the second class of EPAS-post lower secondary level) VOCATIONAL UPPER SECONDARY SCHOOL (EPAL) CERTIFICATE (equivalent to the general upper secondary education leaving certificate, granted to graduates of the third year of EPAL following in-school exams) VOCATIONAL UPPER SECONDARY SCHOOL (EPAL) 'DEGREE' (****) (granted to graduates of the third year of EPAL following in-school exams)	GENERAL UPPER SECONDARY SCHOOL CERTIFICATE (granted to graduates of general upper secondary education following in-school exams)	

5	VOCATIONAL POST- SECONDARY SCHOOL 'DEGREE' (***) for graduates of EPAL apprenticeship class, level 5 (post-secondary level) (granted to graduates of the apprenticeship year of EPAL following certification) VOCATIONAL TRAINING DIPLOMA (post-secondary level) (granted to graduates of vocational training institutes (IEKs) following certification) **VOCATIONAL TRAINING DIPLOMA (IEK) (post-secondary level) POST-SECONDARY AND NOT HIGHER EDUCATION DIPLOMA or 'DEGREE' (****)	
6		BACHELOR DEGREE (University /technological educational institute (TEI)
7		MASTER'S DEGREE (Universities/technological educational institutions (TEI)
8		DOCTORATE (Universities)

Source: EOPPEP www.eoppep.gr

^{*} This qualification is no longer awarded.

^{**} This qualification is no longer awarded.

^{***} The word 'degree' used with quotation marks is a direct translation from the Greek terminology as it appears in the legislation (ptychio). In Greek, the word ptychio is used for titles of study from different education levels (higher, secondary, etc.). It is not to be confused with its usage in the English language, where degree refers to a higher education title of study, i.e. bachelor degree.

4.2 National System of Occupations

Currently, Greece is not using any national system of occupations; instead it uses the international classification system adapted to the STEP-92.

4.3 National version of ISCO

https://www.statistics.gr/en/occupation http://web.statistics.gr/MainPage/step-92/step-92.pdf

The Statistical Classification of Occupations provides a classification system and a grouping of information concerning the professions which derives either from population censuses, other statistical surveys or from administrative sources.

This Statistical Classification of Occupations (STEP-92) reviews and replaces the previous classification of the year 1981.

Until now, Greece used the classifications provided by ESYE (Hellenic Statistical Authority) for the classification of Occupations which were based on structure of the International Standard of Classification (International Standard Classification of Occupations-ISCO) of the International Labour Office in which there was an absolute identification at the Digital level, while at the two-digit and three-digit levels, in order to meet national needs for professional statistics.

So, for reasons of harmonization of statistics of Occupations in its Member States the European Union (EU) has drafted ISCO-88 (COM), which is based on ISCO-88. Minimal deviations, both in the number of groups of occupations and in some of some categories (executives, public servants, etc.), in this case to be portrayed, as much as fully as possible, the structure of the labour market in EU countries.

4.4 Comments (positives and negatives of usability)

Positives of usability of information for C-Game development

- The Hellenic Classification of Occupations is available in a excel format and easy to download.

Negatives of usability of information for C-Game development

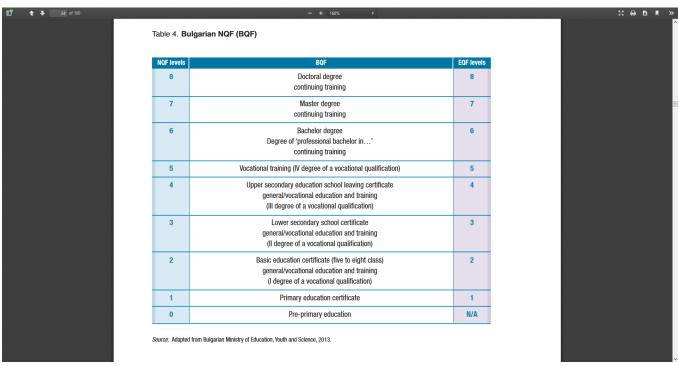
- The occupations in Hellenic Classification of Occupations are not equipped with RIASEC codes.

5 Bulgaria

5.1 National Qualifications Framework

The Bulgarian national qualifications framework (NQF) for lifelong learning (BQF) was adopted in 2012 (Picture 77). It is a single, comprehensive, eight-level framework with an additional preparatory level 0. All levels are described in terms of knowledge, skills, and competences (personal and professional). The framework includes qualifications from all levels and types of formal education and training (pre-primary education, primary and secondary general education, VET, and higher education. The overall objective of the BQF compatible with the EQF and the QF-EHEA – is to make the levels of the Bulgarian education system clearer and easier to understand by describing them in terms of learning outcomes. Apart from offering transparency, the NQF is seen as important to national reforms. The BQF aims to play a role in supporting lifelong learning and in promoting the participation of adults in learning in Bulgaria. The BQF is not yet operational. The referencing report was adopted by the Minister for Education and Science in March 2014, paving the way for action, but actual implementation has been delayed. The BQF, as proposed for referencing, is a classification framework. Its future reforming role to support the development and revision of qualifications and quality assurance arrangements is acknowledged. The BQF will be embedded in wider education reforms with legislative changes to strengthen its implementation. The BQF was linked to the EQF and the QF-EHEA in May 2013.

Picture 6: Bulgarian NQF



5.2 National System of Occupations

National Classification of Occupations and Duties, 2011 (for a short statement Nkpd-2011) defines a professional and job structure in the Republic of Bulgaria. NCOD 2011 is directly presented at the International Station-Dart Classification of Occupations (International Standard Classification of Occupations, 2008 (ISCO-08)) in the practice of the Republic of Bulgaria. in defining the scope of positions and will affect European and national construction, such as these and specific national news, refer to the education system and adult education program, the organization of work, labour and budget management, wages, social security and others.

The last edition (2016) attempted to group together occupations according to similarity of work performed and contained information about 2484 occupations on the following hierarchical pattern:

8 Occupational Divisions (one digit code number)

95 Occupational Groups (two digit code number)

462 Occupational Families (three digit code number)

2484 Occupations (five digit code number)

This was a 5 digit classification system, which gave a unique title to every occupation (called the Standard Title) and in some cases alternative titles have also been given. This classification gave definitions of the occupations, a brief outline of the main tasks, and functions of each occupation thus bringing out the difference between one occupation and another.

NCO is designed to work in full correspondence with ISCO-08 where national statisticians have a tool to make national occupational data available internationally, also to simplify the international character of the classification, only four, broad skill levels were used. This classification of skill levels was more or less based on the educational categories and levels, which appear in the International Standard Classification of Education (ISCED).

Full list of occupations can be found on

https://www.nsi.bg/sites/default/files/files/pages/Classifics/NKPD-2011 1-928.pdf (Bulgarian) or in table format https://www.nsi.bg/bg/content/261/basic-page/ (in Bulgarian) where all professions are listed with codes and alphabetical order is also available in table format there. Every job position is described in details. This information can be used for the descriptors in the Game.

5.3 National version of ISCO

NCO is designed to work in full correspondence with ISCO-08 where national statisticians have a tool to make national occupational data available internationally, also to simplify the international character of the classification, only four, broad skill levels were used. This

classification of skill levels was more or less based on the educational categories and levels, which appear in the International Standard Classification of Education (ISCED).

Educational and qualification levels from 1 to 4 are formulated in accordance with the Vocational Education and Training Act, and educational and qualification levels from 5 to 7 - in accordance with the Higher Education Act. For each position in the NCAP-2011 is determined the minimum educational and qualification level for its occupation.

5.4 Comments (positives and negatives of usability)

Positives of usability of information for C-Game development

- Information of both registers should be useful for adapting the C-Game to Bulgarian language.
- The Bulgarian NCOD, corresponding to ISCO is available in xls format with 5 digit codes and it is usable for the Bulgarian version of the game for descriptors.

Negatives of usability of information for C-Game development

- The occupations in NCOD are not equipped with Holland Occupational Themes (RIASEC) which refers to a theory of careers and vocational choice (based upon personality types) and gives direct link to professions.

6 Conclusions

In the desk research we found out that in all of the 4 partner countries we can rely on the national sources.

All of the 4 partner countries **National Qualifications Frameworks** are very good source for adapting the C-Game to national languages. They can serve as a framework for setting the educational level required by the occupations or groups of occupations.

In all of the 4 partner countries is implemented the **national version of the ISCO** which will be the base of C-Game classification of occupations, and the ISCO is available for download in xls format. There might be slight differences in numbering of occupations but the C-Game database will be equipped by short description of the occupation which will serve as reference for checking the correctness of the word and number of each profession.

From the point of view of creating the C-Game, it is not favourable that none of the mentioned databases is equipped with RIASEC codes. If it were, we would have the advantage of specifying the characteristics of each profession.

7 Used sources

Hellenic Qualifications Framework. https://nqf.gov.gr/en/index.php/ethniko-plaisio-prosonton, https://nqf.gov.gr/en/index.php/ta-8-epipeda

Hellenic Statistical Authority. Statistical classification of occupations according to ISCO 08. https://www.statistics.gr/en/occupation

https://www.nsi.bg/bg/content/261/basic-page/национална-класификация-напрофесиите-идлъжностите

https://www.nsi.bg/files/files/pages/Classifics/NKPD-2011 1-928.pdf

Ministerstvo na obrazovanieto i naukata. Republika Bulgaria. https://www.mon.bg/

Národná sústava kvalifikácií. SK. https://www.kvalifikacie.sk/

Národná sústava povolaní. SK. https://www.sustavapovolani.sk

Národní soustava kvalifikací. CZ. http://www.narodnikvalifikace.cz/

Národní soustava povolání. CZ. https://www.nsp.cz/

National Organisation for the Certification of Qualifications & Vocational Guidance. GR. https://www.eoppep.gr/index.php/en/

Tijdens K.G. & Kaandorp C.S. (2018), Validating occupational coding indexes for use in multicountry surveys. Survey Insights: Methods from the Field. Available at: https://surveyinsights.org/?p=10422

National frameworks of occupation, skills and competencies in the Czech Republic, Slovakia, Greece, and Bulgaria

Project C-Game: Career guidance game in a city full of occupations

No 2019-1-CZ01-KA201-061204

Output O1, part 1.5

Funding ERASMUS+ program, 2019-2022 **Partners** Asociace výchovných poradců, ČR

Národní vzdělávací fond, ČR

K.A.B.A. Slovakia, SK

TeCeMko, SK Znam I Moga, BG

ISON, GR

Date June 2020

Citation record FREIBERGOVA, Z. at all. (2020) *National frameworks of occupation,*

skills and competencies in Czech Republic, Slovakia, Greece, and Bulgaria. Output O1, 1-5. Project ERASMUS+. C-Game: Career

guidance game in a city full of occupations. NTF & Avp. Prague.

The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.