



European inventory on validation of non-formal and informal learning 2014

Case study: validation of self-aCquired learning and credits transfer in web design and computer animation (CREATE)

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1 Introduction

The EU project ‘**Validation of self-acquired learning and cREdits trAnsfer in web design and compuTEr animation**’ (CREATE) was a Leonardo da Vinci Transfer of Innovation project which was implemented between 2011 and 2013. The project addressed skills shortages and unemployment in the ICT/multimedia sector, where learning is often informal and self-acquired. Beneficiaries were young people (aged 16-25) including early school leavers¹ (ESLs) as well as the long-term unemployed who have informally acquired knowledge, skills and competences in computer animation and web design and wish to have these skills validated. The partnership included a number of different types of organisations, as illustrated in Table 1.1, below.

Table 1.1 CREATE Consortium

Country	State Agency	VET institution	Non-profit organisations
BG	National agency for VET (NAVET)		SCAS (Student Computer Art Society) project coordinator; developer of innovative training content <hr/> NSICC (National Student Information and Career Centre) student information and career centre
DE		DEKRA Akademie GmBH (Deutscher Kraftfahrzeug-Überwachungs-Verein) ²	
IE			FIT - curricula developer in ICT
Total	1	1	3

Although CREATE is a transnational European project, the case study focuses on its implementation in Bulgaria. In relation to the national Bulgarian context, the project is unique in that it has developed innovative methods including an online toolkit for the assessment of the outcomes of informal learning in computer animation and web design.

The assessment toolkit was tested and piloted in several Centres for Vocational Training (CVTs) in Sofia and across the country. Successful participants were provided with a certificate describing their competences in computer animation and web design, based on units of learning outcomes and allocated ECVET points. Although the certificates alone do not lead to the acquisition of a qualification from the formal system, they can be used as evidence for the practical part of the state exams in theory of profession and practice of profession.³

Several sources have been used for this case study including a conversation with a representative of SCAS, participation at the CREATE final conference⁴ as well as available literature.

¹ Early school leavers (ESLs) are defined at EU level as 18-24 year-olds with at most lower secondary level education who have not progressed to any further education or training

² German Motor Vehicle Inspection Association

³ §Art.40 of the Bulgarian VET Act regulates the opportunities for citizens to have their knowledge, skills and competences (acquired in a particular profession) certified, validated and recognised. As a result of the validation and recognition process they receive nationally recognised documents for a vocational qualification. The condition that citizens should satisfy is to have at least six months of practical experience and to have successfully passed the state exams in Theory of Profession and Practice of Profession.

⁴ The conference took place on 20 September 2013 in Sofia.

2 Country context

As detailed in the 2014 Inventory country update, Bulgaria still does not have a uniform legal framework, national system, policy or strategy on validation of non-formal and informal learning in place. Nor does it have a national institutional framework on validation, which clearly allocates the responsibilities of different stakeholders.

Stakeholders involved in the development of validation acknowledge that although Bulgarian policy-makers recognise the importance of validation of non-formal and informal learning, the development of corresponding legislation is a slow process. At the same time, validation of non-formal and informal learning is important for the private sector, and in particular for the ICT sector. For example, pilot projects with Microsoft and Cisco have been implemented before the development of relevant legislation.

Dynamic developments and internationalisation of the ICT/multimedia sector, in combination with current skills shortages for IT specialists in Bulgaria, can be seen as one of the main drivers for the launch of the project.³

3 The validation project / practice

CREATE addressed skills shortages and unemployment in the ICT/multimedia sector in Bulgaria. Beneficiaries were young people (aged 16-25), including early school leavers (ESLs) and/or youths at risk of becoming ESLs. Although ESLs represented a small percentage of the total number of project beneficiaries, it is important to mention them as the project enabled access to opportunities also for this group. ESLs tend to show more interest in alternative subjects (such as, for example, computer animation, web design, etc.) compared to the more traditional subjects offered at upper secondary general schools. The target group of ESLs was reached by the consultants at the National Student Information and Career Centre (NSICC), who provide advice to young people in the field of career development.⁵

The project was implemented with the financial support of the Leonardo da Vinci sub-programme of the Lifelong Learning Programme. The funding was used for the development, testing and dissemination of online assessment tools.

Regarding the role and responsibilities of the Bulgarian partners and stakeholders involved in the project, SCAS developed the methodology and the content of the assessment toolkit, and the Bulgarian Web Association also contributed to this task. The National VET Agency was responsible for the involvement of the Centres for Vocational Training i.e. in testing and piloting the toolkit. The National Student Information and Career Centre (NSICC) was in charge of the recruitment of the target group, as mentioned previously.

Practitioners involved in the project included assessors, for example, teachers in VET schools or CVTs, evaluating the e-Portfolio. Careers consultants at the National Student Information and Career Centre acted as guidance practitioners for the group of ESLs.

Considering the link of computer animation and web design to new technologies, online guidance and support was seen as particularly relevant. It targeted two user groups: students that use the toolkit for self-assessment and teachers from accredited institutions (for example, VET schools, CVTs) who organise assessment of the outcomes of informal learning in web design and computer animation. Individual guidance and support was provided by SCAS. In addition, a user manual called 'Validation of self-acquired learning and credits transfer in web design and computer animation' was released. Regarding the target group of early school leavers, guidance and support was provided by the National Student Information and Career Centre (NSICC).

⁵ NSICC is a non-governmental organisation established to meet the needs of young people in the field of youth information processing and career guidance. It coordinates a network of youth information centres and information points nationwide. NSICC core activities include a) providing training and advice to young people in the field of youth information and career development; b) founding and maintaining a pool of youth consultants and experts in the field of career guidance, <http://www.infocareercenter.org>

The assessment methods used in the project include:

- Interactive tests: for example, 'multiple choice', 'true and false', 'matching drag and drop', etc., using different images and videos in some of the questions;
- E-games (simulations);
- E-portfolio: the toolkit uses several popular e-Portfolio systems including LinkedIn, Behance Network⁶, Mahara,⁷ etc.

While the results of online tests and e-games are generated automatically, the assessment of the e-Portfolio is performed by an expert authorised to do so by the organisation (a VET school, a CVT, etc.) who assesses the results of informal learning in computer animation or web design. In order to assess an e-Portfolio the evaluator has to answer several questions.⁸ Some example questions for the unit 'Advanced competence design' (Computer Animation). are given in the box below.

Example assessment questions for the unit 'Advanced competence design' (Computer Animation)

1. 'What part of the projects displays good knowledge, skills and competences in "Unit 9: Advanced character design" as a whole?'
 - a. All of the projects display the knowledge, skills and competences required in the unit.
 - b. Only some of the projects display the knowledge, skills and competences, required in the unit.
 - c. None of the projects display the knowledge, skills and competences, required in the unit.
2. 'Does the student exhibit the knowledge, skills and competences in human anatomy required in the unit?'
 - a. Yes, almost all knowledge, skills and competences required have been demonstrated in the e-Portfolio.
 - b. Only some of the knowledge, skills and competences required have been demonstrated in the e-Portfolio.
 - c. No knowledge, skills and competences (of those required) have been demonstrated in the e-Portfolio.
3. Are the projects published in the e-Portfolio enough to give a good insight on the knowledge, skills and competences of the student in human anatomy?
 - a. Perfect insight on the self-acquired knowledge, skills and competences in human anatomy
 - b. Some insight on the self-acquired knowledge, skills and competences in human anatomy
 - c. Very poor and insufficient insight on the self-acquired knowledge, skills and competences in human anatomy.

Information provided by SCAS

Testing and piloting of the assessment tools was carried out in four Centres for Vocational Training (CVTs) in Sofia, Plovdiv, Plevan and Stara Zagora. Due to the high level of interest in Plevan, testing and piloting took place twice in this Centre. The participants who

⁶ The Behance Network is an online portfolio platform for creative professionals across multiple industries. In 2011 the Behance Network became Webby Award Honouree in the category self-promotional/portfolio and social media, <http://www.behance.net>.

⁷ Mahara E-Portfolio is a learner-centred form of 'Personal Learning Environment'. It provides users with tools to create and maintain a digital portfolio of their learning, and social networking features to allow users to interact with each other, <https://mahara.org>.

⁸ The questions are accessible on the project website www.create-validate.org. In order to read them one needs to register as a teacher and receive authorisation by SCAS.

successfully passed the assessment were provided with a certificate describing their competences in computer animation and web design based on units of learning outcomes with an allocation of ECVET points.

The learning outcomes are structured in units distinguishing between more basic and more advanced units (Fig 3.1).

Figure 3.1 Learning outcomes-based units in computer animation⁹

More basic units:
Unit 1: Principles of traditional animation
Unit 2: Idea and scenario
Unit 3: Environment and object design
Unit 4: Human character design
Unit 5: Rigging
Unit 6: Animation
Unit 7: Texturing and lighting
Unit 8: Rendering
More advanced units:
Unit 9: Advanced character design
Unit 10: Advanced animation techniques
Unit 11: Advanced texturing and lighting techniques
Unit 12: Advanced rendering

The units were developed on the basis of an international survey of training courses provided in the field of computer animation and web design. In relation to computer animation, the corresponding Bulgarian State Educational Requirements (SERs) have also been taken into consideration¹⁰.

In addition, a methodology has been elaborated for the allocation of ECVET points to the units of learning outcomes. The certificate indicates the total number of ECVET points awarded, as well as the number of ECVET points for the single units of learning outcomes.

Although the certificate alone does not lead to the acquisition of a qualification from the formal system, it describes in a transparent way the competences acquired through informal learning. Therefore, it can be used as supporting evidence in the practical part of the state exams for theory of profession and practice of profession¹¹. So far information on actual cases in which CREATE certificates were used for this purpose is not available.

In relation to quality assurance, several aspects should be highlighted. The development of outcome-based units in computer animation and web design was based on the know-how and expertise of partners, the results of an international survey provided in the fields of computer animation and web design as well as the use of the Bulgarian SERs for computer animation.¹² In addition, the Bulgarian Web Association (BWA), which is a branch organisation with sixty-five members, was involved in the development of the assessment toolkit. BWA members (leading companies on the Bulgarian web market) were informed about the project and also about the CREATE certificate. This provides a possibility for considering the certificate, for example, in a job application as a proof of evidence of competences acquired through informal learning. Another aspect of quality assurance relates to the involvement of the Centres of Vocational Training (CVTs) in piloting and testing the assessment tools. The CVTs are licensed by the National Agency for VET and their responsibilities outside of the project include carrying out validation procedures leading to a

⁹ http://www.create-validate.org/index.php?option=com_content&view=article&id=56&Itemid=15&lang=en [accessed 10.04.2014].

¹⁰ Currently there are no State Educational Requirements for web design in Bulgaria.

¹¹ These exams are carried out in front of an examination committee. The examination committee may take into consideration the CREATE certificate.

¹² SERs specify the learning outcomes, assessment of learning outcomes and organisation of state examinations on Theory of the Profession and Practice of the Profession. SERs for computer animation are available in Bulgarian at: <http://www.mon.bg/?h=downloadFile&fileId=1263>, [accessed 11.04.2014]

qualification from the formal system (i.e. certification of learning outcomes acquired through non-formal and informal learning).

4 Future prospects

This Section focuses on future developments related to the methodology developed by CREATE.

SCAS and the rest of the partners have received several enquiries from VET schools and centres wishing to use the toolkit to assess the outcomes of informal learning in web design and computer animation. As a result, the toolkit is now being exploited in real-life situations, with real test-takers and VET practitioners (i.e. teachers from VET schools, CVTs).

SCAS and the Bulgarian Web Association have signed a Memorandum agreeing to propose a new profession in the Bulgarian List of Professions in VET¹³ i.e. web designer, using the CREATE project 'outcome-based units in web design'. Registration, discussion and approval of a new profession (as well as changes in an existing one) are within the sphere of competence of NAVET (which was a project partner). At this stage of development, the proposal has been registered and a decision is still pending.

Furthermore, SCAS is initiating discussions with different organisations in Bulgaria and other countries to enlarge and upgrade the toolkit. This is facilitated by the toolkit's flexibility. For example, it can be easily adapted for other creative professions, e.g. at the moment there are efforts to adapt the tool for the profession of graphic design, through the integration of more online assessment tools and language versions. The toolkit also offers the possibility to update the content of computer animation and web design units, for example the weight of the units (in terms of ECVET points) can be changed.

5 Results, outcomes and impact

SCAS provided information on the quantitative outcomes of the project, which include:

- 240 beneficiaries of testing and piloting events in Bulgaria, Germany and Ireland, of which 36 beneficiaries (15%) were ESLs.

A qualitative outcome is the increased knowledge of VET trainers, instructional designers, policy makers and managers of VET centres of existing methods for the validation of informal learning. This was achieved through so called 'local valorisation events', which included, for example, the presentation of the project in several Centres for Vocational Training (CVTs).

The ICT/multimedia sector (employers, social partners and training providers) in partner countries was given clear guidelines for the allocation of ECVET points to the outcome-based units in computer animation and web design, thus the project helped to develop an improved awareness of ECVET amongst the ICT / multimedia sector. In a long-term perspective, young people's motivation to validate their informal learning in ICT was encouraged, i.e. more possibilities for validating young people's competences related to computer animation and web design (including ESLs and long-term unemployed) were created.

6 Success factors

The development of appropriate outcome-based units in computer animation and web design (corresponding also to the needs of the labour market) was based on the know-how and expertise of some of the partners (SCAS) as well as the involvement of an important

¹³ The List of Professions includes all current professions and specialties at the labour market which have been suggested by the employers, the trade unions, education and training providers, state institutions, non-governmental organisations, vocational unions and professionals in various areas.

national stakeholder, the Bulgarian Web Association (BWA), which maintains close links with leading companies on the Bulgarian web market. Another success factor is the involvement of a strategic partner such as NAVET (including the Centres for Vocational Training), which is responsible for the validation of non-formal and informal learning in VET. This may facilitate the acceptance of innovative assessment methods (for example, e-Portfolio) for the validation of competences acquired through non-formal and informal learning.

7 Challenges and lessons learned

One of the biggest challenges concerns the development of appropriate content of online assessment tools for the validation of competences acquired through informal learning in computer animation and web design. This relates to the definition of the scope of outcome-based units. For example, in the case of web design, there was a discussion on whether units of learning outcomes should cover only web design or include also the development of websites.

8 Summary / Conclusions

In relation to the Bulgarian context, CREATE is unique in that it has developed an innovative toolkit for the assessment of the outcomes of informal learning in two creative professions i.e. computer animation and web design. In addition, a methodology has been elaborated for the allocation of ECVET points to units of learning outcomes, also taking into account State Educational Requirements for computer animation. The different types of organisations that composed the partnership as well as the involvement of important stakeholders contribute to the success of the project.

9 References

'Self-acquired learning validation model':

http://www.create-validate.org/images/pdf/model_for_validation_en.pdf [accessed 11.04.2014]

'Guidelines for allocation of ECVET points to the units of learning outcomes, developed for qualifications computer animation and web design'

http://www.create-validate.org/images/pdf/guidelines_allocation_ecvet_points_en.pdf [accessed 11.04.2014]