



Developing an ECVET validation software prototype

Integration of the selected ECVET project data into the LEVEL5 ECVET validation software prototype

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1. Summary

The report describes and presents the transfer of the specification in the software prototype and the piloting with data from the ten selected example projects out of the total of more than 100 funded ECVET projects since 2007, available in the EU-databases.

The system is based on the work of a team of expert developers from Germany and Italy with profound expertise in validation of informal and non-formal learning, learning technologies, ECVET and EQF taxonomies and specifications.

1.1. Concept

This development concept of the R&D project within IMPACT related to the learning technology part of IMPACT was threefold:

- Firstly, after an inquiry of the few (existing) specifications (IO1) the ECVET recommendation was thoroughly analysed and transferred into a specification draft which is the basis for a machine-readable system – in other words the pre-condition for a software prototype
- Secondly, a first technological specification (IO2) was developed from which
- Thirdly, a software prototype¹ could be developed (IO3) which was tested with the ECVET system data developed by those projects that were identified feasible since they were in accordance to the 2009 specification.

The software prototype was developed on the technological basis of the LEVEL5 validation system. As LEVEL5 was designed as a holistic planning and validation instrument for informal and non-formal learning under specific consideration of social, personal and organisational competences, it was not so much designed to validate “formal qualifications”. Hence, it had to be adapted to match with the recommendations and eventually with the developed specifications.

1.2. Development phases

The software prototype was developed in two stages:

- The first version 0.1 delivered a first functional model from the project start until June 2016
- This version was updated to 0.2 based on the practice tests with the real data from the ECVET projects until September 2016.

The V0 software prototype is a deliverable based on the LEVEL5 software, which is background (IPR) of the REVEAL network. As prototype, it is a demonstrator that is not published. However, the specification, as technological basis of this prototype, is published on the specific website: www.open-ecevet.org which invites open source developers to further develop specifications and eventually software for validation purposes.

1.3. Outcomes

The transfer was successfully executed in two phases. The data of those projects that worked according to the recommendations could be integrated in the software.

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Thus, the IMPACT project delivered a functional prototype that for the first time facilitates validation processes in a digital environment that promotes:

- The standardised and transferrable description of qualifications
- the re-use of validation instruments, tools, procedures
- the adaptation of these instruments in order to transfer them to different (individualised) learning projects and contexts
- The exchange of data between validating organisations and projects on the European level
- An IT based user management

The software prototype can be the cornerstone of a system which goes beyond an exchange platform for validation data.

If connected with other learning technologies, such as LMS and e-Portfolios the system can truly serve to a high feasibility and usability of VINFL in connection with blended learning or e-learning settings.



2. Project Integration

In the following a selection of projects shall be presented by opposing the (analogue) descriptions from the ECVET databases with the digital (and functional) representation in the software prototype.

This visualisation serves on the one hand the documentation of the functionalities based on the structure (derived from the 2009 recommendations and transferred into an IT-system via the specification) and describes on the other hand some of the obstacles that the project had to overcome while transferring a huge amount of data from different practice projects in the (standardised) prototype.

2.1. 2get1care

The Core Curriculum of the 2get1care project

3. Training and Occupational Situation in Physiotherapy, Occupational Therapy, Speech Therapy and Geriatric Care



The Student in Training

	3.2 Learning, Learning Techniques
Hours/learning unit of EARL	20 Physiotherapy (4.2); Occupational therapy (4.2) and (4.5); Speech therapy (4.2); Geriatric care (4.2)
Learning outcomes	
Knowledge	The student has basic knowledge of learning and motivational techniques and theories. He/she has knowledge of a wide range of options and techniques for completing primarily lesson-oriented learning activities such as taking notes, finding and reading scientific literature and giving a lecture. The learner also ascertains the importance of learning motivation and concentration.
Skills	The student applies different learning techniques and techniques such as those for presentation. He/she collects information by means of different informational sources using conventional and new information and communication technologies.
Competences	The student uses his/her knowledge and skills to independently organise his/her learning process. He/she reflects upon and assesses his/her learning motivation and learning progress.
Content	The learning unit includes, but is not limited to <ul style="list-style-type: none"> • Theories of learning, definitions of learning • Learning and achievement motivation • Learning techniques, promoting learning motivation and concentration • Writing and reading techniques • Gathering information by means of different technologies and media, literature research, database research • Giving lectures and presentations

Fig. 1: 2get1care_Unit3

The screenshot displays the LEVEL5 interface. At the top, there are navigation tabs: MYLEVEL5, DATA POOL, CATALOGUE (selected), COMPILATION, and VALIDATION. On the left, a sidebar contains three buttons: SELECT QUALIFICATION, SELECT UNITS, and CUSTOMISE QUALIFICATION. The main content area is titled 'Qualification' and shows the selected qualification 'Core curriculum of 2get1care'. Below this, there is a 'Units' section with a table of learning units. The table has three columns: 'Show details', 'Name', and 'Description'. The units listed are:

Show details	Name	Description
	1. Core tasks of Therapy and Geriatric Care	
	3. Training and Occupational Situation in	
	4 Pathology	

Fig. 2: LEVEL5: 2get1care_qualification

The LEVEL5 GUI shows the Unit 3: “Training and Occupational Situation...” as part of the qualification. By clicking on the arrow, one lands in the next sub-section:

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	1. Core tasks of Therapy and Geriatric Care	
▼	3. Training and Occupational Situation in	

ECVET points

Relative weight

URI

Outcomes

Name	Description	Show details

Subunits

Show details	Name	Description
▶	3.2 Learning, Learning Techniques	
▶	3.3 Social Learning	

Fig. 3: LEVEL5: 2get1care_unit3

Clicking on the arrow in Show details for Unit 3.2 Learning, Learning Techniques opens up the next section:

Subunits

Show details	Name	Description
▼	3.2 Learning, Learning Techniques	
ECVET points		
Relative weight		
URI		
Additional content fields		
Field name	Field content	
Hours/learning unit of EARL	20 Physiotherapy (4.2); Occupational therapy (4.2) and (4.5); Speech therapy (4.2); Geriatric care (4.2)	
Content	The learning unit includes, but is not limited to <ul style="list-style-type: none"> • Theories of learning, definitions of learning • Learning and achievement motivation • Learning techniques, promoting learning motivation and concentration 	
Learning outcomes of subunit		
Name	Description	Show details
3.2 Knowledge 1	The student has basic knowledge of learn	▶
3.2 Knowledge 2	He/she has knowledge of a wide range of	▶
3.2 Knowledge 3	The learner also ascertains the important	▶
3.2 Skills 1	The student applies different learning tech	▶
3.2 Skills 2	He/she collects information by means of	▶

Fig. 4: LEVEL5: 2get1care_subunit3_2

In the sub-unit, the Knowledge and skills related learning outcome descriptors are displayed. ECVET points can be assigned to the learning unit and relatively weighted (Fig. 4).

2.2. Chemlab

Technische Universität München Analytical Research Group PD Dr. Thomas Letzel; PD Dr. Johanna Graßmann	The ECVET Modules in the partner countries
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ECVET Module Cosmetic Analysis in Poland

Title of the field of action	Cosmetics Analysis	
EQF Level		
Total ECVET points		
Units of Learning outcomes	U1	Sampling and preparation of cosmetic samples
	U2	Chromatographic and spectroscopic analysis of cosmetics
	U3	Identification of active compounds
	U4	Quantification of compounds
	U5	Activity control of cosmetic formulations
	U6	Stability tests of cosmetics products
	U7	Calculation, evaluation and presentation of data
Cross sectional Learning Outcomes	<p>To acquire the learning outcomes following qualifications are essential He/she is able to</p> <ul style="list-style-type: none"> • apply and adopt different analytical methods used in analysis of <u>particular cosmetic categories</u>; • select and use the proper instrumental method (analytical equipment) to analyze a given group of cosmetic products • apply methods for evaluation of cosmetic activity, stability, quality monitoring and control • apply different kinds of software for data acquisition and evaluation • differentiate between safety of use and quality assessment of cosmetic products. 	

Fig. 5: Chemlab Qualification

The Chemlab qualification relates to the VET field of cosmetics analysis and consists of 7 units.

Chemlab provided one descriptive field related to “cross sectoral learning outcomes” that are not related to one unit separately but are required to the qualification in an overarching way.

In the following the transfer into the prototype is displayed:

The screenshot displays the LEVEL5 software interface. At the top, there are navigation tabs: MYLEVEL5, DATA POOL, CATALOGUE, COMPILATION, and VALIDATION. On the left, there are buttons for 'SELECT QUALIFICATION', 'SELECT UNITS', and 'CUSTOMISE QUALIFICATION'. The main content area is divided into two sections: 'Qualification' and 'Units'.

Qualification Section:

- Name:** Cosmetic Analysis A
- Description:** Competence Level A
- Additional content fields:** A table with two columns: 'Field name' and 'Field content'. The 'Field name' is 'Cross sectional Learning Outcomes'. The 'Field content' is: 'To acquire the learning outcomes following qualifications are essential He/she is able to' followed by a bulleted list: '• apply and adopt different analytical methods used in analysis of particular cosmetic categories;'.

Units Section:

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	Unit 1A Sampling of cosmetic samples	Competence Level A
▶	Unit 2A Preparation for analysis of different cosmetic products	Competence Level A
▶	Unit 3A chromatographic separation of cosmetic contents	Competence Level A

Fig. 6: LEVEL5: chemlab_qualification_A

The start page of the Chemlab qualification shows the different units in the overview table.

The cross sectoral learning outcomes can be introduced and displayed in the field “additional content field”.

Generic competences could probably be listed here as well.

Unit of Learning Outcome 2: Preparation for analysis of different cosmetic products			
Competence		Skills	Knowledge
Competence Level A	He/she is able to: <ul style="list-style-type: none"> Extract active substances according to instructions 	He/she is able to: <ul style="list-style-type: none"> Extract target analytes from cosmetics Apply extraction methods (SPME, microwave) 	He/she knows about: <ul style="list-style-type: none"> Differences between extraction methods Advantages/Disadvantages of extraction methods Suitability of extraction methods for diverse target analytes
Competence Level B	He/she is able to: <ul style="list-style-type: none"> Choose the appropriate extraction methods depending on the respective sample characteristics and target analytes Recognize and work out typical problems regarding extraction methods 	He/she is able to: <ul style="list-style-type: none"> Extract diverse analytes from different cosmetics Apply the appropriate extraction procedure 	
Work task			Competence Level
Extraction of carotenoids compounds from cosmetics;			A
Removal of solvent			A
Choose a method for extraction of another group of cosmetics			B
Extraction of another group of cosmetic contents, e.g. aroma volatiles			B
Removal of solvent			B

Fig. 7: Chemlab Unit 2

The unit (Fig. 6) describes knowledge and skills on two different competence levels and connects them with work tasks.

Note: This is a special case (with consequences for the IT specification) since in this unit the knowledge related Learning Outcomes cover Levels A and B while the skills relate to separate skill levels.

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	Unit 1A Sampling of cosmetic samples	Competence Level A
▼	Unit 2A Preparation for analysis of different cosmetic products	Competence Level A

ECVET points

Relative weight

URI

Additional content fields

Field name	Field content
Work task	Extraction of carotenoids compounds from cosmetics Removal of solvent

Outcomes

Name	Description	Show details
2 Competence 1A	He/she is able to • Extract active substances	▶
2 Skills 1A	He/she is able to • Extract target analytes from	▶
2 Skills 2A	• Apply extraction methods (SPME, microwav	▶
2 Knowledge 1	He/she knows about • Differences between e	▶
2 Knowledge 2	He/she knows about • Advantages/Disadvant	▶

Fig. 8: LEVEL5: chemlab_unit2A

Fig. 7 shows how the ECVET Unit 2A is displayed in the software: Below the overview of Unit 2 (with ECVET points, relative weight) one finds a catalogue of learning outcomes differentiated in knowledge and skills.

The work tasks are displayed in an “additional field”. For future applications (see perspectives) these fields are already the interfaces to learning management systems.

2.3. COLOR

SPECIFICATIONS OF HCO QUALIFICATION

- **Denomination of qualification:** HCO
- **Reference standards for the qualification:**
 - **National** (Regulatory reference: 2001 Agreement)
 - **Regional** (Regulatory reference: Piedmont Region – standard 2012)
- **EQF Level:** (3 – tbc)
- **Regulatory reference for EQF Level attribution ...**
- **Brief Description of professional figure associated with qualification**

The HCO works to satisfy the primary needs of individuals in various contexts (homes for the elderly, hospitals, semi-residential services and community accommodation, home care, etc.) foster the wellbeing and autonomy of individuals. The professional figure is required to work with other health practitioners (social workers, professional educators, nurses, physiotherapists, doctors, etc.) and volunteers.

- **Work processes and activities**

Key activities according to national standard (Agreement 2001)	Piedmont Region standard Work activities/process
<p>The HCO: assists the dependent person in daily activities and personal hygiene; makes simple activities aimed at diagnostic and therapeutic support;</p> <p>collaborates in activities aimed at maintaining physical or psychological residual abilities, at rehabilitation, (...); manage entertainment activities and socialization of individuals and groups;</p> <p>collaborates in the implementation of assistance interventions.</p>	<p><i>A. Assist individuals in taking care of their primary needs, promoting their wellbeing and independence</i></p> <ul style="list-style-type: none"> - Identify patient needs - Cooperate with other professional figures, with patient and family in planning and in care interventions - Carry out care interventions for individuals

Fig. 9: The HCO (COLOR) qualification

The COLOR project has worked on a qualification for Health Care Operators.

It includes the references, the ECVET levels and descriptors on the qualification and the key activities of the HCO and the standard work activities.

Qualification

Here you can get an overview of the content of the catalogue.

Name	Health Care Operator (HCO)
Description	The HCO works to satisfy the primary needs of individuals in various contexts (homes for the elderly, hospitals, semi-residential services and community accommodation, home care, etc.) foster the wellbeing and autonomy of individuals. The professional figure is required to work with other health practitioners (social workers, professional educators, nurses, physiotherapists, doctors, etc.) and volunteers.

Additional content fields

Field name	Field content
Reference standards for the qualification	- National (Regulatory reference: 2001 Agreement) - Regional (Regulatory reference: Piedmont Region - standard 2012)
Duration of training course	minimum of 1000 h
Work processes and activities	...

Qualification framework references

Framework	Framework level
EQF	3

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	1 Assist Individuals in Taking Care of their Primary Needs and Managing Health and	
▶	2 Assist Individuals in their Daily Activities and Hygiene Needs	
▶	3 Manage dynamics of care relations	

Fig. 10: LEVEL5_color_qualification

Figure 10 displays the transfer of the COLOR qualification into the software. The qualification description can be integrated at the top of the page, the sub-descriptions (which may be important in this case) can be added in the “additional description field” while the units are listed below.

UNIT 1		Assist Individuals in Taking Care of their Primary Needs and Managing Health and Hygiene Issues	
Reference Qualification	Healthcare Operator (HCO)		
Reference Labour Process	A: Assisting individuals in taking care of their primary needs, encouraging their wellbeing and autonomy		
EQF Level	3 (Note: The OSS qualification is not formally referenced in EQF; the technical group has anyway studied the level of autonomy of the single competences in the qualification with respect to the EQF descriptors, according to the Piedmont region implementation).		
Learning Outcomes			
Competence	Skill	Knowledge	
1 Assist individuals in taking care of their primary needs and managing health and hygiene issues Specification of autonomy level <i>According to the needs of the person assisted, he or she can operate: autonomously – in non complex situations in the chronic stage following the individual plan and established protocols/procedures in cooperation or by prescription – in complex situations in the acute stage for which the intervention of other health workers is specified following the individual plan and established protocols/procedures</i>	Identify unsatisfied patient needs Recognise signals and symptoms of patient distress Process patient data Assist individuals in their health needs (life parameters, simple first aid, medications, taking medicine, use of simple medical equipment) Assist individuals (mobility, personal hygiene, feeding and bodily functions) Recognize psycho-physical and social conditions also in terms of patient biography Identify significant actors and relational dynamics with regards to the patient's psycho-physical characteristics Respect patient self-determination Promote patient autonomy Inform family and/or other caregivers about changes in patient conditions	Elements of observation and communication Primary needs: basic techniques Safety and prevention Assisted movement techniques Elements of first aid Elements of personal hygiene Prevention and treatment of complications caused by primary degenerative pathologies Self-medication and medicine taking techniques Conservation and disposal of medicines	

Fig. 11: Color unit 1

The learning outcomes per unit are described in three columns along knowledge, skills and competence, differentiated (EQF conform) as level of autonomy and responsibility.

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▼	1 Assist Individuals in Taking Care of their Primary Needs and Managing Health and	
ECVET points		
Relative weight		
URI		
Additional content fields		
Field name	Field content	
Reference Labour Process	A: Assisting individuals in taking care of their primary needs, encouraging their wellbeing and autonomy	
Qualification framework references		
Framework	Framework level	
EQF	3	
Outcomes		
Name	Description	Show details
1 Skills 1	Identify unsatisfied patient needs	▶
1 Skills 2	Recognise signals and symptoms of patient d	▶
1 Skills 3		

Fig. 12: LEVEL5_color_unit1

The software transfer is displayed in Fig. 12 – the Learning Outcomes are listed on the page for each Unit.

2.4. CREATE

II. Description of Outcome-Based Units in Web design – EQF Level 4

Title of description:	Web designer		
EQF level:	Level 4		
Title of working field 1:	Preparation and design based on standards defined by the software industry (W3C)		
Title of unit 1:	Planning		
ECVET points:	25		
Learning outcomes 1: Preparation	Knowledge	Skills	Competence
	Basics of project management – needs analysis, user profiles creation, defining work	To be able to communicate with the customers in different ways-face-to-face, by e-mail, by other online conferencing tools;	To be able to apply some approaches for identifying the customer needs;

Fig. 13: Create qualification

Title of unit 4:	Management (web sites management/maintenance)		
ECVET points:	18		
Learning outcomes 1: Content updating	Knowledge	Skills	Competence
	User interface; Newsletter technologies; Documentation technologies;	Able to change texts, images, etc. in news and article sections; Is able to communicate with a content developer;	Is able to establish procedures for content updating and customer comments; Update the technology and the content regularly;
Learning outcomes 2: Managing social networks	Basic knowledge about the usage of the existing social networks (Facebook; Twitter, Xing; Youtube, Flickr, Twitter etc.);	Is able to create pages in social networks; Is able to import files- texts, images and video in the social networks;	Has an overview about existing social networks, their strengths and their weaknesses; Able to create and maintain a page/event/group in the social

Fig. 14: Create: Unit 4

In case of CREATE, the Units have been differentiated in Sub-Units. This is a differentiation which was not foreseen in the specification and that had to be considered in the software in order to enable projects to insert this variation which may be meaningful in certain cases:

SELECT QUALIFICATION
SELECT UNITS
CUSTOMISE QUALIFICATION

Qualifications | Web designer

Web designer

Qualification

Here you can get an overview of the content of the catalogue.

Name: Web designer
Description:

Additional content fields

Field name	Field content
Working field 1	Preparation and design based on standards defined by the software industry (W3C) (consists of Unit 1 Planning and Unit 2 Design)
Working field 2	Development of the web site based on standards defined by the software industry (W3C) (consists of Unit 3 Development, Unit 4 Management and Unit 5 Optimization)
Working field 3	Advanced aspects of web design (consists of Unit 6 Interactivity and animation and Unit 7 Introduction to database systems)

Qualification framework references

Framework	Framework level
EQF	4

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	1 Planning	
▶	2 Design	
▶	3 Development	
▶	4 Management (web sites)	

Fig. 15 LEVEL5_create_qualification

Different working fields have been considered in the “additional content field” section.

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	1 Planning	
▶	2 Design	
▶	3 Development	
▼	4 Management (web sites management/maintenance)	

ECVET points: 18.0

Relative weight: [input field]

URI: [input field]

Qualification framework references

Framework	Framework level
EQF	4

Outcomes

Name	Description	Show details

Subunits

Show details	Name	Description
▶	4.1 Content updating	
▶	4.2 Managing social networks	

Fig. 16: LEVEL5_create_unit4

Fig. 16 shows the differentiation of units and sub-units.

Name	Description	Show details
Subunits		
Show details	Name	Description
▼	4.1 Content updating	
ECVET points		
Relative weight		
URI		
Learning outcomes of subunit		
Name	Description	Show details
4.1 Knowledge 1	User interface;	▶
4.1 Knowledge 2	Newsletter technologies;	▶
4.1 Knowledge 3	Documentation technologies;	▶
4.1 Skills 1	Able to change texts, images, etc. in news	▶
4.1 Skills 2	Is able to communicate with a content de	▶
4.1 Competence 1	Is able to establish procedures for conten	▶
4.1 Competence 2	Update the technology and the content re	▶
▶	4.2 Managing social networks	
▶	4.3 Using statistics	

Fig. 17: LEVEL5_create_subunit4_1

Eventually, the learning outcomes for sub-units are being displayed in Fig. 16. Each learning outcome can be described in further detail in the right “show detail” column in order to give advice for other/new partners.

2.5. Easy Metal

Unit of Learning Outcomes No. 3

Pre-vocational Training in Metal Work Occupations with Test Criteria

Title	Production of simple assemblies	
Compared to training level	Unit of learning outcomes no. 3 of 4 of the first year of training.	
Brief description of unit of learning outcomes	<p>The trainees are able to plan and execute an entire work task: Based on technical records they determine the task and plan the work process with the help of a work schedule. They prepare the task, are familiar with and use theoretical and practical basics of various joining techniques and chronologically execute disassembling and assembling tasks. They control the result, document it, and clean up. They observe the basic aspects of work-, health- and environmental protection.</p> <p>The detailed learning outcomes are listed below.</p>	
EQF level GQR level	EQF level 2 or GQR level 2 (GQR: level 3 = 2 years of initial vocational training; level 4 = 3 or 3 ½ years of initial training; application of units of learning outcomes as basic qualification is still unclear in Germany.)	
Reference to national qualifications (skilled trade occupations)	<ul style="list-style-type: none"> • Industrial metal work occupations (3.5 years) (plant mechanic, industrial mechanic, construction mechanic, tools mechanic, milling machine operator) • Metal worker (3.5 years) • Machinery and plant operator (2 years) 	
ECVET points to be scored (in relation to entire training). (calculation based on 60 points per year.)	Industrial metal work occupations	19.79 ECVET points
	Metal worker	16.0 ECVET points
	Machinery and plant operator	13.6 ECVET points

Fig. 18: Easy Metal Unit 3 #1

We start the description already on Unit level. Easy metal is one of the examples in which the software had to be adapted and the specification had to be modified.

Easy metal created a special case which might be applied quite often in reality and which reveals one of the strengths of an IT based validation.

Easy metal was directed towards three qualifications: Industrial Metal Work Occupations; Metal Worker and Machinery and Plant Operator.

In Easy Metal, certain Units of Learning Outcomes create a different amount of ECVET points. This may be a reasonable scenario – however it poses a challenge to both specification and software development.

Brief View on Unit of Learning Outcomes No. 3

Unit of learning outcomes	No. 3	Production of simple assemblies
Reference to National Qualifications (skilled trade occupation)		<ul style="list-style-type: none"> • Industrial metal work occupations: (plant mechanic, industrial mechanic, construction mechanic, tools mechanic, milling machine operator) • Metal worker • Machinery and plant operator
Definition of concepts		<p>Learning outcomes (def. according to recommendation of ECVET 2009): "Learning outcomes" statements about what a person knows, understands and is able to after having finished a learning process; these statements are defined as knowledge, skills and competences.</p> <p>Knowledge (def. EASYMetal): describes the dimension of a work task in which knowledge is used to select among different alternatives to complete the task appropriately.</p> <p>Skills (def. EASYMetal): describes the dimension of a work task in which (known) rules and/or (trained) movement sequences are applied to complete a work task.</p> <p>Competences (def. EASYMetal): describes the dimension of a work task in which self-organisation is necessary to find solutions in complicated situations.</p>
Learning outcomes:		
<p>Gathers work sequences from technical drawings and information sources; draws sketches; gathers and tests standard and single parts; arranges workplace and prepares tools and devices; puts assembly parts in a systematic order; labels single parts.</p> <p>Joins single parts in respective order; assembles components and documents work sequences.</p> <p>Checks position of parts and assemblies and corrects errors; conducts functional checks and documents results, also in a team.</p> <p>Avoids and reduces internal environmental damage; considers possibilities of economic and environmentally friendly use of energy and materials; sees to proper state of workshop after having finished work task.</p> <p>Observes regularly internal safety regulations as well as health protection rules; in case of hazard potentials remedy through appropriate measures; appropriate behaviour and measures in case of accidents.</p> <p>Works carefully and responsibly; communicates adequately; shows commitment.</p>		

Fig. 19: Easy Metal Unit 3 #1

Fig. 19 shows one exemplary Unit of learning outcomes as outlined by the project.

SELECT QUALIFICATION

SELECT UNITS

CUSTOMISE QUALIFICATION

Qualifications Industrial metal work occupations (3.5 years)

RELOAD

Industrial metal work occupations (3.5 years)

Qualification

Here you can get an overview of the content of the catalogue.

Name Industrial metal work occupations (3.5 years)
 Description (plant mechanic, industrial mechanic, construction mechanic, tools mechanic, milling machine operator)

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	Unit 1 Basics of manual metal processing using simple	The trainees are able to plan and execute
▶	Unit 2 Basics of manual metal processing using simple	The trainees are able to plan and execute
▶	Unit 3 Production of simple assemblies	The trainees are able to plan and execute

Fig. 20a: LEVEL5_easy_metal_qualification

Figure 20a displays one the three qualifications, in this case “Industrial Metal Work Occupations” with the highest ECVET points. Units are listed at the bottom of the page.

SELECT UNITS

CUSTOMISE QUALIFICATION

Metal worker (3.5 years)

Qualification

Here you can get an overview of the content of the catalogue.

Name: Metal worker (3.5 years)

Description:

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	Unit 1 Basics of manual metal processing using simple machine production techniques	The trainees are able to plan and execute an entire
▶	Unit 2 Basics of manual metal processing using simple machine production techniques	The trainees are able to plan and execute an entire
▼	Unit 3 Production of simple assemblies	The trainees are able to plan and execute an entire

ECVET points:

Relative weight:

URI:

Additional content fields

Field name	Field content
<input type="text" value="Example for entire work task"/>	Example: Manufacturing and assembling items for an extractor (Learning target: drilling, turning, filing, milling, tapping, knurling, rubbing, rasping, cutting)
<input type="text"/>	Vocational training has to impart in an orderly training vocational knowledge, skills and competences

Fig. 20 b: LEVEL5_easy_metal_qualification #2

Figure 22b displays the qualification “Metal Worker” with similar units. As mentioned above, in this qualification they related to different ECVET points, here 16.

However, the same units can be (re-)used, only the points may be modified.

using simple machine production techniques

Unit 3 Production of simple assemblies

The trainees are able to plan and execute an entire

ECVET points: 19,79

Relative weight

URI

Additional content fields

Field name	Field content
Example for entire work task	Example: Manufacturing and assembling items for an extractor (Learning target: drilling, turning, filing, milling, tapping, knurling, rubbing, rasping, cutting)
Dual Vocational Training System	Vocational training has to impart in an orderly training vocational knowledge, skills and competences (professional capabilities) necessary for an occupation in a changing world of work. Furthermore, it has to make
Pre-vocational training	Pre-vocational training is part of the vocational training: Pre-vocational training aims at imparting basics to acquire professional capabilities to be able to start vocational training in a recognised
Definition of concepts	Learning outcomes (def. according to recommendation of ECVET 2009): "Learning outcomes" statements about what a person knows, understands and is able to after having finished a learning process;

Qualification framework references

Framework	Framework level
EQF	2
DQR	2

Fig. 21: LEVEL5_easy_metal_unit3

Figure 21 shows the unit 3 (production of simple assemblies) for the qualification of Industrial Metal Work Occupations which has an equivalent of 19,79 ECVET points.

Pre-vocational training	Pre-vocational training aims at imparting basics to acquire professional capabilities to be able to start vocational training in a recognised
Definition of concepts	Learning outcomes (def. according to recommendation of ECVET 2009): "Learning outcomes" statements about what a person knows, understands and is able to after having finished a learning process;

Qualification framework references

Framework	Framework level
EQF	2
DQR	2

Outcomes

Name	Description	Show details
3 Learning Outcome 1	Gathers work sequences from technical draw	▶
3 Learning Outcome 2	Joints single parts in respective order, assembl	▶
3 Learning Outcome 3	Checks position of parts and assemblies and	▶
3 Learning Outcome 4	Avoids and reduces internal environmental da	▶
3 Learning Outcome 5	Observes regularly internal safety regulations	▶
3 Learning Outcome 6	Works carefully and responsibly, communicat	▶
3 Knowledge 1	Knows and is able to name major drawing pra	▶
3 Knowledge 2	Names material of the production parts toget	▶
3 Knowledge 3	Names standard parts together with their pro	▶

Fig. 22: LEVEL5_easy_metal_unit3_part2

The second part of the screen reveals the Learning outcomes listed according to the knowledge and skills category.

The Unit can be copied and simply assigned to different ECVET points for the other qualifications "Metal Worker" and "Machinery and Plant Operator"

Note: The following five projects 2.6 to 2.10 could be easily integrated in the software since they had developed in close accordance with the recommendation from the EP 2009.

Therefore, the screenshots from the ECVET databases and the LEVEL5 prototype will be opposed to visualise this transfer.

2.6. Erevet

ECVET für geographical mobility

Network EREVET



Name of the Unit:	A2- Assembling and PLC-programming	
Reference to the qualification:	Electrician	
Area of work tasks:	PLC programming	EQF-level: 4
Description of the Unit:	creating CAD drawing - <i>Programming the Compact PLC (LOGO!)</i> - reading and understanding operating instructions - setting up the control device- developing programs by an existing plan- testing the programs - writing documentation – planned for an 4 WEEKS MOBILITY!	
Knowledge	Skills	Competence
He/She:	He/She is able to:	He/She:
<ul style="list-style-type: none"> is able to describe the necessary components for simple automation systems with compact PLCs can read and understand operating instructions of PLCs in English language knows how to install and configure the software for programming PLCs knows the necessary programming language and symbols for simple industrial applications 	<ul style="list-style-type: none"> select, set up and adjust a PLC and necessary software install and wire sensors and actuators according to the rules in the foreign country by using the documents develop programs for simple applications in a metal processing workshop (e.g. star-delta starter) diagnose and repair errors and malfunctions on simple components and programs of the PLC provide a technical documentation (e.g. manual) about a simple automated system write a report about the personal experiences in a working process 	<ul style="list-style-type: none"> is able to assume responsibility for own work masters the applied work independently adapts own behavior to circumstances in solving problems is able to integrate into a team develops strategies for coping with unexpected situations in daily routines keeps the working hours and is punctual
Additional information: The Unit refers to the Austrian curriculum for electricians. Developed & adapted by: Ing. Christian Pauler – Ing. Gernot Grinschgl- LBS Eibiswald– Austria www.erevet.net		



Co-funded by the Lifelong learning programme of the European Union

Fig 22: Erevet Unit A2

The screenshot displays the LEVEL5_ereivet_qualification web application. At the top, there is a navigation bar with tabs for MYLEVELS, DATA POOL, CATALOGUE (selected), COMPILATION, and VALIDATION. Below the navigation bar, there are buttons for SELECT QUALIFICATION, SELECT UNITS, and CUSTOMISE QUALIFICATION. The main content area shows the 'Qualification' details for 'Electrician'. It includes a description field, a table for 'Qualification framework references' with columns 'Framework' and 'Framework level', and a table for 'Units' with columns 'Show details', 'Name', and 'Description'. The 'Units' table lists three units: A1 - Electrical installation of a metal processing factory, A2- Assembling and PLC-programming, and A3 - Communication in a mobility-project.

Fig 23: LEVEL5_ereivet_qualification



Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	A1 - Electrical installation of a metal processing factory	Planning and realizing electrical installation - Pl
▼	A2 - Assembling and PLC-programming	creating CAD drawing - Programming the Com

ECVET points

Relative weight

URI

Additional content fields

Field name	Field content
Area of work tasks	PLC programming
Additional information	The Unit refers to the Austrian curriculum for electricians.

Qualification framework references

Framework	Framework level
EQF	4

Outcomes

Name	Description	Show details
A2 Knowledge 1	He/she is able to describe the necessary co	▶
A2 Knowledge 2	He/she can read and understand operating	▶
A2 Knowledge 3	He/she knows how to install and configure	▶
A2 Knowledge 4	He/she knows the necessary programming	▶
A2 Skills 1	He/she is able to select, set up and adjust s	▶

Fig 24: LEVEL5_ereivet_unitA2

Eireivat is a project which easily fits into the software.

2.7. ESTO

Introduction

Training aim	<p>The training of „Specialist in Traditional Orchards“ intends to enlarge and deepen the classical vocational training within related fields. The curriculum offers a possibility to teach/learn and to discover new/forgotten knowledge about traditional orchards and ways of sustainable orchard management.</p> <p>One aim is to provide students the knowledge about traditional orchards in the fields of pomology, care & management and processing & marketing of their products. A second aim is to develop the needed skills and competences to integrate this knowledge and insight into different kinds of professional environments.</p> <p>The curriculum, based on ECVET (European Credit System for Vocational Education and Training) and using an output-oriented approach consists of units and learning outcomes describing the knowledge, skills and competences to be reached by students/trainees.</p>
Total amount of teaching hours	103
EQF-Level	L4 (in case of units tested in pilot courses also L3 and L5: Units 1, 4 and 7)
Modules	<ol style="list-style-type: none">1) <i>Pomology</i>2) <i>Care & management</i>3) <i>Processing & marketing</i>

Fig 25: esto_qualification1

Qualification

Here you can get an overview of the content of the catalogue.

Name Specialist in Traditional Orchards
Description

Additional content fields

Field name	Field content
Training aim	The training of „Specialist in Traditional Orchards“ intends to enlarge and deepen the classical vocational training within related fields. The curriculum offers a possibility to teach/learn and to discover new/forgotten
Total amount of teaching hours	103
Modules	1) Pomology 2) Care & management 3) Processing & marketing
Supportive materials and tools for the curriculum	1) Material collection (knowledge base) The comprehensive material collection (knowledge base) serves as a supporting tool for the use of the curriculum. The material collection comprises available literature,

Qualification framework references

Framework	Framework level
EQF	4

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	Unit 1 Getting the pomological base L4	
▶	Unit 2.1 Establishment - Planning a new traditional orchard	
▶	Unit 2.2 Establishment - Establishing a new ...	

Fig 26: LEVEL5_esto_qualification

ESTO – European Specialist in Traditional Orchards		
CARE & MANAGEMENT		Unit 2.1
Establishment Planning a new traditional orchard		L 4
<p>KNOWLEDGE</p> <p>He/she is able to</p> <ol style="list-style-type: none"> 1. explain the need of machine tracks for running a traditional orchard 2. name the legal demands and the standards of establishing a traditional orchard (tree density, diversity of varieties, etc.) 3. describe suitable varieties and species 4. describe different types of plans (inventory plan, design plan, implementation plan) 5. explain the basics of designing a plan (by hand and/or computer) what method of planning? 6. explain the structure of cost calculation (staff, material, machines and external services) 	<p>SKILLS</p> <p>He/she is able to</p> <ol style="list-style-type: none"> 1. plan a new traditional orchard (respecting demands of market, landscape, ecology, climate, etc.) and to define the production goal 2. choose the right locality, varieties, distance between the trees 3. draw a scaled plan of the orchard (including borders, distribution of varieties or species, driveways etc.) 4. calculate the costs of establishing a traditional orchard 	
<p>COMPETENCES</p> <ol style="list-style-type: none"> 1. He/she does an analysis for the establishment of a new traditional orchard on his/her own. 2. He/she creates and works out a plan for a traditional orchard on his/her own. 		

Fig 27: esto_unit2_1

▶	Unit 1 Getting the pomological base L4	
▼	Unit 2.1 Establishment - Planning a new traditional orchard	
ECVET points		
Relative weight		
URI		
Additional content fields		
Field name		Field content
Module		CARE & MANAGEMENT
Qualification framework references		
Framework		Framework level
EOF		4
Outcomes		
Name	Description	Show details
2.1 Knowledge 1	He/she is able to explain the need of m	▶
2.1 Knowledge 2	He/she is able to name the legal deman	▶
2.1 Knowledge 3	He/she is able to describe suitable variet	▶
2.1 Knowledge 4	He/she is able to describe different type	▶
2.1 Knowledge 5	He/she is able to explain the basics of	▶
2.1 Knowledge 6	He/she is able to explain the structure of	▶
2.1 Skills 1	He/she is able to plan a new traditional	▶
2.1 Skills 2	He/she is able to choose the right local	▶
2.1 Skills 3	He/she is able to draw a scaled plan of	▶
2.1 Skills 4	He/she is able to calculate the costs of	▶
2.1 Competence 1	He/she does an analyse for the establi	▶

Fig 28: LEVEL5_esto_unit2_1

2.8. Learning with Clay

	Surface treatments, maintenance and repair of clay plasters	ECVET Unit n° 3
	Qualification : Designer in clay plastering (Chamber of Crafts, DE)	Level 4 Credit: 10%

Knowledge

- Techniques for maintenance and touching up
- Damage
- Causes of damage: plaster mix, application, construction, external factors
- Different repair options and accurate touching up
- Conservation aspects of traditional clay plasters and backgrounds, including earthen walls
- Finished plaster quality to achieve the required standard for the particular conditions of use
- Options for final surface treatments and coatings onto clay plasters: fixatives, paints, plasters with other binders, tiles, glass, wood, wallpaper
- External clay plaster and renders onto earthen walls
- Composition and application of clay slip, clay paint and washes
- Use of lime onto a clay plaster background and issues of bonding and carbonation
- Composition and application of lime plasters and paints
- Impacts of surface treatments on issues of permeability, health and environment
- Maintenance, repair and surface treatments:
 - Current legislative workplace requirements
 - Relevant codes of practice and current standards for quality of work and materials
 - Tools, machinery and equipment
 - The order of work
 - Safe and healthy working practices

Skills

- Use maintenance techniques
- Identify and classify damage
- Make test panels and interpret the results to determine the correct mixture for repairs
- Protect adjoining surfaces
- Repair damage to any level
- Make seamless joins with repair plaster
- Demonstrate paint effects onto sample clay plaster boards
- Paint clay plaster with clay and lime based paints and washes
- Prepare and apply fixatives
- Make sample boards of lime putty based plaster
- Select, calculate and source materials
- Select and use appropriate tools, machinery and equipment for maintenance, repair and surface treatments
- Organise the building site
- Comply with current legislation, official guidance and workplace safety requirements at all times

Competence

- Explain the cause of damage and account for your chosen repair technique
- Plan and organise all the steps involved in the repair of clay plaster - from the analysis of damage and remedy through to surface finish, as on usual and predictable building sites
- Plan and organise all the steps involved in the application of paints onto clay plaster as on usual and predictable building sites
- Identify and recognise the value of traditional and heritage plaster backgrounds and clay plasters
- Control the quality of the work
- Supervise and co-ordinate the entire work process
- Input into the decision making process concerning surface treatments and/or repair techniques
- Advise on techniques and options for repair and maintenance
- Advise on the impacts of different surface treatments on issues of permeability, health and environment
- Advise other trades on suitable surface treatments and coatings and their application

www.earthbuilding.eu



Fig 29: learn_with_clay_unit3

CUSTOMISE QUALIFICATION

Qualification

Here you can get an overview of the content of the catalogue.

Name: Designer in clay plastering

Description:

Qualification framework references

Framework	Framework level
EQF	4

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	Unit 1 Preparing Clay Plaster	
▶	Unit 2 Application of Clay Plaster	
▶	Unit 3 Surface treatments, maintenance and repair of clay plasters	
▶	Unit 4 Interior design with clay plaster	
▶	Unit 5 Decorative elements with clay plaster	
▶	Unit 6 The Business of Clay Plaster	

Fig 30: LEVEL5_learn_with_clay_qualification

▶	Unit 2 Application of Clay Plaster	
▼	Unit 3 Surface treatments, maintenance and repair of clay plasters	
ECVET points		
Relative weight		
0.1		
URI		
Qualification framework references		
Framework		Framework level
EQF		4
Outcomes		
Name	Description	Show details
General Skills 4	Select, calculate and source materials	▶
General Skills 1	Select and use appropriate tools, machinery a	▶
General Skills 2	Organise the building site	▶
General Skills 3	Comply with current legislation, official guidar	▶
3 Knowledge 1	Techniques for maintenance and touching up	▶
3 Knowledge 2	Dmage	▶
3 Knowledge 3	Causes of damage : plaster mix, application, c	▶
3 Knowledge 4	Different repair options and accurate touching	▶
3 Knowledge 5	Conservation aspects of traditional clay plastr	▶
3 Knowledge 6	Finished plaster quality to achieve the requirec	▶

Fig 31: LEVEL5_learn_with_clay_unit3

2.9. Proper Chance

Overview on Units of Learning Outcomes

Key Activities and Professional Competences

Qualification: **State-assessed Social Care Assistant**

GQF Level: 3

Key Activities and Professional Competences
<p>Arrange and deliberate on your own work, and arrange in accordance with tasks and client requirements</p> <p>Develop a professional identity and socio-pedagogical attitude Purposefully organise own work schedule On the basis of perception and observation, comprehending the life situation of the various clients Plan, carry out and deliberate on client-oriented nursing care, education, and personal development processes</p>
<p>Assist socio-pedagogical and socio-nursing care specialists</p> <p>Consider Legal Framework of Professional Activities Act according to Facility-specific parameters Contribute to team work and in the network of specialists in social-care work</p>

Fig 31: proper_chance_qualification

- SELECT QUALIFICATION
- SELECT UNITS
- CUSTOMISE QUALIFICATION

Qualifications

RELOAD

State-assessed Social Care Assistant

Qualification

Here you can get an overview of the content of the catalogue.

Name State-assessed Social Care Assistant
 Description

Qualification framework references

Framework	Framework level
DQR	3

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	1 Arrange and deliberate on your own work, and arrange in accordance with tasks and	
▶	2 Assist socio-pedagogical and socio-nursing care specialists	

Fig 32: LEVEL5_proper_chance_qualification

Key Activity Assist socio-pedagogical and socio-nursing care specialists	
Qualification Social Care Assistant	GQF Level: 3
Assessment Instruments: Oral examination (Expert discussion), practical examination at workplace, written examination	
Professional Competence Consider Legal Framework of Professional Activities	
Skills <ul style="list-style-type: none"> Practice the profession respecting the laws and institutional regulations, and in the interest of the patients 	Knowledge <ul style="list-style-type: none"> Describe the basics and structure of the legal framework Explain the legal fundamentals Explain Civil Law basics: <ul style="list-style-type: none"> Legal and contractual supervisory duties Selected contents of Nursing Care legislation Explain basics of labour legislation Describe the essential contents of „Laws for Kindergarten Facilities in Saxony“ (Gesetz über Kindertageseinrichtungen in Sachsen (SäKitaG)) Describe the essential contents of the „Children and Youth Assistance Law“ (Kinder- und Jugendhilfegesetzes (KJHG)) Explain the term „School Readiness“ and „Enrolment“ Demonstrate knowledge of the Legal Basis for the Integration of People with Disabilities Describe the Legal Framework for First Aid and RefUse to Offer Assistance Define the term „Compulsory Registration“ on the basis of relevant, legal-binding documents Define the term „Need for Nursing Care“ on the basis of relevant, legally-binding documents Describe the essential contents of the „Nursing Home Law“ (Heimgesetz)
Professional Competence Act according to Facility-specific parameters	
Skills <ul style="list-style-type: none"> Consider activities guidelines and the concept of the facility Handle the material resources of the facilities responsibly Use the computer for organise and planning work Work with job-related software as well as text-editing and table calculation programmes Organise information acquisition and administration with the aid of a computer 	Knowledge <ul style="list-style-type: none"> Elaborate on the conditions, work schedules, and work organisation in the various social institutions

Fig 33: proper_chance_unit2

Name	Description	Show details
Subunits		
Show details	Name	Description
▶	2.1 Consider Legal Framework of Professional Activities	
▼	2.2 Act according to Facility-specific parameters	
ECVET points		
Relative weight		
URI		
Learning outcomes of subunit		
Name	Description	Show details
2.2 Skills 1	Consider activities guidelines and the con	▶
2.2 Skills 2	Handle the material resources of the facil	▶
2.2 Skills 3	Use the computer for organise and planni	▶
2.2 Skills 4	Work with job-related software as well as	▶
2.2 Skills 5	Organise information acquisition and adm	▶
2.2 Knowledge 1	Elaborate on the conditions, work schedul	▶
▶	2.3 Contribute to team work and in the network of specialists in social-care work	

Fig 34: LEVEL5_proper_chance_subunit_2_2

in the 'Show' column.

Show details	Name	Description
▶	1 Arrange and deliberate on your own work, and arrange in accordance with tasks and	
▼	2 Assist socio-pedagogical and socio-nursing care specialists	
ECVET points		
Relative weight		
URI		
Qualification framework references		
Framework		Framework level
DQR		3
Outcomes		
Name	Description	Show details
Subunits		
Show details	Name	Description
▶	2.1 Consider Legal Framework of Professional Activities	
▶	2.2 Act according to Facility-specific parameters	
▶	2.3 Contribute to team work and in the network of specialists in social-care work,	

Fig 35: LEVEL5_proper_chance_unit2

2.10. SME Master

Title of the Qualification	Master Baker Craftsperson					
Total ECVET Points						
EQF Level						
NQF Level	AT	DE	FR	NO	SI	
Units of Learning outcomes	U1	Accounting and Controlling				
	U2	Budgeting, Calculation and Financing				
	U3	Entrepreneurship				
	U4	Human Resources Management				
	U5	Tutoring				
	U6	Marketing and Sales Management				
	U7	Production of bread, small breads and rolls				
	U8	Production of cakes, pastries and cookies				
	U9	Hygiene, Food-Safety and Food Quality				
	U10	Quality and Security Management				
	U11	Vocationally-specific Business Administration				
	U12	Production of snacks and sandwiches (<i>country specific unit</i>)				
	U13	Communication in an international context (<i>country specific unit</i>)				
Cross sectional Learning Outcomes	<p>To acquire the learning outcomes properly the following competences are essential:</p> <ul style="list-style-type: none"> ▪ s/he is able to act with social and ecological responsibility, ▪ s/he is able to adopt a quality management, ▪ s/he is able to use information and communication technology (ICT). 					

Fig 36: SME Master qualification

Qualification

Here you can get an overview of the content of the catalogue.

Name: Master Baker Craftsperson
Description:

Additional content fields

Field name	Field content
Cross sectional Learning Outcomes	To acquire the learning outcomes properly the following competences are essential: <input type="checkbox"/> s/he is able to act with social and ecological responsibility, <input type="checkbox"/> s/he is able to adopt a quality management,

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	U1 Accounting and Controlling	
▶	U2 Budgeting, Calculation and Financing	
▶	U7 Production of bread, small bread and rolls	
▶	U8 Production of cakes, pastries and cookies	

Fig 37: LEVEL5_sme_master_qualification

Show details	Name	Description
▶	U1 Accounting and Controlling	
▼	U2 Budgeting, Calculation and Financing	
ECVET points		
Relative weight		
URI		
Outcomes		
Name	Description	Show details
2 Learning Outcome 1	S/he is able to draw up a cost estimate,calcul.	▶
2 Learning Outcome 2	S/he is able to assess the company'sinvestm	▶
2 Learning Outcome 3	S/he is able to calculate the company'sperfor	▶
2 Learning Outcome 4	S/he is able to plan a budget by taking intoacc	▶
2 Learning Outcome 5	S/he is able to produce operational accounts.	▶
2 Learning Outcome 6	S/he is able to calculate the costs of products	▶
2 Learning Outcome 7	S/he is able to calculate the prices of product:	▶
2 Learning Outcome 8	S/he is able to identify overall profit and losse	▶
2 Learning Outcome 9	S/he is able to select types of financing for co	▶
2 Learning Outcome 10	S/he is able to draw up the bases for aninvest	▶
2 Learning Outcome 11	S/he is able to conduct a cost control.	▶
2 Learning Outcome 12	S/he is able to prepare a financial plan for thei	▶

Fig 38: LEVEL5_sme_master_unit2

Title of the Qualification	Master Baker Craftsperson			<h1>U2</h1>	
EQF Level					
Generic Title of the Unit	Budgeting, Calculation and Financing				
ECVET points / Relative Weight	AT	DE	FR	NO	SI
Learning outcomes					
S/he is able to draw up a cost estimate, calculate contribution margins and balance outcomes economically.	S/he is able to produce operational accounts.				
	S/he is able to calculate the costs of products and services and to analyse their profitability.				
	S/he is able to calculate the prices of products and services.				
	S/he is able to identify overall profit and losses.				
S/he is able to assess the company's investment needs and its financial resources.	S/he is able to select types of financing for corporate requirements, such as equity financing, self-financing and debt financing, leasing, factoring as well as types of public financing and subsidisation.				
S/he is able to calculate the company's performance ratios and take them into consideration.					
S/he is able to plan a budget by taking into account the relationship between operational accounts, calculations and results deviations.	S/he is able to draw up the bases for an investment budget, taking into account the company's liquidity and possible types of financing.			S/he is able to prepare a financial plan for the company, determine liquidity and identify the company's investment requirements.	
	S/he is able to conduct a cost control.				

Fig 39: SME master unit 2

SELECT UNITS

Master Craftsperson in Joinery / Cabinetmaking

CUSTOMISE QUALIFICATION

Qualification

Here you can get an overview of the content of the catalogue.

Name: Master Craftsperson in Joinery / Cabinetmaking

Description:

Additional content fields

Field name	Field content
Cross-sectional learning outcomes	To acquire the learning outcomes properly the following competences are essential: <input type="checkbox"/> he/she is able to act in a socially and ecologically responsible manner, <input type="checkbox"/> he/she is able to introduce a quality management system,

Units

To see the learning outcomes and subunits of a unit of learning outcomes click on the respective triangle in the 'Show' column.

Show details	Name	Description
▶	U1 Accounting and Controlling	⋮
▶	U2 Budgeting, Calculation and Financing	⋮
▶	U7 Production of goods in the field of joinery	⋮
▶	U8 Production of goods in the field of cabinetmaking	⋮

Fig 40: SME master unit Qualification 2



3. Conclusion

3.1. Outcomes

The transfer was successfully executed in two phases. The data of those projects that worked according to the recommendations could be integrated in the software.

Thus, the IMPACT project delivered a functional prototype that, for the first time, facilitates validation processes in a digital environment that promotes:

- The standardised and transferrable description of qualifications
 - to promote standardised IT-based translations of qualifications, LO units and KSC descriptors.
 - to promote standardised procedures for assessments that can be transferred also to new partners in Europe
 - to facilitate an IT-based quality management
- the re-use of validation instruments, tools, procedures such as:
 - assessment design, methods and instruments
 - learning outcome descriptors
- the adaptation of these instruments in order to transfer them to:
 - different learning projects and contexts
 - individualised learning scenarios
- The exchange of data between validating organisations and projects on the European level
 - For instance, transferrable learning outcome descriptions
 - Identification and Assessment instruments
- An IT based user management, for instance
 - for large VET institutions
 - for European networks and collaborating partners

3.2. Perspectives/Vision

The software prototype can be the cornerstone of a system which goes beyond an exchange platform for validation data.

If connected with other learning technologies, such as LMS and e-Portfolios, the system can truly serve to a high feasibility and usability of VINFL in connection with blended learning or e-learning settings.

In this connection, the IMPACT project has already developed strategic partnerships with:

- KA1 courses
- KA2 projects
- The OWL qualification for the large community of Adult Educators in Germany.



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