IO 3

The PITCH blended teaching and learning approach

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0. Introduction

Based on the Competence Framework developed in IO2 a modular blended learning concept was established which grounds on the identified competences.

This modular concept leads to different CPD pathways e.g.:

- Full time (master courses)
- singular modules on design thinking methods
- e-learning courses
- research driven internships (in companies)

The blended learning concept contains learning modules in different and mixed learning modalities.

These modules shall be introduced in different learning settings, they can be delivered as full-fledged entrepreneurship courses or as singular modules, they can be self-learning units, both as web-based learning units and also on the job (e.g. in internships and mobilities in connection with practice projects in enterprises).

1. PITCH – Blended Teaching and Learning Approach

The blended teaching and learning concept developed in the PITCH project is based on the competence-oriented learning approach. The PITCH approach has been developed in a modular learning environment comprising different learning modules that can be used in mixed modalities in a face-to-face approach, e-learning, project learning and study visits, and is able to foster an environment for creativity and innovation.

The modules are designed as self-learning units but can also be used as web-based learning units or in the workplace (e.g., in internships and mobilities linked to practice projects in companies).

The blended teaching and learning approach of PITCH is designed to convey the theoretical background of the concept and the experience gained during the project period at four universities and two companies.

This document is a planning tool for programme planners and education professionals in higher education to transfer the PITCH approach as a continuing education concept for Higher Education staff that can also be facilitated within individual modules, existing Master programmes or different study areas in general.

In this respect, the report on hand is the central document for the CPD and a planning tool for the partners. It contains the following elements:

- Course and module design patterns (reference systems, didactic frameworks and sequencing tables, indicators) for the CPD,
- Activity and learning field patterns and course planning tables (learning pathways),
- Qualification course for specific subject and competence areas,
- A more modular scenario aiming at a situational learning approach.

1.1. Structure

The PITCH approach and associated concepts and methods have been developed on the LEVEL5 system in conjunction with the EQF specification.

The PITCH approach and the related teaching/learning modules can be used in different ways:

- It has been offered in an overall course (as a "CPD programme" which can be transferred to various Higher Educational Institutions (HEI) to train their staff in all programme topics) and
- It was provided in various HE (course) modules (individually and also in conjunction with appropriate validation).

- The competences acquired in the PITCH modules were partly validated according to the EQF system, which means that they can also be used in other further education contexts to achieve the greatest possible transferability.

The PITCH learning modules are structured and described according to the LEVEL5 taxonomy developed to facilitate competence-oriented learning and validation (COL&V). They are structured into three successive levels of difficulty and complexity that allow for meaningful integration into learning processes in different contextualised learning fields.

In this way, PITCH achieves a highly flexible and modular learning approach in the learning phases that can be standardised.

1.2. Terminology and Specification

The following section provides concise explanations of the terminology and specifications we use to avoid ambiguities and misunderstandings.

1.2.1. EQF connection

The European Qualifications Framework (EQF) has been put into practice across Europe since the European institutions reached agreement in 2008. It encourages countries to relate their national qualifications systems to the EQF so that all new qualifications issued from 2012 include a reference to a corresponding EQF level. The EQF is a descriptive tool for translating common qualifications in different countries.

However, the EQF does not contain core criteria on which its eight learning outcome levels are based. The PITCH project developed concrete reference systems for creativity and innovation based on the European EntreComp initiative. In PITCH, the entrepreneurial competences framework has been translated and operationalised into a system that facilitates competence-based planning and validation of PITCH competences and related facilitation competences for trainers. This system can be transferred to other European Member States to build bridges between science and business and contribute to the European Qualifications Framework (EQF) - where the EQF refers to "qualifications", an approach that is only partially suitable for "learning" (the development of competences) in the context of creativity and innovation.

By introducing the affective component into learning (in taxonomic steps: Curiosity, Motivation, Commitment, and Internalisation), PITCH systematically promotes the emotional learning factors and the meaningful documentation of learners' potentials in terms of their affective competence development. Especially in business, it is of great importance to assess and validate the motivation and will of (future) employees in terms of innovation, creativity and management.

The PITCH project enriches European certification systems by applying the LEVEL5 methodology (see subsequent section) and creating tools to visualise and document social and personal skills and competences as well as competence developments in an evidence-based way, thus contributing to the European Skills Agenda.

The cooperation with projects inside and outside the European education programmes led to a wide dissemination and valorisation of the PITCH learning and validation approach. In this way, the different working and learning cultures in Europe are reflected and truly European results have been achieved and tested in the pilot phase.

Despite the obstacles of the Corona crises (with missing F2F piloting opportunities), the whole partnership managed to transform or complement the learning projects into digital learning formats. This was a particular challenge as the aim and approach of the project was not only to acquire knowledge but also to develop innovation in teams. Therefore, the PITCH approach of "competence-based learning and validation" was extended and further developed with a

strong digitalisation component, resulting in a concept we called "Design Based Collaborative Learning" (DBCL). Within this concept (and the applied methodology, tools and adapted study content and learning project designs), the number of students, learners in further education and internships could even be increased beyond the envisaged target. The feedback from teachers and lecturers regarding the implementation and the associated collaboration with students on these online formats was consistently positive, so that PITCH was also able to make an important contribution to innovation in the area of digitally supported teaching, further education and learning in science and business.

1.2.2. The PITCH/LEVEL5 approach

The LEVEL5 approach used by PITCH and its tools are compatible with the main European validation approaches and tools such as EQF, ECVET and EUROPASS. As such, they add value to the systems where these have weaknesses, e.g., in the validation of key social, personal and lifelong competences or in non-formal or workplace learning. These features ensure the transferability of the results developed in the PITCH project.

The developed PITCH concept thereby combines the competence-based learning and the unique LEVEL5 validation system proposed in a multidisciplinary learning approach.

The PITCH learning approach for creativity and innovation was piloted by all members with a total of 88 learners developing prototypes in their "learning projects" in different areas. An internal evaluation covered both the pilot projects and the competence development and gave positive feedback on the feasibility and acceptance of the PITCH approach in both universities and companies.

1.2.3. Planning Tool Terminology

To bring about Competences and learning projects related to Innovation and Creativity the PITCH project applied the LEVEL5 planning methodology[1] for informal/non-formal learning. This approach has been developed over the last decade to specifically:

- Plan, deliver competence-oriented learning,
- Facilitate the assessment and validation of competences on professional quality,
- Plan, Deliver and Validate learning also in less formal (subject-oriented) learning context, e.g. practical learning projects parallel to academic studies, while learning on the job, in social, ecological projects, civic collaboration context and in capacity building projects and eventually

[1] The LEVEL5 System is added to this document

- To enable also non-academic professionals (e.g. mentors in internships) to develop good quality educational offers

Instruments used in this approach in procedural 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 PITCH facilitators must know and 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 specification[2] ("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

[2] IMS LD Standard to Describe Learning Designs
[3] Impact-eu.net

2. PITCH - Concept

The PITCH approach is a continuing education measure for higher education staff that aims to introduce entrepreneurship, innovation and creativity as a study concept that is transferable to different target groups, learning environments and higher education sectors due to its modular concept.

The target groups are therefore primarily higher education staff and ultimately their learners as final beneficiaries.

The approach was implemented in the form of blended learning modalities.

The basic idea is based on the results of the inventory (desk research and interviews), which suggest that there is a lack of supply and options in terms of "teaching competences in the field of innovation and creativity" and also that the spectrum of entrepreneurship and its thoughts in different form al courses/learning offers are only available to a limited extent.

Therefore, the PITCH partnership has adopted an approach that "contextualises" the acquisition of entrepreneurial skills and competences, following the concept of competence-based learning (COL). Consequently, the competences developed in the framework are a kind of side effect of learning - they are acquired like other "cultural skills and competences" (Belshaw, 2014) without being formal learning objectives.

This means that the didactic framework used is more about facilitation and a learner-centred, constructive and collaborative ('team') approach, specifically incorporating impulses and incentives for creativity and innovation. This approach can also be applied to online or blended learning modalities, but requires professionals who are familiar with the appropriate methods and approaches and who have specific knowledge and skills and are open to the critical use of online resources.

This development led to the creation of a didactic pattern designed and described in this document to provide guidance to higher education staff and blended learning concept professionals on how to enhance and adapt curricula and frameworks based on the skills of their students.

With seven different steps covering aspects of both methodological approach and content presentation, the PITCH approach is a guiding tool that can foster creativity, innovation and entrepreneurial thinking.

2.1. PITCH – Didactic pattern

Summary

An essential core of 21st Century skills are the skills and competences to identify problems and develop solutions and/or strategies through different approaches that are novel, innovative and characterised by their creative approach.

Based on this foundation, the PITCH approach is structured in such a way that the methodological concept of self-awareness and exploration is used as an essential tool - in the spirit of the Design Thinking method. Directly linked to this approach are various techniques and methods that come to the fore through their variability and flexibility.

This approach can be shifted to different subject areas and focal points, as the course content can be variable without much effort, whereas the methodology can be used "almost universally".

As already mentioned in the introduction, this can be offered in different formats of blended learning, as the individual elements are possible in the face-to-face concept, as well as in the online format, in a mix of both concepts, as well as allowing a certain degree of self-learning units.

This transfer offers the great advantage of contextualised learning.

Target group

The target groups are at the firstly educational personal in Higher Education:

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

The final beneficiaries are the students at universities and collaborating institution, 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 PITCH approach consists of 2 main themes:

1. Competence Oriented Learning & Validation (COL&V) (CPD concept for trainers) and
2. Design Thinking and Creativity Techniques (to trigger innovation; Students)

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

ECTS credits

The ECTS credits were of course related to the courses and modules planned and delivered individually by each HEI. They are described in chapter 5 and extensively described in IO6 (piloting reports by each HEI with a filled ECTS template for the piloted modules).

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

- Workshops on competence-based learning and validation as online material on PITCH moodle platform, which additionally captures competence development through individual validation by the LEVEL5 approach and can be adapted to each of the 21 competences (as well as reference systems)
- 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. PITCH – Action Field

The first planning step is always related to the practical situation and describes:

- Context
- Target Group
- Aims
- Resources
- Activities

What is the acting field[4] and what does the individual has to perform in a specific context – (what are the tasks, the challenges, the visions, background and the perspectives)?

The action field is thoroughly described in a pre-defined project pattern. This step represents the planning of modern, practical, and contextualised learning. It can be applied in a large variety of learning sectors ranging from modern HR-management for highly efficient continuing professional development (CPD at the workplace) to practical learning projects in NGOs or in innovative formal education settings (HEI), e.g. in innovative study projects, or innovative interdisciplinary fields, system thinking or other interdisciplinary action fields or simply by creating and introducing innovative practices (e.g. methods in educational studies).

The action field already comes with five different quality levels and describes the challenges and tasks that the individual is confronted with in his/her field of action (which can be professional and/or private).

• **Name of the project**	**1. PITCH CPD**
• Context	2. CPD opportunities for HE personnel to professionally qualify as trainers for entrepreneurship, creativity and innovation 3. Need for new learning contents and units for innovation, creativity and entrepreneurship education
• Target Group	4. HE personal and experts/trainers working in the field of Higher Education
• Aims	5. Training on the Design Thinking approach includes various opportunities on innovation and creativity 6. Qualification for competence-based learning and validation in different
• Resources	7. Learning platform, LEVEL5 validation system

[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.

	8. Either interactive collaborative online tools (MIRO) or Moderation equipment (boards and cards etc.; material for prototyping
• Activities	9. Context dependent

2.3. PITCH – Learning Field

In the next planning step the action field is turned into a learning field, following the question: Which competences do we need at which (quality) level in order to tackle the situation successfully? At this stage the LEVEL5 reference systems establish a framework which maps the necessary (contextualised) competences on three dimensions and quality levels. Necessary actions to create a learning field are:

- Define the necessary competences
- Create a reference system for the learning field (could look like the one below)
- Describe learning outcomes on knowledge, skills and attitudes and five levels based on the action field in a specific learning context (e.g. for a team which works for 6 month in a specific organisation (in a specific unit) on the introduction of a SD management approach or simply a plan for the introduction of SDGs in the unit/company). The tasks, the challenge and the context determine the necessary knowledge they need and the activities that they have to perform.
- Allocate assignments, materials, assessments in the LEVEL5 reference systems

Knowledge, skills and attitudes in the learning field are described in a consistent way on the five quality levels including potential learning outcomes. Appropriate learning activities, materials, resources, and potential validation settings are assigned to and allocated in the reference systems.

2.4. PITCH – Learning Field (Refence system)

	KNOWLEDGE		SKILLS//CAPABILITIES		ATTITUDES/VALUES	
L	**Level Titles**	**Level description**	**Level Titles**	**Level description**	**Level Titles**	**Level description**
5	Knowing where else (strategic transfer)	Knowing how to transfer idea creation skills and concepts into other contexts. Knowing how to help other people act successfully in different entrepreneurial structures in this respect.	Developing, constructing, transferring	Being able to transfer ideation and prototyping strategies into new business contexts. Actively planning and creating new entrepreneurial activities based on ideating and prototyping.	Incorpora-tion	Having internalised ideation and prototyping as a fundamental personal entrepreneurship mindset. Being an inspiration for others in their ideation and prototyping activities.
4	Knowing when (implicit understanding)	Knowing when to apply right instruments from the portfolio of different ideation and prototyping approaches and tools. Knowing when to use certain ideation and prototyping strategies.	Discovering acting independently	Deliberately searching for and selecting appropriate ideation and prototyping techniques and instruments for the own business. Creating and executing an ideation and prototyping strategy for the own context and professional domain.	Self-regulation, Commit-ment	Being determined and pro-active in using and improving ideation and prototyping in the own environment. Finding it important to be creative in this respect.
3	Knowing how	Knowing different ideation and prototyping approaches, techniques related to: • Spotting opportunities • Creating ideas • Working towards a Vision • Valuing ideas • Checking for Sustainability. Theoretically knowing how to act along an ideation and prototyping concept.	Deciding/ selecting	Taking part in ideation and prototyping activities as they are offered by others in safe (undisturbed) contexts. Choosing singular ideation and prototyping tools from a given (known) portfolio	Motivation/ appreciation	Valuing ideation and prototyping in general. Being motivated to develop own ideation and prototyping competences and visions.
2	Knowing why (distant understanding)	Having basic knowledge on creativity and innovation. Knowing that idea creation, a multi-perspective view on the ideas and the check of ideas is an essential part of the product/service and business development. Understanding basic aspects of the ideation and prototyping.	Using, imitating	Occasionally taking part in non-structured activities related to the creating of ideas. Carrying out ideating actions when being instructed to.	Perspective taking	Being curious and interested in ideating and prototyping and spotting of opportunities.
1	Knowing what	Knowing that entrepreneurship is based on innovation and the creation of ideas.	Perceiving	Perceiving and recognising the concept of creating ideas and opportunities without taking further steps.	Self-orientation	Perceiving the concept of creating ideas and opportunities without relating it to oneself.

2.5. Learning Pathways - Planning of informal and non-formal learning

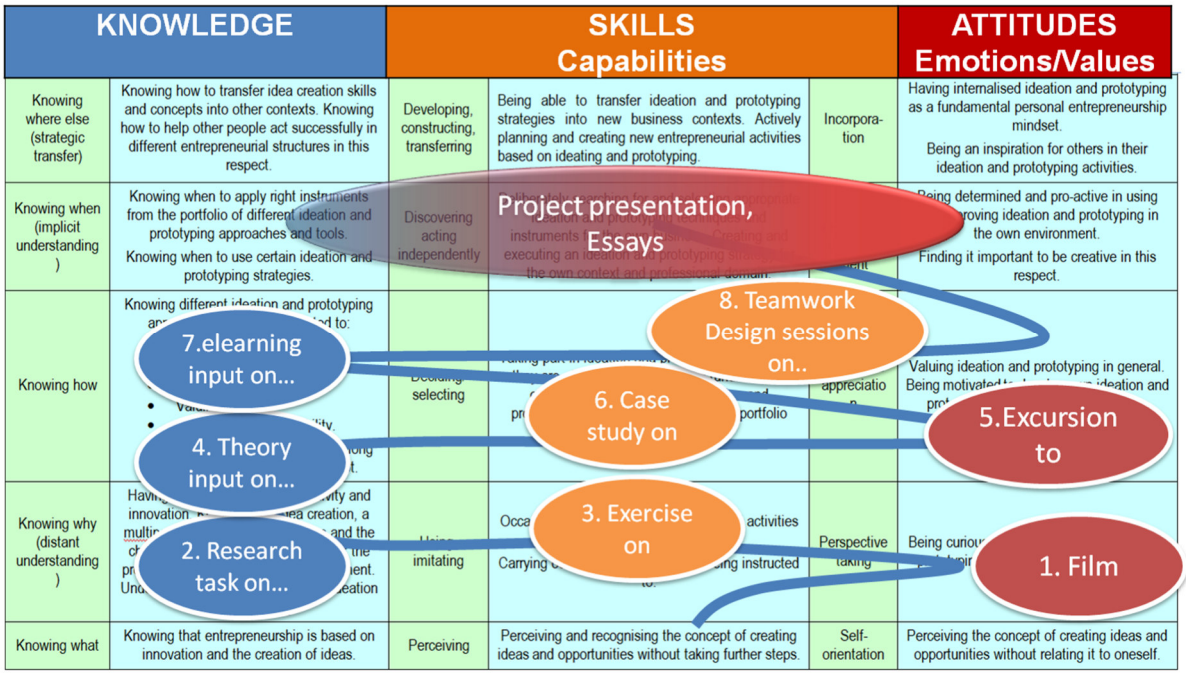

Fig. 1: Learning pathway with envisaged activities in the Learning field

The learning pathway is a trajectory through a learning landscape, a consciously planned path through the reference system (which is the competence framework of this learning field).

While planning and delivering COL we must take into account:

- Assigning the right tasks to the right stages; depending on
- content levels (level of complexity)
- levels of difficulty
- levels of knowledge, skills
- attitudes
- intention of the designer

The action and learning fields help the learning designer to identify different competence levels, to describe learning outcomes related to the levels and the three dimensions (columns) knowledge, skills and attitudes. They are then able to deliver a kind of landscape to develop a consistent and high-quality learning pathway – also in informal learning settings.

Based on these landscapes, designers can also plan learning trajectories when the learner is not in a classroom (e.g. in cultural projects, internships, volunteering or on mobility) and/or connected with mobile learning apps.

Necessary actions while delivering Competence Oriented Learning:

- Identify pre-knowledge, skills and motivations of the learners

- Define appropriate learning situations and learning modalities (e.g. blended learning arrangements, practical learning projects etc.)
- Apply appropriate didactic design and methods in the learning field
- Substantiate the learning pathway and practical learning arrangements
- Assign meaningful tasks that match to the situational challenges
- Organise the learning accordingly

Appropriate assignments on different levels may be:

Knowledge basic level:	Basic Input, simple research questions, ...
Skills basic level:	Simple exercises, imitation of something, ...
Attitudes basic level:	watching film, discussion, provocative opening questions, ...

Knowledge medium level:	advanced knowledge Input, comprehensive tasks, more complicated research questions, reflections, and discussion, valuing different approaches according to certain scales ...
Skills medium level:	More complex exercises, taking a role, unguided activities in a protected space (role plays, case studies), ...
Attitudes medium level:	self-reflection on the main theme, advanced and motivating tasks, ...

Knowledge high level:	transfer knowledge in complex scenarios, evaluating complex different options and explanation of complex systems and principles...
Skills high level:	Complex exercises in an unknown or disturbed context, project tasks...
Attitudes high level:	no specific tasks, just observation of commitment ...

3. Teaching and Learning Modules

3.1. Module1: COL&V and Facilitation

3.1.1. Module 1: Introduction

Background and Basic Ideas

Competence oriented learning (and education[5]) 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 consequence the educative approach needs to be integrative and holistic as well.

- *Constructive 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,

[5] In the meaning of „Bildung" – a German term which promotes a holistic educational and pedagical learning approach that comprises concepts like qualification, learning but also personal development and socialisation. Hence it coverst he whole range from formal to informal learning.

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, teams, cooperation partners 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. 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 CPD.

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 Innovative learning project by the students.

3.1.2. LU1: Educational trends and background

- **Content** (information material[6]):
  - 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)

[6] 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

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
    - 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?
    - Mathetics
        - Material: reveal p. 31f
- C.2: Competence development (external driven): How can I support others in their competence development?
    - Didactics (and mathetics)
        - 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

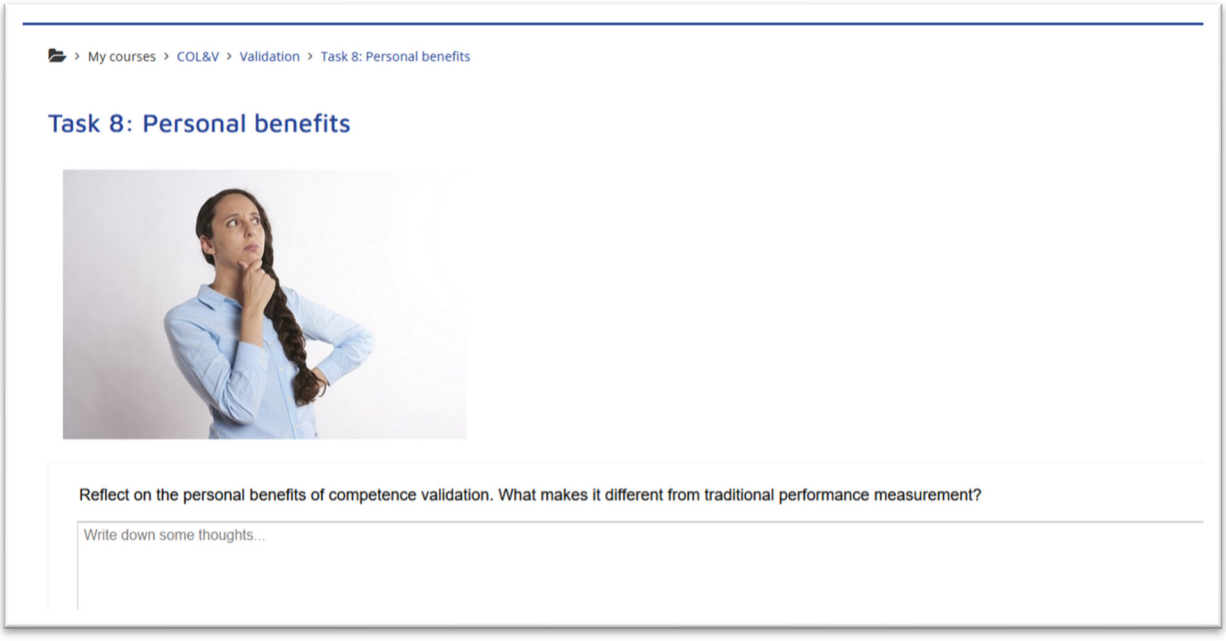

Fig. 2: Screenshot from the Learning object (information + assignment) from Module 1, Unit Validation

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: <u>where</u> 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 (<u>what</u>)/starting points
            - Material: reveal p. 34
    - D: Learning pathways
        - decide on <u>how</u> 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. Table Module 1: COL&V: Table of learning units

Module/Topic/Duration	Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
Competence oriented Learning and Validation (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: behaviourism, constructivism and connectivism	S2: assign given tasks to educational theories (behave., constr., connect.)
		Informal learning patterns (Text and tables)	A3: I don't need no education (anymore)? What would improve learning 2030? ➔ 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			

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Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				A2: estimate your competence level for facilitation (scale 1-5)	K2: Describe purpose of taxonomy	
					K3: Compare Bloom & EQF & LEVEL5 ➔ 1 paragraph to write	S3: Name an activity for a competence on Levels S2&3 (constructed case)
				K4: Contextualise a LEVEL5 Ref.-Sys ➔ given simplified ref.-sys.		
		Development & Pathway	Reference system Page 16			
				A2 give a task 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, …)

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
					K4/S4: Assign tasks to levels and columns	
		Learning process				
					K2:	
					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 material[7]):
  - 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.

[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

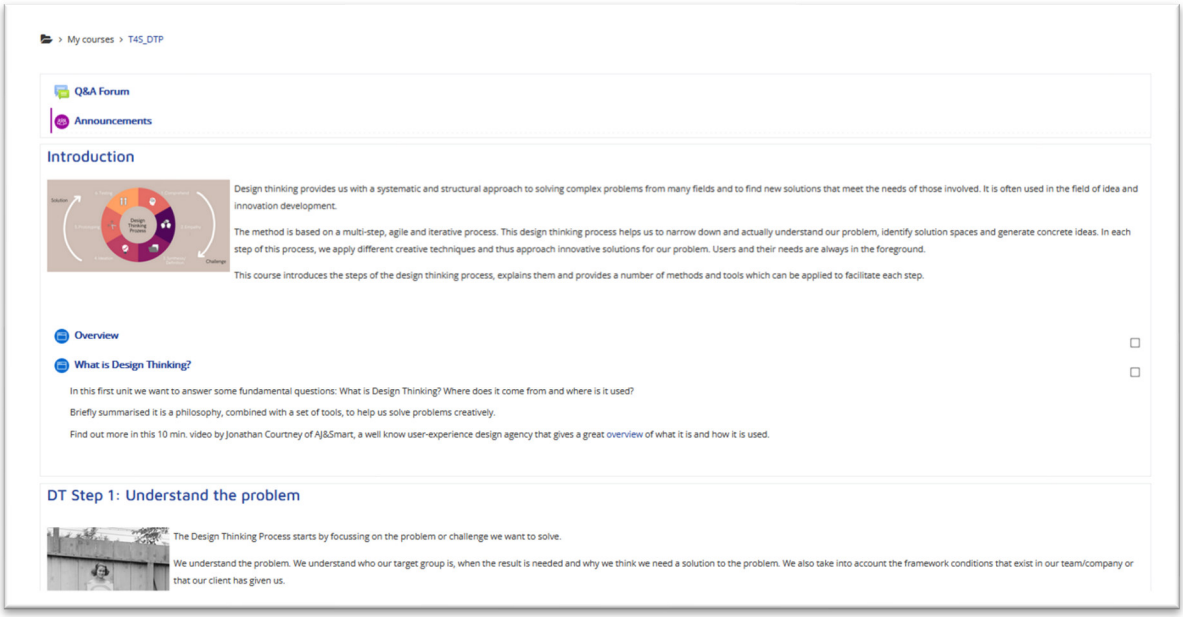

Fig. 3: Screenshot from the Learning Module on Design Thinking and Creativity Techniques

- **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. Ideally 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. Table 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' features and needs
			Moderated discussions, Visualisations	A4: Reflect which barriers or attitudes may blur 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

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
						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 your personal attitude towards it	K2: Decide upon a procedure to approach ideating, i.e., which methods from the toolbox to use	S2: Discuss and agree the next steps in the team
				A3: Reflect about your creativity and open mindedness	K3:	S3: Apply creativity techniques and CT tools and generate as many ideas as possible

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				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 an in how far it contrasts 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)
		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

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				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

3.3. Module 3: Open Educational Resources (OER)

3.3.1. Module 3: Introduction

Background[8]

Education is a human right and the key to individual and social development. One of UNESCO's most important goals is therefore the participation of all people in quality education. Education for all and the increasingly important global access to information and knowledge are central building blocks of modern knowledge societies.

Today, the internet allows access to information worldwide and at any time. It offers new possibilities for the exchange of knowledge and collaborative knowledge development, which are also attracting increasing attention in education. Open Educational Resources (OER) follow on from the opportunities that are opening up here: Authors of educational materials make them available under an open licence and thus enable users to access, use, edit and share the materials free of charge, with no or only minor restrictions. These materials range from worksheets for school lessons and textbooks to complete university courses with video and audio materials.

This concept is attracting more and more attention in international education. The first UNESCO World Congress on Open Educational Resources took place in 2012. 400 experts discussed the opportunities and challenges associated with OER. The final declaration, the Paris Declaration on OER, calls on UNESCO member states to promote the creation and use of openly licensed educational materials.

What are OER?

To answer the question, UNESCO provides the following definition: “In its simplest form, the concept of Open Educational Resources (OER) describes any educational resources (including curriculum maps, course materials, textbooks, streaming videos, multimedia applications, podcasts, and any other materials that have been designed for use in teaching and learning) that are openly available for use by educators and students, without an accompanying need to pay royalties or licence fees” (Butcher 2011[9]).

The UNESCO definition is significant because the term OER was first introduced at a UNESCO Forum on the Impact of Open Course Ware for Higher Education in Developing Countries in 2002. Since then, it has gained considerable currency worldwide and has become the subject

[8] The introduction is based on Neil Butcher, “Was sind Open Educational Resources? Und andere häufig gestellte Fragen zu OER”, deutsche Fassung bearbeitet von Barbara Malina und Jan Neumann, hrsg. von der Deutschen UNESCO-Kommission, Bonn 2013. Adapted translation: Neil Butcher, „A Basic Guide to Open Educational Resources (OER)“, hrsg. von Commonwealth of learning und UNESCO 2011, S. 1-22. published freely under a CC-BY-SA 3.0 licence.

[9] Neil Butcher, „A Basic Guide to Open Educational Resources (OER)“, hrsg. von Commonwealth Commonwealth of learning und UNESCO 2011. Download: http://www.col.org/

of increased interest in policy and institutions. Many people and institutions are concerned with the concept and its potential to contribute to the improvement of education worldwide.

Key features of OER

The OER concept has been shown to hold great potential to promote change in education. While its pedagogical value lies in the use of educational resources as an integral method of teaching subject matter, its transformative power lies in the ease with which such resources, once digitised, can be disseminated via the internet.

Importantly, there is only one fundamental difference between OER and other educational materials: their licence. Therefore, an OER is simply an educational resource under a licence that allows it to be re-used - and regularly edited - without the need to obtain prior permission from the copyright holder.

It is a common misconception that content with a 'free' or 'open' licence is in the public domain and that its creators give up all their rights to that material. This is not the case. Through an open licence, "rights holders grant users [...] non-exclusive rights to use their works".

Exactly which rights they want to grant and which they want to reserve is decided by the rights holders themselves. A wide range of legal regulatory systems governing the licensing of OER is emerging. Some of these regulatory systems only allow copying, others allow the user to also adapt and edit the educational materials used. The best known is the licensing system of Creative Commons (CC licences; see http://de.creativecommons.org/), a non-profit organisation founded in 2001. This provides legal mechanisms for authors to secure their recognition as creators while allowing users to distribute the work. In addition, authors can exclude commercial use and editing.

This also means that not all materials under an open licence are OER.

What criteria must be met for material to become OER?[10]

- *Retain:*

  Make, own, and control a copy of the resource (e.g., download and keep your own copy)

- *Revise*:

  Edit, adapt, and modify your copy of the resource (e.g., translate into another language)

- *Remix*:

[10] This material is an adaptation of Defining the "Open" in Open Content and Open Educational Resources, which was originally written by David Wiley and published freely under a Creative Commons Attribution 4.0 license at http://opencontent.org/definition/.

Combine your original or revised copy of the resource with other existing material to create something new (e.g., make a mashup)

- *Reuse*:

  Use your original, revised, or remixed copy of the resource publicly (e.g., on a website, in a presentation, in a class)

- *Redistribute*:

  Share copies of your original, revised, or remixed copy of the resource with others (e.g., post a copy online or give one to a friend)

How OER can be used, where to find them and what to consider when using and creating OER will be covered in more detail in the learning units. These are aimed at all those interested in OER who want to expand their knowledge and skills in dealing with OER in small bites. The application-related basics also take up the topic of Creative Commons licences in order to create an all-round picture.

For more information on the content and structure of the learning units as well as the learning objectives, please refer to the further description and the learning module itself.

Objectives of this Learning Module

The concept of Open educational Resources as a topic afford other facilitation approaches than subject oriented (formal) education as the Openess approach itself goes hand in hand with a new way of learning and breaks out of "traditional" structures.

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 staff to:

- better understand the concept of OER,
- to reflect on potentials, but also on challenges, and to
- gain knowledge and skills in dealing with and creating OER.

As professional assessment and validation is a decisive element of good quality training and learning, the validation of competence development - through feedback integrated exercises and a module structure by means of a Learning Pathway (see below) - is also part of the CPD.

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.

3.3.2. LU1: OER – Background and Basic Ideas

- **Content** (information material):
  - Exercise to test own knowledge regarding OER
  - **Definition of OER** (UNESCO 2022)
  - Additional introduction video (UNESCO 2022)
  - Reflection exercise on potentials and challenges of OER
  - Input regarding **potentials and challenges of OER** (Zimmermann et al. 2022)

- **Learning goals**: The participants…
  - Know what OER stands for.
  - Can list the main characteristics of OER.
  - Contrast/explain the potentials and challenges associated with OER.

Short descriptions of contents and learning objectives are used as introductions to the learning units.

3.3.3. LU2: Using and Creating OER

- **Content** (information material):
  - Input on **Criteria** of OER (Wiley)
  - Reflection exercise on Criteria of OER
  - Input on **OER and Copyright**/Creative-Commons-Licences (UNESCO 2022; Zimmermann et al. 2022)
  - Exercises to test your knowledge about CC licences (Zimmermann et al. 2022)
  - Exercise to find licences on resources (Zimmermann et al. 2022)
  - Tips on where to search for and **find OER**
  - Input on using and creating OER
  - Exercises to use OER correctly (Zimmermann et al. 2022)
- **Learning goals**: The participants…
  - Know the criteria of OER and their degrees of freedom.

- Know what CC licences are and which attributes they can have
- Know how copyright, licences and OER stand in relation to each other
- Find CC licences on materials
- Can assign CC licence abbreviations to certain criteria
- Can recognise and distinguish between CC licences and their degree of openness
- Can name different search platforms for OER

3.3.4. LU3: Application of OER in one's own context

- **Content** (information material):
  - Input on planning own OER
  - Exercises on planning OER
- **Learning goals**: The participants…
  - Know what to look for when using OER
  - Can identify licences that are appropriate for your material

The module starts and ends with a short self-assessment regarding the participant's abilities in dealing with OER. The reflection covers the competences in the competence field "dealing with OER"[11]. Through the assessment at the beginning and after completion of the module, the participant gets an insight into his or her competence acquisition.

[11] Based on Ehlers & Bonaudo (2020). Referenzrahmen für Kompetenzen von Hochschullehrenden im Bereich der offenen Bildung. https://tud.qucosa.de/api/qucosa%3A73899/attachment/ATT-0/ (Last access 12.07.2022)

3.3.5. Table Module 3: COL&V: Table of learning units

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
Competence oriented Learning and Validation (COL&V)						
	Background and Basic Ideas					
		Definition of OER	UNESCO (2022). Open Educational Resouces. https://www.unesco.org/en/communication-information/open-solutions/open-educational-resources (Last access: 11 July 2022) Zimmermann, Claudia; Neuböck Kristina; Kopp Michael (2022) Leitfaden für die Erstellung von Open Educational Resources. Informationen und praktische Übungen für Hochschullehrende. Hrsg. von Open Education Austria, Graz.			

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				A2/K2: Think about the characteristics of OER. What a key feature and why is it typical? What is special about OER? Quiz		S2: Using the correct definition of OER
				A3: Goes hand in hand with potentials and challenges	K3: Knowing how to define OER and differentiate it from less open content	
				K, S, A 4: Contextualise the OER approach (with own examples)		
		Potentials and Challenges of OER	Zimmermann, Claudia; Neuböck Kristina; Kopp Michael (2022) Leitfaden für die Erstellung von Open Educational Resources. Informationen und praktische Übungen für Hochschullehrende. Hrsg. von Open Education Austria, Graz.			
				A2: Reflect about potential potentials and challenges which come along with OER Brainwriting	K2/3: Know why and how these potentials and challenges come about	S2: Formulate reasons for the discovered challenges and potentials
	Using and Creating OER					

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
		Criteria of OER	Offenheit im Bildungsbereich: Warum es für OER auch Open Content braucht?! (2018). Susanne Grimm for OERinfo - Informationsstelle OER. CC BY 4.0-Licence. Adapted (shortened and translated) by Julia Treek. UNESCO (2022). Open Educational Resouces. https://www.unesco.org/en/communication-information/open-solutions/open-educational-resources (Last access: 11 July 2022)			
				A,S,K2: With regard to which criteria have I already used OER? Documentation task		
					K3: List and justify Application examples	S3: Assign the application examples to the appropriate criteria

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
					K4/S4: Assign examples to columns	
		OER and Copyright	Wikimedia UK 2018: https://www.youtube.com/watch?v=w4CcSfdC-PQ Leitfaden für die Erstellung von Open Educational Resources, Claudia Zimmermann, CC BY 4.0, Open Education Austria. https://creativecommons.org/licenses/ Creative commons (the original CC license symbols), the combined work by Shaddim and is hereby cc-by-4.0 licensed. https://creativecommons.org/about/downloads/https://creativecommons.org/policies/			
				A2: Differentiation of licence types based on their openness. explores the degrees of freedom of CCL.	K, S2: Know and can reproduce the principles of CCL	
				A3: Appreciates the differentiation of different licences and	K3: How to build CC license Quiz	S 3: Assign OER to licences with corresponding

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				the opportunities this offers.		degrees of freedom
					K4/S4: Discovers the means of the CC abbreviations	
		Searching for OER				
				A2: Develop a feeling for which search grids work well.	K2: Understands search criteria and options	S2: Uses searching engines to find appropriate OER Searching tasks
				A3: Motivated to find and use appropriate OERs	K3: Application of search terms	S3: Decide which search grid seems most appropriate for a given case
						S4: Find your own OER repositories and expand your own portfolio
		Using and Creating OER	Leitfaden für die Erstellung von Open Educational Resources, Claudia Zimmermann, CC BY 4.0, Open Education Austria. Creative Commons: Choose a License			

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
				A2: What is possible and allowed, which licences would make sense? Reflection	K2:	S2: Using TASLL as a guide for the correct use of open licensed work
					K3: How to combine materials with different licences	S3/4: Identify false licensed work and correct it. Creating own licences.
	Application of OER in one's own context		Mooc about OER: https://imoox.at/course/oermooc Canvas for creating OER: https://repository.tugraz.at/records/c8zht-dhj07 Tipps how to create own OER: https://www.bpb.de/lernen/digitale-bildung/oer-material-fuer-alle/181176/10-nuetzliche-tipps-um-eigene-oer-materialien-zu-erstellen/			

Module/Topic/Duration		Learning Unit	Material	Assignment Attitude	Assignment Knowledge	Assignment Skills
			Planning Tool: https://tibhannover.gitlab.io/oer/oer-wizard/html/wizard-modal.html			
				A3: Appreciating the OER already out there. Willingness to share own material.	K3: Knowing how creating OER should be rolled out. Combine at least two images from different sources.	S3: Selecting tools and guide lines that help to create own OER
					K4: When should I mix existing OER and when does it make sense to create my own? Knowing when to use which licence.	S4: Creating own OER.

4. Validation

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

4.1. 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.

4.2. 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

Co-funded by the Erasmus+ Programme of the European Union

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.

4.3. 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.

4.4. LEVEL5 Taxonomy

The REVEAL group has developed its own taxonomy (LEVEL5) based on the post-Bloom taxonomy in a blend with a derivate 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, *Strategic Knowledge*	**Transfering** Developing/ Constructing *Versatility*	**Incorporation** (Internalising) *„Unconscious" Competence*
4	**Know when...** Practical (Procedural knowledge	**Discovering/** acting independently (disturbed systems)	**Commitment** *Affective self-regulation (Willing)*
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.

4.5. 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.

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

<u>Professional Formal Qualification:</u>

- Purpose: 'profiling', identifying levels of competences and measuring 'performances'
- Means: -> summative assessments and high level of formality, certification

<u>Personal development:</u>

- Purpose: incentive for civic engagement, showing potentials of learners
- Means:-> identification, formative assessment and low level of formality

Between those two poles there are many different scenarios ready and waiting for competence validation:

- Continuing professional education
- Learning in leisure time (maybe even without a learning goal)
- Training on social/personal competences like teamwork, communication, customer orientation etc.,
- Orientation projects for people in uncertain situations,
- Mobility projects for ERASMUS students (or other target groups)
- Self-learning arrangements, to give evidence to competences acquired in rather informal learning contexts, e.g. in volunteering projects

… just to name a few.

In PITCH 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 (represented via ECTS (time related credit points) and maybe even ECVET (learning outcome driven) 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.

5. The PITCH Continuing Professional Development Programme (CPD)

The PITCH CPD (Qualification) for higher education personnel and for facilitators within companies is a further education offer to promote competence development relating to entrepreneurship and intrapreneurship (involving creativity and innovation).

Target groups are educational experts at colleges and universities as well as experts who plan and implement, develop and design informal and non-formal learning or work in more informal learning environments, but also professionals from other educational sectors.

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.

5.1. Competences to be acquired in the Programme

The PITCH competence inventory gives an overview of 23 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 PITCH Competence; Facilitating Design Based Collaborative Learning	
1	**A**	Comprising all planning and delivery competences listed below, to be used to create: • learning fields (in projects for facilitators) • validation designs (competence oriented assessments)	
	B	**Field-Competence**	
2		Spotting Ideas and Opportunities Entrepreneurship Competence (as general concept which can be applied in a potential Entrepreneurial practice project)	
	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

5.2. Transfer to the 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 EQF terms) will end up at the research level.

Hence the scope of development will reach from EQF level 4 to a maximum of EQF level 6 which would bridge 3 levels and correspond to LEVEL5 ("learning") level from level 2-5.

EQF level7 would be similar to master which would require a master thesis, which is not foreseen in the CPD.

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

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

	Knowledge[12]	Skills[13]	Competences[14]
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 EQF taxonomy.

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

A qualification range of EQF 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

[12] In the context of EQF, knowledge is described as theoretical and/or factual.
[13] 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).
[14] In the context of EQF, competence is described in terms of responsibility and autonomy.

5.4. 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**[15] **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.
CD[16]	Ability to apply knowledge in known contexts (e.g. in protected case studies without disturbances)		
LO[17]	Knowledge on different learners needs Knowledge on Programme development	Assessing and evaluating learners needs Designing learning programmes accordingly	Appreciating and valuing learners needs analysis Positive attitude towards known programme development

[15] Corresponding LEVEL5 level
[16] Common Denominator: Central, transferrable level descriptor fitting both EQF and LEVEL5
[17] Learning Outcome Description

	Theoretical knowledge on learning process design Broad Theoretical knowledge on learning methods, approaches techniques Theoretical knowledge on Open learning environments	Designing the Learning process accordingly Applying known learning methods, approaches and techniques from the own repertoire Using known tools and instruments for Open learning environments (known OER)	Appreciating and valuing known learning process design Openness and positive attitude towards known learning methods, approaches techniques and Open learning environments
Ass[18]	• Self/Tandem assessment with the LEVEL5 grid • Questionnaires • Knowledge tests or reports • Participants' feed-back	• Self/Tandem assessment with the LEVEL5 grid • Learning diary • Observations in the learning situation	• Self/Tandem assessment with the LEVEL5 grid • Learning diary • Observations in the learning situation • Observing level of autonomy and responsibility

[18] Possible assessment methods

5.5. 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**[19] **4**	LEVEL5->Level3 / "Theoretical Knowledge – know how" To have a very brought theoretical *and practical* 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->Level3 / "Deciding/Selecting" 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->Level3 / "Appreciation" 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
CD[20]	Ability to apply knowledge in unknown (disturbed) contexts (e.g. in direct contact with learners in reality)		
LO[21]	• Knowledge on how to combine and to transfer • innovative assessment methods into new contexts • new programme design components for a consistent	• To develop and transfer new methods to assess and evaluate learners needs • Designing learning programmes with unknown elements. To innovate learning programmes	• Targets/Level descriptors • To feel the need transfer LCP in new situations and to help other personal to apply: • learners needs analysis

[19] Corresponding LEVEL5 level
[20] Common Denominator: Central, transferrable level descriptor fitting both EQF and LEVEL5
[21] Learning Outcome Description

	programme in an unknown situation • innovative appropriate learning process design in an unknown situation • innovative (unknown) instruments and approaches of LCP into new contexts • open learning environments fit appropriately to specific learning contexts, target groups and aspired competences	• To innovate learning processes, to transfer this in other contexts, to help others to apply it • 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)	• on programme development • Learning process design • methods, approaches techniques • Open learning environments
Ass[22]	• Self/Tandem assessment with the LEVEL5 grid • Participants' feed-back	• Essay • Learning diary • Observations in the learning situation	• Observing during discussions and self-reflections

[22] Possible assessment methods

5.6. 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[23] **5**	LEVEL5->Level5: Transfer Knowledge To have a very brought theoretical *and practical* 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
CD[24]	Ability to transfer competences in a versatile way to new contexts (e.g. to other cultural heritage domains)		
LO[25]	• Knowledge on how to combine and to transfer • innovative assessment methods into new contexts	• To develop and transfer new methods to assess and evaluate learners needs • Designing learning programmes with unknown elements. To	• To feel the need transfer in new situations and to help other personal to apply: • learners needs analysis

[23] Corresponding LEVEL5 level
[24] Common Denominator: Central, transferrable level descriptor fitting both EQF and LEVEL5
[25] Learning Outcome Desription

	• new programme design components for a consistent programme in an unknown situation • 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	innovate learning programmes • To innovate learning processes, to transfer this in other contexts, to help others to apply it • Developing new methods, ap-proaches and techniques (which were not even available in other repertoires) Integrating those innovative tools and elements in new Open learn-ing environments (known OER)	• on programme development • Learning process design • methods, approaches techniques • Open learning environments

6. ANNEX 1:

6.1. PITCH - Didactic pattern template

Please describe the learning project on entrepreneurship, creativity and innovation that you developed and delivered during the PITCH project along the following pattern.

- **Summary**

Please give a short summary of your project topic, the background of the project (why did you choose it), the objectives (what should be done and what were the students supposed to learn), and the final results.

- **Target group**

Please give a short description of your target group: age, what kind of educational background, study subjects, …

- **Themes (content area)**

Please list the themes/content areas that you worked on with your students.

- **Learning objectives**
  - **Knowledge:**
    - *Please describe the knowledge that students are supposed to acquire during the project.*
  - **Skills:**
    - *Please describe the skills that students are supposed to acquire during the project.*
  - **Attitudes:**
    - *Please describe which attitudes students are supposed to develop during the project.*

- **Methods/Activities**

Which teaching methods did you use? Which activities did you carry out with your students?

- **ECTS credits**

Indicate the ECTS equivalent points (in terms of effort) for the activities envisaged in the learning pathway

- **Resources and materials**

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

6.2. Learning pathway Grid

Please describe the learning pathway of your learning programme. Learning pathways are sequences of learning steps or learning units. To fill in the table you need to break down your learning project in chronological steps/units.

6.3. Describe your learning pathway

Step No.	Title	Content	Learning objective	Method/ Activity	Media	Unit Time	Competence column Please indicate if the unit targets knowledge, skills or attitudes and if the difficulty is rather easy, medium or hard.
1	Intro video on entrepreneurship		To become curious in the theme	Watching video and discussion	film	30min	
2	Discussion on the number of entrepreneurs in different countries	Statistics on Impact of E. to the societies	To understand the economic impact of E. To understand the necessity of a culture of E.	Reading Discussion in the group	Statistic data	45	
3	##	##	##	##	##	##	##
n	Plan	##	##	##	##	##	##