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Transfer of Qualifications and Learning Standards in Plastic Sector - StandPlast VET
Č. projektu: 2013-1-SK1-LEO05-06359, Č. zmluvy: 13310 0362

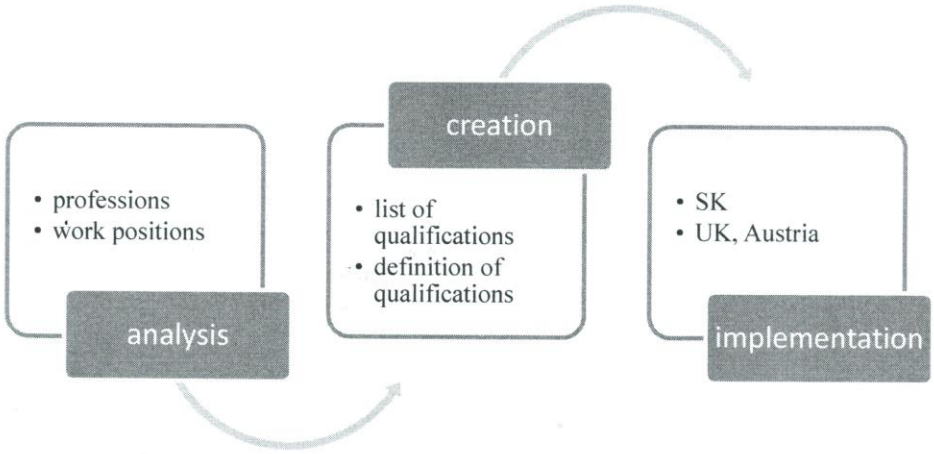
The following documents have been provided as a base for the evaluation:

- project application
- Polymer Education and Training Provision Guide (Cogent)
- reports from the workshops I to III
- reports from the expert group meeting I (both in S and ENG)
- Survey of/by employer in the sector of plastics industry (in S)
- Survey of/by employer in the sector of plastics industry (summary)
- SK-AT-UK Table of Qualifications
- Guide of Occupations, Qualifications and Educational Standards in Plastic Industry (in S, further addressed as a *Guide*).

The evaluation addresses:

- accomplishment of the aim of the StandPlast VET project
- the content of the main outcome from the project - Guide of Occupations, Qualifications and Educational Standards in Plastic Industry
- fulfilment of the objectives addressed by the project
- fulfilment of the particular activities:
- fulfilment of methodology and workplans of the project
- attaining of the proposed transfers

The aim of the project - to enhance the attractiveness of vocational education, training and mobility in the plastic industry for employers, working trainees and individuals - has been achieved through the improvement of the transparency and recognition of qualifications and competences, including those acquired through creation of common frame of vocational preparation and qualifications in the field of plastic industry.
The individual process steps can be summarized as follows:



The project has started in December 2013 and should be finalized in May 2015. Seven partners from three countries (Slovak Republic – SK, Austria – AT and United Kingdom – UK) have agreed to cooperate to fulfil its aim. The project team consisted of the partners having various experience in the considered plastic processing field – HR, teaching and preparation of learning programs, creation and exploitation of nonstandard training programs. In particular UK and AT partners have already applied occupational and qualification framework and forms of fulfilment of National Qualifications Framework in practice. Clearly, the Cogent (UK) developing so called gold standards in UK as well as Montanuniversität Leoben (AT) closely connected to the manufacturing industry within Industrial Liaison department are the well-recognized institutions relevant for this project.

The rationale of the project is supported by the instantaneously growing number of new working positions in plastic manufacturing. According to the *Guide* the companies related to manufacturing rubber and plastics comprise about 82 % of the chemical industry in SK. In the countries entering EU during the period 1998-2005 the demands on working positions were further strengthened due to enormous expansion of foreign enterprises and consequent transfers of production lines and technologies. New demands are rather multitasking and interdisciplinary, than fulfilled by the present position of a "plastic-rubber worker" which was possible to study in Slovak Republic (SK) before 1989. The *Guide* introduces the proposal of the qualification syllabuses for the work positions currently recognized within plastic

industry. Each syllabus contains the information on title of work position, its characteristic, main operations, working conditions, professional knowledge, skills, ability of application, attitude, degree of education, salary range, quality of work, security and environmental issues, and perspectives of personal growth. However, it might be useful to explain in more detail on which basis the definitions of the individual chapters have been derived. As an example where providing a commentary is desirable: the education degree required for the position of a Polymer Technologist is the university master degree with a salary range from 929 to 1690 Euro, while the position of Maintenance Specialist with only bachelor degree has been evaluated with 1250 – 1750 Euro salary.

Furthermore, the *Guide* should be disseminated in other EU countries, because e.g. in the Czech Republic according to National Register of Professions (NSP) there are only two professions within category Chemistry devoted directly to plastics manufacturing – Welder of Plastics and Sticker of Plastics. National Register of Qualifications (NSK) distinguishes between two categories: Chemistry, and Leather and Footwear Production and Processing of Plastics. Within the category Leather and Footwear Production and Processing of Plastics there is no qualification related to plastic processing and the same applies for the category Chemistry.

From the search presented in the *Guide* it is obvious that in SK there are currently no graduates from the courses related directly to plastic industry on the secondary level. According to SOV –NKR 3 there is no student attending the course of plastic-rubber worker (2866 H) in 2014/15, and only 6 students are studying (no graduate in the last year) the course with resulting qualification chemist – manufacturing of rubber and plastics (2889 H04). In this respect, the project addresses the very important issue, which is still rather underestimated by the society.

Furthermore, the necessity of the unification of the working positions is connected also to the consistent vocational dictionary. The authors of the project are well aware of this fact as the rationale of the project was based not only by the general "feelings", but supported by analyses done by Slovak Plastic Cluster in SK, discussions during preparatory visits to both UK partners, discussions and long-term cooperation with Austrian partner, realization of a project within LLP TOI "EDMOULD" (2009-2011) with partners from France, Slovenia, Czech

Republic, official working journey in Turkey (Eagean Plastic Association) as well as the discussions realized during international workshops and fairs in the Czech Republic and Poland.

The outcomes of the project are planned to be used for the official representation of the Slovak Republic in order to develop, implement and recognize the concept of national qualification system to the learning systems. The Slovak Plastic Cluster (SPC) might become distinguished authority influencing and supporting the decision processes of the Accreditation Commission of the Ministry of Education in SK as one the project aim is to synchronize the functioning of the SPC with the official representation in SK. The important is also the follow up of the Lisbon strategy formulated in 2000.

The *Guide* brings important summary of various forms of educational systems. Especially, the systems of life-long learning are now broadly diversified and their content often misunderstood due to existing discrepancies in the definitions of various educational systems. In this respect the Guide might represent an effective tool to find and speak "the common language" among the manufactures, educational institutions´ representatives as well as politicians when developing the unified qualification systems and qualification standards in the plastic industry field. In Slovak Republic the situation is further complicated by the fact that within 256 companies registered within the Slovak Plastic Cluster about 50 % are those employing between 20 and 50 workers, which means high diversification of HR (Human Resources) approaches, and many issues in quality of HR. For these companies the summary of unified definitions of related terms presented in the *Guide* (pages 10-14) can be considered as an important source for the development of their own systems of practical training and education.

Similarly to the guide provided by Cogent (UK), the *Guide* contains the summary of plastic processing relevant courses offered by institutions providing secondary and university levels of education. The information concerning the course, institution, form and length of course, and course language is broadened with a number of current students taking into account the gender matter. The university level of education does not contain any courses directly related to plastic processing as it is in the Czech republic, where e.g. within Tomas Bata University in Zlin the master courses Polymer Engineering and Technological Equipment

Construction have a long tradition with about 30 graduates a year. Nevertheless, Slovak universities are presently undergoing the global accreditation, thus some courses might be changed within next year. In addition, the accredited courses offered by VUSAPL, A-Omega and IOV as well as non-accredited training devoted to plastic processing have been commented in the *Guide*.

Further, a useful particular result of the project is the anchoring the term of partial qualification. Such an approach should bring the transparency, comparability as well as warranty to the present state, where there is no system in various certificates granted by institutions and bodies providing this type of long–life education and training. Furthermore, as the similar situation is in the Czech Republic, this part of the Guide could be directly implemented there as well.

FULFILMENT OF THE OBJECTIVES ADDRESSED BY THE PROJECT:

Programme General Objectives: the support of improvements in quality and innovation in vocational education and training systems, institutions and practices (LEO-SpObj-b) and the enhancement of the attractiveness of vocational education and training and mobility for employers and individuals and to facilitate the mobility of working trainees (LEO-SpObj-c) have been fulfilled.

The same applies clearly for the Programme Operational Objective, which led to an improvement the transparency and recognition of qualifications and competences, including those acquired through non-formal and informal learning (LEO-OpObj-4).

From the European Priorities of Leonardo da Vinci projects, the selected one - ECVET for transparency and recognition of learning outcomes and qualifications (LEO-TraInno-11) was attained.

Finally, the horizontal issues as a promoting an awareness of the importance of cultural and linguistic diversity within Europe, as well as of the need to combat racism, prejudice and xenophobia (Div), will hopefully become strengthen within the project outcomes.

FULFILMENT OF THE PARTICULAR ACTIVITIES:

1. The National system of qualifications (part chemical production and pharmacy) in SK according to comparison of systematization of professions and qualifications in UK and Austria was broaden and tailored to the present demands. For each profession the detailed description has been developed using the cards containing the positions:
   - process operator
   - machine tool setter
   - toolmaker
   - laboratory technician analytical
   - quality manager
   - polymer technologist
   - maintenance specialist
   - process technician.
2. Qualification frame for plastic industry in SK on the basis of comparison of National qualification framework in plastic processing and production in UK and Austria has been created.
3. The credit systems in specific qualifications within plastic section in UK and Austria were compared, and based on them the credit system in non-formal education was prepared taking into account also the formal educational system. The definition of various types of education systems is summarized in the *Guide*, which facilitates the orientation among them for the professionals out of academic field.
4. The educational standards in field of vocational education in plastic industry in SK were defined based on NVQ and Cogent standards applied in UK.

FULLFIMENT OF METHODOLOGY AND WORKPLANS OF THE PROJECT

In the text bellow the planned tasks during the working group and workshops meetings are summarized and their fulfilment derived from the meeting reports are added *in Italic* for easier orientation.

The methodology used during the project tasks fulfilment contained employer need analysis, vocational and methodological preparation and testing "Training of trainers", workgroups vocationally focused on preparation of support documents for outcomes, workshops: discussions to proposed outcomes from workgroups, study visit/case study for trainers, networking: discussion on specialized vocational web portal, and testing of electronic three-language vocational dictionary.

MONTHS 2–5:

a) Selection of a group of teachers, lectors and technical trainers and educational designers

b) Employer need analysis in plastic sector focused on detection of work positions, qualifications, learning content and outcomes, etc.

c) Outcomes and their processing – discussions, networking.

d) Preparation and realization of 3-day preparation of target group at STUBA and 3-day training "How to teach" (learning content, forms of self-education)

e) Realization of a 1-day study visit/case study at University (teaching methodology, quality measurement of learning outcomes and designing of educational programs)

f) Initiation of a preparation of a software and structure of Electronic Multilingual dictionary

g) Preparation of project web portal (including web portal to support the informal education)

MONTH 6

a) Preparation and realization of 4-day training of teachers in PTIC focused on teaching methodology, quality measurements of teaching and learning outcomes

b) Preparation and realization of 2-day training of trainers in G&A

MONTH 7-11

a) 2-day Workgroup I in UK (solving of system of work positions and qualifications)

- *collecting data and information from the experts in UK*

b) 2-day Workgroup II in AT focused on solving learning content, methodology, forms, outcomes and quality measurement in educational program and its modules

1-day *Workshop I* in SK (discussion to created system of work positions and qualifications, preparation of documentation for National occupational and qualifications framework

– realized in October 29, 2014, Nitra, SK:

- discussion of the outcomes of the workgroup II

- structure of the "Guide"

- list of the work positions in SK

- structure of the description of the work positions

- key competences for the individual work positions

- training standards and training methodology.

MONTHS 12-15

a) Initiation of testing running of electronic vocational dictionary

b) 2-day *Workshop II* in SK (discussion among all involved parties in SK regarding the quality of education of specialists)

- realized in February 2, 2015, Nitra, SK:

- discussion on the 1st version of the Guide

- schedule and particular responsibilities of the involved bodies in preparation of the final version.

c) 2-day Workgroup III in SK (problem solving in praxis, forms and methods of acquiring the latest knowledge)

- realized in November 18, 2014 University Leoben

- collecting data and information from the experts

- comparison of the polymer education and training in SK and Austria

d) Creation of Educational program for teachers, lectors and trainers in plastic sector for accreditation purposes

MONTHS 16-18

a) 1-day Workshop III in SK (presentation of electronic vocational dictionary to specialists, presentation of project outcomes to stakeholders)

- realized in March 6, 2015

- discussion on the 5th version of the Guide.

b) Preparation and printing of project outcomes (Guide for vocational education in plastic sector), launching of information system bringing the latest knowledge in electronic version (Web portal supporting the informal education) and launching the full running (Electronic multilingual technical dictionary in field of plastics industry)

The fulfilment of the work plan is summarized in Tables I and II.

Table I Work Group Meetings

Work Group	**I**	**II**	**III**
planned	UK Month 7-11	SK Month 12-15	AT Month 12-15
realized	Polymer Training and Innovation Centre, UK July 16, 2014	Leoben University, AT November 18, 2014	Hotel Mikado, Nitra, SK April 4, 2015

Table II Workshops

Workshop	**I**	**II**	**III**
planned	SK Month 7-11	SK Month 12-15	SK Month 16-18
realized	Jelšovce Nitra October 29, 2014	Jelšovce Nitra February 2, 2015	Jelšovce Nitra March 6, 2015

The following transfers have been realized within the project as stated in the project application:

- transfer of innovation within a sector of education in plastic industry
- transfer of educational standards
- transfer of education based on credit system
- transfer of experience to interconnect systems of formal and non-formal education
- transfer of knowledge and experience to teachers, lectors and technical trainers.

Finally, the creation of systems of qualifications for plastic manufacturing among SK, UK and Austria can bring the general concept for other countries as well as other sectors of industry. The project results will support life-long education and training systems in general. Thus, the common European task to build up the knowledge-based society is strengthened.

MAY-15, 2015
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