

Manag*EU*r

ECQA Certified EU Project Manager

Skill Card Design

Job Role Committee
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1 Job Role Committee Members (JRC)

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2 Erasmus+ KA1 Project

Programme: Erasmus+

Identifier: 2014-1-AT01-KA104-000647

Title: Fantasy to Reality - From Adult Literacy Skills to Augmented Reality

Summary

Augmented Reality is a new ITC-tool with a considerable potential for the provision of training and learning services. Yet it is not implemented sufficiently, because intensive training is required for trainers and staff of adult education organisations to be enabled to use its full potential. The development of creative and innovative skills for pedagogy will raise skills also in graphic and IT needed for employment growth in communication, science and technology.

Fantasy to Reality - From Adult Literacy Skills to Augmented Reality is an Erasmus+ KA mobility project which aims at enhancing learning mobility of individuals by means of mobility of staff .engaged in adult education. Two staff members of Skills International GmbH, Austria, will participate in a structured training course in London, UK for adult learning in Augmented Reality. The profile of the participants is a mixture of trainer and project staff. An important part of the mobility project is integration of potential target groups, such as staff that has not participated in the training, learners who are curious to try out innovative learning tools and stakeholders in general.

The style of this course is structured for non or basic skilled IT teachers and trainers who wish to use Augmented Reality to teach adult literacy, chemistry, physics, astronomy, history, geography or maths to their target audience. Augmented Reality can be used to make learning exciting and develop literacy skills more joyfully. 40 hours of training are required in this structured course.

The methodology to be used in carrying out the structured course is also innovative, such as centric learning, learner centered learning, distance learning and specifically the hands on practical (doing) learning with Joanna Pinewood Education computer suite, including also learning with smart phones and i-pads of participants.

Dissemination of the project activities and results will be among the main activities throughout the project lifetime, by using innovative channels and tools, such as video, slideshare, digital photography and literacy on you-tube, social platforms like facebook and blogs and twitter. As main results of the mobility activities, a practical Mobility Handbook for the organisation and a concise Handbook on AR usage in teaching literacy skills will be developed.

The impact of the mobility activities will be empowered by the implementation and transfer of knowledge in the follow-up phase. The participants will return to their institution with workshop materials that can be taught to members of staff of our consortium and organisation. Augmented Reality is developing fast outside of Europe. Europe is lagging behind in job opportunities. This course intends to motivate other European education institutions to see that there are job opportunities in developing this sector of training and education.

Start Date: 01-06-2014

Ending Date: 31-05-2015

Duration in months: 12

EC Contribution: 3.000

Coordinating organisation: Skills International GmbH, Austria

Partner organisation: Joanna Pinewood Education Limited, UK

Key Action: Learning Mobility of Individuals

Action Type: Adult education staff mobility

3 Introduction

3.1 European Project Management

The European Union provides funding for a broad range of areas and policy fields such as:

- research and innovation
- education, training, youth and sports
- cohesion policy, regional and urban development
- international cooperation and development
- employment and social inclusion
- agriculture and rural development
- maritime and fisheries policies
- humanitarian aid etc,

3.2 ECQA Certified EU Project Manager (ManagEUr)

The qualification and certification for EU Project Managers was originally developed under the Leonardo da Vinci programme HU/B/03/F/PP-170028 (2003 – 2006). ManagEUr was one of the first qualifications in European project management that linked industry, academia and public authorities by a training and certification based on a skill card following principles like those which are nowadays applied in the European Qualifications Framework (EQF).

The ECQA Certified EU Project Manager qualification and certification provides project managers, proposal writers, administrators and financial personnel with the skills needed to successfully plan, implement and monitor European funding programmes and projects.

Based on general principles of general project management (guide and standards such as PMBOK^[17], Prince 2^[18] and other generic project management methods), the EU Project Manager focuses more specifically on the management of EU-funded projects. It is primarily targeted at professionals from public, private and non-profit sectors from both EU and non-EU countries.

Qualifications, certificates and diplomas awarded following education, training or learning are crucial for individual citizens. The ECQA Certified EU Project Manager is based upon a European skill card of a certified EU project manager. This is made available through a solution offered by ECQA, which comprises an online system for browsing the skills card, performing self assessment online, collecting evidences, perform an examination and receive a formal assessment of the evidences online.

To be able to professionally manage European projects a specific set of skills is required. European projects are characterised by an international project teams with diverse working methods and cultures, geographically distributed team members and strict administrative and financial regulations. The ECQA Certified EU Project Manager training and certification programme covers all the key aspects that are associated with considerations upfront the process of the structuring of European projects, as well as with boosting the dissemination and usage of project results. To this aim, it deals with:

- **Introduction into EU Projects und European Funding Programmes:** EU Structure and institutions, EU programmes in different areas

- **EU-funded projects:** Project life-cycle from the contract negotiation to project closure including contract management, start-up and objectives, management of work packages and project results, finance management and audits
- **Dissemination and usage of project results:** from the identification of target groups and stakeholders to the visibility of EU-funded projects, dissemination, exploitation and sustainability of project results, communication and team management, reporting
- **Quality Assurance** is the process of integrating quality control standards by applying the planned, systematic quality activities and working to improve the processes
- **Risk Management** processes that are relevant for mitigating the risk involved in EU projects.

In this sense, ManagEUr addresses the following target groups:

- a) *Managers of EU-funded projects* who are implementing the European project in co-ordinating or partner organisation. Their tasks usually range from contract negotiation following the positive evaluation of an application, to the implementation and follow-up of EU-funded projects.
- b) *Developers of European projects.* Proposal writers and developers of European projects also require the competences related to the planning, implementation and quality assurance related to EU-funded projects.
- c) *Financial staff* being responsible for financial management and reporting according to the financial regulations.
- d) *Authorities responsible for European programmes* which are responsible for the design, implementation, evaluation or monitoring of European programmes and projects.
- e) *Independent experts* who have an assignment for the evaluation of proposals, external evaluation of running projects, monitoring of actions, preparation, implementation or evaluation of programmes and design of policies, often assisting as peer reviewers.

3.3 European Certification and Qualification Association (ECQA)

ECQA was established as the successful result of a number of EU supported initiatives in the past years in the European Union Life Long Learning Programme. A number of training and education bodies/organizations (public and private, together with industrial partners) decided to follow a joint process for the certification of persons.

The common interests of these organizations (currently about 60 organizations from 18 countries) was to establish an association for jointly developing and maintaining a set of quality criteria and common certification rules to be applied across different European countries and internationally.

Roles of the ECQA

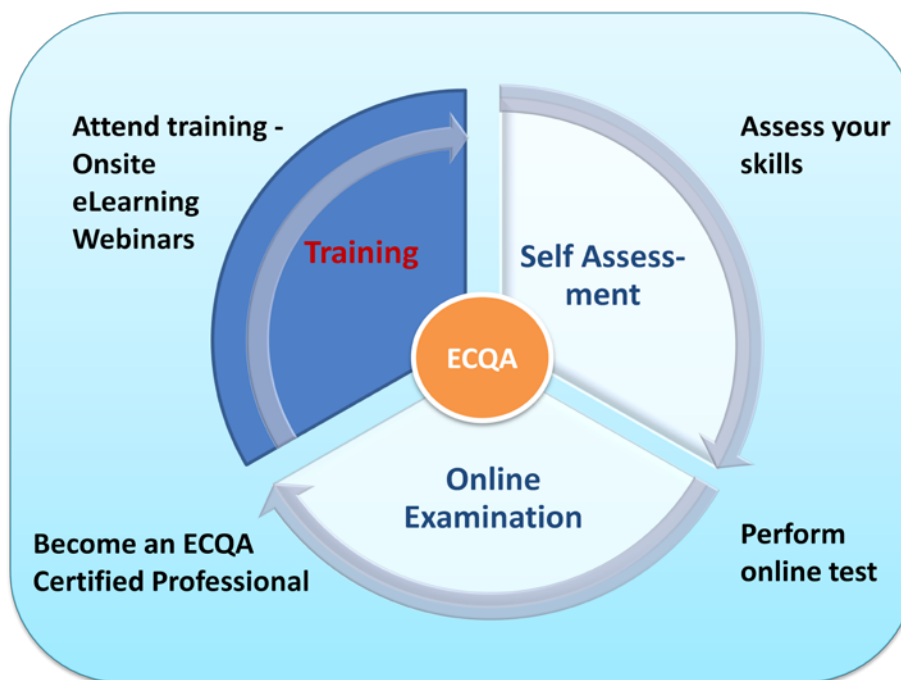
- **The ECQA is a non-for-profit association**, joining institutions and several thousands of professionals from all over Europe and internationally.
- **The ECQA provides a world-wide unified certification schema for numerous professions.** The same exam pool, exam rules and the same electronic exam system are used for examination in any participating country.

- **The ECQA joins experts from the market and supports the definition and development of the knowledge (skill cards) required for new jobs and new skills.**
Experts joined in Job Role Committees update the professions on a regular basis.
- **The ECQA defines and verifies quality criteria for training organizations and trainers** to assure the same level of trainings all over the world.
- **The ECQA centrally promotes all certified job roles.**
Databases of ECQA certified professionals are publicly available to help organizations on the market in seeking organizations and individuals for cooperation.

3.4 The Qualification and Certification Circle

The learning circle for EU Project Managers comprises the following phases:

- Training onsite or online (the training is optional)
- Self-assessment
- Online examination
- ECQA Certification



3.5 Examination

The online test for ECQA Certified EU Project Manager comprises 110 multiple choice test questions (10 questions for each of the 11 elements). A minimum of 66% is required to pass an element.

To be listed as an ECQA Certified EU Project Manager on the ECQA website (www.ecqa.org), participants need to pass a minimum of 8 elements out of the 11 elements from the skill set.

The self-assessment is accessible on the ECQA portal to test the level of knowledge.

4 Skills Definition Model

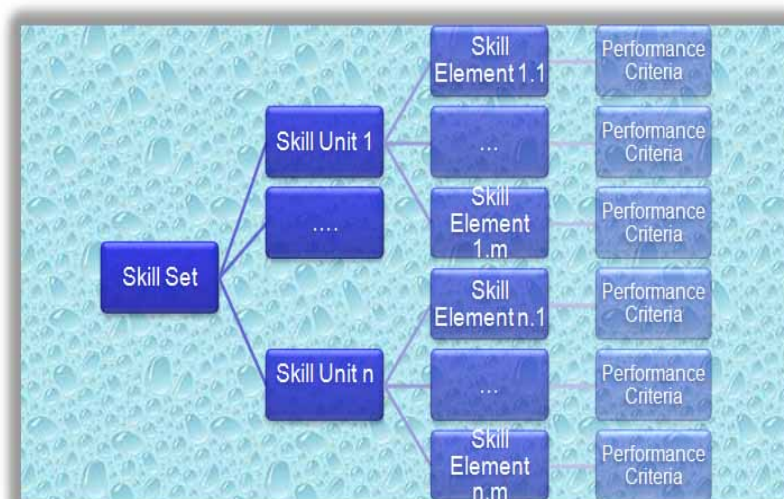
4.1 Skill Card Strategy

The skill card (also called skill set) is the basis for each ECQA profession. It contains units with modular learning elements where the performance criteria are defined. Such a common set of skill sets is needed for the free mobility of workers. Some European countries have already established open universities which support APL (Accreditation of Prior Learning). In APL the skills of students are assessed, already gained skills are recognized, and for the skill gaps a learning plan is established.

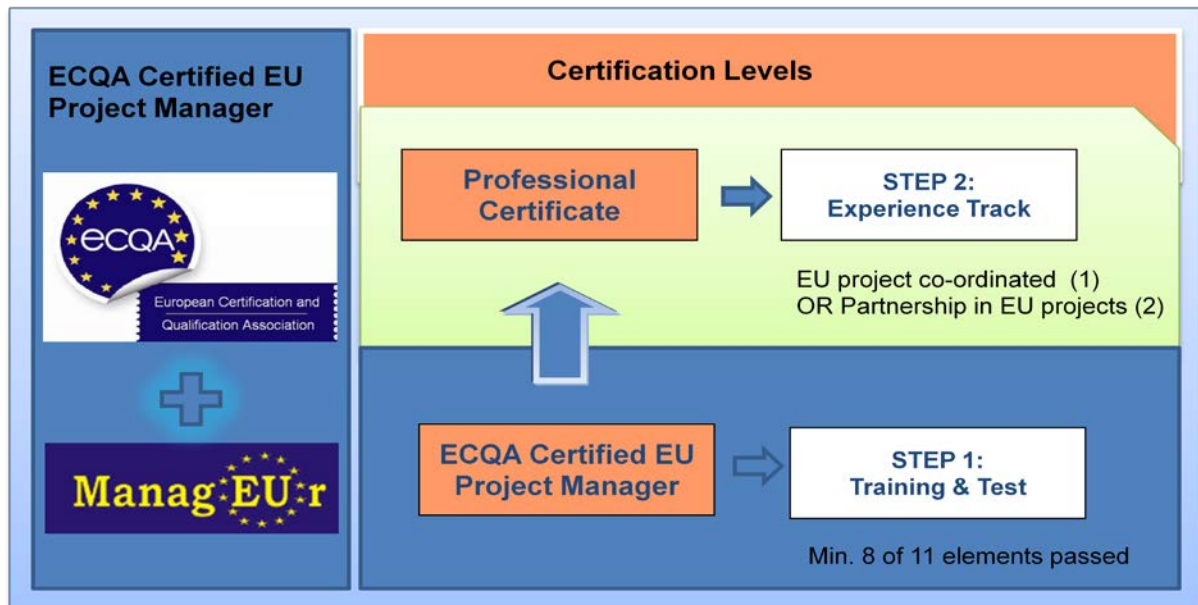
4.2 Skill Card Definitions

The skill card is based on the skills definition proposed by the DTI (Department of Trade and Industry) in the UK for the NVQ (National Vocational Qualification) standards and revised skill cards from other countries. It contains the following items.

- **Domain:** An occupational category. e.g. domain = Project Management
- **Job Role:** A profession that covers part of the domain, e.g. job role = EU Project Manager
- **Unit:** A list of certain activities that have to be carried out in the workplace. It is the top-level skill in the qualification standard hierarchy. Each unit consists of a number of elements, e.g. Unit 1 Introduction into EU Projects, Unit 2 Project Objectives and Finance, etc.
- **Learning Element:** Description of one distinct aspect of the work performed by a worker, either a specific task that the worker has to do or a specific way of working. Each element consists of a number of performance criteria, e.g. U1.E1 EU Structure and Institutions etc.
- **Performance criteria:** Description of the minimum level of performance a participant must demonstrate in order to be assessed as competent, e.g. MAN15.U2.E1.PC3 Student knows how to define measurable project objectives.
- **Level of cognition:** For each performance criteria there is an intended level of cognition. At the same time this describes the complexity level of the test questions for each performance criteria, according Bloom's Taxonomy ^[6]
- **Evidence:** Proof of Competence.



4.3 Two level certification



I. Certificate - ECQA Certified EU Project Manager

To become an ECQA Certified EU Project Manager and to be listed on the ECQA website, candidates must pass a minimum of **8 out of the 11 learning elements** (with min. **66% coverage for each element**).

In order to obtain the certificate, candidates need to perform an online test to show sufficient knowledge to cover the skill card for EU Project Managers.

II. Upgrade Certificate - Professional ECQA Certified EU Project Manager

1. Participants who fulfill the requirements for ECQA Certified EU Project Manager (minimum 8 learning elements passed successfully, with min. 66% to pass a learning element) have the opportunity to upgrade their certificate to a professional level. The professional certificate additionally confirms the practical experience of the candidate. The upgrade professional certificate is based on an independent assessment of evidences by an external board of reviewers.

2. Candidates additionally cover the skill card for EU Project Manager Professionals.

The evidences provide a proof of practical competence and illustrate that the person has been capable of applying best practice principles of EU Project Management in his/her professional career. The minimum conditions are either **one EU Project coordinated** or **partnership in 2 EU-funded projects**.

5 Skill Card for ECQA Certified EU Project Manager

UNIT 1: INTRODUCTION INTO EU PROJECTS

U1.E1 EU Structure and Institutions

MAN.U1.E1.PC1	Student knows the main institutions and bodies of the European Union.
MAN.U1.E1.PC2	Student knows the roles of European Parliament, European Council, Council and Commission.
MAN.U1.E1.PC3	Student knows the roles of Court of Justice, European Central Bank, Court of Auditors and other bodies.
MAN.U1.E1.PC4	Student knows what is the source of the EU budget and how it is spent.
MAN.U1.E1.PC5	Student knows about the 2014-2020 Multiannual Financial Framework.

U1.E2 Introduction into EU Programmes

MAN.U1.E2.PC1	Student knows how to assign different project ideas to European funding programmes.
MAN.U1.E2.PC2	Student knows the aims and funding rules for EU research and innovation programmes, such as Horizon 2020.
MAN.U1.E2.PC3	Student knows about Erasmus+, the EU programme for education, training, youth and sport.
MAN.U1.E2.PC4	Student knows the main aims, targets and rules concerning Cohesion Policy.
MAN.U1.E2.PC5	Student understands the main principles of the Europe 2020 strategy.

UNIT 2: PROJECT OBJECTIVES AND FINANCE

U2.E1 Start-up and Objectives

MAN.U2.E1.PC1	Student knows how to select relevant partners for project consortium.
MAN.U2.E1.PC2	Student understands advantages of knowledge sharing and knows how to integrate the know-how of partners.
MAN.U2.E1.PC3	Student knows how to define measurable project objectives.
MAN.U2.E1.PC4	Student knows how to plan the project results.
MAN.U2.E1.PC5	Student can align project objectives to programme objectives and organizational objectives.

U2.E2 Management of Work Packages and Project Results

MAN.U2.E2.PC1	Student understands the definition of work packages in EU projects.
MAN.U2.E2.PC2	Student knows how to define inputs and outputs of work packages.
MAN.U2.E2.PC3	Student knows how to agree on the responsibilities for work packages.
MAN.U2.E2.PC4	Student knows how to define the process to integrate the project results.
MAN.U2.E2.PC5	Student knows how to develop the project plan and how to set milestones.

U2.E3 Finance Management

MAN.U2.E3.PC1	Student understands the project budget structure and types of eligible and non-eligible costs.
MAN.U2.E3.PC2	Student knows to apply different cost categories in EU-funded projects.
MAN.U2.E3.PC3	Student understands payment models between EU Authorities, co-ordinator and partners.
MAN.U2.E3.PC4	Student knows how to define and manage the project budget and evidences of budget usage.
MAN.U2.E3.PC5	Student knows how to manage budget changes and how to calculate the final EU funding.

U2.E4 Contract Management

MAN.U2.E4.PC1	Student understands the content of the contract between EU Authority and the consortium.
MAN.U2.E4.PC2	Student understands the purpose and the process of the legal and financial viability checks.
MAN.U2.E4.PC3	Student knows how to run contract negotiations with the EU Authorities.
MAN.U2.E4.PC4	Student knows how to develop and negotiate contracts with project partners.
MAN.U2.E4.PC5	Student knows how to follow-up a contract throughout the project and how to manage amendments.

UNIT 3: COOPERATION**U3.E1 Communication and Team Management**

MAN.U3.E1.PC1	Student understands communication principles between EU Authorities and consortium.
MAN.U3.E1.PC2	Student knows how to establish communication models within the project consortium.
MAN.U3.E1.PC3	Student understands importance and principles of document management and IT infrastructure.
MAN.U3.E1.PC4	Student knows how to organize and manage project meetings and other communication events.
MAN.U3.E1.PC5	Student is aware of cultural differences in international cooperation.

U3.E2 Exploitation and Sustainability

MAN.U3.E2.PC1	Student understands the concept and importance of dissemination activities.
MAN.U3.E2.PC2	Student is able to define a dissemination plan and strategy.
MAN.U3.E2.PC3	Student understands the importance of intellectual property rights.
MAN.U3.E2.PC4	Student knows how to identify relevant models for exploitation of project results.
MAN.U3.E2.PC5	Student knows how to agree on exploitation and sustainability plan or agreement.

U3.E3 Reporting

MAN.U3.E3.PC1	Student understands the reporting models for specific EU programmes.
MAN.U3.E3.PC2	Student knows what information and evidences are needed for financial and content reporting.
MAN.U3.E3.PC3	Student knows how to prepare content, status and financial reports to EU.
MAN.U3.E3.PC4	Student knows how to establish reporting models within consortium.
MAN.U3.E3.PC5	Student knows how to manage communication with EU authorities in relation to reporting.

UNIT 4: QUALITY MANAGEMENT**U4.E1 Quality Planning and Control**

MAN.U4.E1.PC1	Student understands the importance and characteristics of quality in EU projects.
MAN.U4.E1.PC2	Student understands the responsibilities of partners in quality management.
MAN.U4.E1.PC3	Student knows how to plan quality of processes and results in EU projects.
MAN.U4.E1.PC4	Student understands why the quality assurance and control is needed.
MAN.U4.E1.PC5	Student knows how to manage internal and external reviews, evaluations and audits of EU projects.

U4.E2 Risk Management

MAN.U4.E2.PC1	Student understands the most relevant risks in EU projects.
MAN.U4.E2.PC2	Student understands what risk management is and how it is applied in European Projects.
MAN.U4.E2.PC3	Student knows understand the responsibilities for risk management and how to respond to different risks.
MAN.U4.E2.PC4	Student knows to apply risk management activities and tools.
MAN.U4.E2.PC5	Student knows how to define the different types of conflicts and how to manage them.

6 Skill Card Professional ECQA Certified EU Project Manager

This certificate is based on an independent assessment of evidences by an external board of reviewers. The evidences provided a proof of practical competence and illustrated that the person is capable of applying the best practice principles of EU Project Management.

Candidates who have already successfully fulfilled the requirements to become an ECQA Certified EU Project Manager, can apply for a professional certificate which covers the following performance criteria IN ADDITION to the basic certificate for ECQA Certified EU Project Managers:

MAN_PROF.U1 Evidences of EU project management

MAN_PROF.U1.E1.PC1	The Candidate has submitted the application form for the ECQA Certified EU Project Manager professional certificate.
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ECQA Certified EU Project Manager Certificate

MAN_PROF.U1.E1.PC2	The candidate has passed a minimum of 8 out of 11 elements in the ECQA Certified EU Project manager examination.
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EU Project Coordination or Partnership

MAN_PROF.U1.E1.PC3	The Candidate has coordinated at least one EU project or has participated as a partner in a minimum of two European projects fulfilling an active role in the project management.
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7 Skill Card Mapping 2010 to 2015

European Certification and Qualification Association
 Piaristengasse 1, A-3500 Krems , Austria
info@ecqa.org, www.ecqa.org



ECQA Certified EU Project Manager

Skill Card 2015	Skill Card 2010
UNIT 1: INTRODUCTION INTO EU PROJECTS	UNIT 1: INTRODUCTION INTO EU PROJECTS
E 1.1 EU Structure and Institutions	E 1.1 EU Structure and EU Programs
E 1.2 Introduction into EU Programmes	
UNIT 2: PROJECT OBJECTIVES AND FINANCE	UNIT 2: PROJECT OBJECTIVES AND FINANCE
E 2.1 Start up and Objectives	E 2.1 Start up and Objectives
E 2.2 Management of Work Packages and Project Results	E 2.2 Management of Work Packages and Project Results
E 2.3 Finance Management	E 2.3 Finance Management
E 2.4 Contract Management	E 2.4 Contract Management
UNIT 3: COOPERATION	UNIT 3: CO-OPERATION
E 3.1 Communication and Team Management	E 3.1 Communication and team management
E 3.2 Exploitation and Sustainability	E 3.2 Exploitation and sustainability
E 3.3 Reporting	E 3.3 Reporting
UNIT 4: QUALITY MANAGEMENT	UNIT 4: QUALITY MANAGEMENT
E 4.1 Quality Planning and Control	E 4.1 Quality Planning
E 4.2 Risk Management	E 4.2 Quality Assurance
	E 4.3 Risk Management

ECQA Certified EU Project Manager Professional Certificate

Additional requirements (evidences):

- 1 EU project coordinated or
- 2 EU project partnerships
- 2 independent reviewers of the evidences

8 Mapping to Learning Levels

8.1 EU Instruments and Principles

The mapping of learning outcomes to learning levels is a complex ongoing process within the European Union. Several instruments and principles support the mapping:

- The European Qualifications Framework (EQF)
- The European Credit System for Vocational Education and Training (ECVET)
- Europass
- European Quality Assurance in Vocational Education and Training (EQAVET)
- Validation of non-formal and formal learning

8.2 European Qualifications Framework (EQF) for Job Roles

The European Qualifications Framework (EQF) acts as a translation device to make national qualifications more readable across Europe, promoting workers' and learners' mobility between countries and facilitating their lifelong learning. The structure of the EQF descriptors set out knowledge, skills and competence in terms of learning outcomes.



KNOWLEDGE SKILLS COMPETENCE: In the context of EQF, knowledge is described as theoretical and/or factual.

SKILLS: In the context of EQF, skills are described as *cognitive* (involving the use of logical, intuitive and creative thinking) and *practical* (involving manual dexterity and the use of methods, materials, tools and instruments).

COMPETENCE: In context of EQF, competence is described in terms of responsibility and autonomy.

8.3 ECVET – European Credit System for Vocational Education and Training

ECVET is a methodological framework that facilitates the accumulation and transfer of credits for



learning outcomes from one qualifications system to another. ECVET applies to vocational education and training (VET) qualifications at all levels of the European Qualifications framework. It helps individuals to transfer, have recognised and accumulate the learning outcomes they have achieved in diverse contexts, especially for mobilities. ECVET applies to all outcomes obtained by an individual from various education and training pathways. ECVET complements the European Credit Transfer and Accumulation System (ECTS) by linking VET with higher education.

8.4 ECTS - European Credit Transfer and Accumulation System

ECTS is a learner-centred system for credit accumulation and transfer based on the transparency of learning outcomes and learning processes. ECTS credits are based on the workload students need 60 ECTS credits are attached to the workload of a full-time year of formal learning (academic year) and the associated learning outcomes. Per credit point it is about 25-30 hours of workload.

Descriptors defining levels in the European Qualifications Framework (EQF) ^[8]

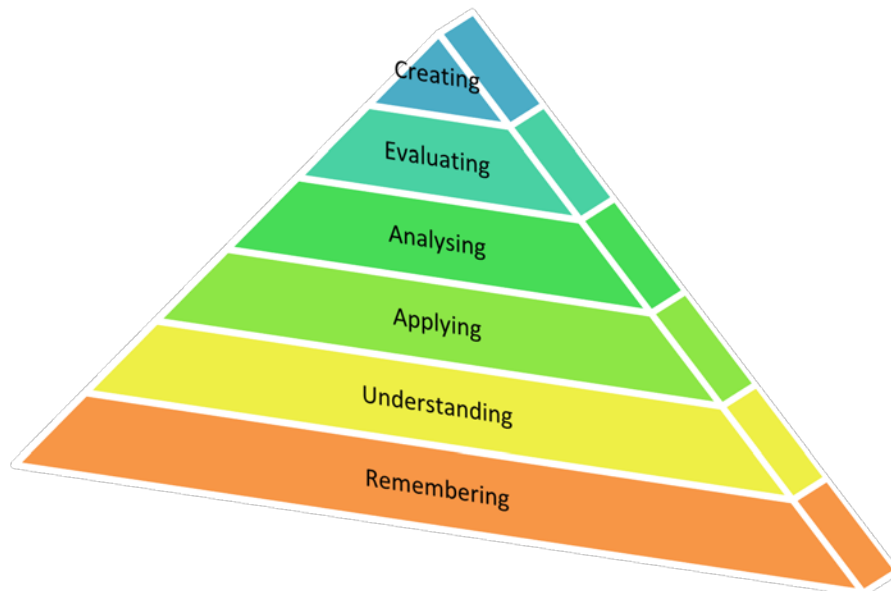
Level	Knowledge	Skills	Competence	ManagEUr
Level 1	Basic general knowledge	basic skills required to carry out simple tasks	work or study under direct supervision in a structured context	-
Level 2	Basic factual knowledge of a field of work or study	basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	work or study under supervision with some autonomy	-
Level 3	Knowledge of facts, principles, processes and general concepts, in a field of work or study	a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information	take responsibility for completion of tasks in work or study; adapt own behaviour to circumstances in solving problems	EU Project Manager
Level 4	Factual and theoretical knowledge in broad contexts within a field of work or study	a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study	exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change; supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities	EU Project Manager
Level 5 ^[1]	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	a comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others	EU Project Manager Professional
Level 6 [2]	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles	advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study	manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of	-

			individuals and groups	
Level 7 [3]	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research Critical awareness of knowledge issues in a field and at the interface between different fields	specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields	manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams	-
Level 8 [4]	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields	the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice	demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research	-

1. The descriptor for the higher education short cycle (within or linked to the first cycle), developed by the Joint Quality Initiative as part of the Bologna process, corresponds to the learning outcomes for EQF level 5.
2. The descriptor for the first cycle in the Framework for Qualifications of the European Higher Education Area corresponds to the learning outcomes for EQF level 6.
3. The descriptor for the second cycle in the Framework for Qualifications of the European Higher Education Area corresponds to the learning outcomes for EQF level 7.
4. The descriptor for the third cycle in the Framework for Qualifications of the European Higher Education Area corresponds to the learning outcomes for EQF level 8.

8.5 Bloom's Taxonomy for Performance Criteria

Bloom's Taxonomy was an attempt to classify the domains of human learning into *cognitive* (knowing, or head), *affective* (feelings, or heart) and *psychomotor* (doing, tactile, hand/body). These levels are from 'Levels of Cognition' (originally from Bloom's Taxonomy 1956^[6] – Revised, 2001), and can be used to create learning outcomes for students^[16]:



*Revised taxonomy of the cognitive domain
following Anderson and Krathwohl (2001)^[16]*

A statement of a learning objective contains a verb (an action) and an object (usually a noun).

- The **verb** generally refers to [actions associated with] the intended **cognitive process**. – the cognitive process dimension (remember, understand, apply, analyse, create)
- The **object** generally describes the **knowledge** students are expected to acquire or construct. (Anderson and Krathwohl, 2001, pp. 4–5) – the knowledge dimension (factual, conceptual, procedural, metacognitive)

The Nationale Koordinierungsstelle ECVET in der Nationalen Agentur Bildung für Europa beim Bundesinstitut für Berufsbildung (NA beim BIBB), www.ecvet-info.de, suggests in 'Geographical Mobility in Vocational Education and Training Guidelines for describing units of learning outcomes':^[13]

Table 2: Examples for formulating learning outcomes

Examples:

■ Knowledge

He/she is able to...

describe structural characteristics which are responsible for the behaviour and properties of a chemical substance

- ... differentiate between separation and mix principles and corresponding procedures
- ... describe the functioning of components, assemblies and systems of a vehicle
- ... assign the necessary documents for service and maintenance
- ... explain regulations concerning the handling of hazardous substances

■ Skills

He/ she is able to ...

Receive order and plan own procedural steps

... analyse data and present it as a basis for decisions

... use information and communication technologies taking into account data protection requirements

... develop a marketing plan and use marketing and PR instruments

... select chemical agents and production procedures and make up formulas

■ Competence (in the sense of taking over responsibility and autonomy):

He/ she is able to ...

calculate production and service costs and analyse profitability ...

apply problem solving strategies ...

reflect upon his/her own action ...

cope with and withstand strain and stressful situations in a way that is not harmful to health ...

communicate with appreciation with patients, family members/ reference person groups involved in the care process...

express and receive situation based criticism

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10 Glossary of Terms

Acronym	Description
APL	Accreditation of Prior Learning
Assessment of learning outcomes	The process of appraising knowledge, skills and/or competences of an individual against predefined criteria, specifying learning methods and expectations. Assessment is typically followed by validation and certification. ^[12]
Certificate	An official document, issued by an awarding body, which records the achievements of an individual following a standard assessment procedure.
Certification of learning outcomes	The process of formally attesting that knowledge, skills and/or competences acquired by an individual have been assessed and validated by a competent body against a predefined standard. Certification results in the issue of a certificate, diploma or title. ^[12]
Competence	In the context of EQF, competence is described in terms of responsibility and autonomy.
ECQA	European Certification and Qualification Association (ECQA, www.ecqa.org)
ECTS	European Credit Transfer and Accumulation System
ECVET	European Credit System for Vocational Education and Training
EQAR	European Quality Assurance Register
EQAVET	European Quality Assurance in Vocational Education and Training
ESCO	European Skills, Competences, Qualifications & Occupations
EQF	European Qualifications Framework
EU	European Union
Knowledge	In the context of EQF, knowledge is described as theoretical and/or factual.
Learning outcomes	The set of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of a learning process. ^[12]
ManagEUr	Acronym for ECQA Certified EU Project Manager / EU Project Certified EU Project Manager
NA	National Agency
NARIC	National Academic Recognition Information Centre
NQF	National Qualifications Framework
Qualification	The term qualification covers different aspects: <ul style="list-style-type: none"> • formal qualification: the formal outcome (certificate, diploma or title) of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards and/or possesses the necessary competence to do a job in a specific area of work. A qualification confers official recognition of the value of learning outcomes in the labour market and in education and training. A qualification can be a legal entitlement to practice a trade (OECD); • job requirements: the knowledge, aptitudes and skills required to perform the specific tasks attached to a particular work position (ILO); • personal attributes: the sum of knowledge, know-how, skills and/or competences acquired by an individual in formal, non-formal and/or informal settings. ^[12]
OER	Open Educational Resources

Skills	In the context of EQF, skills are described as cognitive (involving the use of logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).
Standard	<p>Expectation, obligation, requirement or norm expected. It is possible to distinguish between:</p> <ul style="list-style-type: none"> • educational standard refers to the statements of learning objectives, content of curricula, entry requirements as well as resources required to meet the learning objectives; • occupational standard refers to the statements of the activities and tasks related to – or to the knowledge, skills and understanding needed for – a specific job; • assessment standard refers to the statements of the learning outcomes to be assessed, the level of performance to be achieved by the individual assessed and the methodology used); • validation standard refers to the statements of the learning outcomes to be assessed, the assessment methodology used, as well as the level of performance to be reached; • certification standard refers to the statements of the rules applicable for obtaining a certificate or diploma as well as the rights conferred. ^[12]
Standard	<p>Expectation, obligation, requirement or norm expected. It is possible to distinguish between:</p> <ul style="list-style-type: none"> • educational standard refers to the statements of learning objectives, content of curricula, entry requirements as well as resources required to meet the learning objectives; • occupational standard refers to the statements of the activities and tasks related to – or to the knowledge, skills and understanding needed for – a specific job; • assessment standard refers to the statements of the learning outcomes to be assessed, the level of performance to be achieved by the individual assessed and the methodology used); • validation standard refers to the statements of the learning outcomes to be assessed, the assessment methodology used, as well as the level of performance to be reached; • certification standard refers to the statements of the rules applicable for obtaining a certificate or diploma as well as the rights conferred. ^[12]
Units of learning outcomes	A unit of learning outcomes (also called “unit” or “module”) is a component of a qualification consisting of a coherent set of knowledge, skills and competence that can be assessed and validated. This presupposes that the units of learning outcomes are structured comprehensively and logically and that they can be examined. Units of learning outcomes can be specific to a single qualification or common to several qualifications and may also describe so-called additional qualifications which are not part of a formal qualification or curriculum. [13]
Validation of learning outcomes	The confirmation by a competent body that learning outcomes (knowledge, skills and/or competences) acquired by an individual in a formal, non-formal or informal setting have been assessed against predefined criteria and are compliant with the requirements of a validation standard. Validation typically leads to certification. ^[12]
VET	Vocational Education and Training