# Qualifications

# Assessment

Frameworks and Indicators

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# Introduction

The assessment framework was proposed to ensure that the learning outcomes, targets and activities are met. In our opinion the Qualifications Assessment Frameworks and Indicators provides way to ensure high quality and number of benchmarks are established to promote comparability of performance across the regions. To achieve this, the document consist of a common assessment and progress tracking framework which include indicators of success and thresholds to evaluate attainment. The proposed framework is based on the European Entrepreneurship Competence Framework (EntreComp).

According to EntreComp website The European Commission has developed EntreComp as a reference framework to explain what is meant by an entrepreneurial mindset. EntreComp offers a comprehensive description of the knowledge, skills and attitudes that people need to be entrepreneurial and create financial, cultural or social value for others.

# EntreComp: The Entrepreneurship Competence Framework

Several research activities ware carried on to analyse and measure the impact of entrepreneurship education on the entrepreneurial skills and intentions of students (according to Fiore et al., 2019):

• GUESSS (Sieger et al. 2016),

• National Survey of Entrepreneurship Education (Solomon 2007),

• Entrepreneurship Education Project—EPP (Vanevenhoven and Liguori 2013),

• Entrepreneurship Competence Framework—EntreComp (Bacigalupo et al. 2016),

• Assessment Tools and indicators for entrepreneurship Education—ASTE (Moberg et al. 2014),

• Innovation Cluster for Entrepreneurship Education—ICEE (Johansen 2018),

• Framework for Innovation and Entrepreneurship Support in Open Higher Education—INNOENTRE (Kyrgidou et al. 2016)


We decided to stick with EntreComp because is universal and is accepted on the EU level (McCallum, Weicht, 2018). According to (Bacigalupo et al. 2016) EntreComp defines entrepreneurship as a transversal competence, which applies to all spheres of life: from nurturing personal development, to actively participating in society, to (re)entering the job market as an employee or as a self-employed person, and also to starting up ventures (cultural, social or commercial). The EntreComp was developed to achieve a number of goals: mobilise interest in entrepreneurship and inspire action, create value by adapting the framework to specific contexts, appraise & assess levels of entrepreneurship competence, implement entrepreneurial ideas and projects; recognise entrepreneurship skills.
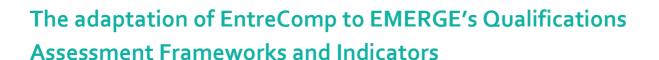

At its very simplest level, EntreComp is made up of 3 competence areas: Ideas & Opportunities, Resources, and Into Action. Each area contains 5 competences, and together these make up the 15 competences that individuals use to discover and act upon opportunities and ideas (see table 1).

Table 1: Detailed explanation of the 3 competence areas and 15 competences of the EntreComp (based on (McCallum, Weicht, 2018))

| Area | Competences | Description |
|---|---|---|
| IDEAS AND OPPORTUNITIES | Spotting opportunities | - Identify and seize opportunities to create value by exploring the social, cultural and economic landscape<br>- Identify needs and challenges that need to be met<br>- Establish new connections and bring together scattered elements of the landscape to create opportunities to create value |
| | Creativity | - Develop several ideas and opportunities to create value, including better solutions to existing and new challenges<br>- Explore and experiment with innovative approaches<br>- Combine knowledge and resources to achieve valuable effects |
| | Vision | - Imagine the future<br>- Develop a vision to turn ideas into action<br>- Visualise future scenarios to help guide effort and action |
| | Valuing ideas | - Judge what value is in social, cultural and economic terms<br>- Recognise the potential an idea has for creating value |

| | | and identify suitable ways of making the most out of it |
|---|---|---|
| | Ethical and sustainable thinking | - Assess the consequences of ideas that bring value and the effect of entrepreneurial action on the target community, the market, society and the environment<br>- Reflect on h w sustainable long-term social, cultural and economic goals are, and the course of action chosen<br>- Act responsibly |
| RESOURCES | Self-awareness and self-efficacy | - Reflect on your needs, aspirations and wants in the short medium and long term<br>- Identify and assess your individual and group strengths and weaknesses<br>- Believe in your ability to influence the course of events despite uncertainty, setbacks and temporary failures |
| | Motivation and perseverance | - Be determined to turn ideas into action and satisfy your need to achieve<br>- Be prepared to be patient and keep trying to achieve your long-term individual or group aims<br>- Be resilient under pressure, adversity, and temporary failure |
| | Mobilising resources | - Get and manage the material, non-material and digital resources needed to turn ideas into action<br>- Make the most of limited resources<br>- Get and manage the competences needed at any stage, including technical, legal, tax and digital competences |
| | Financial and economic literacy | - Estimate the cost of turning an idea into a value-creating activity<br>- Plan, put in place and evaluate financial decisions ver time<br>- Manage financing to ma e sure your value-creating activity can last over the long term |
| | Mobilising others | - Inspire and enthuse relevant stakeholders<br>- Get the support needed to achieve valuable outcomes<br>- Demonstrate effective communication, persuasion, negotiation and leadership |
| INTO ACTION | Taking the initiative | - Initiate processes that create value<br>- Take up challenges<br>- Act and work independently to achieve goals, stick to intentions and carry out planned tasks |
| | Planning and management | - Set long-, medium- and short-term goals<br>- Define priorities and action plan<br>- Adapt to unforeseen changes |
| | Coping with uncertainty, ambiguity and risk | - Make decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes<br>- Within the value-creating process, include structured ways of testing ideas and prototypes from the early stages, to reduce risks of failing<br>- Handle fast-moving situations promptly and flexibl |
| | Working with others | - Work together and co-operate with others to develop ideas and turn them into action |

|  |  | - Network<br>- Solve conflicts and face up to competition positively when necessary |
| --- | --- | --- |
|  | Learning through experience | - Use any initiative for value creation as a learning opportunity<br>- Learn with others, including peers and mentors<br>- Reflect and learn from both success and failure (your wn and other people's) |

# The adaptation of EntreComp to EMERGE's Qualifications Assessment Frameworks and Indicators

The EMERGE's resources are divided into following parts:

1. Engineering Entrepreneurship, where are the women?
2. Validating and incubating Engineering ideas - ultimate test of viability
3. Accelerating Engineering Startups, getting your business model right
4. Investor ready business planning
5. Self-confidence, assertiveness and risk-taking
6. Networking and access to relevant technical, scientific and general business networks
7. Funding issues for female entrepreneurs in engineering, tacking gender bias and attracting investment (specific focus on finance available, especially on venture capital).

The presented material acquaints the person with various aspects of entrepreneurship. Generally speaking Entrepreneurship is a competence which is developed through action by individuals or collective entities to create value for others. Entrepreneurship develops over time due to two aspects:

1. Developing increasing autonomy and responsibility in acting upon ideas and opportunities to create value;
2. Developing the capacity to generate value from simple and predictable contexts up to complex, constantly changing environments.

Our idea is to recognize the progression of Entrepreneurship competence by EMERGE's project participant. The EntreComp Progression Model (Table 2) provides a reference for the development of indicators for EMERGE's qualifications assessment. We assume that at Foundation level, entrepreneurial value is created with external support, and entrepreneurial value is created with increasing autonomy at Intermediate level. At Advanced level, responsibility to transform ideas into action is developed.

Table 2: EntreComp Progression model

| Area | Competences | At Foundation Level | At Intermediate Level | At Advanced Level |
|---|---|---|---|---|
| IDEAS AND OPPORTUNITIES | Spotting opportunities | Learners can find opportunities to generate value for others. | Learners can recognise opportunities to address needs that have not been met. | Learners can seize and shape opportunities to respond to challenges and create value for others. |
| | Creativity | Learners can | Learners can | Learners can |

| | | develop multiple ideas that create value for others. | test and refine ideas that create value for others. | transform ideas into solutions that create value for others. |
|---|---|---|---|---|
| | Vision | Learners can imagine a desirable future. | Learners can build an inspiring vision that engages others. | Learners can use their vision to guide strategic decision-making. |
| | Valuing ideas | Learners can understand and appreciate the value of ideas. | Learners understand that ideas can have different types of value, which can be used in different ways. | Learners can develop strategies to make the most of the value generated by ideas. |
| | Ethical and sustainable thinking | Learners can recognise the impact of their choices and behaviours, both within the community and the environment. | Learners are driven by ethics and sustainability when making decisions. | Learners act to make sure that their ethical and sustainability goals are met. |
| RESOURCES | Self-awareness and self-efficacy | Learners trust their own ability to generate value for others. | Learners can make the most of their strengths and weaknesses. | Learners can compensate for their weaknesses by teaming up with others and by further developing their strengths. |
| | Motivation and perseverance | Learners want to follow their passion and | Learners are willing to put effort and resources | Learners can stay focused on their passion and |

|  |  | create value for others. | into following their passion and create value for others. | keep creating value despite setbacks. |
|---|---|---|---|---|
|  | Mobilising resources | Learners can find and use resources responsibly. | Learners can gather and manage different types of resources to create value for others. | Learners can define strategies to mobilise the resources they need to generate value for others. |
|  | Financial and economic literacy | Learners can draw up the budget for a simple activity. | Learners can find funding options and manage a budget for their value-creating activity. | Learners can make a plan for the financial sustainability of a value-creating activity. |
|  | Mobilising others | Learners can communicate their ideas clearly and with enthusiasm. | Learners can persuade, involve and inspire others in value-creating activities. | Learners can inspire others and get them on board for value-creating activities. |
| INTO ACTION | Taking the initiative | Learners are willing to have a go at solving problems that affect their communities. | Learners can initiate value-creating activities. | Learners can look for opportunities to take the initiative to add or create value. |
|  | Planning and management | Learners can define the goals for a simple value-creating activity. | Learners can create an action plan, which identifies the priorities and milestones for the achievement | Learners can refine priorities and plans to adjust to changing circumstances. |

| | | | of their goals. | |
|---|---|---|---|---|
| | Coping with uncertainty, ambiguity and risk | Learners are not afraid of making mistakes while trying new things. | Learners can evaluate the benefits and risks of alternative options and make choices that reflect their preferences. | Learners can weigh-up risks and make decisions despite uncertainty and ambiguity. |
| | Working with others | Learners can work in a team to create value. | Learners can work together with a wide range of individuals and groups to create value. | Learners can build a team and networks based on the needs of their value-creating activity. |
| | Learning through experience | Learners can recognise what they have learnt by taking part in value-creating activities. | Learners can reflect and judge their achievements and failures, and learn from these. | Learners can improve their abilities to create value by building on their previous experiences and interactions with others. |

We decided to use EntreComp Progression model because is generic enough to be implemented into different European regions and EMEREG's participants profile.

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