



Versatile and
Innovative open educational resources for collaborative
Virtual and mobile learning
Arrangements in HE



VIVA – R4 CPD Blended Teaching Learning Approach



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1. Introduction

1.1. Preliminary Remark

The document on hand is a planning instrument for programme planners and educational experts who intend to transfer the VIVA approach as CPD for their learners, be it in the own institution or in KA1 courses. At the time of the first publication it serves as plan for the first official pilot which had to be postponed until spring 2022.

The document on hand is a concept to facilitate the application of the VIVA approach of Design Based Collaborative Learning, DBCL, in the own organisation and the transfer in other contexts and with other target groups. Hence it explains the innovative concept from an educational perspective, taking on board concepts like European Educational instruments (EQF, ECVET etc.) or educational concepts (“Competence Theory”, taxonomies, didactic patterns etc.) which afford a specific educational pre-knowledge.

Insofar the document is an important backing document for the CPD and a planning device for the partners and beyond:

It contains

- Course and module design patterns (Reference systems, didactic frames and sequencing tables, indicators) for the CPD
- Action and learning field patterns and Course planning tables (learning pathways) for the three main CPD modules that can be utilised for the envisaged two scenarios
 - Qualification course for certain thematic and competence areas,
 - A more modular scenario which aims at a situative learning approach (problem solving – not having the qualification in mind)

1.2. Structure

The VIVA programme has been developed based on the ECVET specification, based on the idea that:

- The programme and the teaching/learning modules can be used:
 - As a whole (as “CPD-programme” which can be delivered in educational institutions to train their staff members in all programme topics) and
 - In modules (which can be delivered individually and, in connection with a respective validation)
- The programme modules can be validated according to ECVET which makes them transferrable also in other CPD context to achieve utmost transferability
- Eventually to make them fit to all kinds of learning technology which is based on LOM (learning object metadata) standards which makes the units portable from one LMS to the other.

The VIVA learning modules are built and described according to transferrable competence levels based on the LEVEL5 taxonomy, which has been created to facilitate Competence oriented Learning and Validation (COL&V). They are arranged in three subsequent levels of difficulty and complexity which allows a reasonable integration into the learning processes in different contextualised learning fields.

This way, VIVA achieves a highly flexible and modular learning approach in those learning phases, that can be standardised.

1.3. Terminology and Specification

For the avoidance of uncertainties and misunderstandings we include a short explanation on terms and terminology and specifications that we use.

ECVET Specification

The VIVA learning approach is based on a couple of specifications that are consciously applied to facilitate utmost transfer and usability.

The quality instrument ECVET (European Credit System for Vocational Education and Training) established in Europe is the basis for such a "common language". The basis for comparability of educational pathways is the concept of learning outcome orientation (outcome orientation independent of learning location, learning duration and learning context).

The ECVET system is a logical, hierarchical structure which has, as smallest common denominator, the learning outcomes, described in knowledge, skills and competences:

A qualification (or a CPD) consists of:

- **Learning Modules** containing
 - **Learning Units** consisting of
 - **Learning objects** that are
 - described by their envisaged **outcomes**
 - clustered along **knowledge, skills and competences (ECVET/EQF)** or (in variation for rather not-formalised contexts **attitudes (LEVEL5)** instead of the "competence" column.

LOM Specification

The second system that we refer to is relating to the question how educational elements should be organised to make them transferrable to blended learning modalities and re-usable in different LMS. To achieve this, we use the basics of the LOM model (Learning Object Metadata). Learning Object Metadata is a data model, usually encoded in XML, used to describe a learning object and similar digital resources used to support learning. The purpose of learning object metadata is to support the reusability of learning objects, to aid discoverability, and to facilitate their interoperability, usually in the context of online learning management systems (LMS).

The IEEE 1484.12.1 – 2002 Standard for Learning Object Metadata is an internationally recognised open standard and describes Learning Objects as smallest units

- **Information** (media/text etc) and
- **Assignments** including
 - **Tasks to take Actions** and
 - **Assessments**

Planning Tool Terminology

Eventually we use the LEVEL5 planning methodology¹ which has been developed over the last decade to:

- To plan, deliver competence-oriented learning,
- To facilitate the assessment and validation of competences on professional quality,
- To apply this methodology also in less formal learning context, e.g. on the job or in social, ecological projects, civic collaboration context and in capacity building projects and eventually
- To enable also non-academic professionals and citizens to develop good quality educational offers

Instruments used in this approach in hierarchical order:

1. Learning programme (the “whole”)

- a. Didactic pattern: an overview of contents, objectives, participants resources, methods (Didactic Frame)
- b. Action field: describes the context and what a learner has to do in his/her context (here the Facilitators)
- c. Learning field: describes what the VIVA facilitators has to know and to be able to (as well as the affective competence dimension) in a defined learning scenario based on the action field (in terms of expected learning outcomes within a LEVEL5 reference system)

2. List of content related modules

- a. = clusters of contents to be delivered within the programme
 - i. Based on the LOM specification² (“learning module” consisting of “learning units” and learning objects (information+assignment) and ordered along the EQF/ECVET and to fit in KSA / KSC Taxonomy)³

3. Learning pathway:

- a. List of learning modules (titles)
- b. Sequence of connected learning modules within the learning field
- c. If needed clustered in thematic areas

¹ The LEVEL5 System is added to this document

² [IMS LD Standard to Describe Learning Designs](#)

³ [Impact-eu.net](#)

2. The VIVA Learning Programme

2.1. Didactic Frame Pattern

- **Summary**

The VIVA programme is a CPD for educational personal which aims at introducing CSR and SD in their organisations and in their educational offers.

Hence the target groups are at the firstly staff members and in the end also their learners as final beneficiaries.

The programme has been delivered in blended learning modality.

The main underlying idea is grounded on the results of the needs analysis at the application phase“

which suggest that it is not very helpful to “tech digital literacy” or to offer courses / learning offers which exclusively aim at the acquisition of digital competences.

Instead, following the idea of COL – Competence-Oriented Learning the VIVA partnership has chosen an approach which “contextualises” the acquisition of digital skills and competences. Hence the digital competences are a kind of side-effect from the learning – they are acquired like other “cultural skills and competences” (Belshaw, 2014) without being formal learning objectives.

This means that the applied didactic framework aims rather at a facilitation and a learner centred, constructive and collaborative (“team”) approach (DBCL). This approach can be also transferred in online or blended learning modality, however, it needs professionals who are “Facilitators of Design Based Collaborative Learning”, who have specific knowledge and skills and openness towards the critical use of online resources.

The programme consists of an optional societal teambuilding event, an obligatory self-learning course delivered via browser-based apps and eventually a design thinking programme in which prototypes for Digital Learning in contextualised AE learning offers will developed.

- **Target group**

The target groups are at the firstly staff members of educational institutions:

- Trainers, teachers
- Programme planners
- Coaches
- Learning assistants
- Programmers and e-learning designers
- ...

As the programme shall enable also non-educational professionals (e.g. from volunteering organisations or facilitators on the job or HR professionals) the educational background does not play a prominent role.

The final beneficiaries are the learners in the AE institutions, AE projects and also in companies and administrations.

Hence the target groups are very diverse in age and background, which can be considered as a positive aspect since diversity triggers fruitful discussions in the design thinking phase.

- **Topics/Themes (content area)**

The VIVA-CPD for facilitators) consists of 3 topics

1. Methodology#1: Competence Oriented Learning and Validation (COL&V) to facilitate SD and CSR
2. Methodology#2: Design Thinking and creativity techniques (to trigger innovation
3. Content: Digitalisation, Digital learning and Tools and Instruments

- **Learning objectives**

- **Knowledge:**

- Theoretical knowledge on
 - Digital Literacy and Digital learning
 - Synchronous/Asynchronous online learning
 - Collaborative Tools and platforms
 - Design Thinking methodology
 - Competence oriented Learning and Validation
 - Learning Platforms

- **Skills:**

- *Ability to...*
 - Develop blended learning offers to bring about digital skills and competences for various target groups in adult education.
 - Design thinking skills: developing visions for demand driven learning projects (in the region), spotting ideas and opportunities, creativity techniques and prototyping.
 - Facilitating Competence Oriented Learning
 - Creation of learning units with open-source platforms

- **Attitudes:**

- Positive attitude towards the development of ideas in the team.
- Tolerance of ambiguity as a guiding person in relation to the developments in the teams
- Positive appreciation of all design thinking phases and iterative processes
- Positive appreciation of the contributions of all team members
- Openness, curiosity and motivation to use mixed learning forms

- **Methods/Activities**

- Synchronous online theory inputs on the content modules in combination with asynchronous learning units delivered via Moodle and design based collaborative learning facilitated in breakout sessions and MIRO boards and/or
- F2F course phase with theory input and joint design thinking projects on innovative learning projects that aim at digital skills
- Design Thinking workshops on own project development and
- Workshops on COL&V with LEVEL5

- **Resources and materials**

Which resources/materials do you need/use to carry out your project? Please note if you developed the material, bought it, borrowed it

- Design Thinking workshops facilitated via Design Based Collaborative Learning (zoom (online synchronous communication and collaboration), MIRO (online collaboration with creativity techniques), Mahara (as group space) and Moodle (as LMS); LEVEL5 assessment interface (for L2 assessment (profile = competence spider) and L4 (self-assessment questionnaire)
- Virtual development labs for own courses and modules

2.2. VIVA Action Field

What is the environment, the specific challenges and the overall objectives of the target group, participating in the VIVA course.)⁴

<ul style="list-style-type: none"> • Name of the project 	1. VIVA CPD
<ul style="list-style-type: none"> • Context 	2. ERASMUS C1 Training Course, designed to be delivered in future as KA1 course
<ul style="list-style-type: none"> • Target Group 	3. Adult educators, working either in AE and cVET domains and/or in concrete Digitalisation learning projects.
<ul style="list-style-type: none"> • Aims 	4. 1. AE to be trained to introduce Digitalisation management in own institutes and 5. 2. Qualification as “Facilitators” for Learning and Development
<ul style="list-style-type: none"> • Resources 	6. Learning platform, LEVEL5 validation system 7. Either interactive collaborative online tools (MIRO) or Moderation equipment (boards and cards etc.; material for prototyping
<ul style="list-style-type: none"> • Activities 	8. Context dependent

⁴ The action field is a tool which relates especially to a contextualised learning scheme, for instance in learning projects (e.g. in teams), volunteering, internship or learning on the job. In case of de-contextualised learning (e.g. in case of school subjects and sole delivery of theory) „action fields may not be appropriate.

2.3. Learning Field

Reference System on Facilitation of Design Based Collaborative Learning in Digital Literacy and Digital Learning (DL) Contexts

	COGNITIVE / KNOWLEDGE		ACTIVITY		AFFECTIVE	
	2	3	2	3	2	3
L	Level Titles	Individual description/ explanatory statement	Level Titles	Individual description/ explanatory statement	Level Titles	Individual description/ explanatory statement
5	Knowing where else (knowledge for transfer)	Having a broad theoretical background how to facilitate open learning processes on DL under different conditions and with different target groups.	Developing/ construct-ing, transferring	Developing new approaches and expertise to facilitate open learning in different DL contexts and aiming at different target groups and competence developments. Supporting others.	Incorporation Internalisation	Having incorporated to facilitate learning in open learning environments on Digitalisation and Digital Learning. Motivating and supporting others to improve their competence to facilitate open learning.
4	Knowing when (implicit understanding)	Knowing when and how to implement the appropriate open learning conditions and design thinking steps and blended learning units to achieve the competences envisaged in regard to Digital Literacy/Digital Learning.	Discovering acting independently	Researching for related theory, expanding own competence to facilitate appropriate open learning on DL with learning conditions related to the competence development as envisaged.	Commitment Volition	Being determined to explore and improve theory and practice of facilitating open learning for digital learning. Finding it important to be creative in this respect.
3	Knowing how	Knowing how to facilitate open learning involving multiple perspectives and addressing concrete individual experiences and authentic problems/experiences on DL	Deciding/ selecting	Facilitating open learning by selecting from a repertoire of known approaches. Selecting and trying out appropriate format for Digital Literacy/Digital Learning	Appreciation Motivation	Valuing open learning as format for learners to develop digital competences and being motivated to improve own competence to facilitate them.
2	Knowing why (distant understanding)	Knowing that open learning environments address multiple perspectives and concrete individual experiences, involving authentic problems including DL	Using/ Imitating	Applying or adapting existing open learning formats for own training offers on DL. Facilitating open learning as instructed or imitated by others.	Curiosity Perspective taking	Being interested in facilitating open learning environments in own work and to improve own competence to do so.
1	Knowing what/ knowing that	Knowing what open learning is and which role a facilitator has in it.	Perceiving	Recognising open learning and perceiving the advantages for competence developments.	Self oriented, neutral	Feeling that own competence to facilitate open learning environments is sufficient.

Fig. 1: Reference System on Facilitating Learning on Digitalisation and Digital Literacy

3. Learning Modules

Learning Module Structure within VIVA:

The VIVA-Concept (Qualification for facilitators) aims at Facilitating Design Based Collaborative Learning for Sustainable Development and CSR and consists of 3 modules

1. M1: Competence Oriented Learning and Validation (COL&V -> Facilitating SD)
2. M2: Design Thinking and
3. M3: Digitalisation and Digital Literacy⁵

3.1. Module1: COL&V and Facilitation

3.1.1. Module 1: Introduction

Background and Basic Ideas

Competence oriented learning (and education⁶) do not consist of traditional teaching situations. They are based on the idea that the learners learn by experience and discovery. This concept has an impact on how learners may be educated. The idea is that learners need to be actively involved in the learning situation. They learn best in meaningful contexts and in co-operation and interaction with others and with their environment. Thus, they enable themselves to acquire knowledge, construe knowledge and check and cross check their newly constructed ideas with those of others. Of course this in no way denies the importance of teaching; it emphasises the necessity of teaching in a highly responsive and learner-centred way without neglecting the obligation of showing learners new horizons and perspectives and enthusiasm for things they may never yet have heard of.

Key features of Competence Oriented Learning

Competence based learning requires an approach to education that differs from the traditional approaches to teaching. In competence-oriented education one tends to stress the importance of powerful, or rich learning environments, that enable students/learners to engage in meaningful learning processes. The most distinctive features of this approach may be summarized as follows:

- *Meaningful contexts*
For learning to take place it is recommended to create or to look for meaningful contexts in which students will in a natural way experience the relevance and the meaning of the competences to be acquired.
- *Multidisciplinary approach*
Competences are holistic and as a consequence the educative approach needs to be integrative and holistic as well.
- *Constructive learning*

⁵ Still in concept stage in Nov. 2021 due to the pandemic and the shift of the TtT-course

⁶ In the meaning of „Bildung“ – a German term which promotes a holistic educational and pedagogical learning approach that comprises concepts like qualification, learning but also personal development and socialisation. Hence it covers the whole range from formal to informal learning.

The philosophy of competence-oriented learning has its roots in the social constructivism that pervades our views on learning today. Learning is conceived as a process of constructing one's own knowledge in interaction with one's environment, rather than as a process of absorbing the knowledge others try to transfer to you. The consequence of this view is that educative processes are better when they are constructive. By focusing on the construction of models, products, guidelines, rules of thumb, reports, or other tangible outputs the learning easily and naturally will turn out to be constructivist. This is the opposite approach from using learning processes that focus on information processing first, after which the actual application of the knowledge will have to wait for another time.

- *Cooperative, interactive learning (with peers, teachers and heritage providers etc.)*

The basic idea behind competence-oriented learning is to help learners to develop and construct their own knowledge and seek ways to make optimal use of other people's competence in their learning itinerary. This is what social constructivism is about.

Co-operation and interaction are both domains of learning as well as vehicles of learning in other domains. If learning is supposed to be self-initiated, self-regulated, and aimed at developing personal competences, the educative approach must allow for diversity in needs and related to that in goals and objectives. This requires an open approach in which education includes dialogues between learners and educators about expectation, needs, goals, choices etc.

- *Discovery learning*

Open learning processes require learning that may be characterized as active discovery as opposed to receptive learning. This does not imply that learning content should not be made available and accessible. It means that the way of acquiring this knowledge or these competences, should not be just a process of providing information, but should always be embedded in a discovery-based approach.

- *Reflective learning*

Competence based learning requires, apart from a focus on the key competences, also an emphasis on the learning processes as such. By reflecting on one's own needs, motivation, approach, progress, results etc. one develops learning competences/strategies that may be considered *meta-competences*. The competence meant here is usually referred to as the process of 'learning to learn'.

- *Personal(ised) learning*

In the competence-oriented theories learning is conceived as a process of constructing one's own personal knowledge and competences. Information, knowledge, strategies etc. only become meaningful for a person if they become an integral part of one's own personal body of knowledge and competences. In education this implies that students need to be able to identify with the contexts, the persons, the situations and interests that are included in the learning domains involved.

Objectives of this Learning Module

Competence oriented learning affords other facilitation approaches than subject oriented (formal) education.

It requires another teaching and learning approach and therefore requires also a “new” way of thinking and a different consciousness and understanding of learning and education than in the 20th century.

The learning module, in connection with concrete tasks, challenges and eventually also a “learning project” aims to enable educational personnel to plan and deliver Competence oriented Learning and to become “Facilitators of Sustainable Development”. As professional assessment and validation is a decisive element of good quality training and learning, the validation of competence developments is also part of the module.

All contents are structured in modules and units and can be delivered in a course structure, as add-on self-learning units or also as reference points for a validation scenario for the educational professionals, for instance in the course of the planning and delivery of an SDG learning project.

3.1.2. **LU1: Educational trends and background**

- **Content** (information material⁷):
 - List of contents from the REVEAL publication first pages
 - History of approach development (education in general) and digitalisation (4-9)
 - Professional Development of Adult Educators (39-43)
 - List of contents from the REVEAL publication first pages (p. 4-9)
 - Trends in competence development: p. 39ff -43

- **Learning goals:** to create a consciousness about necessary changes in educational offers
 - Understanding the necessity to adapt to new societal and economic demands within education
 - Understanding “Modern” and traditional ways of education
 - Understanding the change to learner centred education
 - Understanding how assignments reflect the educational “philosophies” (theories)

Short descriptions of contents and learning objectives would be a good introduction to the learning units.

3.1.3. **LU2: Competence theory and acquisition**

- **Content** (information material):
 1. Concepts of Competences (10-15) B (taxonomies etc.)
 1. What? -> Definition (Level2)
 2. taxonomies (L3)
 3. references (L4)
 2. Competence Development (16-19) C
 3. Professional Competences for Adult Educators (44-51)
 4. A: Competences (Definition of the term)
 - What are competences?
 - Material: p. 10f

⁷ Information material along the definition within the Classification of learning activities (CLA):
<https://ec.europa.eu/eurostat/documents/%203859598/7659750/KS-GQ-15-011-EN-N.pdf/978de2eb-5fc9-4447-84d6-d0b5f7bee723>

- key competences
- Material: 21st Century Skills

- B: Competence taxonomies (representation and classification)
 - ☐ Overview Blooms' Taxonomy + Terms
 - ☐ EQF
 - ☐ Level 5
 - ☐ Material: REVEAL Publication 2020, p.12-15

- C: Competence development: How ...
 - ☐ Engine of learning development
 - ☐ Material: REVEAL Publication 2020, p. 16-18)
- C.1: Competence development (self driven): How do I develop my competences?
 - ☐ Mathematics
 - ☐ Material: reveal p. 31f
- C.2: Competence development (external driven): How can I support others in their competence development?
 - ☐ Didactics (and mathematics)
 - ☐ Material: REVEAL Publication 2020 p. 41- 43
 - ☐ Methods (and arrangements) to support c. d.
 - ☐ Material: REVEAL Publication 2020:p. 45f

- **Learning goals:** (for every step 3 goals regarding the 3 dimensions)
 - ☐ A: Perception of (own and the range) competences; further: understand their relevance
 - ☐ B: Read and understand the term taxonomy; further: understand different taxonomies, their objectives and content/foci
 - ☐ C.1: Learning how to develop competences; further: develop them (Know-how and DO)
 - ☐ C.2: Get to know different didactical approaches and methods for teaching/facilitating others in their competence development

3.1.4.LU3: Validation

- **Content** (information material):
 - Validation basics (K. 4: 20-29)
 - Material: Dehnbostel graphic (cedefop), reveal: p. 20-23, who: 24, why: p. 25, process: 26f, related competences: p. 49
 - A: Validation the W's (what, why, etc)
 - ☐ necessity of validation of informal learning
 - ☐ european concept
 - Assessment and design -> Tools and methods (p. 35- 38, 118 ff.)

- **Learning goals:**

- A: Understand the term of validation; further: Understand the necessity of validation of informal learning
- B: Getting an overview about different methods and tools to validate competences; further: Transfer to own context

My courses > COL&V > Validation > Task 8: Personal benefits

Task 8: Personal benefits



Reflect on the personal benefits of competence validation. What makes it different from traditional performance measurement?

Write down some thoughts...

Fig. 2: Screenshot from the Learning object (information + assignment) from Module 1, Unit Validation

3.1.5.LU4: Planning COL&V

- **Content** (information material):
 1. COL (approach and core elements) (30-31) → Describe the properties
 2. Instruments for Planning COL&V (33ff) -> examples
 1. action fields & learning fields (p. 33f)
 2. Examples Settings and Tools (p. 52-117)
- A: Relation & connection of former units
 - ▣ educational background, the term competences, taxonomies/reference systems, (methods/tools) validation
 - ▣ Material: Former units, reveal p. 32f, p. 46-48
- B: Action fields (skills)
 - ▣ defining the action field: where does it take place; what competences are apparent, developed and needed in the field?
 - ▣ Material: reveal p. 34
- C: Learning Fields
 - ▣ specific: identifying competence development needs (what)/starting points
 - ▣ Material: reveal p. 34
- D: Learning pathways
 - ▣ decide on how to put competence development into practise; grade of formalisation, “curriculum”, validation methods
 - ▣ step by step guideline (to transfer it on an own example)
 - ▣ Material: reveal p. 35

- **Learning goals:**
 - A: Understand how the different aspects are connected to each other
 - B: defining the action field; further: which competences are used and important
 - C: identifying competence development needs
 - D: develop a structure and a procedure for competence development in personal action field



3.1.6. Module 1: COL&V: Table of learning units

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
COL&V						
	Educational background					
		Trends in Edu	REVEAL, Page 3-9			
				A2: what was your common teaching style in school? Mentimeter or similar	K2: Recall and explain: behavioursm, constructivism and connectivism	S2: assign given tasks to educational theories (behav, constr., connect.)
			Informal learning patterns (Text and tables)	A3: I don't need no education (anymore)? What would improve learning 2030? <input type="checkbox"/> brainstorming	K3: Analyse differences between the teaching of the decades. List the requirements of edu 21?	S3: create tasks for learners for different stages
				K, S, A 4: Contextualise a LEVEL5 Ref.-Sys		
	Competence Theory					
		Taxonomies	Taxonomies, Bloom, EQF and LEVEL5 P 12-15			
				A2: estimate your competence level for facilitation (scale 1-5)	K2: Describe purpose of taxonomy	

Module/Topic/Duration	Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				K3: Compare Bloom & EQF & LEVEL5 <input type="checkbox"/> 1 paragraph to write	S3: Name an activity for a competence on Levels S2&3 (constructed case)
				K4: Contextualise a LEVEL5 Ref.-Sys <input type="checkbox"/> given simplified ref.-sys.	
		Development & Reference system Pathway Page 16			
			A2 give a tasks which is too simple and too complex.	K2: Discuss starting suitable starting points, based on A2	A2:Formulate a fitting starting tasks for a given case and target group
				K3: List and justify assignments	S3: Collect and cluster assignments in different formats (F2F, online, ...)
				K4/S4: Assign tasks to levels and columns	
	Learning process				
				K2:	

Module/Topic/Duration	Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				K3: Compare Bloom & EQF & LEVEL5	
				K4/S4: Assign tasks to levels and columns	
	Competence Oriented Learning				



3.2. Module 2: The Design Thinking Process

3.2.1. Module 2: Introduction

- **Content** (information material⁸):
 - Design Thinking process: Definition of terms and context of the concept (in moodle via video <https://www.youtube.com/watch?v=gHGN6hs2gZY&t=147s>)
 - Overview of structure and contents (along the Train the Trainer Design Thinking Brochure)
 - Introduction of application scenario: Story to exemplify the steps of the design thinking process

Changes in this world are often driven by innovation. Innovation means to create something new, may it be from already known parts which are assembled in a new fashion, or something entirely new and unknown before. The Innovation is present in all fields of our society, it is fuel for economic growth and progress, provides new solutions to problems and challenges. An important pre-requisite of innovation is creativity, the soil in which new ideas root and flourish.

Design thinking provides us with a systematic and structural approach to solving complex problems from many fields and to find new solutions that meet the needs of those involved. It is often used in the field of idea and innovation development.

The method is based on a multi-step, agile and iterative process. This design thinking process helps us to narrow down and actually understand our problem, identify solution spaces and generate concrete ideas. In each step of this process, we apply different creative techniques and thus approach innovative solutions for our problem. Users and their needs are always in the foreground.

The Design-Thinking Method is a client-centred approach which was initially developed by Larry Leifer (director of the Hasso Plattner Design Thinking Programme at Stanford University), Terry Winograd (co-founder of the Hasso Plattner Institute at Stanford) and David Kelley (founder of the IDEO agency).

This module introduces the steps of the design thinking process, explains them and provides a number of methods and tools which can be applied to facilitate each step.

Each step is substantiated with a practical exercise to be applied to a scenario, in which a team of educational project designers has set out to develop a new product.

⁸ Information material along the definition within the Classification of learning activities (CLA):
<https://ec.europa.eu/eurostat/documents/%203859598/7659750/KS-GQ-15-011-EN-N.pdf/978de2eb-5fc9-4447-84d6-d0b5f7bee723>

Q&A Forum
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Introduction

Design thinking provides us with a systematic and structural approach to solving complex problems from many fields and to find new solutions that meet the needs of those involved. It is often used in the field of idea and innovation development.

The method is based on a multi-step, agile and iterative process. This design thinking process helps us to narrow down and actually understand our problem, identify solution spaces and generate concrete ideas. In each step of this process, we apply different creative techniques and thus approach innovative solutions for our problem. Users and their needs are always in the foreground.

This course introduces the steps of the design thinking process, explains them and provides a number of methods and tools which can be applied to facilitate each step.

- Overview
- What is Design Thinking?

In this first unit we want to answer some fundamental questions: What is Design Thinking? Where does it come from and where is it used?
Briefly summarised it is a philosophy, combined with a set of tools, to help us solve problems creatively.
Find out more in this 10 min. video by Jonathan Courtney of AJ&Smart, a well know user-experience design agency that gives a great overview of what it is and how it is used.

DT Step 1: Understand the problem

The Design Thinking Process starts by focussing on the problem or challenge we want to solve.

We understand the problem. We understand who our target group is, when the result is needed and why we think we need a solution to the problem. We also take into account the framework conditions that exist in our team/company or that our client has given us.

Fig. 3: Screenshot from the Learning Module on Design Thinking and Creativity Techniques

- **Learning goals:** to create a consciousness about DT and general processes, to know and understand the module concept, to gain understanding of the practical applications of design thinking
 - Understanding what design thinking is and what it is used for
 - Reading the texts and watching the video
 - Feeling motivated to learn more about design thinking

3.2.2.LU1: Understanding the problem

- **Content (information material):**
 - Explanation of step 1 in the design thinking process
 - Presentation of methods to facilitate step one
 - Scenario example
 - Assignment

In the first phase we focus on the problem or challenge we want to solve. What problem does our client have? We understand the problem. We understand who our target group is, when the result is needed and why our client thinks they need a solution to the problem. We also take into account the framework conditions that exist in our team/company or that our client has given us.

The aim of this phase is to formulate a so-called design challenge. This is our project assignment, so to speak, which we want to solve with the Design Thinking process.

Suggestions for methods to be used in this phase (to be presented in detail in the moodle course):

- **Mind map:** Organize thoughts and ideas by putting them on paper as a "map"
- **Analogies & role models:** Use analogies to change the perspective on the challenge.

- 6 W Method: Get a basic understanding through questions.
- Semantic analysis: Develop a common knowledge base for the challenge in a team.

Scenario: Our team of project developers gets together and creates an extended mind map to define their design challenge...

Task: Define your own design challenge by using one of the tools suggested.

- Learning goals: to
 - Understanding the relevance of understanding in the DTP
 - Identifying and understanding the design challenge
 - Applying methods from the design thinking toolkit
 - Engaging with the task, being motivated to solve it

3.2.3.LU2: Empathy

- Content (information material):
 - Explanation of step 2 in the design thinking process
 - Presentation of methods to facilitate step 2
 - Scenario example
 - Assignment

In the second phase, we focus on our potential clients and users. Who are they? What are their needs? We become experts in understanding them better.

The aim of this phase is to build empathy for our target group, the beneficiaries of our idea. In order to understand them, in this step of the process we identify them and try to find out as much as possible about them. We can do this with explorative interviews, a self-test or by actually observing our clients, e.g. with the Shadows method.

Suggestions for methods to be used in this phase (to be presented in detail in the moodle course):

- 5 Whys method: Raising awareness for a specific challenge or situation
- Emotional Journey Map: to understand users' emotions
- Interviews: Receive qualitative information directly from users
- Mind mapping: described under DT1: Understanding
- Shadows: Be there inconspicuously at every turn

Scenario: The design challenge identified in the previous stage was to create micro-sized learning bits on digital literacy in every-day life, presented through an app.

The team starts out phase 2 with the 5 whys-method to firstly explore their clients' views theoretically. Based on these results they designed question sets and interviewed a number of HR representatives in large companies who seem to care for digitalisation, but also regular employees about their work life and learning at the workplace in general. They also inquired users' practices and preferences regarding learning apps.

Task: Collect information about your target group's habits and needs by using one of the tools suggested.

- Learning goals:
 - Understanding the relevance of the empathy phase in the DTP
 - Understanding the users' propositions and needs regarding the aspired solution/product/idea
 - Identifying and understanding the design challenge
 - Applying methods from the design thinking toolkit
 - Engaging with the task, being motivated to solve it

3.2.4.LU3: Synthesising

- Content (information material):
 - Explanation of phase 3 in the design thinking process
 - Presentation of methods to facilitate phase 3
 - Scenario example
 - Assignment

In the third phase we summarise our findings and knowledge. What insights can we gain? We share our knowledge in the team. We interpret our previous analysis and draw new insights and weight the findings. The picture of our users clearly increases in detail.

The aim of this phase is to share the knowledge with our team and to generate tangible findings. We summarise our findings in a persona, for example. The persona represents our user group with its needs. This persona allows us to feel empathy in the generation of ideas in the next phases of the Design Thinking process. We finally conclude this phase with a How Might We question.

Suggestions for methods to be used in this phase (to be presented in detail in the moodle course):

- Personas: getting to know potential users and understanding what they want
- Emotional Journey Map: described under DT2: Empathy
- Interviews: described under DT2: Empathy
- Mind mapping: described under DT2: Empathy
- Shadow: described under DT2: Empathy

Scenario: In order to structure their findings and to prepare to synthesize the team presented their results to each other. These were visualized on a mind map (with miro).

Task: Bring together all findings you have had so far and conclude their relevance in order to create a persona of your client by using one of the methods presented above.

- Learning goals:
 - Understanding the relevance of the synthesis phase in the DTP

- Understanding the connections and priorities of information regarding the aspired solution/product/idea
- Identifying and understanding the aspired client via a persona
- Applying methods from the design thinking toolkit
- Engaging with the task, being motivated to solve it

3.2.5.LU4: Ideating

- Content (information material):
 - Explanation of phase 4 in the design thinking process
 - Presentation of methods to facilitate phase 4
 - Scenario example
 - Assignment

In the fourth phase of the process, we develop ideas and outline solutions. Which idea solves the problem? We use various creative methods to develop new solutions with our extensive knowledge. Our focus is on quantity. We develop as many ideas as possible in order to come up with innovative solutions afterwards.

The goal of this phase is to generate as many ideas as possible and then prioritise them. For example, we can use the Wow-How-Now method for prioritisation. It is then important to agree on one or two ideas to be then tested in the next phase.

Suggestions for methods to be used in this phase (to be presented in detail in the moodle course):

- Brainwriting: brainstorming (initially) for yourself
- Brainstorming: developing new ideas in the group
- Bodystorming: experiencing and understanding the challenge first-hand
- Bisociation: break through established thought patterns
- How -Wow- Now Matrix: How good are our ideas? Assessment of feasibility and innovation
- Mind mapping: described under DT1: Understanding

Scenarios:

One could for instance transfer the scenario for different contexts and target groups, all of them tackle different projects that all have a connection to digitalisation and digital literacy. In case of disadvantaged target groups or people with only few digital skills the learning fields would be rather simple and under-complex while the approach can also be scaled up to CPDs for IT experts. The skeleton of the reference system stays the same, as well as the design concept.

Task for the facilitators: Generate some ideas for solving your design challenge in a user-centred approach by using one of the methods presented above.

- Learning goals:
 - Understanding the relevance of the ideating phase in the DTP

- Understanding the connections and priorities of information regarding the aspired solution/product/idea
- Identifying a number of ideas that are feasible to solve the problem/design challenge
- Applying methods from the design thinking toolkit
- Engaging with the task, being motivated to solve it

3.2.6. **LU5: Prototyping**

- Content (information material):
 - Explanation of phase 5 in the design thinking process
 - Presentation of methods to facilitate phase 5
 - Scenario example
 - Assignment

In the fifth phase of the process, we bring our idea(s) identified in the previous phase to life. Now our solution is made tangible for our clients. How do we visualise the idea?

The goal is to test the solution with our users and gain new feedback and further insights. We focus on creating prototypes as quickly as possible and with little effort. The prototypes are continuously adapted based on feedback from our customers. At the beginning, a sketch or a handcrafted element is often sufficient. A wide variety of materials can be used for this. Examples of analogue models include paper, modelling clay, theatre performances and building blocks. Digital tools can be used just as well, for example to display an app or to realize an object with the aid of a 3D printer - there are no limits to creativity!

Suggestions for methods to be used in this phase (to be presented in detail in the moodle course):

- Paper prototyping: visualization of the main product features
- Digital prototyping (mock- ups): simulation, digital dummies
- Role play: test through the eyes of the user
- Storyboard: visualize the user experience

Scenario:

Task: Build a prototype of your idea by using one of the methods presented above.

- Learning goals:
 - Understanding the relevance of the prototyping phase in the DTP
 - Identifying and highlighting key features of the product/idea in a prototype
 - Applying methods from the design thinking toolkit
 - Engaging with the task, being motivated to solve it

3.2.7.LU6: Testing

- Content (information material):
 - Explanation of phase 6 in the design thinking process
 - Presentation of methods to facilitate phase 6
 - Scenario example
 - Assignment

In the final phase, we test the prototype with our clients/users. What feedback do they give us? We get qualitative feedback. We continue to test and develop our idea until our client - our user - recognises our idea as a problem solution. The aim is to test our ideas to find out whether our solution meets the needs of our users.

For example, we can use the card sorting method to test our features. IVIVAlly our product or service is rated by external, uninvolved people.

It is important that our prototype is continuously adapted and that we pay attention to our users' feedback. If an idea is not well received by them, we go back to phase 4 and choose another idea to test. Feedback should ultimately contribute to an improvement of the prototype in iterative loops.

Suggestions for methods to be used in this phase (to be presented in detail in the moodle course):

- User tests: carry out tests with users
- Feedback Capture Grid: clustering of the test results
- Testing Card: Assistance for a well-prepared test scenario
- Wizard of Oz prototype: test functionality in advance

Scenario:

Task: Create a testing scenario for your prototype by using one of the methods presented above.

- Learning goals:
 - Understanding the relevance of the testing phase in the DTP
 - Understanding the connections and priorities of information regarding the aspired solution/product/idea
 - Identifying and understanding whether the solution is feasible or if a new idea needs to be developed
 - Applying methods from the design thinking toolkit
 - Engaging with the task, being motivated to solve it

3.2.8. Module 2: Design Thinking - Table of learning units

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
	The Creative Thinking process					
		1. Understanding		A2: Reflect what problems/issues you find interesting	K2: Summarise/ describe phase 1 of the DTP and related methods	S2: Describe phase 1 of the DTP
				A3: Reflect your own attitude toward the problem and related aspects	K3: Gather information regarding the problem you are interested in	S3: Visualise all aspects of the issue and structure them
				A4: Reflect what you would be ready to do to solve the issue	K4: Define your design challenge	S4: Create a motto for your design challenge
		2. Empathising		A2: Reflect for whom you want to solve the challenge	K2: Identify potential target groups and approaches to gather data	S2: Visualise potential target groups and data collection approach
				A3: Reflect your own attitude towards the target group and your motivations/aspirations	K3: Research and identify target groups' features	S3: Apply methods from the DT Toolkit to identify target groups'

Module/Topic/Duration	Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
					features and needs
		Moderated discussions, Visualisations	A4: Reflect which barriers or attitudes may blurr your objective view on the target group	K4: Analyse and prioritise target groups' features and aspects	S4: Create a common understanding of aspects and needs to consider in next phases in the team
	3. Synthesising		A2: Reflect your attitude towards the challenge having a bigger picture than in phase 1	K2: Collect and structure all information gathered so far	S2: Discuss the information in the team
			A3: Reflect on the communication process in your team to identify the most relevant aspects	K3: Extract the most relevant features aspects to further consider	S3: Visualise the most relevant features/ aspects to further consider
			A4: Reflect in how far you identify with your persona, here there are differences and similarities between you	K4: Analyse all data and define a persona	S4: Visualise the persona and create a common understanding in the team
	4. Ideating		A2: Reflect about thinking barriers/thinking outside the box and	K2: Decide upon a procedure to approach ideating, i.e. which methods	S2: Discuss and agree the next steps in the team

Module/Topic/Duration	Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
			your personal attitude towards it	from the toolbox to use	
			A3: Reflect about your creativity and open mindedness	K3:	S3: Apply creativity techniques and CT tools and generate as many ideas as possible
			A4: Reflect how your opinions have shaped/influenced the ideating process in the team	K4: Analyse and prioritise your ideas in the team	S4: Create consensus in your team about the selection of ideas to prototype
		5. Prototyping	A2: Reflect your own role and aspirations in the prototyping process in your team	K2: Identify team roles and process for building the prototype	S2: Brainstorm ideas for prototypes in the team and visualise them
			A3: Reflect your own view on features' relevance and in how far it contrast your team members views	K3: Define and reason the most relevant features of the prototype	S3: Discuss different methods how the prototype can be built
			A4: Reflect about your attitude towards the final prototype	K4: Develop a design for the prototype that covers all relevant features	S4: Create a prototype (virtually or physically)

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
		6. Testing		A2: Reflect your personal preferences against the decisions taken in the team	K2: Define a testing strategy	S2: Visualise the testing strategy and assign tasks to the team
				A3: Reflect your attitude towards the testing activities	K3: Identify relevant questions and target groups for testing	S3: Apply the testing scheme you have developed
				A4: Reflect the results of testing and what consequences should be taken	K4: Identify and analyse the test results, decide whether to improve or go back	S4: Create ideas for improvement based on test results in the team



4. The EQF Reference

As described in the first chapters, the VIVA CPD is designed along two specifications:

- The ECVET specification to facilitate the validation of competences and
- The LOM specification to facilitate the transfer of (open) Educational Resources, here learning units and materials in a meaningful way to other LMS

The following chapters describe the theoretical groundworks and the concrete connections to the ECVET system as an instrument from the European Skills Agenda to validate learning outcomes of learners (in this case educational professionals) in the VIVA CPD.

4.1. Validation

4.1.1. Competence Taxonomies

The increasing level of control (management) over a particular competence can also be called a 'competence level'. This implies that a 'competence' is a dynamic concept – competences grow while learning. The question on how to measure and document different competence levels is as old as it is complex. It has probably challenged generations of educationalists on practical, administrative and political levels; in formal education but also in professional development domains, such as in Human Resources.

The problem in measuring competences is not only a certain ambiguity in the term 'competence', caused for instance by different connotations in different languages, but also by different cultural views on competence and learning theory.

Additional complexity comes in as competences are – unlike (school) subjects – always dependent on their contexts. Teamwork competences are (among others) dependent on the team composition and the task; leadership competences are dependent on the group and the environment in which it is applied and teaching competences relate to the learning environment, the students and their familiarity with the learning schemes – among many other contextual aspects.

In order to operationalise competences, one needs certain reference points against which competences can be described.

Taxonomies are such reference systems.

They are the major instruments to classify, and later to measure and document competence levels.

4.1.2. Bloom's Taxonomy

One of the best-known taxonomies was developed by Benjamin Bloom in 1956 as Taxonomy of Learning Objectives. He differentiates 3 main areas:

- Taxonomy for the area of cognitive behaviour
- Taxonomy for the area of affective behaviour
- Taxonomy for the area of psycho-motor behaviour



<picture of Bloom's taxonomy>

Fig. 5: Taxonomy according to Bloom

Bloom's taxonomy has been constantly further developed by his followers (Anderson/Krathwohl and others) and describes cognitive objectives, psycho-motor objectives and affective objectives along a number of quality levels.

4.1.3. EQF Taxonomy

A second, well known taxonomy is for instance the European Qualification Framework and the related Credit Transfer Systems (ECTS and ECVET).

	Knowledge ^[1]	Skills ^[2]	Competences ^[3]
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
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
LEVEL 5	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

LEVEL 6	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	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	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	

Fig. 6: EQF-Taxonomy

Both taxonomies not only differ in structure (EQF is clustered in Knowledge, Skills and Autonomy/Responsibility and has 8 levels while Bloom distinguished Cognitive, Psycho-Motor and Affective traits on 4-6 levels).

The main difference between these taxonomies – and this is often forgotten – is their purpose.

While ‘learning’ was in the focus of Bloom’s taxonomy, ‘qualification’ is the main driver for the establishment of the EQF.

What all taxonomies have in common is that they aim to describe competence dimensions (the vertical columns) and competence levels (the horizontal competence qualities) with the help of learning outcome descriptors. These learning outcome descriptors have to be precise and consistent in order to facilitate distinguishing between different competence quality levels.

There are several other competence models and taxonomies which try to explain and describe competences and try to operate them for different purposes.

4.1.4. LEVEL5 Taxonomy

The REVEAL group has developed its own taxonomy (LEVEL5) based on the post-Bloom taxonomy in a blend with a derivative of the emotional intelligence taxonomy. It consists of Knowledge, Skills (capabilities) and Attitudes (emotions/values) on 5 levels. This taxonomy facilitates assessing, documenting but also planning competence developments in highly context-dependent environments such as learning in mobility or learning on the job or in leisure time activities.

LEVEL	KNOWLEDGE	SKILLS Capabilities	ATTITUDES Emotions/Values
5	Know where else... (Transfer Knowledge, <i>Strategic Knowledge</i>)	Transferring Developing/ Constructing <i>Versatility</i>	Incorporation (Internalising) <i>„Unconscious“</i> <i>Competence</i>
4	Know when... Practical (Procedural knowledge)	Discovering/ acting independently (disturbed systems)	Commitment <i>Affective</i> <i>self-regulation</i> (<i>Willing</i>)
3	Know how... Theoretical knowledge	Deciding/ selecting (Known systems)	Appreciation Motivation
2	Know why... (Distant understanding)	Applying Imitating (Exercising)	Perspective taking (Curiosity)
1	Know-that... Basic Perception	Perceiving Listening	Self orientation Neutral

Fig. 7: LEVEL5 Taxonomy

As Fig. 7 shows, the LEVEL5 taxonomy comes with general descriptors ('level titles') which are derived partly from Bloom's systems and partly from other taxonomies and concepts, like levels of 'emotional intelligence' and 'affective competence' and affective self-regulation.

The LEVEL5 taxonomy is the basic system for so called 'reference systems' in which the taxonomy is transferred to distinctive competences.

In the reference systems competences are contextualised with the help of specific learning outcome descriptors for each of the cells.

L	Level Titles	Level description	Level Titles	Level description	Level Titles	Level description
5	Knowing where else (strategic transfer)	Knowing how to enhance team processes in different teams. Knowing how to help other people act successfully in teams and to assign specific responsibilities to people keeping in mind their relevant skills.	Developing, constructing, transferring	Leading a team in a way that members are able to contribute to the best of their abilities, supporting them to do so. Being able to strategically develop a team.	Incorporation	Having internalised the "culture" of constructive team work and to accomplish goals through mutual support. Inspiring others to improve their teamwork skills.
4	Knowing when (implicit understanding)	Having substantial knowledge on how and when to join/form a team. Understanding strength and weaknesses of team members. Knowing the importance of communication and how to coordinate workflows.	Discovering acting independently	Being able to assign and coordinate specific tasks and roles to team members on the basis of their strengths and weaknesses. Monitoring team processes. Trying out new roles for one-self.	Self-regulation, determination	Feeling the importance to refrain from own preferences (e.g. in regard to procedures, own solution strategies, methods etc.) for the sake of the team and the teamwork. Being determined to be a good team worker.
3	Knowing how	Knowing the basic dynamics and demands of teamwork. Knowing how to engage in a coordinated work flow where the skills, qualities and limits of each member are taken into account in order to work efficiently.	Deciding/ selecting	Actively reaching out to join a team or help create a team. Contributing to the team process according to own strengths and needs for reaching the shared goal.	Motivation/ appreciation	Having a positive attitude towards working together in a team and to appreciate team diversity. Finding it important to have a 'team spirit'. Being motivated to develop own competence to successfully work in a team.
2	Knowing why (distant understanding)	Knowing that teamwork is a more effective way to achieve results. Knowing it demands from individuals to coordinate their work considering individual competences and abilities.	Using, imitating	Contributing to team work when being invited or instructed to. Fulfilling assigned tasks in a team by following the example of others.	Perspective taking	Being interested in the potentials of team work and to learn more about it.
1	Knowing what	Knowing that teamwork is collaborating with others to reach a shared goal.	Perceiving	Recognising situations in which teamwork is feasible to reach goals.	Self-orientation	Seeing teamwork as something positive, but without considering developing own team work competence.

Fig. 9: LEVEL5 Reference system with general descriptors on teamwork

With the help of the reference systems each competence can be described properly on 5 quality levels along their three basic dimensions: the knowledge, skills (capabilities) and affective (value) competence components.

4.1.5. Validation Purposes

Prior to the transfer of the professionals' competences into the European EQF and ECVET systems we find it useful to start with a brief introduction to validation purposes in order to find out for whom and why this transfer might be useful (for more detailed information see also the chapter on validation in the BADGES toolbox and Valorisation)

Validation purposes can firstly be clustered along organisation levels:

- EUROPEAN level (European Commission)
- Transparency of qualifications
- Mobility
- Comparability
- European economic growth and stability
- INSTITUTIONAL level (enterprises, public institutions, schools)
- Finding personnel
- Providing evidences of own capacities
- Organisational development
- INDIVIDUAL level
- Showing potentials and competences
- Finding jobs
- Collecting evidences in CV
- Sharing competences for private projects/purposes

One can differentiate two main purposes

Professional Formal Qualification:

Purpose: 'profiling', identifying levels of competences and measuring 'performances'

Means: -> summative assessments and high level of formality, certification

Personal development:

Purpose: incentive for civic engagement, showing potentials of learners

Means:-> identification, formative assessment and low level of formality

Between those two poles there are a large number of different scenarios ready and waiting for competence validation:

- Continuing professional education and training for people working at cultural sites,
- Learning in leisure time (maybe even without a learning goal)
- Training on social/personal competences like teamwork, communication, customer orientation etc.,
- Orientation projects for young (unemployed) adults,
- Mobility projects for those Not in Employment Education or Training (NEETs) to develop their potentials and to bridge to the working life or formal education again,
- Self-learning arrangements, to give evidence to competences acquired in rather informal learning contexts, e.g. in volunteering n cultural or nature projects

just to name a few.

In REVEAL and the professionalisation of adult educators we probably encounter different expectations and functionalities related to validation:

1. a formative (learning process oriented) and
2. a summative (qualification oriented) assessment and documentation.

Hence the idea to connect to the formal system of EQF and ECVET is relevant only for those who intend to convert their competences into something "professional" or who might be interested in collecting evidence/proofs of these competences in their portfolios.

The transfer of our competence frameworks to EQF and ECVET is only meaningful in the professional context. ECVET for instance is literally connected to a system which is a cascade of

- Qualification
- Learning Units
- Knowledge, skills and competences (relating to responsibility and autonomy)

4.2. VIVA Qualification Programme

The VIVA CPD (qualification) is a continuing professional development offer to promote digital literacy, digitalisation learning topics and digital learning instruments.

Target groups are educational professionals, like trainers, teachers, semi-professionals who plan and deliver informal and non-formal learning and also those who develop and design IT based learning environments, or work in rather informal learning settings, but also professionals from other educational fields.

It is a blended learning system consisting of four learning units related to the competence areas of

1. Planning,
2. Delivering,
3. Evaluating innovative, competence-oriented learning and
4. Validation of learners' competence developments.

4.3. Competences to be acquired in the Programme

The VIVA competence inventory gives an overview of 24 identified key competences for educational professionals. These competences are clustered into 5 competence areas: planning competences, competences related to the delivery of training, competences related to evaluation and validation and generic competences.

		Overall VIVA Competence; Facilitating Design Based Collaborative Learning	
1	A	Comprising all planning and delivery competences listed below, to be used to create: <ul style="list-style-type: none"> • learning fields (in projects for facilitators) • validation designs (competence oriented assessments) 	
	B	Field-Competence	
2		Being Competent in Digital literacy and Digital Learning	
	C	Facilitation Sub-Competences	
		1. Planning competences (incl. competence oriented learning)	
3	P1	Planning, preparation	Assessing learners' needs and motivations
4	P2	Planning, preparation	Designing and constructing trainings and programmes
5	P3	Planning, preparation	Planning and designing the learning process
6	P4	Planning, delivery	Deploying different learning methods, styles and techniques
7	P5	Planning, delivery	Creating competence-oriented learning offers:
8	P6	Planning, delivery	Creating an open learning environment
		2. Competences when delivering training/learning	
9	D1	Delivery	Facilitating ICT based learning
10	D2	Delivery	Facilitating (open) learning processes
11	D3	Support	Advising/counselling on career and further life planning
12	D4	Support	Mentoring an intern/trainee/apprentice
		3. Evaluation of the learning process	

13	E1	Evaluation, QM	Designing an evaluation process
14	E2	Evaluation, QM	Define and apply the right indicators/instruments for evaluation
		4. Validation of competence developments	
15	V1	Validation	Assessing competences and competence developments
16	V2	Validation	Evidencing competence developments as learning outcomes
17	V3	Validation	Integrating validation concepts promoted by the EU
18	D	Generic Competences	
19	G1	Personal/delivery	Being an expert in the content matter
20	G2	Self/personal	Lifelong learning
21	G3	Social/delivery	Motivating/empowering learners
22	G4	Social	Communication
23	G5	Social	Team work
24	G6	Social	Networking
25	G7	Social	Managing diversity
26	G8	Social	Intercultural communication

5. Transfer to ECVET and EQF System

The starting point of the qualification is an accomplished EQF level 3 and a LEVEL5 level 2.

It is not intended that the “qualification” (in ECVET terms) will end up at the research level.

Hence the scope of development will reach from ECVET level 4 to a maximum of ECVET level 6 which would bridge 3 levels and result in LEVEL5 level from level 2-5.

EQF level7 would be similar to master which would require a master thesis. This is something which could be offered in connection with a university but probably not in a CPD for professionals in AE.

The lower boundary (Level 3) is presented below as a starting point:

5.1. Starting level (EQF:3 / LEVEL5:4)

	Knowledge ⁹	Skills ¹⁰	Competences ¹¹
EQF 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

In the following we put together the ECVET levels and their meta-descriptions with the LEVEL5 levels. This is relatively easy as far as the knowledge and skills dimensions are concerned. In the case of the competences/attitudes we will in a first step stick to the LEVEL5 descriptors and bring in the “responsibility/autonomy –aspects after that.

To wrap up:

This file outlines a first attempt to create a “qualification” for potential professionals according to the ECVET taxonomy.

It is based on the 4 units related to the development, delivery, and validation processes.

A qualification range of ECVET levels 4-6 is envisaged

The sub-competences (of the 4 units) will be assigned to each level by using the LEVEL5 descriptors

For this purpose the descriptors from LEVEL5 taxonomy Level3-5 will be applied

⁹ In the context of EQF, knowledge is described as theoretical and/or factual.

¹⁰ 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).

¹¹ In the context of EQF, competence is described in terms of responsibility and autonomy.

5.2. Basic qualification level (EQF:4 / LEVEL5:3)

EQF	Knowledge	Skills	Competences
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
Unit	Unit 1: Planning – Knowledge on:	Unit 1: Planning – Skills on:	Unit 1: Planning – Attitudes on:
L5 Level 12 3	LEVEL5->Level3 / “Theoretical Knowledge – know how” To theoretically know how to create learning offers based on Learner and Competence Orientation. e.g. through multiple perspectives and concrete individual experiences involving authentic problems etc.	LEVEL5->Level3 / “Deciding/Selecting” To use existing learner and competence oriented training formats for the planning of courses/training offers. To select and try out appropriate formats.	LEVEL5->Level3 / “Appreciation” To value the planning of open and competence oriented learning as an/the appropriate format for learners to develop competences.
CD¹³	Ability to apply knowledge in known contexts (e.g. in protected case studies without disturbances)		
LO¹⁴	Knowledge on different learners needs Knowledge on Programme development Theoretical knowledge on learning process design Broad Theoretical knowledge on learning methods, approaches techniques	Assessing and evaluating learners needs Designing learning programmes accordingly Designing the Learning process accordingly Applying known learning methods, approaches and techniques from the own repertoire	Appreciating and valuing learners needs analysis Positive attitude towards known programme development Appreciating and valuing known learning process design Openness and positive attitude towards known

¹² Corresponding LEVEL5 level

¹³ Common Denominator: Central, transferrable level descriptor fitting both EQF and LEVEL5

¹⁴ Learning Outcome Description

	Theoretical knowledge on Open learning environments	Using known tools and instruments for Open learning environments (known OER)	learning methods, approaches techniques and Open learning environments
Ass¹⁵	<ul style="list-style-type: none"> ● Self/Tandem assessment with the LEVEL5 grid ● Questionnaires ● Knowledge tests or reports ● Participants' feed-back 	<ul style="list-style-type: none"> ● Self/Tandem assessment with the LEVEL5 grid ● Learning diary ● Observations in the learning situation 	<ul style="list-style-type: none"> ● Self/Tandem assessment with the LEVEL5 grid ● Learning diary ● Observations in the learning situation ● Observing level of autonomy and responsibility

¹⁵ Possible assessment methods

5.3. Advanced level (EQF:5 / LEVEL5:4)

EQF	Knowledge	Skills	Competences
5	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 (new) 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
Unit	Unit 1: Planning – Knowledge on:	Unit 1: Planning – Skills on:	Unit 1: Planning – Attitudes on:
L5 Level 16	LEVEL5->Level3 / “Theoretical Knowledge – know how”	LEVEL5->Level3 / “Deciding/Selecting”	LEVEL5->Level3 / “Appreciation”
4	To have a very brought theoretical <i>and practical</i> background in order to transfer Learner and Competence Orientated Planning.(LCP) to other contexts and help other people to apply the approach as well	To build knowledge and expertise, to construct related theory and practice regarding Learner and Competence Orientated planning. To help other trainers apply the right approaches.	To have an incorporated reflex to plan the training in a learner and competence oriented way. To feel the need to help other trainers applying
CD¹⁷	Ability to apply knowledge in unknown (disturbed) contexts (e.g. in direct contact with learners in reality)		
LO¹⁸	<ul style="list-style-type: none"> ● Knowledge on how to combine and to transfer ● innovative assessment methods into new contexts ● new programme design components for a consistent programme in an unknown situation ● innovative appropriate learning process design in an unknown situation 	<ul style="list-style-type: none"> ● To develop and transfer new methods to assess and evaluate learners needs ● Designing learning programmes with unknown elements. To innovate learning programmes ● To innovate learning processes, to transfer this 	<ul style="list-style-type: none"> ● Targets/Level descriptors ● To feel the need transfer LCP in new situations and to help other personal to apply: ● learners needs analysis ● on programme development ● Learning process design ● methods, approaches techniques

¹⁶ Corresponding LEVEL5 level

¹⁷ Common Denominator: Central, transferrable level descriptor fitting both EQF and LEVEL5

¹⁸ Learning Outcome Description

	<ul style="list-style-type: none"> ● innovative (unknown) instruments and approaches of LCP into new contexts ● open learning environments fit appropriately to specific learning contexts, target groups and aspired competences 	<p>in other contexts, to help others to apply it</p> <ul style="list-style-type: none"> ● Developing new methods, approaches and techniques (which were not even available in other repertoires) ● Integrating those innovative tools and elements in new Open learning environments (known OER) 	<ul style="list-style-type: none"> ● Open learning environments
Ass ¹⁹	<ul style="list-style-type: none"> ● Self/Tandem assessment with the LEVEL5 grid ● Participants' feed-back 	<ul style="list-style-type: none"> ● Essay ● Learning diary ● Observations in the learning situation 	<ul style="list-style-type: none"> ● Observing during discussions and self-reflections

¹⁹ Possible assessment methods

5.4. Expert level (EQF:6 / LEVEL5:5)

EQF	Knowledge	Skills	Competences
6	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
Unit	Unit 1: Planning – Knowledge on:	Unit 1: Planning – Skills on:	Unit 1: Planning – Attitudes on:
L5 Level 20 5	LEVEL5->Level5: Transfer Knowledge To have a very brought theoretical <i>and practical</i> background in order to transfer Learner and Competence Orientated Planning.(LCP) to other contexts and help other people to apply the approach as well.	LEVEL5->Level 5: Developing/Transferring To build knowledge and expertise, to construct related theory and practice regarding Learner and Competence Orientated planning. To help other trainers apply the right approaches.	LEVEL5->Level5 / “Internalisation” To have an incorporated reflex to plan the training in a learner and competence oriented way. To feel the need to help other trainers applying
CD²¹	Ability to transfer competences in a versatile way to new contexts (e.g. to other cultural heritage domains)		
LO²²	<ul style="list-style-type: none"> ● Knowledge on how to combine and to transfer ● innovative assessment methods into new contexts ● new programme design components for a consistent programme in an unknown situation 	<ul style="list-style-type: none"> ● To develop and transfer new methods to assess and evaluate learners needs ● Designing learning programmes with unknown elements. To innovate learning programmes ● To innovate learning processes, to transfer this 	<ul style="list-style-type: none"> ● To feel the need transfer in new situations and to help other personal to apply: ● learners needs analysis ● on programme development ● Learning process design ● methods, approaches techniques

²⁰ Corresponding LEVEL5 level

²¹ Common Denominator: Central, transferrable level descriptor fitting both EQF and LEVEL5

²² Learning Outcome Description

	<ul style="list-style-type: none"> ● innovative appropriate learning process design in an unknown situation ● innovative (unknown) instruments and approaches into new contexts ● open learning environments fit appropriately to specific learning contexts, target groups and aspired competences 	<p>in other contexts, to help others to apply it</p> <ul style="list-style-type: none"> ● Developing new methods, approaches and techniques (which were not even available in other repertoires) <p>Integrating those innovative tools and elements in new Open learning environments (known OER)</p>	<ul style="list-style-type: none"> ● Open learning environments
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