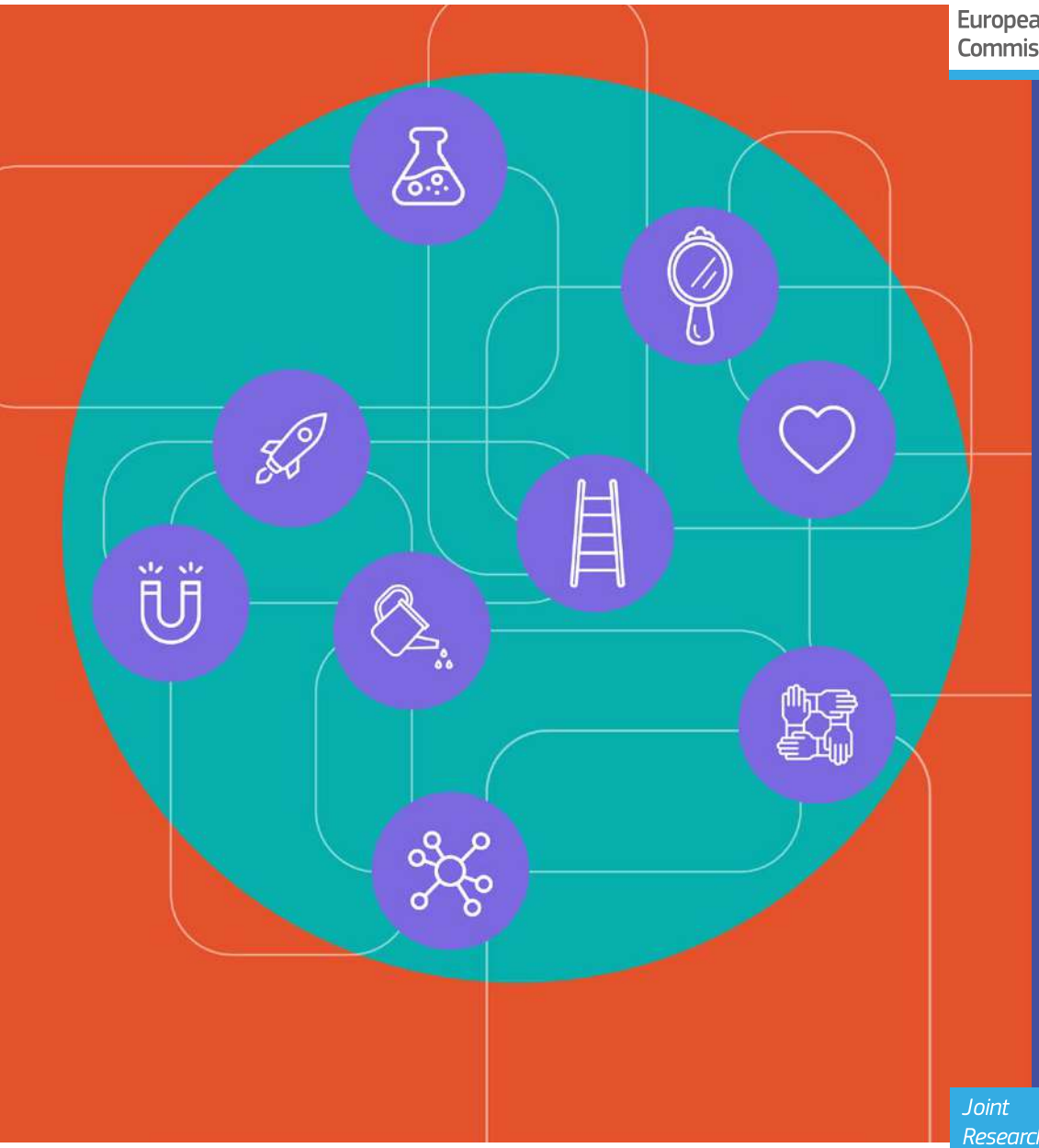

European Commission

EntreComp playbook

Entrepreneurial learning beyond the classroom

Joint Research Centre

EUR 30245 EN

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Authors: Margherita Bacigalupo, Lilian Weikert García, Yashar Mansoori, William O'Keeffe

Contact information

Yves Punie (European Commission, Joint Research Centre)

Yves.Punie@ec.europa.eu

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Title: *EntreComp Playbook. Entrepreneurial learning beyond the classroom*.

Abstract: This playbook targets learning facilitators who operate outside the formal education system. It provides readers with a selection of orientation tools for them to experiment and create their own map to entrepreneurial teaching and learning.



Margherita Bacigalupo
Lilian Weikert García
Yashar Mansoori
William O'Keeffe

EntreComp playbook

Entrepreneurial learning beyond the classroom

Joint Research Centre

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Your own index

As will soon become clear, this playbook is not a manual of instructions to be followed from A to Z. It is rather a toolkit for entrepreneurial learning facilitators to design interventions. By going through it, there will be ideas that appeal to you more than others. Choose and create your own index of principles, methods and tools. Choose your beacons to explore the entrepreneurial learning territory.

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Welcome

These two reports, *EntreComp at Work: The European Entrepreneurship Competence Framework in action in the labour market* and *The EntreComp Playbook* with practical guidance for labour market intermediaries are a new chapter in the success story of EntreComp.

Their publication comes at a time when the European economy, labour market and workforce are faced with unprecedented challenges. It has never been clearer that we require resilience, initiative and collaboration skills to respond and EntreComp can offer inspiration and lessons to build entrepreneurial mindsets across the EU.

The 10 case studies in the *EntreComp at work* report highlight the diversity of ways in which EntreComp can be used, including workforce development, design of training, support for start-ups, and design of personal development plans.

The *EntreComp Playbook* is an innovative collection of practices, tools and examples of how to activate EntreComp in the workplace. The 9 principles of EntreComp set out in the playbook have the potential to become a new methodology for building entrepreneurial skills – and can be applied equally by an individual planning their career or at system level to support an entire workforce.

Our hope is that these new publications serve as a call to action for greater uptake of EntreComp and delivering on the goals of the European Skills Agenda.

I wish to give special thanks to those organisations - Bantani Education together with Matera Hub, Espacio RES, the EU3Leader Consortium, Consorcio Fernando de los Ríos and its programme Guadalinfo, Mygrants, the SFEDI Group with SFEDI Awards, SFEDI Solutions and the IOEE, Social Innovators KG, Startup Support South Africa, the Women's Organisation and the Youth@Work Partnership - that gave such rich and inspiring information on their case studies. I also take the opportunity to welcome the diverse projects and commitment by the EntreComp community who have used EntreComp in the third sector, for social innovation and start-ups, and to support underrepresented and disadvantaged groups.

Thanks also to the team in the European Commission's Joint Research Centre for their work in creating this report as well as their ongoing commitment to the implementation and development of EntreComp.

Alison Crabb

Head of Unit, Skills and Qualifications

DG Employment, Social Affairs and Inclusion

"... in a world dominated by uncertainty and complex problems, established routes and maps are limited and limiting instruments. What we really need are people capable of creating their own maps. And the creation of maps requires an experimental pedagogical model."

Juan Freire

Introduction

Embracing the European Entrepreneurship Competence framework (EntreComp) means believing that everyone can learn to become more entrepreneurial.

It also means believing that – by becoming more entrepreneurial – learners, employees, civil servants, managers, third sector leaders or business owners can create greater value for others.

Embracing the European Entrepreneurship Competence framework (EntreComp) means believing that everyone can learn to become more entrepreneurial. It also means believing that – by becoming more entrepreneurial – learners, employees, civil servants, managers, third sector leaders or business owners can create greater value for others.

It means believing that entrepreneurship is not only about creating successful businesses, rather it is a competence that allows us to improve the environment we live in, by tackling old and new problems, addressing unmet needs and having the ambition to tackle well-known and emerging challenges, such as achieving a carbon neutral economy, eradicating poverty or cleaning plastic from the oceans. EntreComp is a tool for anyone who wants to help others develop their potential to make a positive impact whatever they do, as entrepreneurs, active citizens, and employees in the public, private or third sector. It describes entrepreneurship as a broad set of competences that can be applied in different contexts to create value for others. EntreComp is a descriptive framework, which does not prescribe how such competences are to be taught or learnt. Since its publication, EntreComp has been taken up widely; more than 70 use cases have been compiled in the *EntreComp into Action*[i] guide and an additional ten in the *EntreComp at Work*[ii] report. Further research has highlighted some of the challenges faced by players in the world of entrepreneurial learning and some of the methods and tools they use to overcome the difficulties they find in setting up practical entrepreneurial experiences.

i McCallum E., Weicht R., McMullan L., Price A.,(2018) EntreComp into Action: get inspired, make it happen (M. Bacigalupo & W. O'Keeffe Eds.), Luxembourg: Publication Office of the European Union; EUR 29105 EN: doi:10.2760/574864, https://europa.eu/!fb73BK

ii McCallum, E., McMullan, L., Weicht, R. and Kluzer, S. EntreComp at Work. (2020) The European Entrepreneurship Competence Framework in action in the labour market: a selection of case studies. (M. Bacigalupo Ed.), Luxembourg: Publication Office of the European Union; 30228 EN, doi: 10.2760/673856

EntreComp

EntreComp is a flexible reference framework that defines what is meant by entrepreneurship as a key competence for lifelong learning. The framework is comprehensive and multi-purpose, for use in expanding the entrepreneurial capacity of European citizens and organisations.

Published in 2016, EntreComp creates a shared understanding of the knowledge, skills and attitudes that make up what it means to be entrepreneurial in all spheres of life.

It starts with a definition that "entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value created can be social, cultural, or financial". Such definition implies that entrepreneurship is both an individual and collective capacity. It also suggests that entrepreneurship is a competence for life, which is equally relevant for active citizenship, civic engagement, career progression or to start something new and of value for others, in the private, public or third sector.

EntreComp identifies 3 areas and 15 competences that are represented in the image in **FIGURE 1**.

The EntreComp wheel offers an overview of the different yet interconnected competences that individuals, teams and organisations use to discover and act upon opportunities and ideas.

EntreComp is not prescriptive. The 15 competences are of equal importance, there is no single core competence, nor foundational competences and ancillary ones. There is no required sequence in the acquisition process, nor a hierarchy to the competences. The context of use determines which competences are more relevant. EntreComp should be adapted to mirror a particular entrepreneurial learning process or experience, remov-

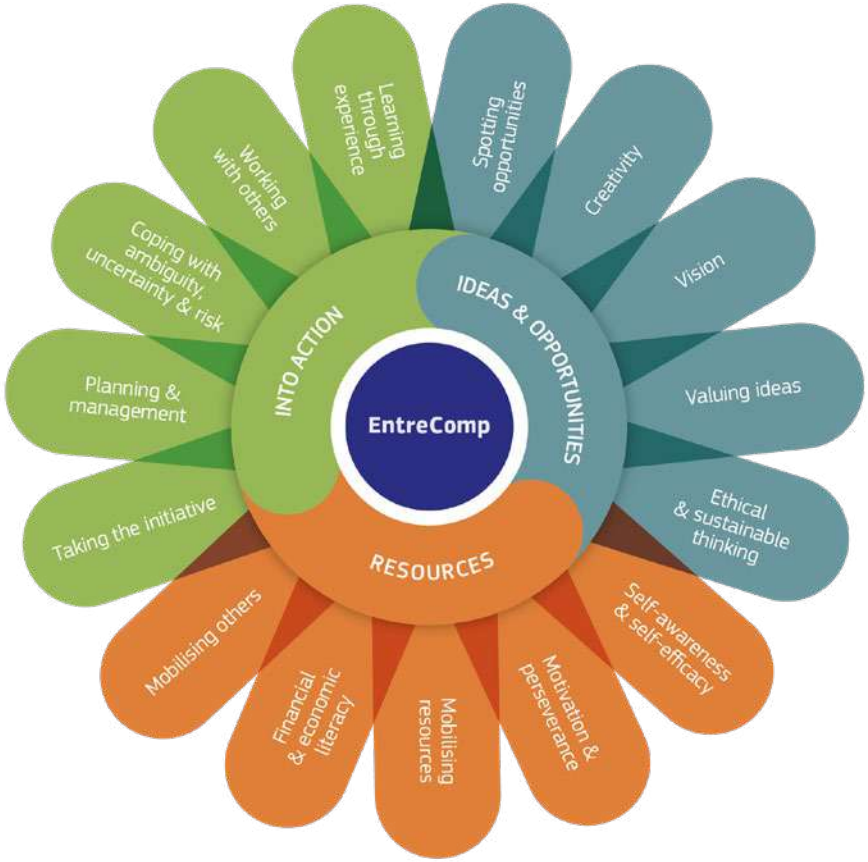


FIGURE 1: EntreComp areas and Competences

ing competences that are not priorities and emphasising those that are critical to the intended goal.

The EntreComp wheel can be seen as a simple starting point for understanding and interpreting what is meant by the entrepreneurship competence. The framework unfolds the wheel to define each competence into thematic threads that describe what the particular competence really means in practical terms.

Each thread, in turn, unfolds into learning outcomes across 8 progression levels, from foundation to intermediate, advanced and expert levels. Learning outcomes statements help appraise the different starting points of learners, to assess learning over time, or design an entrepreneurship education pathway.

EntreComp states that entrepreneurship is a key competence for lifelong learning, and describes the competence in detail. However, it does not say how this competence can be nurtured or developed.

Since 2016, many lessons have been accrued from the practical application of EntreComp] in the EU and internationally.

Practice forms the spine of this publication.

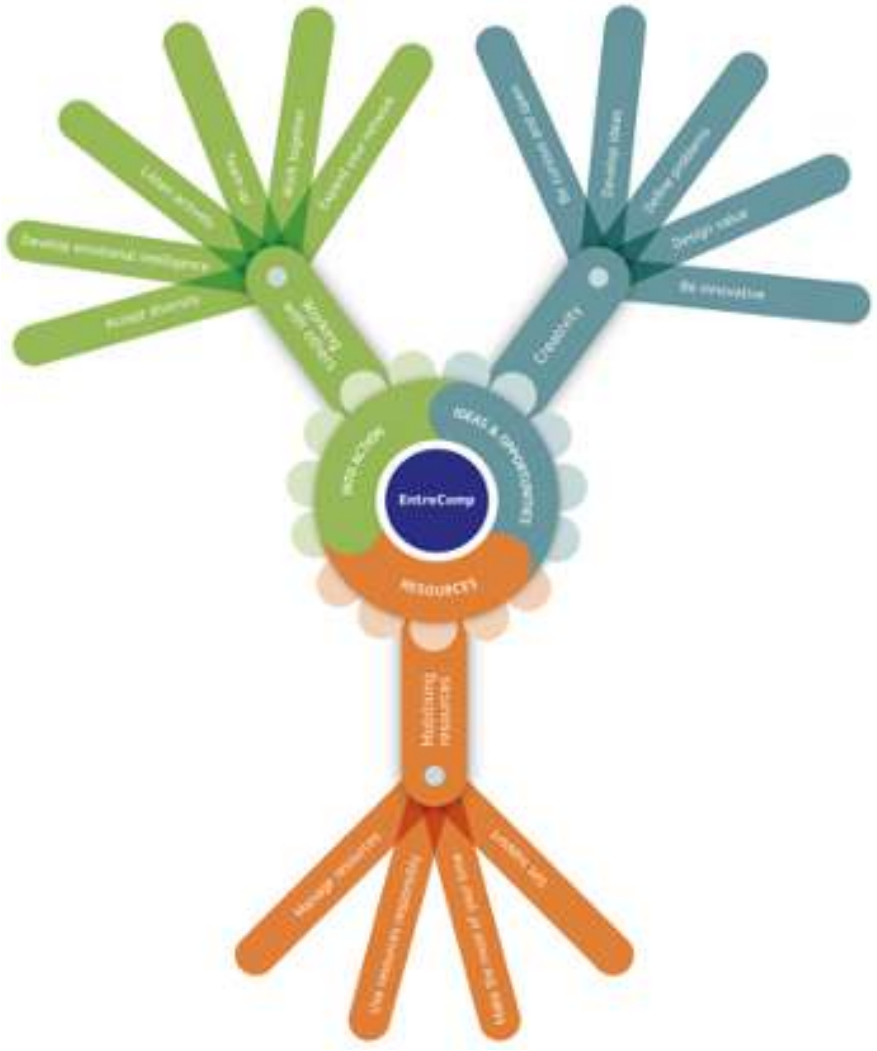


FIGURE 2: Three EntreComp Competences unfolded into threads

This playbook

This playbook targets primarily learning facilitators, including trainers, employers, and employment services, that support the needs of adults. The playbook can be applied in many settings: developing entrepreneurial competences in adults to increase their employability, up-skilling to face the changing needs of the labour market, career progression, supporting actors of change, as well as business start-ups within or outside existing ventures. The playbook can be used by the private, the public and the third sector alike. It aims to help non-formal learning facilitators, who operate outside the formal education system, design and facilitate entrepreneurial learning activities in meaningful ways.

No two entrepreneurial learning activities will be alike, nor can an algorithm be scripted to produce the perfect intervention. Even when a format is defined, each learning group, each context bears its own circumstances and a facilitator will have to adapt and make the most of such circumstances. This playbook therefore is not a process guide; it rather provides readers with a selection of orientation tools for them to experiment and create their own map to entrepreneurial teaching and learning.

The playbook sets out nine principles that any entrepreneurial learning facilitator should consider when designing entrepreneurial teaching and learning.

The playbook also describes three popular entrepreneurial methods and three pedagogical methods that can be adapted to foster entrepreneurial learning.

The entrepreneurial methods give explicit guidance to practitioners to create value for others. They establish a logic that structures thought and action, by prescribing steps and offering tools to be used at each stage of the entrepreneurial process. The methods are based in both research and theory as well as in the practices of real-life entrepreneurs.

The pedagogical methods, alike, aim to guide teachers and trainers to cultivate EntreComp competences including perseverance, resilience, self-efficacy, creativity, teamwork and sensitivity to ethical and sustainability consequences of actions. They all aim at fostering learning through experience, by offering learners something to act upon, such as a problem or a challenge. They rely on questioning and inquiry and promote a growth mindset.

The list of methods is not exhaustive or comprehensive, but offers the readers a range of alternative approaches to explore, combine and experiment. Each of the methods can be adapted with the 9 principles to help structure practical value creation experiences for learners to become more entrepreneurial.

The final section of this playbook lists resources, templates and tools to help learning facilitators design “situated” learning activities to help learners to become more entrepreneurial.

The playbook is intended as a learning exercise itself for those that have little or no experience in designing practical entrepreneurial experience. The playbook is built on the experiments, perseverance and lessons learned by users of EntreComp.

The 9 EntreComp principles

This section presents nine inspirational principles that will guide any facilitator in the process of designing, implementing and monitoring an entrepreneurial learning experience. Such principles help in setting the right mindset for creating practical entrepreneurial experiences that allow learners to stage and grow their entrepreneurial competences.

Experience

Plan the entrepreneurial learning experience

Entrepreneurship is the individual and collective capacity to act upon opportunities and ideas to generate value for oneself and others. The value that is generated through entrepreneurial action can be of any type. It can be cultural, social, emotional, environmental or economic. Entrepreneurial action can lead to venture creation, to public sector innovation, or to start a grass-root action to foster societal change.

Entrepreneurship thus is action oriented, and entrepreneurial learning must be based on practical entrepreneurial experience. Developing entrepreneurship as a competence is much more than learning about entrepreneurship and is premised on the power of learning by creating value. EntreComp indicates that any value creation initiative is a learning opportunity, and learning through experience is one of the competences that make us entrepreneurial.

When designing an entrepreneurial learning activity, then, a key element is to create a frame for action, establishing the right climate for experimentation, for flexible adaptation, and creating opportunities to fail, reflect and recover. Whenever possible this should be done in a real world setting.

Ensuring that the process has numerous iterations is a great way to guarantee that one learns through experience, by testing ideas, and progressively refine assumptions based on what works and what does not.



Novelty

Focus on new value creation

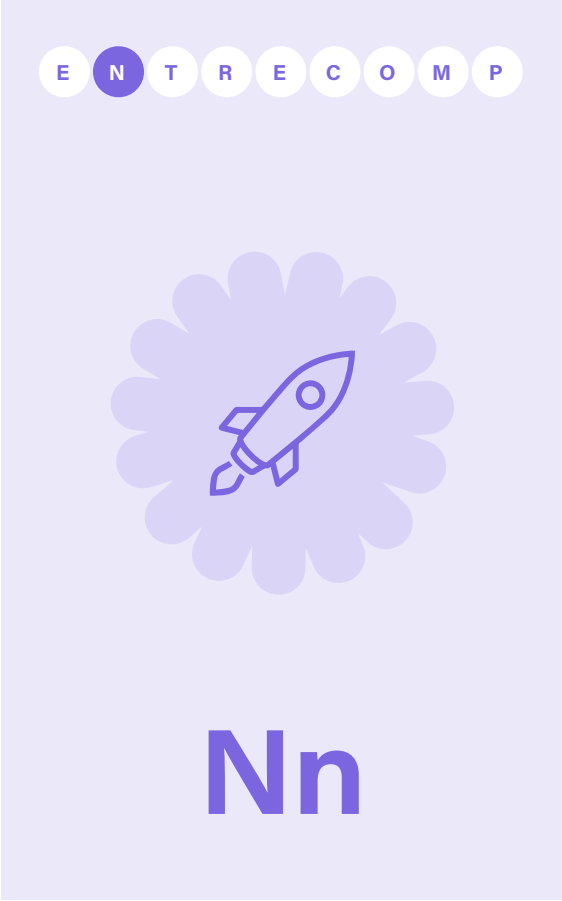
Entrepreneurial learning always starts from a problem for which the solution is not yet known. What is more, the problem at stake is often ill-defined and permanently shifting.

Creating new value is often the ultimate goal of an entrepreneurial process. In turn, learning to become entrepreneurial requires learners to explore ways to create new value. Importantly, novelty is a continuum that moves from new for the individual to new for the world. Entrepreneurial learning can happen by developing solutions that are new to the individual or the project team.

Generating new value for others is not a linear process, and should not be treated as such. It is an exploratory endeavour, which requires creativity, the capacity to cope with ambiguity, uncertainty and risk and to learn from experience, three of the EntreComp competences.

Rather than giving step-by-step instructions, or selecting the ideal mix of techniques for generating ideas, you – as a learning facilitator – need to think about novelty through a number of iteration cycles which can include: generating multiple purposeful ideas; testing ideas with the intended beneficiaries; discarding, combining, prototyping and further developing ideas.

You should also carefully plan how to create a learning setting that is conducive to generating new ideas, that promotes inquiries and sees setbacks and temporary failures as opportunities for learning.

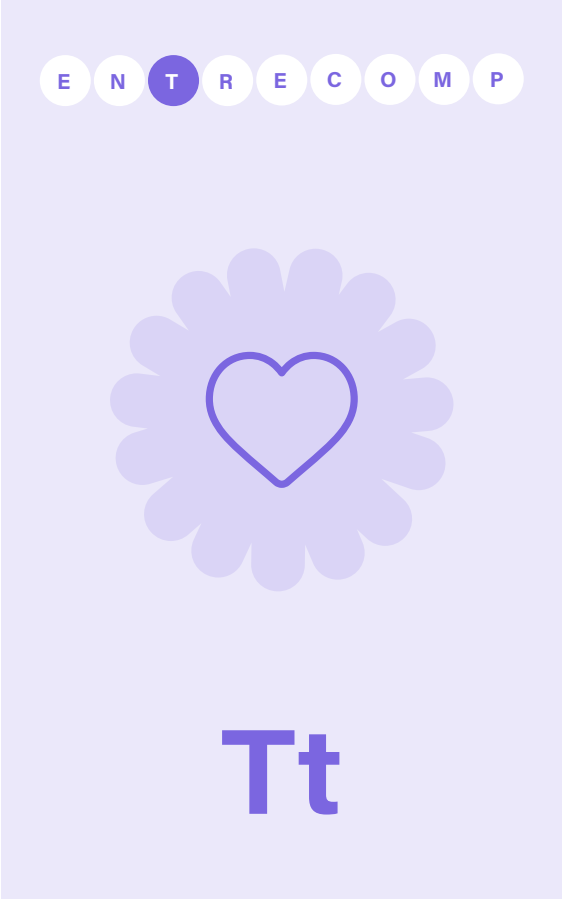


Triggers

Embed triggers for emotional learning

Emotions are always present in learning processes, especially in those designed to have learners collaborate to face ill-defined problems, unexpected flows of events, under time constraints. The experiential nature of entrepreneurial learning brings with it an emotional dimension, which can be leveraged. Evidence is growing that addressing the emotional side of learning pays off and can increase self-efficacy, entrepreneurial passion and build-up of entrepreneurial identity.

As an educator, you are invited to plan opportunities for learners to learn from events and processes that bear an emotional weight and expose them to coping with ambiguity, uncertainty and risk, one of EntreComp Competences. This can be done by setting challenging tasks, having learners leave the training room, go out and interact with their intended user groups, beneficiaries or customers, with supporters or possible detractors of their ideas, injecting uncertainty along the process, having learners work in teams, or exerting time pressure, for instance by moving deadlines forward.



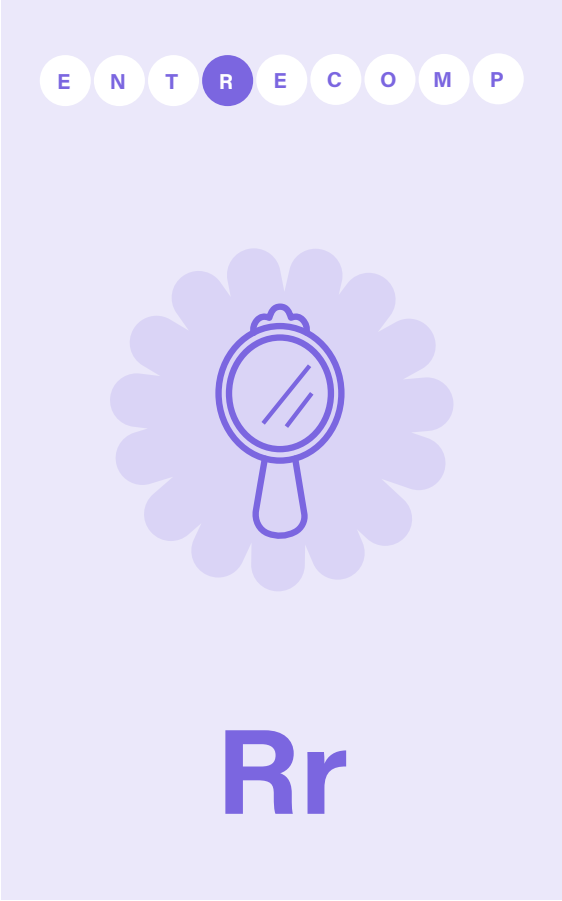
Reflection

Use reflection to make learning visible

Entrepreneurial learning is intrinsically experiential, but for learning to happen, we must reflect on the experience. Reflection allows us to learn, to refine assumptions and improve ideas at each step of a learning process. Reflection also allows us to extract general principles from each learning situation to apply to new situations, becoming the basis for further learning.

Reflection promotes meta-cognition, which is essentially the ability to understand one's own thought processes, including one's learning processes. Increased awareness of one's strengths and weaknesses, as learners, team members, creative thinkers, resilient agents, etc. helps in self-directed learning.

As an educator you can put emphasis on reflection, by embedding iterative cycles of discovery, ideation and testing in the process, but also by asking learners (individually or in groups) to reflect upon their learning experience. They can do it in writing or orally. When they perform such a self-reflection exercise, their learning outcomes become apparent, in turn contributing to increased self-efficacy, which is one of the EntreComp competences.



Ecosystem

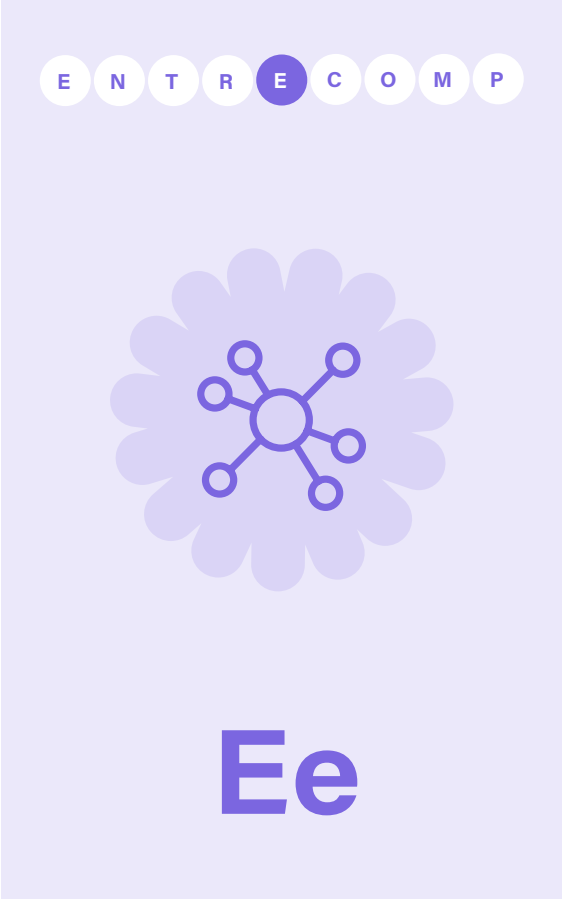
Connect with the wider ecosystem

Entrepreneurship is a social process embedded in a specific community. An entrepreneurial ecosystem is set of interdependent actors within one such community, that together – interdependently – make up the ground for productive entrepreneurship. They can be local businesses, non-governmental organisations or community associations. Such entities represent a source of real-life challenges, experiences and examples that can offer outstanding learning opportunities.

You can start by inviting representatives of the local ecosystem to present the challenges they struggle with to the learners, or have them create a brief for learners to develop a project.

Connecting the learning experience to the ecosystem provides a more insightful picture of the context, and it allows to identify the key players. These may help in turning ideas into action, in mobilising resources to turn ideas into action, including information, competences and expertise learners may lack. In addition, real experiences of failure help learners understand that failure is part of the learning and entrepreneurial process, and cultivate both their motivation and perseverance, which are part of the 15 EntreComp Competences.

By promoting learners' interaction with the external world, you promote that learning is situated in relation to others, in authentic settings, and that learners experience how to transfer their previous experience and knowledge to face up to new situations. Learning through experience is another of the 15 EntreComp competences that you can cover by following the ecosystem principle. By interacting with the local ecosystem learners become part of it. They may well start at the periphery of the ecosystem, but, as they learn and keep interacting, they increase their engagement and expertise moving towards the centre of the ecosystem itself and becoming progressively more autonomous in directing their own learning.



Collaboration

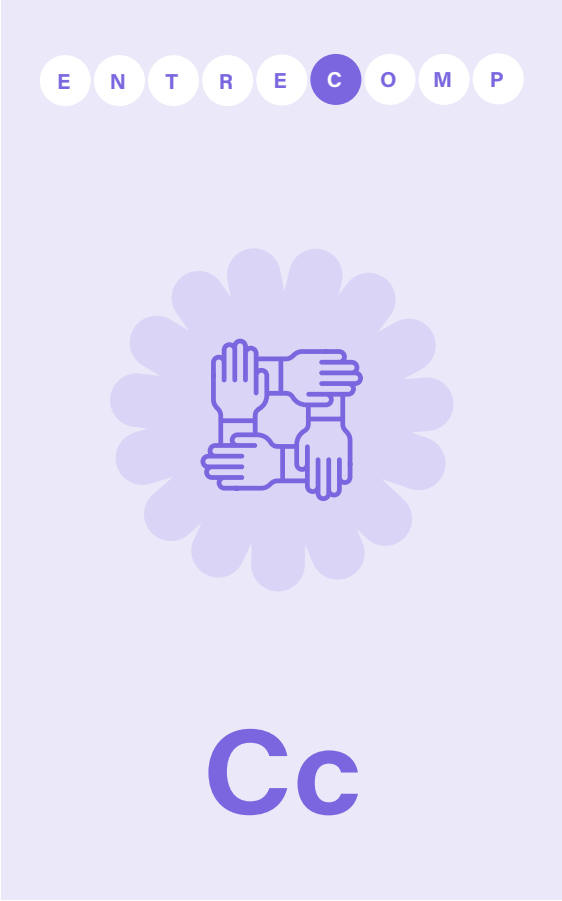
Promote collaboration

People very rarely work in isolation. In the case of entrepreneurial learning, this is especially so. Entrepreneurship is an individual and collective competence. The simple fact that to create value for others one has to interact with them and engage them in the process makes it a co-creation process.

Collaboration – the engagement in fruitful group activity and teamwork by learners in an entrepreneurial learning experience – can elicit and deploy a diversity of knowledge, skills and attitudes.

Working with others is actually an entrepreneurial competence of itself. It requires the capacity to acknowledge and respect others, to develop empathy and emotional intelligence so as to tune in with others, to listen actively and incorporate other people's input, to team up with others around a common goal, work in teams effectively as well as the capacity to expand one's network to increase impact.

Prompting learners with collaborative tasks therefore encourages them to develop one of the 15 competences defined in the EntreComp, while providing emotional triggers that can facilitate learning.



Others

Engage others

Entrepreneurial learning hinges upon value creation. Value creation pedagogy requires learners to apply their new or existing knowledge, skills and attitudes to create something of value to at least one external stakeholder outside their own group (class, course, functional unit in an organisation). The value that is created can be of any type: economic, social, cultural, including environmental or emotional.

To create something of value for someone else requires empathy, meaning one has to have the capacity to step in their shoes, to understand their problems, adopt their point of view and engage them in the value creation process. In EntreComp empathy is one of the learning outcomes that make up working with others, one of the 15 competences included in the framework.

When choosing a problem, or having learners choose a problem to address based on their own curiosity, drive and passion, it is fundamental that you guide them in engaging with others so as to adopt a new perspective and frame the problem in a novel way. Encourage them to interact closely with those expected to benefit from the value creation process to gather key information, to spot opportunities and gather feedback on ideas. Beneficiaries, users, customers can provide very useful insights at any stage of the process; they can be engaged to get feedback or to become co-designers, equal partners in the collective process of turning an idea into action.



Mentoring

Be a mentor for the learner

As an entrepreneurial learning facilitator in adult learning, you need to go beyond arranging activities for your learners to acquire all the content prescribed in a curriculum or a syllabus. You are called to create opportunities for learners to independently develop their own learning, to become self-directed learners.

Rather than thinking about which tasks you have to plan for learners to achieve a set of learning outcomes, you are called to become a mentor and coach to your learners. You are expected to reduce their dependency on you as an educator, push them to draw upon their previous experience, assume new roles and learn from these immediately as they face new situations.

By acting as a mentor rather than an instructor, you contribute to the development of their self-efficacy, which in turn nourishes their capacity to cope with uncertain, ambiguous, and complex situations and self-direct their learning while creating value.

This is not an easy step to make, and if it seems daunting remember that there is no such thing as the perfect mentor. Each has to develop their approach, following learners' interests, passions and desires for value creation. You can start small, by opening your teaching to learner-led projects and progressively allow more freedom to your learners. The EntreComp progression model can help you in understanding how learners' autonomy develops.



Progression

Assess progress through multiple methods

Entrepreneurial learning is a complex phenomenon where each learner has a different experience, mediated by their own interests, aspirations, emotions and previous competence level. Further, entrepreneurial learning is situated in a social context, where interactions with others shape the learning process.

Assessing entrepreneurial learning is not an easy job. Assessing whether a learner has achieved what the entrepreneurial learning intervention was designed to obtain is possibly not even the job at hand. In entrepreneurial learning, there are no standardised tests to facilitate the ranking of a learner's performance. When learning is driven by learners' curiosity, rather than trying to establish fixed criteria to measure achievement, you, as a facilitator, can focus on observing how learners face the challenges of the entrepreneurial learning process and help them reflect on their performance.

Assessing how learners accomplish tasks is not the only way to assess progress. Reflective learning for instance builds on the individual or collective reflection of the learners and aims to foster self-directed learning and growth mindset. Peer assessment involves learners assessing one another, and contributes to their capacity to take on board valuable criticism from others as well as to provide constructive feedback to others.

To help learners progress in their entrepreneurial learning, you should be open to the unexpected, looking for answers/solutions that surprise you, rather than for answers that match pre-defined expectations. EntreComp learning outcomes statements will help you align the learning activity with (self-) assessment questions that guide you and the learner in assessment as learning, rather than in assessment of learning.



Methods

There is no one approach that can fit all needs. Lifelong learning embraces a broad spectrum of learning settings and contexts each with different characteristics. By starting from EntreComp, you commit to support your learners develop their entrepreneurial competence, you do not sign up for a specific way to do it. In this section, six methods are presented, three come from the entrepreneurial practice, three from the pedagogical one. There are many more in the literature. Each method has a different focus; however, each one can be used to foster entrepreneurial competences. By bearing in mind both the 15 competences described in EntreComp and the nine principles presented in the previous section, choose the method that best suits you.

1 Effectuation

Effectuation is rooted in the understanding of humans as creators of the future, resulting in the assumption that the future can be controlled and/or created through human action. Effectuation was initially introduced as a set of heuristics used by experienced entrepreneurs to develop new ventures. Effectuation is about **controlling the future rather than predicting it**. When it comes to the actions of entrepreneurs, this control or creation happens in a social process. Entrepreneurs focus on possible outcomes that can be created with the available means at their disposal. Committed stakeholders are essential to effectuation; continuous interaction with stakeholders is necessary to shape goals, combine or recombine resources, and create entrepreneurial artefacts, which can be new ideas, new firms, new organisations, new markets or new institutions.

Five principles form the backbone of effectuation:

1. Do not wait for the perfect opportunity. Mobilise the resources you have available and start by asking 'who you are, what you know, and whom you know?'
2. Entrepreneurship is an uncertain affair. Limit risk by estimating how much you can afford to lose.
3. Creating something new is rife with surprises. Embrace the surprise factor and adapt. Try to use it as a potential advantage.
4. To make an idea materialise is often a social effort. Reduce uncertainty by forming partnerships with people and organisations.
5. Not everything can be controlled. Focus on activities that are within your control rather than attempting to predict the unknown future.

WHAT CAN YOU DO WITH IT?

When it comes to fostering entrepreneurial learning, effectuation can be helpful as it allows for cycles of action and reflection, which lead to both improving the ideas and learning in the process. It posits that the entrepreneurial process is not a straight pathway to a clearly defined destination. It rather is a process of setting a direction and taking advantage of environmental contingencies as they arise, adapting and learning as things develop.

Moreover, it suggests that effectual learners shall leverage the resources they have at hand, their previous experience, their competences, their networks and expand from there, through iterative cycles. This allows them to learn in an experimental approach. Effectuators in addition plan for failure, guided by the principle of affordable losses, they progress in small steps they can control, while learning what works and what does not at every turn. Furthermore, effectuation promotes self-awareness and self-efficacy as it hinges on the idea that taking the initiative to turn an idea into action is essentially a process of shaping the future and controlling outcomes.

In sum, effectuation allows learners to work on all EntreComp competences, but it focuses in particular on the “Resources” and “Into action” areas of the framework.

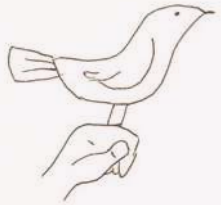
RESOURCES

Effectuation can be supported through a number of tools, such as means inventory, affordable loss assessment template, and effectual ask to uncover available resources. These tools can aid in the assessment of risks that are involved in venture creation activities, guide the formation of the network of stakeholders, and inform how to control the outcomes of a particular action.

FIND OUT MORE

www.effectuation.org

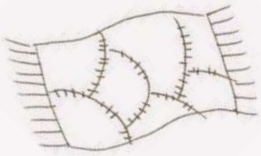
MEANS
bird in hand



LEVERAGE CONTINGENCIES
lemonade



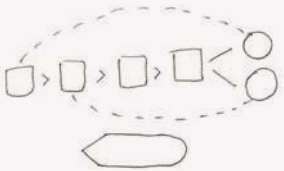
CO-CREATION PARTNERSHIP
crazy quilt



WORLD VIEW
control vs prediction



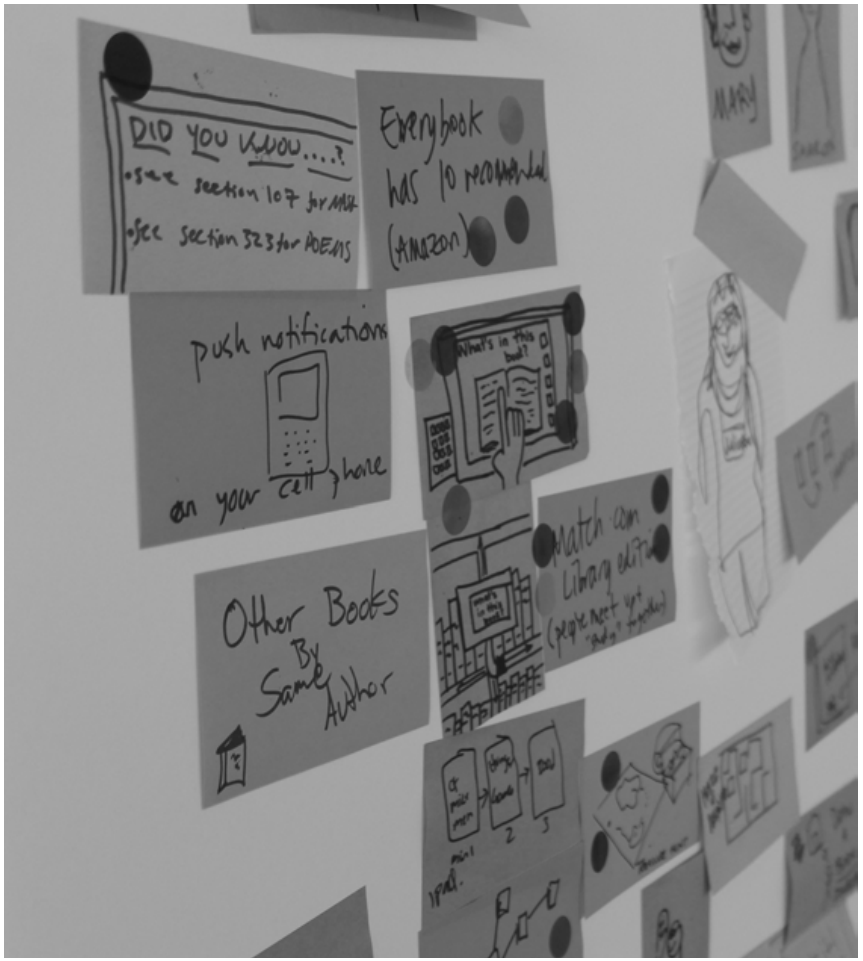
EFFECTUAL CYCLE



AFFORDABLE LOSS
focus on downside



2 Design thinking



Design thinking is an iterative, non-linear and human-centred practice that capitalises on insights gathered through interactions with users to match their needs with what is feasible. Design thinking aims to solve the conflict between ¨reliability and validity, exploitation and exploration, and between analytical and intuitive thinking" [i]. Initially, the process sets out to define the problem that users experience, understand it in depth, create a possible solution, test it, and reflect on the results. Through this process of creating, testing, and learning initial ideas are improved and turn into ideas that are more relevant. Design thinking relies on five distinct steps:

1. Take the users' perspective and empathise with the problem they experience.
2. Define the problem in detail by aggregating the available dispersed information.
3. Brainstorm various possible solutions for the problem by combining imaginative insights and generate the broadest possible range of ideas.
4. Prototype the solution to identify new paths and highlight strengths and weaknesses.
5. Test the prototype by soliciting feedback from the final users.

i (Martin 2009, p. 171): Martin, R. (2009). The design of business. Boston, MA: Harvard Business School

WHAT CAN YOU DO WITH IT?

Design thinking offers learners many ways to think about for whom value is created. The starting point is focused on understanding who will benefit from what the learners will create and to what extent. Design thinking promotes self-efficacy; it gives its practitioners the confidence that–by turning challenges into opportunities for design and acting upon them–they can make a difference. It gives you, as learning facilitator, a process to follow and a good deal of optimism that–no matter the constraints one is faced with–you can design better learning experiences for your learners. What is more, Design thinking embraces failure as part of the process, it calls you to learn from your mistakes, to come up with new ideas, get feedback and improve them at every cycle.

Design thinking allows learners to develop all EntreComp competences; however, it puts a special emphasis on the "Ideas and opportunities" area of the framework.

It worth underlining that it is a method you can share with your learners, applying the same steps for you as a learning designer and for them to address their value creation challenge.

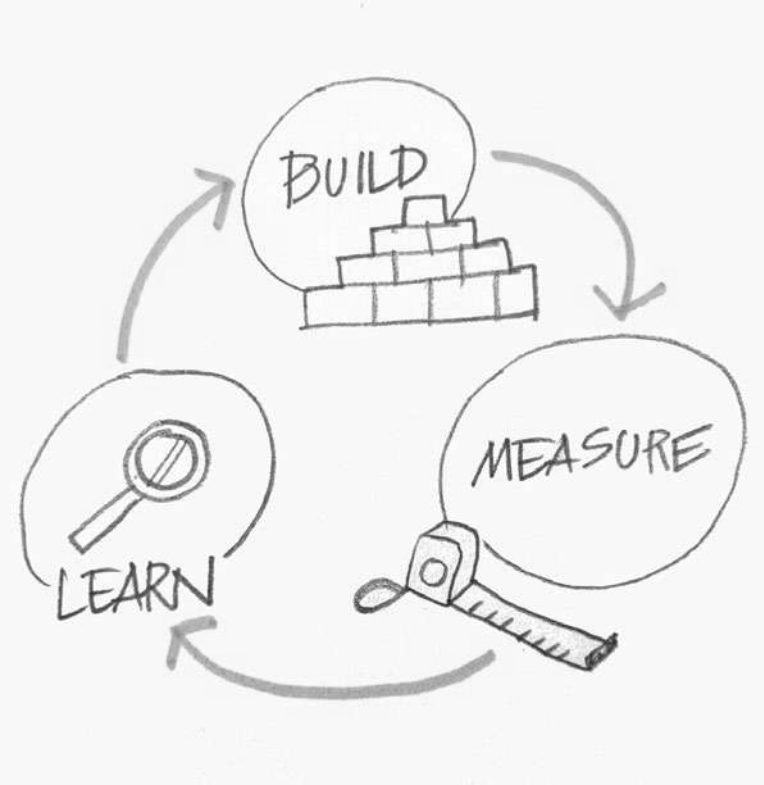
RESOURCES

Proponents of design thinking offer a portfolio of tools. They include but are not limited to: "physical prototypes", which are physical representations of an idea designed to put it to the test; "user interviews", which aim to elicit information directly from users; "innovation flowchart", providing a detailed overview of the various stages of the innovation process by way of outlining activities, requirements and goals; "question ladder", a technique for questioning that allows different angles to be taken into account within an interview; "journey map", a synthetic step-by-step representation of users" interactions with a service; "2x2 matrix", a decision support tool where options are plotted on four quadrants of a matrix; "Wizard of Oz", a research tool where users interact with a computer system that is fully or partially operated by an unseen human being while users believe the system to be autonomous.

FIND OUT MORE

designthinkingforeducators.com

3 The Lean Startup Method



The Lean Startup method is a set of practices for helping entrepreneurs increase their odds of building successful ventures. Inspired by the principles of lean manufacturing (i.e., avoiding waste and optimising resource spending), it is founded on the realisation that although our judgment may be faulty, it can be improved by repeated testing of our theories. Such repeated testing or purposeful experimentation provides evidence to reduce uncertainty about sources of uncertainty. Insights are gathered through close and constant interactions with current and potential customers and are used to validate or invalidate key assumptions.

Through a process model called "build-measure-learn" loop, the Lean Startup method advocates three concrete steps:

1. Break the idea into its constituent components, map them onto assumptions that can be tested and build a 'minimum viable product' (MVP) to allow for collecting feedback as a way to test such assumptions. (An MVP is a version of the product with the smallest set of features that is built to provide relevant insights to help entrepreneurs validate or invalidate their assumptions.)
2. Test the MVP with users and objectively analyse the results of the completed experiments to validate or invalidate key assumptions.
3. Learn from the results and refine the next round of experiments.

WHAT CAN YOU DO WITH IT?

Lean Startup is about learning through experience, by embedding ideas into prototypes and iteratively testing them with their intended beneficiaries. Lean Startup is grounded in real-life experimentation, in eliciting feedback to refine assumptions and in probing the solution to learn what works and what does not. Prototyping, testing and redesign loops make up an entrepreneurial learning journey that you can guide learners through and that learners can self-regulate any time they embark on a new value creation process.

Compared to other methods, the Lean Startup approach hinges upon EntreComp “Into action” competence area

RESOURCES

The proponents of the Lean Startup method propose a number of prominent tools. These tools include but are not limited to: “Customer Development Framework”, which consists of four steps of customer discovery, customer validation, customer creation, and company creation; “rapid prototyping” , a collection of techniques used to quickly fabricate a model of an idea (physical or virtual); “agile software sevelopment”, a collection of principles such as short feedback loops and adaptation cycles, iterative, incremental, and evolutionary processes, and focus on quality. Other tools such as targeted experiments, customer interviews, physical prototypes, concierge, “A/B” tests, and “fake door” tests all allow for quick feedback collection and advancement of the process.

FIND OUT MORE

www.learningstartup.org

4 Project-based learning



Project-based learning is a consolidated pedagogical approach that seeks to nurture inquisitive learners by actively engaging them in real-world projects. The Buck Institute for Education offers a model for project-based learning based on the following project design elements:

1. Identify a question, a problem or a challenge to address. The learning process is framed as a project to solve a challenging problem.
2. Proceed by questioning. Learners are engaged in a sustained inquiry based on posing questions, gathering information, combining approaches to shape and address the problem iteratively throughout the project.
3. Pursue authenticity. Learning happens in a real-world context, where the project creates real value for others and is rooted in what learners care about.
4. Foster learners' independence. To engage learners in a project, it is important that the project matters to them, that they can shape it and make decisions on how they approach it, organise their work and

their team.

5. Promote reflection. Project-based learning puts a lot of emphasis on self-directed learning, based on learners' (supported by their teachers/mentors/facilitators) reflection on the process, the obstacles encountered, the information they are lacking to proceed and devise strategies for overcoming them.
6. Give, foster and collect feedback. Learners give, receive, and use feedback to improve both their ideas and the process to turn it into action.
7. Share outcomes to an external audience. Part of the authenticity component of project-based learning resides in having learners present their work to an external public.

WHAT CAN YOU DO WITH IT?

Learners do not learn creativity, to spot opportunities or to work with others in books, as topics of a curriculum. They learn these and the other competences, by turning ideas that solve problems into tangible solutions. Project-based learning can be combined with the nine EntreComp principles, and provides a very suitable approach to promote entrepreneurial learning and nurture all EntreComp Competences.

RESOURCES

Project-based learning can be implemented through various tools, many of which emerge from the expanding technological educational space. Video presentations, employment of actionable models for guiding operations, setting up concrete goals while allowing for alterations in their structure, capitalisation on electronic databases, use of embedded and online coaching aids, group process methods, self- and peer-assessment techniques, web mind-map tool, and concept mapping are some of the most common tools practiced as part of project-based learning.

FIND OUT MORE

my.pblworks.org

5 Playful experimentation



Playful experimentation is about fostering imagination, playing with possibilities, establishing connections and following intuition. It is about empowering learners to tinker in a safe environment.

Playful experimentation leverages previous knowledge, in that it promotes combining ideas in unusual ways, to explore what could happen if things went that way. It makes it clear that learning is not the end destination of an education or training programme, rather it happens along the way, while living a practical (entrepreneurial) learning experience. In play, means are more valuable than ends, so learners dare to try different non-conventional ways to achieve the goals. Process is more important than outcomes. Playful experimentation builds and leverages learners' engagement. Safe playful spaces support learning from failure, management of risk-taking, creativity, collaboration and innovation. By giving learners the opportunity to select how to proceed in exploring the problems and experiment with alternative approaches in a safe learning environment, it nurtures their motivation and increases the enjoyment of learning.

Researchers have identified 5 key characteristics that should be considered to set up a playful learning activity:

1. Make the experience joyful.
2. Make the purpose clear and meaningful to the learner.
3. Encourage learners' engagement in doing things (e.g. generating multiple ideas, experimenting with alternative scenarios, building and testing prototypes).
4. Iteratively loop idea generation, prototyping and evaluation.

5. Create opportunities for interacting with others.

WHAT CAN YOU DO WITH IT?

Although playful learning is often associated to engaging children in activities that are both fun and educational, playful experimentation suits adult learning too. We have to be able to solve future challenges that we do not yet know. We need to learn to unlearn. By questioning every part of the processes, and by considering why things happen the way they do, we will realise that sometimes there are good reasons, but that in other cases it is simply unquestioned custom. Playful experimentation perfectly couples with the EntreComp "Ideas and opportunities" area. In particular, it aims at nurturing creativity, the capacity to frame problems in novel ways. Thus, opportunities are spotted that were otherwise invisible, while the capacity to value all ideas and make the most of them is developed. It also supports learners' resourcefulness, while allowing them to learn from experience, thus nurturing their autonomy as learners. Further, it embraces failure as part of the process of experimenting, focusing on learning from experience and from discovering what does not work. What matters here is that – by trial and error – learners develop perseverance and resilience to set backs, while learning that by experimenting they develop better solutions.

RESOURCES

Innovative use of traditional games and toys can serve to foster creativity and associations of different knowledge realms. The method of thinking with hands, handcrafting the ideas in three-dimensional artefacts is a very powerful tool to promote lateral thinking and reflection. Learners are more creative and more efficient when solving problems with their hands. Visual thinking tools, like mind mapping, facilitate the association of ideas and establish these associations in the memory of the learner. Techniques such as role-play and storytelling enable learners to experience different situations without fear of ridicule and failure and make them empathise with other realities. In addition, gamification can be a powerful tool to integrate narrative, experience, emotion, progress and motivation in the training process, achieving lasting learning over time.

Particular forms of playful learning may be more appropriate in certain contexts; social, cultural or gender biases can condition learners' predisposition to learning experiences, so it is important to adapt them to the specific situation (space, time, target group).

FIND OUT MORE

www.legofoundation.com/en

conference.playthinklearn.net/blog

6 Classrooms as learning communities

The classroom as a learning community approach posits that learning is a process of co-construction, which is rooted in interacting with others. Learning is thus the product of a social process where individuals grow their knowledge by learning together as a collective, by contributing to a communal effort. Research has shown that in classrooms which operate as communities, learners feel part of a whole, they feel they are in control of the collective result; they are open to diversity and help each other learn and understand that learning happens collectively.

To turn classrooms into learning communities, the following practices have been pinned down:

1. Community forming. Create the community by getting to know each other and having members share their stories, recognise diversity and appreciate the contribution it brings;
2. Agenda setting. Focus on an issue to address and plan intentional learning;
3. Activities for collective learning. Run activities that promote community learning, such as reciprocal teaching, development of dialogue, and assign group goals for assessment;
4. Community governance. Ensure that responsibility and control are shared and that there is a collective agreement on the "the classroom we want".
5. Community climate. Encourage prosocial behaviour, nurture trust, facilitate learners helping each other to learn, provide a sense of belonging.

WHAT CAN YOU DO WITH IT?

This approach has been developed to embed collective learning in formal education, but it can be applied to adult learning as well. It is particularly useful if you are running a short entrepreneurial learning workshop (see **F8**) where diverse learners join and are asked to collaborate on a value creation project.

By leveraging the classroom as a learning community approach, both cooperative learning and the importance of the team in entrepreneurial action are passed on to the learners. In learning communities, social relations and knowledge-creation meet.

Ensuring that teams work as learning communities can help learners grow a diversity of EntreComp competences, in particular working with others, learning from experience and their self-awareness and self-efficacy.

RESOURCES

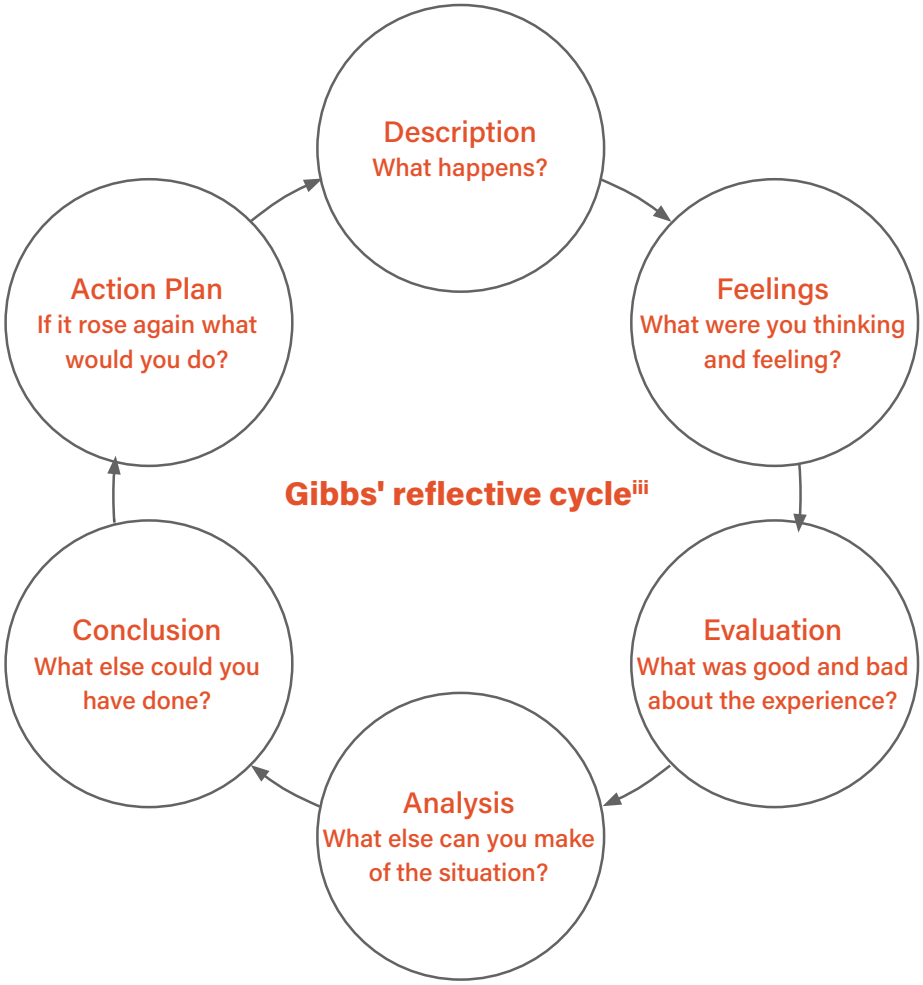
Sharing the output of collective learning is a powerful means to engage learners in co-construction: a presentation in front of an external audience, blogs, and podcasts offer the opportunity to document the process while enhancing digital competences too. Empower the learners to be owners of their learning process through jigsaw tasks, where the group is divided into small teams (not more than 5 or 6 members), designating each of the team members a specific profile to construct knowledge together. Working on peer assessment and reciprocal feedback is also a useful strategy to turn the pedagogical approach of the classroom as a learning community into practice. Gibb's reflective cycle can be used to guide individual and group reflection.

FIND OUT MORE

www.chriswatkins.net/download/111

www.jigsaw.org

www.ed.ac.uk/reflection/reflectors-toolkit/reflecting-on-experience/gibbs-reflective-cycle



iii Gibbs G (1988). *Learning by Doing: A guide to teaching and learning methods. Further Education Unit.* Oxford Polytechnic: Oxford.

Tools and techniques

This section presents a series of tools that you can use to foster EntreComp competences, following any method listed in the previous section and adhering to the nine principles listed in preceding one. Once more, the list is not exhaustive, not even comprehensive. It is an essential kit compiled to cover all EntreComp competences and help you associate principles with practice. Almost none of these tools has been generated for turning EntreComp into action. Many of them have been in use for decades and are very well documented. You will find links to further information wherever freely available. Adopt a Do-it-Yourself (DIY) approach, select the tools best facilitate the learning outcomes you aim your learners to achieve. Dare to adapt and even create the tools you consider necessary for your specific context.

F1

Design a learning intervention

Scoping your entrepreneurial learning intervention

PRIMARY COMPETENCES

- Vision

GUIDING PRINCIPLES

-

What do you want to obtain by setting up an Entrepreneurial Learning Initiative?

What are your expectations in terms of participants' outcomes?

ANSWER THE QUESTIONS

Why do you want your target group to become more entrepreneurial?

How will you know that you have achieved your goal?

F2

Training design canvas

Planning an entrepreneurial learning intervention

PRIMARY COMPETENCES

- Vision
- Planning and management

GUIDING PRINCIPLES

All

The Training design canvas (TDC) has been created to help educators and vocational education trainers, as well as facilitator, coaches and mentors embed entrepreneurial competences in the design of their learning interventions. A strategic thinking tool, the TDC helps capture what needs to be taken into account to facilitate a rich entrepreneurial learning experience. It expands on the reflections you may have already outlined by filling in **F1. DESIGN A LEARNING INTERVENTION** questionnaire.

Fill in each of the seven sections of the TDC by answering the questions below. Not all of them will be relevant to any context, use them as prompts to be specific in planning your entrepreneurial learning intervention.



ADAPTED FROM: EntreCompItalia

Training design canvas 2/4







1. Training goals

What knowledge, skills or attitudes will learners develop through your desired intervention?

At the end of the entrepreneurial learning experience, what knowledge, concepts, tools should the participants be able to use?

What is the individual, collective, professional and personal value that your training project can generate?

2. Target audience

What are the training needs of your participants?

What are the minimum and maximum number of participants to be involved to ensure that your intervention is effective?

What is (are) the profile(s) of your target group(s)? Be specific in your description.

How you can balance different needs in the case that your target group is heterogeneous?

3. Learning contents, structure, tools and methodology

What are the main themes your intervention is going to focus on?

Can you articulate a detailed course structure? (Modules, training units, learning objectives, etc.)

What is the duration of the course? What is the duration of each module?

Which parts of the course will be online? Which digital tools will you use?

Which parts will be offline? What tools/materials will you use?

How many external experts/ practitioners do you think you will involve? Which will be their roles?

Training design canvas 3/4





What models and/or methodologies do you plan to use? (E.g. mentoring, blended learning, self-training, collaborative learning, etc.)

What is the balance between theory, practical activities and self-study?

What is the practical entrepreneurial experience your learners will be engaged in?

4. Communication strategies

What channels and tools will you use to promote your initiative?

Which communication style and approach do you think is the most effective for your target group?

Can you describe in detail the strategy you will implement to recruit your participants?

If you have an online section, which platforms or software will you use?

5. External connections

Who are the strategic partners you will involve? How? What role will they play?

Are there other practices connected to your training initiative?

Can you curate a selection of "open educational resources" that you can use through your initiative?

Are there existing training tools that can be integrated into your initiative?

Training design canvas 4/4





6. learning impacts

What are the expected impacts of participating in your activity on learners' personal and professional lives? How will measure them? How will you raise their visibility?

What are the potential impacts on the territorial ecosystem? (Education, social, cultural, economic, etc.)? How will you measure them? How will you raise their visibility?

What indicators, strategies, times and monitoring tools will you adopt? How will you integrate them along the initiative?

7. Assessment + evaluation plan

How do you assess the initial level of competence of your learners? (e.g. self assessment)

How do you evaluate and measure the achievement of the intended learning outcomes?

How do you check progress and/or learning in a formative way?

What evaluation tools do you use, before, during and after your training course/learning activity? What are the verification times and tools?

How and when do you certify the results?

Will you use external evaluators/ validators? If so, how do you plan to structure the evaluation/validation process?

F3

Plan for an entrepreneurial learning intervention

Planning an entrepreneurial learning intervention

PRIMARY COMPETENCES

- Planning and management

GUIDING PRINCIPLES

All

Define the learning outcomes you want your learners to achieve

Craft a format that fits your goal

List the resources you need to bring

FILL IN AS MANY TIMES AS YOU NEED

Select the learning space needed

How will you assess that the Learning Outcomes have been achieved

Which other transversal competences you will tackle in combination with this

F4

Create a safe facilitating learning space

Create the facilitating learning space

PRIMARY COMPETENCES

- Mobilising others
- Planning and management

GUIDING PRINCIPLES

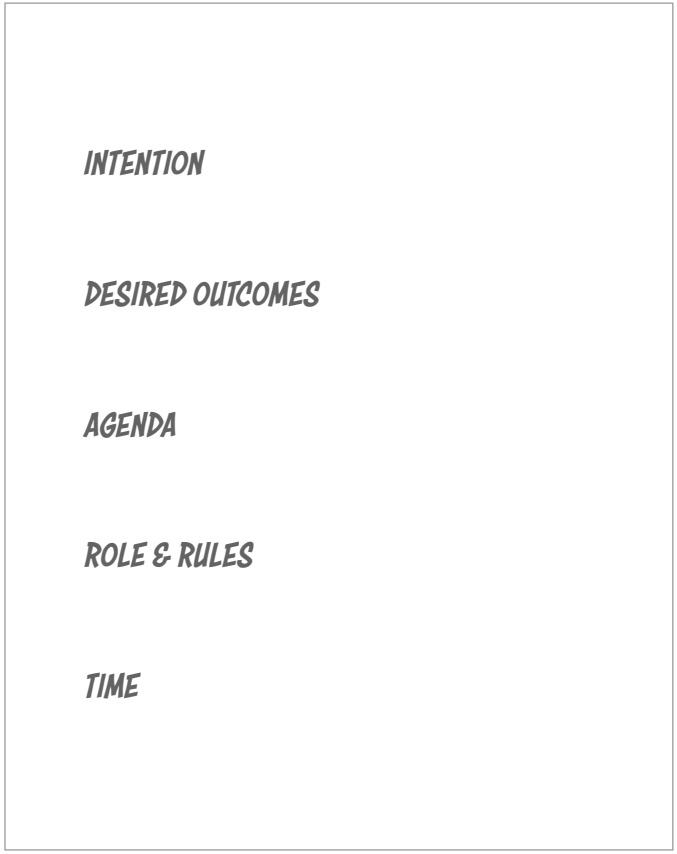
C. Collaboration

It is important for the development of entrepreneurial learning activities to create a safe learning space, a magic circle, where learners feel confident and safe. One technique to create a safe space is the "I DO ART" technique (Intention, Desired Outcomes, Agenda, Role and Rules, Time).

1. Take a big poster or board and write the titles on the right.
2. Give participants 5 minutes to reflect on the activity to be carried out and collect comments.
3. Combine participants' comments with your own I DO ART poster as facilitator.
4. Take another 10 minutes to agree on the results collectively.
5. Once the decision is made the poster remains a consensual commitment that team members will abide by.

If the participants of the learning activity do not know each other, it is a good idea to introduce the technique, do an icebreaker or team building activity so that learners gain confidence and feel safe and then continue with the discussion.

ADAPTED FROM: Kaospilot



F5

Challenges marketplace

Select the challenges

PRIMARY COMPETENCES

- Spotting opportunities
- Vision

GUIDING PRINCIPLES

N. Novelty

The challenges to be solved during an entrepreneurial learning activity or workshop can be presented in different ways. You can invite a non-profit organisation to present the specific challenges they face in their projects, or you can invite a private company from a specific sector or even a public institution.

There can be a single challenge or more (three is a good amount) so that the teams can decide which challenge they want to work on. If you have enough time, you can invite a few of your learners to come up with their own challenges and ask the rest of participants to join one of the challenges. It is also possible that your own organisation sets the challenge to work on.



F6

Work plan and timeline

Plan the learning project

PRIMARY COMPETENCES

- Vision
- Planning and management

GUIDING PRINCIPLES

M. Mentoring

To help develop a timeline for your learning activity/project you need to consider the different tasks that must be done and the deadline to deliver the activity. Once you have finalised the order of the activities you might want to work backwards from the deadline. Use a worksheet to write all of this down in one place – the overall categories, the specific activities, and the completion dates to create a work plan. If you already know who will be doing the tasks, you can even assign names to tasks so everyone knows who has agreed to do what – and by when they need to have them finished.

You can also define a **Work Breakdown Structure (WBS)** to better identify the times and persons needed to prepare the activity. The work-breakdown structure is a hierarchical decomposition of the total scope of work to be carried out by the team to accomplish the project goals, which can be designed as a workflow diagram.

Team recruitment and management

Date ..... Task ..... Person .....

Venue and Logistics

Date ..... Task ..... Person .....

Participants (recruitment and follow up)

Date ..... Task ..... Person .....

Content

Date ..... Task ..... Person .....

Media

Date ..... Task ..... Person .....

F7

Spider diagram to foster entrepreneurial learning

Design and assess the training method

PRIMARY COMPETENCES

- Vision
- Planning and management

GUIDING PRINCIPLES

All

Based on an analytical framework that combines theory and practice, the spider diagram presented herein frames eight dimensions of entrepreneurial learning deemed to be particularly important. Four of these eight dimensions stem from education theory: Encourage failure, teamwork, and activity-based feedback and assessment, and subject matter connections. The other four key dimensions belong to the core of entrepreneurship theory: External interaction, value creation for others, learner ownership and iterative process.

The spider diagram can be used as a checklist either to design new entrepreneurial learning activities or to assess them (or both). You can use it to appraise your practice. Give to your training method from one up to seven points on each dimension, depending on how central the dimension is in the method and how well it works for the learners.

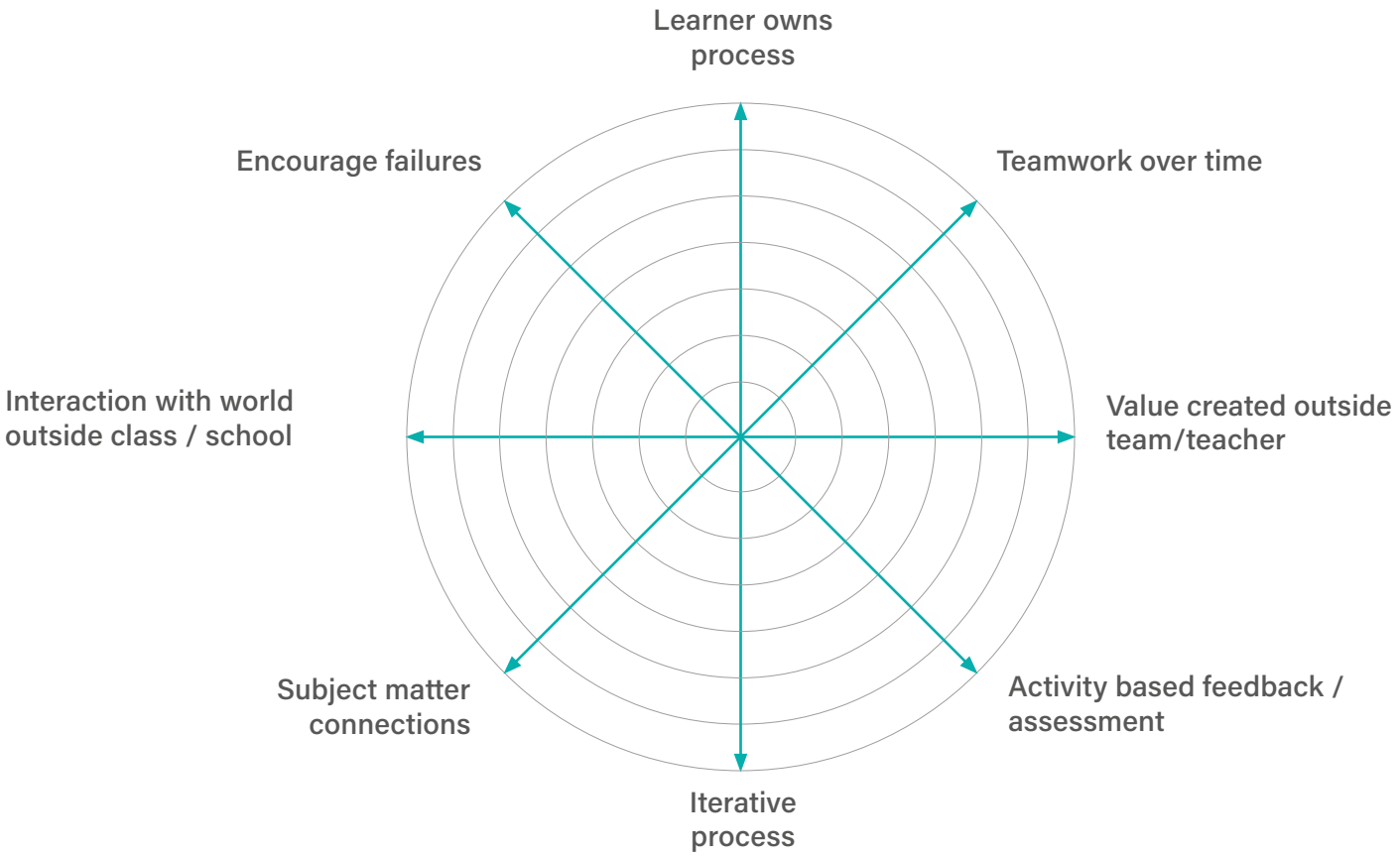
ASK YOURSELF THE FOLLOWING QUESTIONS

Does your teaching method...

- ...allow learners interact with people outside class?
- ...encourage learners to dare and fail?
- ...allow learners develop ownership over their process?
- ...encourage learners to work in teams over time?
- ...require learners create value for people outside group?
- ...assess learners by giving activity and reflection based feedback?
- ...require learners work iteratively?
- ...connect to subject matter knowledge/skills?

SOURCE: Lackéus, M., and Sävetun, C., Assessing the Impact of Enterprise Education in Three Leading Swedish Compulsory Schools. *Journal of Small Business Management*, Vol. 57, pp. 33-59.

Spider diagram to foster entrepreneurial learning 2/2



F8

Set up an entrepreneurial learning workshop

Organise an entrepreneurial learning workshop

PRIMARY COMPETENCES

- Taking the Initiative
- Planning and management

GUIDING PRINCIPLES

M. Mentoring

The entrepreneurial learning workshop is an entrepreneurial project itself. Learners can apply tools and steps used in the workshop in their own entrepreneurial project: Spot opportunity, ideation, decision-making, research, planning and design, test and evaluation.

1. Create the facilitating learning space

- Introduce the entrepreneurial learning workshop, aims of the workshop (use the EntreComp flower, split screen, inspiring quotes, explain the use of space), trainers and experts, schedule
- Create the groups with icebreaker activities
- Create the teams with collaborative games
- Agree on goals and rules

2. Prepare the teams to the teamwork

- Introduce the challenges/topics/problems to work with
- Reflect on the starting point of the team related to the EntreComp competences
- Boost creativity with games, crafts and drawings
- Boost critical thinking with short training talks related to the topics
- Make a team decision on the challenge to develop, if there are more than one. Activities to exercise the decision making

3. Think, design, test, improve (e.g. using Design thinking strategies) in an iterative process

- Think, brainstorm, mind map of the challenge, empathy map, stakeholders map
- Design with empathy to the user and stakeholders, set the stage, use the lean canvas
- Prototype and test (MVP, prototypes),by using user interviews, landing page, app, crafts, crowdfunding campaign
- Improve the service/product/solution and start again with the loop

4. Evaluate

- The project: simulate a venture round and have learners pitch their idea
- The learning process: develop your own rubrics
- The EntreComp competences: use EPIC survey on the heinnovate platform

F9

RAMP dimensions

Engage learners leveraging intrinsic motivation

PRIMARY COMPETENCES

- Motivation and perseverance
- Mobilising others
- Working with others

GUIDING PRINCIPLES

T. Triggers



RAMP stands for **Relatedness**, **Autonomy**, **Mastery**, and **Purpose**, which are facets of intrinsic motivation. Intrinsic motivation is an internal drive to act that comes from within and is independent form an external system of rewards. When designing an entrepreneurial learning activity, having the four key motivational drivers in mind is useful to engage learners:

- **R**- Relatedness is the desire to be connected to others. If learners enjoy social interaction, creating opportunities for relatedness will engage them in the activity you propose.
- **A**- Autonomy can be seen as the freedom to make decisions. Giving users a level of autonomy will help them to feel that they have at least some control of what they are doing and the learning process will be more successful.
- **M**- Mastery is the process of becoming skilled at something, to mastering it. It is important to the learners that they feel their skills are increasing in proportion to the level of challenge of the activity.
- **P**- Purpose can be seen as our need for our actions to have meaning. Creating value for self and the others is a compelling drive. You may want to open the space for your learners to focus on a kind of value that they find purposeful, avoiding briefs that are too narrow.

Ask yourself the following questions to ensure that you learning activity embeds motivation drivers that promote learner engagement.

RAMP dimensions 2/2

1. Relatedness

Does your activity promote the sense of belonging and connectedness among learners or among learners and external stakeholders?

How does you design activity allow learners to relate to each other, to the trainer and/or to the people they want to create value for?

Is the learning activity organised in teams?

What channels or spaces do they have to interact?

Are there different roles?

2. Autonomy

Will the learners be able to feel autonomous?

What decisions will they be allowed make?

Can they decide how to introduce themselves to the others? Are they able to pick their own challenge?

3. Mastery

What space or time are there for the learners to practice?

How are you going to offer them a safe environment where they can experiment and fail without risk?

How will you assess progression and recognise mastery?

4. Purpose

Can the learners help each other by exchanging experiences and learning?

Will you promote peer to peer learning?

Will the challenges you propose address specific collectives in society?

Will your learners address global problems that improve society and/or the environment?

F10

Align to EntreComp principles

Develop your unique approach to entrepreneurial learning

PRIMARY COMPETENCES

- Self-awareness and self-efficacy

GUIDING PRINCIPLES

All

This is an invitation for you to reflect on the educator you want to be by embracing entrepreneurial learning.

Reply to the questions below to elaborate your own take on the nine principles proposed in this playbook and define your approach to becoming an entrepreneurial learning facilitator.



Align to EntreComp Principles 2/4





Plan the entrepreneurial learning **Experience**

How will learners learn to become entrepreneurial? What experience will they take part in?

Will they choose which opportunity to act upon, or will you brief them with a problem to solve, a challenge to address?

How does the practical entrepreneurial experience you are setting up relate to the topic/course you are teaching/facilitating?

Focus on **New** value creation

How will you ensure that the ideas developed by learners are novel?

How will you offer a scaffold for learners to question reality, challenge assumptions and shape problems in new and original ways?

How will you prompt learners to explore the problem space and generate multiple purposeful ideas to address the problem they have identified?

Embed **Triggers** for emotional learning

How can you embed emotional triggers into the entrepreneurial learning activity?

How can you support learners to reflect how emotions influence their learning?

How can you show learners the competences (e.g. adaptability, resilience, flexibility...) they are developing through this learning process?

Align to EntreComp Principles 3/4



Use **Reflection** for giving visibility to learning

How are you going to help learners reflect on the process of becoming entrepreneurial, rather than focusing only on the idea they want to turn into action?

How are you going to allow learners to test their assumptions early and iteratively?

How can you help learners reflect on how their previous experiences can be applied in this situation and how can you help them share it with their learning mates?



Connect with the wider **Ecosystem**

How could you bring representatives of the local ecosystem into the learning experience?

How can you open up the practical entrepreneurial experience you are designing to engage external actors?

How can you prompt learners to have meaningful interactions with the local ecosystem?



Promote **Collaboration**

How will you make sure that groups are diverse?

How can you guide group work to ensure effective collaboration?

Are you prompting learners to understand what they would not have achieved by themselves?

Align to EntreComp Principles 4/5



Engage **Others**

Who defines the “others” and their needs that learners will address in the value creation venture?

How will you support learners in conducting research on their target “others”? How will you prompt learners to test their ideas with their target “others” along the process, iteratively?

Will you encourage learners to have their target others as co-designers of the solutions they will develop?

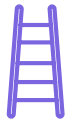


Be a **Mentor** for the learner

How can you give up my role as a conductor to become more of a curator for the learners to engage in the entrepreneurial learning experience?

How can you provide feedback to your learners so that they keep learning while progressing in their value creation trajectory?

How can you help learners progress through difficulties, such as setbacks and temporary failures? How can you signal that failing is part of the process and leads to learning?



Assess **Progress** through multiple methods

How can you combine different assessment methods that have learners reflect on their performance and development of skills?

How can you combine rubrics and self-assessment questionnaires?

How can you use the EntreComp progression model for signposting observable behaviours that show increased expertise by learners taking part in a practical entrepreneurial experience?

L1

Collaborative face drawing

Icebreaker, know your learning mates

PRIMARY COMPETENCES

- Creativity
- Working with others

REFERENCE METHODS

5. Playful experimentation
6. Classroom as learning communities

To transform a group of people into an effective team, which will work on a solution to the given challenge, you can use some icebreakers. The collaborative face drawing is a fun interactive activity that helps with name memorisation if the participants do not know each other or get to know the co-workers in a different way.

1. Give each participant paper and a pen
2. Instruct the participants to write their name on the bottom of the paper
3. Ask everyone to walk randomly in the room until you say the word stop
4. Each person should pair up with someone nearby
5. Instruct the pair to exchange the papers
6. Everyone should draw the other person's eyes, ask a question and write the answer on the paper
7. Instruct the pairs to exchange the papers again (now each person should have the paper with their name again)
8. Repeat steps 3 to 8 for all facial features (eyes, noise, ears, chin, hair, facial hair and accessories)
9. Ask each participant to present her portrait and choose a question



L2

Play with hidden rules

Team building by learn by doing

PRIMARY COMPETENCES

- Mobilising others
- Coping with uncertainty, ambiguity and risk

REFERENCE METHODS

5. Playful experimentation



You can organise this activity using Lego® bricks, or you can use any other materials. Work with teams of 5-6 members. Assign each member a secret role, for example if you are using lego bricks “do not use yellow bricks” or “you have to ensure that blue bricks are not placed on the second level”. Give the instruction to the team to construct an artefact. They have to play in silence. Make sure each participant understands the rules and instructions. Play the game for 10 minutes. After this period ask the team if they think there is a spoiler in the group. If yes they have to point him/her out. Continue playing for five more minutes. Clarify there is no spoiler. Give five more minutes to construct the artefact. Ask the learners to evaluate the team work from 1 to 10. Give five more minutes to improve the artefact. Ask the learners to read their hidden role and assess their performance. Discuss collectively the ability to work together.

1. You have to ensure that the structure is completed as quickly as possible.
2. You are the leader of the group.
3. You have to ensure that the structure has a maximum of 8 levels. In case the group stops construction at level 8, you must ensure that they continue to build below this level.
4. You have to ensure that in levels 1, 6 and 8 there are no pieces adjacent of the same color.
5. You have to ensure that only you, and a maximum of two other people put pieces on levels 3 and 4.

L3

Means Inventory

Clarify your personal means

PRIMARY COMPETENCES

- Self-awareness and self-efficacy
- Mobilising resources

REFERENCE METHODS

1. Effectuation

To start an entrepreneurial project a first step can be for the learner themselves in relation with their context to answer the questions below.

Who Am I

What I Know

Whom I Know

L4

Five roles

Clarify your profile

PRIMARY COMPETENCES

- Self-awareness and self-efficacy
- Learning through experience

REFERENCE METHODS

1. Effectuation

In a team, there are different roles that are necessary to succeed in an entrepreneurial project. Here is a description of the roles that should contribute to the teamwork:

- The **Creative**: provides ideas and solutions. Everybody is creative so will act in this role.
- The **Coordinator**: coordinates activities.
- The **Explorer**: Searches for information and resources.
- The **Builder**: Turns ideas into something concrete.
- The **Communicator**: prepares and transmits information.

To practice the different roles, and help learners to decide which role best fits their profile you can assign two different roles randomly to each of the learners and ask them to work on a specific task. Each participant has a main role that s/he will play during the assigned task, and a secondary role that s/he will play in parallel to support the person who has this role as a main one. If someone is the main creative and the secondary explorer, s/he will provide ideas and solutions as a primary task, but also will support the main explorer searching for information and resources.

After a period of time, the main communicator of the team must present the results of the teamwork to the classroom.

Another possible categorisation of the roles in a team according to Meredith Belbin includes: the plant, the resource investigator, the coordinator, the shaper, the monitor evaluator, the team worker, the implementer, the completer finisher, the specialist. Explore which combinations suit your needs best.

MORE

www.belbin.com/about/belbin-team-roles/

L5

Frame the value creation idea

Clarify which problem you are trying to solve

PRIMARY COMPETENCES

- Spotting opportunities
- Vision

REFERENCE METHODS

2. Design thinking

Ask your learners to answer the following questions in writing.

What is the problem you are trying to solve?

What is your vision, the ultimate impact you want to achieve?

What are the main constraints you face?

ADAPTED FROM Ideo Field Guide to Human Centred design

L6

Look around

Understand the problem you want to solve

PRIMARY COMPETENCES

- Spotting opportunities
- Creativity

REFERENCE METHODS

1. Effectuation

Ask your learners to spot opportunities for value creation around them. You can add new columns and challenges.

Train them to look around and scan the world to identify problems, unmet need, challenges that need to be addressed.

	At home	Outdoors	At work	At ...
It is not easy				
It is not comfortable				
It is not cheap				
It is not ecological				
It is not nice				
It is not fast				
It is not ...				

L7

Mindmap

Understand the problem you want to solve

PRIMARY COMPETENCES

- Spotting opportunities
- Vision

REFERENCE METHODS

2 Design thinking

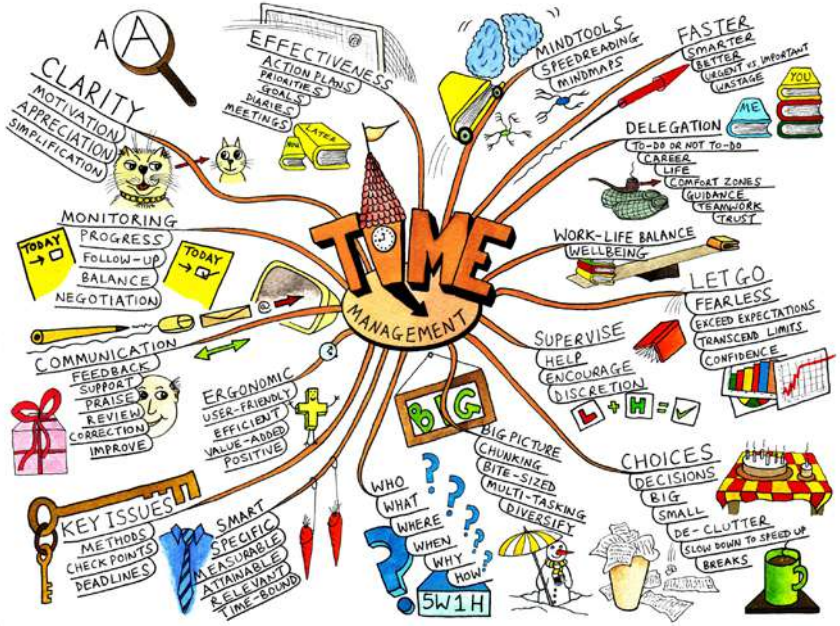
A mindmap is a hierarchical spatial representation of ideas. It is a useful technique to structure thoughts and information visually.

Ask your learners to start form the centre of a blank sheet and note down their core topic, idea or problem they want to address first.

Second, instruct them to jot down other words, signs, drawings around their core issue. The idea is to capture things as they come to mind, though showing the connections with the initial point, or links among them.

Encourage your learners to allow their mind to freely explore, diverge and connect points, growing the map bigger and bigger – there will be time to review and rationalise it at a later stage.

Mindmapping fosters unconstrained thinking and uncover interesting connections. Advise learners to use very short phrases or even single words, including images or icons: it is a visual board, not a way to condense text.



ADAPTED FROM Service Design Tools

L8

Guilford's alternate uses task

Boost creativity and critical thinking

PRIMARY COMPETENCES

- Creativity
- Spotting opportunities

REFERENCE METHODS

2. Design thinking
5. Playful experimentation

This technique opens the mindset of the learners, motivating them to be more exploratory.

1. Ask your learners to list as many possible uses for a common simple object, such as a brick, an umbrella, a paperclip, a newspaper.
2. Give your learners a time constraint, for example 3 minutes. After this period write all the uses on the board.
3. Vote the most original, useful, funny use. Discuss on the way of voting the ideas.

ADAPTED FROM Creative Huddle

Object: *Umbrella*

Idea	Description	Sketch
1		
2		
3		
4		
5		
...		

L9

Random combination

Boost creativity to generate innovative ideas

PRIMARY COMPETENCES

- Creativity
- Valuing ideas

REFERENCE METHODS

2. Design thinking

This tool can be used in lots of different situations. It is a good activity to boost creativity. It can be used by individuals or by a team. It is a very simple technique. It only requires paper and a pen.

1. Ask learners to take a sheet of paper and fold it in four columns like a fan
2. enumerate in one column a list of 10 objects (one noun per row)
3. give the paper to the person on their right with the list of nouns hidden
4. write in the second column a list of 10 actions (one verb per row)
5. give the paper to the person on their right with both lists hidden
6. write a list of 10 adjectives and give the paper to the person on their right
7. write a figure with three digits
8. Ask your learners to unfold their sheet and pick from each column the word that corresponds to the relative position of the digits of the figure on the last column of the paper.
9. With the noun, verb and adjective they have found, they now have to create a story. The story can be written, spoken, or drawn and must be related to the challenge they are working on.

It can be used either to generate avenues to explore the challenge or to envision possible solutions. This technique is a pretty flexible one, and can be staged in different ways. You can ask your learners to write 10 nouns, verbs, and adjectives on small pieces of paper of different colors and to separate each color in a different bag and ask them to pick one piece of paper from each bag and create the story. Feel free to adapt it.

Nouns	Verbs	Adjectives	Figure
1- chair	*1- run*	*1- handsome*	*135*
2- book	*2- talk*	*2- red*	
3- cat	*3- reflect*	*3- slow*	
4- woman	*4- eat*	*4- lazy*	
5- computer	*5- imagine*	*5- young*	

L10

Brainstorming

Create different possible ideas

PRIMARY COMPETENCES

- Creativity
- Spotting opportunities

REFERENCE METHODS

2. Design thinking



Brainstorming is about generating lots of ideas, about collaboration and openness to wild solutions. Avoid discussions of why ideas may not work. This behaviour kills creativity and shifts the group mindset from a generative one to a critical one. The only way to get to good ideas is to have many to choose from.

There are many variations on how to run a brainstorming, using flipcharts, sticky notes, using techniques such as “brainwriting”, “alphabet”, “grid” or “circle brainstorming”. Below you find a set of instruction for guiding a successful brainstorming.

RULES

1. Defer judgement. You never know where a good idea is going to come from. The key is to make everyone feel like they can say the idea on their mind and allow others to build on it.
2. Encourage wild ideas. Wild ideas can often give rise to creative leaps. In thinking about ideas that are wacky or ‘out-there’ we tend to think about what we really want without the constraints of technology or materials.

Brainstorming 2/2

3. Build on the ideas of others. Being positive and building on the ideas of others takes some skill. In conversation, we try to use "and" instead of "but."
4. Stay focused on the topic. Try to keep the discussion on target, otherwise you can diverge beyond the scope of what you are trying to design for.
5. One conversation at a time. Your team is far more likely to build on an idea and make a creative leap if everyone is paying full attention to whoever is sharing a new idea.
6. Be visual. In live brainstorms write down on sticky notes and then put them on a wall. Nothing gets an idea across faster than drawing it.
7. Go for quantity. Aim for as many new ideas as possible. In a good session, up to 100 ideas are generated in 60 minutes. Crank the ideas out quickly and build on the best ones.

STEPS

1. Setup

- Frame a question to guide your group into thinking about the issue you want to address
- Illustrate the brainstorming rules, to start with the right mindset

2. Facilitate

- Start with heads-down individual brainstorming.
- Share ideas as a group and build on each other's concepts.

3. Follow-up

- Harvest the ideas generated to keep track of them
- Develop the most promising ideas into a concept to validate

ADAPTED FROM Ideo Field Guide to Human Centred design

L11

Dot voting

Make decisions

PRIMARY COMPETENCES

- Vision
- Motivation and perseverance

REFERENCE METHODS

5. Playful experimentation



In an entrepreneurial process, decisions have to be made. This technique can help the members of a team in this process. It is an established facilitation method used to describe voting with dot stickers or marks with a marker pen.

Participants vote on their chosen options using a limited number of stickers or marks with pens. This sticker voting approach is a form of cumulative voting. Dot-voting is a quick and simple method for prioritising a long list of options. It is less cognitively demanding than having to perform a full ranking of all the options, because participants are not required to give a comparative judgment of each option. It allows participants to express a preference for more than one option at a time. It leverages the collective wisdom of the team, and provides an equal way for all the voices on the team to be heard and have accountability in prioritising key issues. It also creates a sense of engagement and allows participants to see the decision process in action and understand how the final choice was made. The dot-voting process includes the following steps:

1. Participants are each given a set number of dot stickers (as decided by the facilitator)
2. They place dot stickers next to options presented that they like (they may place any number of their dots on any number of the options)
3. Options with the most dots at the end of voting "win"
4. Variations include: using different colour dots to signify different values, e.g. green for "like" and red for "dislike"

MORE

dotmocracy.org

L12

Six thinking hats

Make decisions

PRIMARY COMPETENCES

- Ethical and sustainable thinking
- Valuing ideas

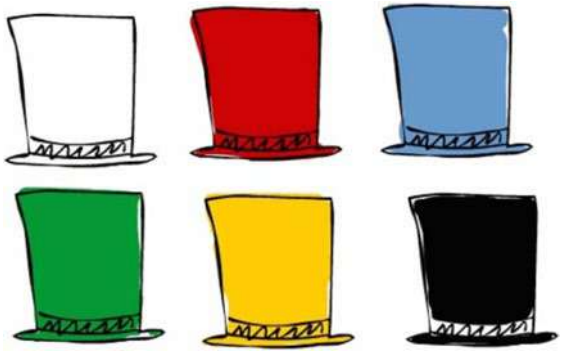
REFERENCE METHODS

4. Project-based learning
5. Playful experimentation

The primary principle of the six hats technique is to enhance the structure of thinking so that decision making and idea evaluation can be improved. The six hats technique provides a framework to help people think clearly and thoroughly by adopting and directing different modes of thinking in one direction at a time. These different modes of thinking are characterised by six different coloured hats which enable more expansive, increased creativity and decision-making.

1. Blue: Process
2. White: Facts
3. Green: Creativity
4. Red: Emotions
5. Yellow: Benefits
6. Black: Cautions

Start the activity applying the first three colours (blue, white and green) to plan the process and generate ideas, apply the three last colours (red, yellow and black) to the ideas you select from the green hat section. You can use real hats or draw the hats in posters and collect the different contributions.



L13

SMART goals

Prioritise and select goals

PRIMARY COMPETENCES

- Vision
- Planning and management

REFERENCE METHODS

2. Design thinking
4. Project-based learning



This technique helps you guide your learners towards setting appropriate goals for their project. SMART is an acronym that stands for:

- **Specific** – goals should be specific about what one wants to achieve.
- **Measurable** – one should be able to measure whether goals are being achieved or not.
- **Achievable** – Goals should be achievable.
- **Realistic** – Can the goals be achieved given the resources one has/ can mobilise?
- **Time-bound** – What is the time frame in which the goals have to be achieved?

Working with SMART goals will give your learners a greater chance of success. If they have already defined the goal of their project or the idea they have to address a challenge, ask them to apply the SMART criteria and reformulate the goals accordingly, so as to start working from specific, measurable, achievable, realistic and time-bound solutions.

L14

Understand your users

Understand the "others" who will benefit from your idea

PRIMARY COMPETENCES

- Valuing ideas
- Learning through experience

REFERENCE METHODS

2. Design thinking

To create value for others one has to understand them first. There are multiple techniques to elicit information from the intended beneficiaries of an idea. The semi-structured interview is a staple in the kit of any solution designer as it is a flexible tool to collect information on people's ideas, opinions, or experiences. They are often used to uncover needs assessment, but also to collect feedback on initial concepts, envisioning scenarios or prototypes. Below you find instructions that you can pass on to your learners to prepare for field interviews.

INTERVIEW GUIDE

Prepare questions to ask your target "others", to unveil their thoughts, troubles, feelings, fears, wishes, ambitions... Try to elicit what they need, digging with open, yet specific questions. This is not about your idea(s), but about understanding what your target "others" may benefit from.

Identify open-ended questions you can use to open the conversation with your target others

.....

.....

.....

Identify questions that can help you start to understand this person's problem to be addressed

.....

.....

.....

Identify questions that can help you to understand this person's hopes, fears, and ambitions

.....

.....

.....

L15

Empathy map

Understand the "others" who will benefit from your idea

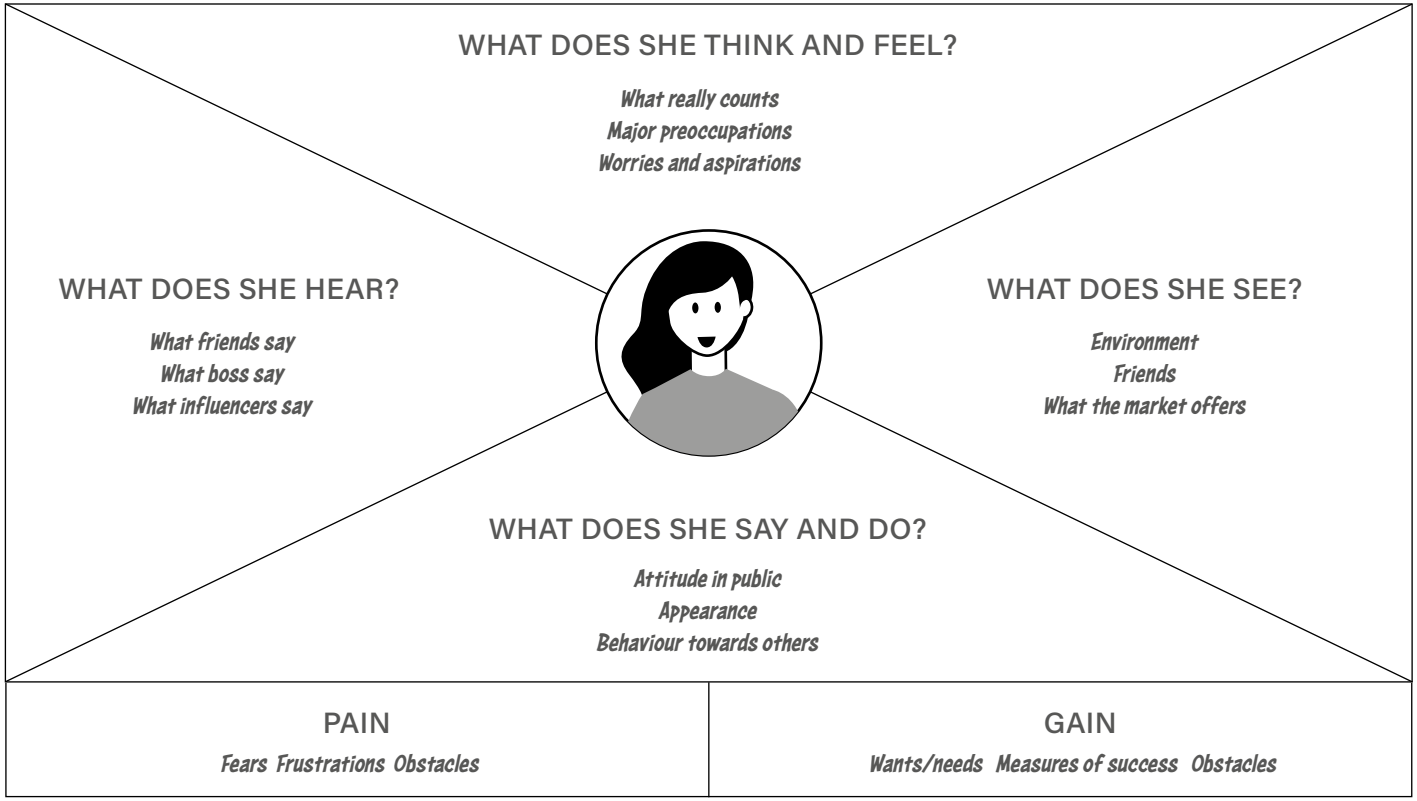
PRIMARY COMPETENCES

- Ethical and sustainable thinking
- Learning through experience

REFERENCE METHODS

2. Design thinking

Provide your learners with the following map and ask them to fill in the quadrants with the results of their research on the intended beneficiaries of their solution.



L16

Golden circle

Reflect on your project idea

PRIMARY COMPETENCES

- Taking the initiative
- Motivation and perseverance

REFERENCE METHODS

4. Project-based learning

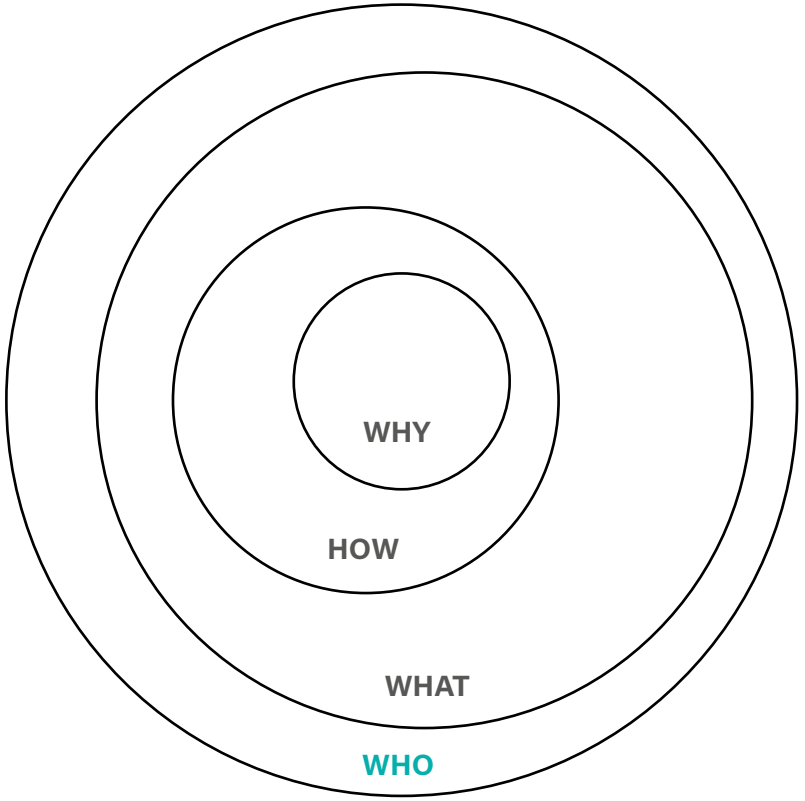
This technique from the marketing process can help your learners to reflect on their project and gain new insights on what they are trying to solve with their value creation idea. Ask them to answer the three questions with full sentences or – alternatively – to compose a story using the collage technique. The golden circle is a good technique to guide learners to work individually and then, confront the individual reflections across the team. An external circle can be added to identify the "WHO", where learners can analyse the ecosystem and detect allied stakeholders and users.

WHO is going to do your project?

WHAT will your project do?

HOW are you going to do it?

WHY do you want to do it?



INSPIRE YOUR LEARNERS: Simon Sinek´s TED talk

L17

Personas

Understand your user/client

PRIMARY COMPETENCES

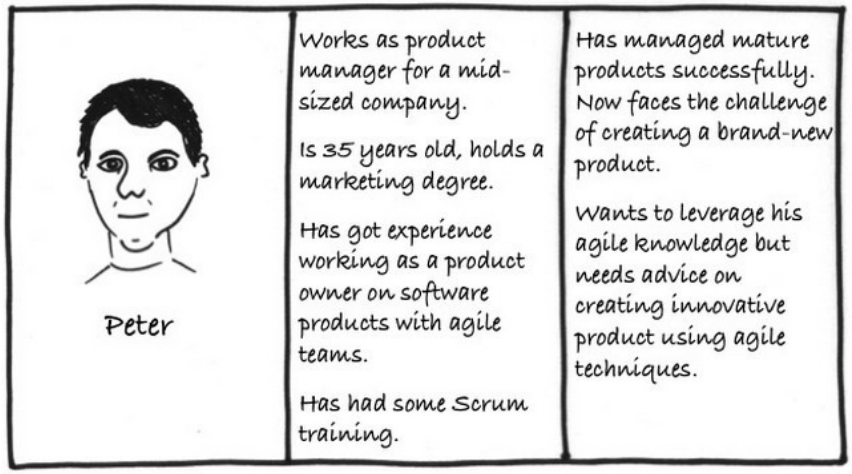
- Planning and management
- Coping with uncertainty ambiguity and risk

REFERENCE METHODS

3. The Lean Startup Method

This tool comes from the field of usability and user experience design and it is useful to understand the possible users and/or customers of a value creation idea. Personas are archetypes, fictional characters, created based upon user research. They do not describe real people, but embody the information collected from multiple individuals. By creating personas your learners will better capture the needs, experiences, behaviours and goals of the "other" they want to create value for. There are a number of different approaches to building personas.

The goal-directed persona for instance focuses on what archetypical users would want to do with the solutions provided. It looks into the workflow that the user would choose to achieve their objectives in interacting with the envisioned solution. To craft a persona, your learners will first need to run a field-based data collection, than ask themselves in-depth questions about their ideal customers. This exercise alone will help them notice things they had not before. They can then compare theirs answers with those of your teammates- this will unearth any inconsistencies among team members perspective and will foster discussions to resolve them.



MORE

Interaction design Foundation

L18

The being entrepreneurial canvas

Reflect on your entrepreneurial learning process

PRIMARY COMPETENCES

- Self-awareness and self-efficacy
- Learning through Experience

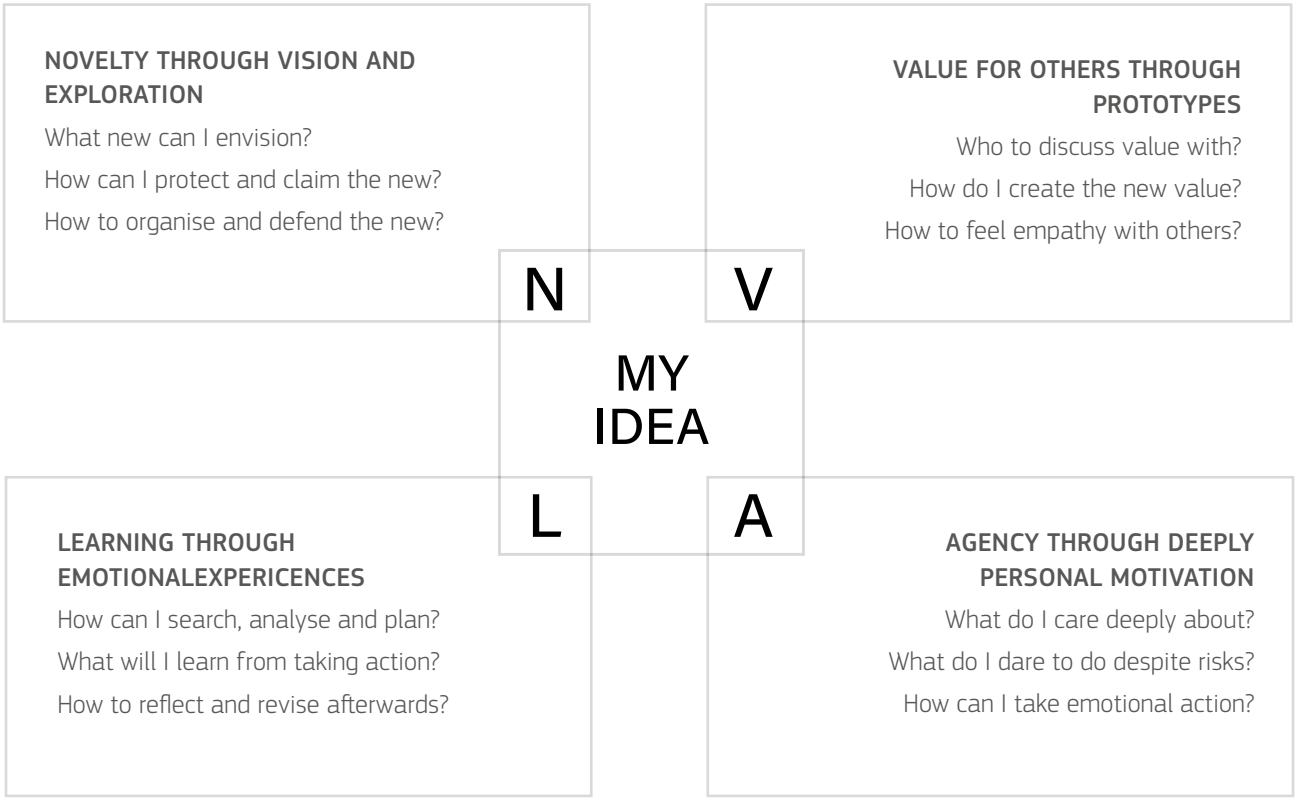
REFERENCE METHODS

4. Project-based learning

Ask your learners to fill in the canvas below to clarify how you can create new value for others, and learn through the process

MORE

Lackéus, M. Lundqvist, M., Williams Middleton, K., Inden, J. (2020) *The entrepreneurial employee in the public and private sector – what, why, how* (M. Bacigalupo Ed.), Publications Office of the European Union, Luxembourg



L19

Scanning the landscape

Analyse the market and the context

PRIMARY COMPETENCES

- Ethical and sustainable thinking
- Financial and economic literacy

REFERENCE METHODS

1. Effectuation

When beginning to create a new product, service or project (or enhancing an existing one), it is helpful to analyse the context, needs, the challenges and gaps. This includes carrying out desk research, case studies, evidence gathering on similar or related products or services. Give this template to your learners to help them frame their idea for a product or service in the greater context. Filling it in will shed light on already existing efforts and allow them to learn from available solutions and inform their own approach and understanding.

Advise them to scan the web for similar projects, analyse competitors, learn from other projects, and adapt other ideas to their solution. The idea is to understand the context of the challenge and be aware that there may be others working along the same lines. Both history and recent innovations can enrich their thinking.

Landscape scan: What is the context like? What are the ideas, products or organisations your idea is competing with?

Trends: ideas gaining momentum	**Trials:** experimental solutions	**Beacons:** established ideas & players	**Landmarks:** "have always been there"

ADAPTED FROM: Futures Nordkapp

L20

Ecosystem map

Reflect on the relation among stakeholders and products or services

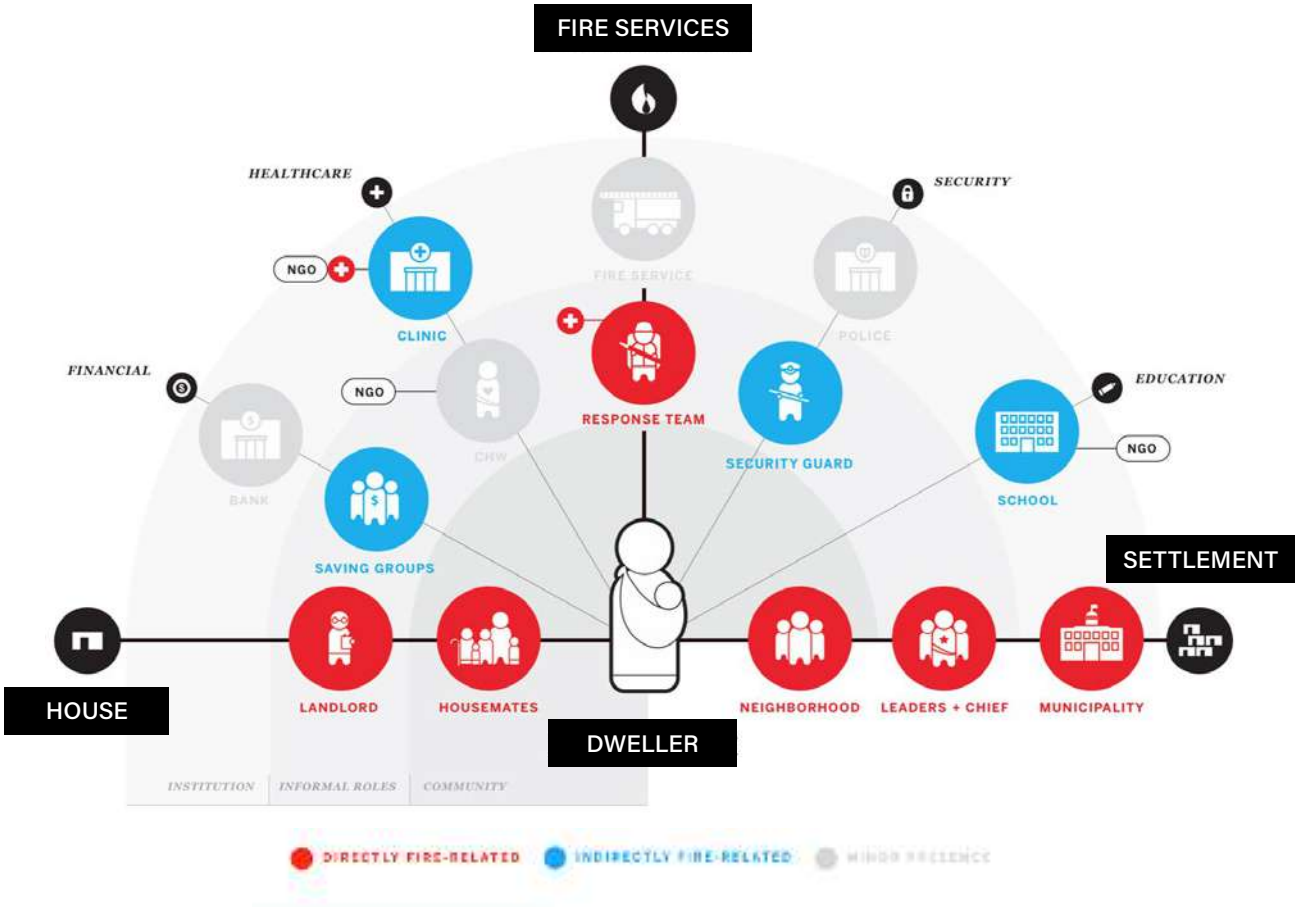
PRIMARY COMPETENCES

- Mobilising resources
- Learning through experience

REFERENCE METHODS

1. Effectuation
2. Design Thinking

The ecosystem map is a synthetic representation capturing all the key roles that have an influence on the user, organisation and service environment. First displaying all the entities, and then connecting them based on the type of value they exchange, build the ecosystem map. It is useful to uncover existing gaps and identify valuable opportunities for synergies. Map all the relationships as a giving and a receiving: the value is in the loops.



ADAPTED FROM: Service design tools

L21

Issue cards

Reflect on the challenges

PRIMARY COMPETENCES

- Valuing ideas
- Creativity

REFERENCE METHODS

2. Design thinking

The basic concept behind issue cards is to isolate a specific element into each card, and then use the cards as a starting point for a one-to-one or group conversation. An issue card can contain an insight, a picture, a drawing, a feature, a keyword, a description, etc. based on the specific need. They act as prompts to suggest new interpretations of a problem and induce considering a different perspective; they can be used in many different ways, from identifying priorities to discussing relationships or simply facilitating the conversation, in a creative, open and fun way.

Cards are simple tools to overcome the creative block, so you can feed them in the learning activities when you assess a team is stuck. Keep the content of the cards clear and simple, reducing the risk of bias and misinterpretations.



ADAPTED FROM: Service design tools

L22

Business model canvas

Plan the business model

PRIMARY COMPETENCES

- Vision
- Financial and economic literacy

REFERENCE METHODS

3. The Lean Startup Method

Depending on the kind of intervention you have designed, it may be useful to have learners reflect on the business model that would make their idea sustainable. A good way for project teams to remain abreast of their business model while developing their idea and testing it is to fill in a Business Model Canvas (BMC) and keep it in sight. The BMC is a simple template that needs learners to provide details about the revenue stream, the key partnerships they will need to forge, and the necessary resources to operate. You may ask your learners to revise the BMC several times in the process as elements change as they refine their idea and move towards implementation.

STEPS

1. Download and print out a BMC for each of the team members.
2. Ask them to fill out the sections of the BMC. Reassure them that when they fill it for the first time it does not need to be complete as there will be unknowns.
3. Encourage them to pause filling out the sheet to get more information if they need to do it.
4. When they are done, encourage them to post the BMC in their workspace. Remind them that they will have to revise the BMC as the project advances. Remember entrepreneurial value creation is not a linear journey: iterations are key to come up with something that has a real value for someone.

L23

Lean canvas

Reflect on the challenges

PRIMARY COMPETENCES

- Vision
- Financial & economic literacy

REFERENCE METHODS

3. The Lean Startup Method

Before starting with the Business Model Canvas you can ask your learners to reflect on their business idea or project by completing the Lean Canvas. This simple sheet asks key questions on revenue streams, key partnerships, and vital resources. A Lean Canvas can be used several times in a process as elements are bound to change as you refine your idea and move towards implementing it.

STEPS

1. Download and print out a Lean Canvas for each of your team members.
2. Work with your team and start to fill out the sections of the Lean Canvas. When you fill it out the first time there will be some unanswered questions.
3. You may need to pause filling out the sheet to get more information. That is fine.
4. When you are done, post the Lean Canvas in your workspace. Like everything else in the human-centred design process, you will refine it. Consider doing a new one as your project progresses.

L24

SWOT analysis

Reflect on your business model

PRIMARY COMPETENCES

- Taking the initiative
- Motivation and Perseverance

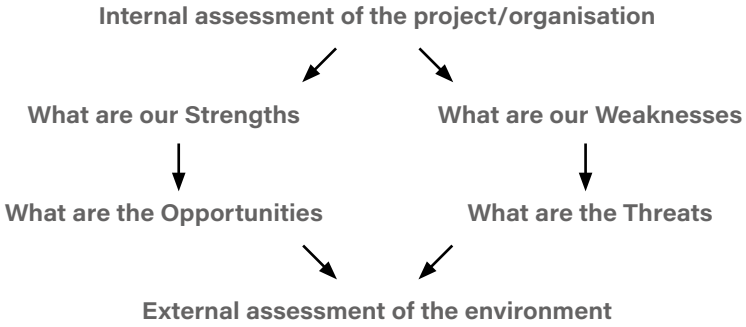
REFERENCE METHODS

1. Effectuation
3. Lean Startup Method
6. Classrooms as learning communities

SWOT stands for Strengths, Weaknesses, Opportunities and Threats. A SWOT analysis can be applied to an individual with career change in mind, but it is especially used for projects, organisations or even sectors. Filling in a SWOT matrix involves identifying and mapping the internal and external factors that are assisting or hindering the individual/project/organisation/sector in achieving their goal.

By listing, analysing and reflecting upon Strengths, Weaknesses, Opportunities and Threats your learners obtain a richer understanding of what they can offer, the issues they need to solve, and where they may need assistance to overcome difficulties.

The SWOT analysis can be started as an individual assignment, but it is essential to involve all team members. Some issues detected as weaknesses may be opportunities for another team member. Encourage learners to combine the different quadrants to define strategies that enrich your project: Strengths and Opportunities, Strengths and Threats.



	Opportunities	Threats
Strengths	.....	.....
Weaknesses	.....	.....

L25

SOAR analysis

Reflect on your business model

PRIMARY COMPETENCES

- Spotting opportunities
- Vision
- Planning and Management

REFERENCE METHODS

1. Effectuation
3. Lean Start-up
6. Classrooms as learning communities

Another useful strategic planning tool is the SOAR Analysis, which stands for Strengths, Opportunities, Aspirations and Results. SOAR Analysis helps organisations focus on their future ambitions and the result these ambitions will yield. It is a process of co-construction, which engages stakeholders of an organisation to co-create a shared vision of their desired future throughout the process by inquiry, imagination, innovation, and inspiration. It is a strategic planning tool that unites stakeholders in a process to understand organisational strengths and envision future prospects. The SOAR approach expands the definition of organisation and invites participants to develop the exercise with different stakeholders of the organisation's ecosystem (including suppliers, customers, partners, or neighbours). By opening up the SOAR Analysis to an extended network of interested parties, the strategic planning of an organisation/project gets richer.

SOAR allows you to:

- Build on strengths (the positive core).
- Discover profitable opportunities.
- Visualise goals and strategic alternatives.
- Identify enabling objectives.
- Design strategies and tactics that are integrated with your most successful programmes and ecosystem stakeholders.
- Implement a strategic plan that is a dynamic, continuous, and living document.

Invite the members of your organisation and the stakeholders of your ecosystem to reflect on following questions and fill in the table:

Strategic Inquiry	**Strengths** What are our greatest assets?	**Opportunities** What are the best possible market opportunities?
Appreciative Intent	**Aspirations** What is our preferred future?	**Results** What are the measurable results?

SOURCE: Stavros, J., Cooperrider, D., & Kelley, D. L. (2003). Strategic inquiry appreciative intent: inspiration to SOAR, a new framework for strategic planning. Ai Practitioner, 11.

L26

Use scenario

Explain the envisioned experience by narrating a relevant story of use

PRIMARY COMPETENCES

- Planning and management
- Coping with uncertainty ambiguity and risk

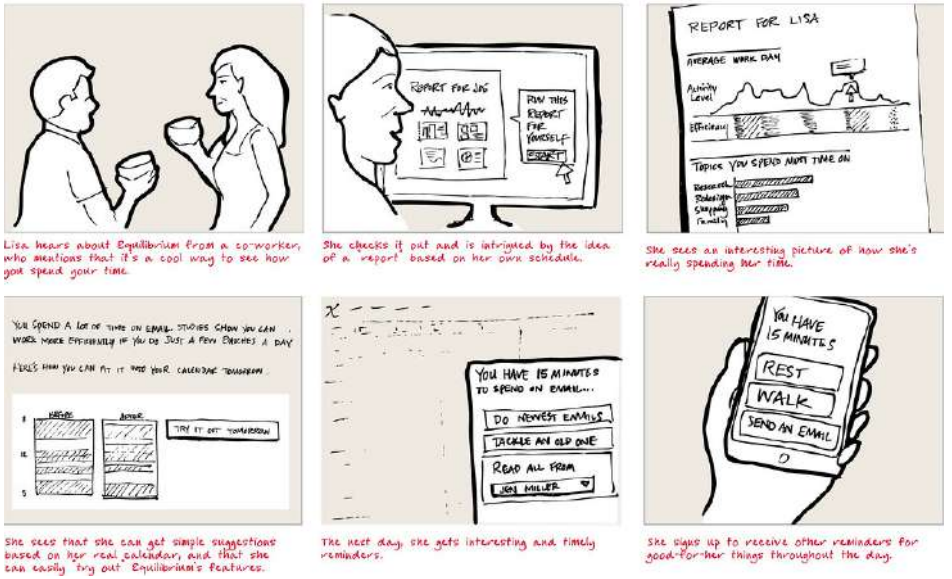
REFERENCE METHODS

1. Design thinking
3. Lean Startup Method

A use scenario is a story that describes – in an exemplification and narrative manner – how the user is going to interact with the service during a specific situation of everyday life. Scenarios are artefacts that mediate the design process: they have to be detailed so that design implications can be inferred and thought through. This means that scenarios themselves are design objects that evolve along the design process.

Writing use scenarios requires users to identify a specific context in which the action takes place, as well as characters and needs that define the attitude of the user. Scenarios can be first written as stories, describing the experience systematically, and then supported with drawings, pictures or clips of the experience, adding a visual layer to it.

Scenarios have different characteristics depending on which design phase they support (envisioning what role an artefact will play in users' life, or to evaluate an advanced prototype of a product). What is key is that they must help your learners make choices in developing their ideas by keeping use at the centre of the decision-making.



L27

User's journey

Understand better the use of your product/service by the users

PRIMARY COMPETENCES

- Creativity
- Vision

REFERENCE METHODS

1. Design thinking
3. Lean Startup Method

The user's journey is a synthetic representation that describes step-by-step how a user interacts with a product/service. The process is mapped from the user perspective, describing what happens at each stage of the interaction, what touchpoints are involved, what obstacles and barriers they may encounter. The journey map is often integrated with additional layers representing the level of positive/negative emotions experienced throughout the interaction. This tool is useful to depict the whole user experience, representing the process as well as pain points and emotional flows.

This technique can be developed as a storyboard, using key-frames and captions – as in a movie – to select the main stages of the solution and understand the related main needs expressed by the user of the service/product and the touchpoints to the service/product. Different storyboards can be completed for the different personas

Storyboard: Draw the key frames of the user journey				
Needs: For each frame identify the main needs				
Touchpoints: Define the touchpoints according to the user's need				
Obstacles/Barriers: Reflect on the possible obstacles/barriers				
Emotions: Reflect on the feelings related to this action				

L28

Prototype

Prototype your minimum viable product/service

PRIMARY COMPETENCES

- Learning through experience
- Mobilising others

REFERENCE METHODS

1. Design thinking
3. Lean Startup Method

Once your learners have envisaged the key features of their product/service to match the needs of the intended users, they have to put their ideas to the test.

Prototyping is the creation of dummy products built to test a concept or process. The first thing to do when building a prototype is to identify which feature of the product/service to test with end users. This will help define which function of the value creating idea will have to be embedded in the prototype. It will also help decide in which context the test will need to happen (e.g. at home or at the bus stop, inside an airport or on a mountain trail....) and which type of users will need to be recruited for the testing.

The Lean Startup method has brought prototyping outside experimental settings into the real world. The Minimum Viable Product is de facto a high fidelity prototype that allows the team to 'fail cheap and recover fast'. When deploying a Minimum Viable Product it is essential to have a strategy in place to collect data and measure how the users/customers respond to it. Information gathered will be analysed to take decisions on how to proceed in developing additional features.



L29

Pitch deck/Elevator pitch

Understand better the use of your product/service by the users

PRIMARY COMPETENCES

- Self-awareness and self-efficacy
- Motivation and perseverance

REFERENCE METHODS

1. Design thinking
3. Lean Startup Method

An elevator pitch is a brief, persuasive speech that you use to spark interest in what you propose, your idea, your product. Its aim is to convey the value of the proposal in a minimum amount of time so as to get the audience excited about it. Once your learners' idea has achieved a stage of development, there comes a time to communicate it and engage possible sponsors. The learners will have to analyse all relevant aspects of their project in order to communicate what is essential in a compelling way. Preparing a pitch is a way to refine the idea, spell out its purpose, to clarify the goals and to plan how to achieve them. Generally pitches aim to get potential investors or key partners on board with the project. A pitch must be as clear and brief as possible in order to transmit sound concepts and be convincing, but also inspirational and memorable to engage the audience. A structure you can pass on to the learner is the 6 Cs system: **context**, **challenge**, **change**, **concept**, **capacity**, **commitment**. Ask them to organise their presentation following the content pyramid below:

- 35%: Who, What, When, Where
- 30%: How, Why, From what
- 25%: Specifics
- 10%: Background



L30

P2P rubric

Assess the work of your peers

PRIMARY COMPETENCES

- Valuing ideas
- Working with others

REFERENCE METHODS

6. Classrooms as learning communities

The final activity of an entrepreneurial learning workshop can be the presentation of the projects by the teams, simulating a funding round. The P2P rubric can be applied to have learners engaged in giving feedback to the different projects. You can decide with the learners the criteria to value the work, here are some ideas:

PROJECT:						
Challenge	*Solution*	*Relevance*	*Efficiency*	*Viability*	*Presentation*	*Teamwork*

L31

Self-reflection on learning achievements

Assess your own work

PRIMARY COMPETENCES

- Self-awareness and self-efficacy

REFERENCE METHODS

4. Project based learning

Ask your learners to answer the following questions. They have to describe their behaviour rather than evaluate it and must be specific and honest.

With respect to the process and outcomes

- How satisfied are you with your results?
- What was the plan?
- How did things actually proceed?
- How did you react?
- How did others see it?
- What did you learn?
- How would you do it next time?

With respect to their individual contribution

- Which tasks did you take on and complete?
- What did you do well? Where were you unsuccessful?
- What helped you? What held you back from completing your tasks?
- In which situations did you feel good? In which did you feel uncomfortable?
- How do you behave in pleasant situations? In difficult ones?
- How do other people perceive you in such situations?
- What knowledge and abilities helped you to do this work?
- What new knowledge and abilities did you acquire?

L32

Draw your EntreComp flower

Assess your own progression

PRIMARY COMPETENCES

- Self-awareness and self-efficacy

REFERENCE METHODS

6. Classrooms as learning communities

You can prompt your learners with the EntreComp flower and ask them to reflect on their entrepreneurial competences. You can ask them to flag the competences where they feel stronger and those where they feel weaker. You can also ask them to flag which competences they would like to master.

You can ask them to draw their own petals of the flower and create a personal EntreComp flower. You can then ask to compare the flowers within teams and have them identify which competences they lack in the team to have the full set of EntreComp competencies. In addition you can ask them to think how they could fill any gaps they may have.

Depending on the proficiency levels (foundation, intermediate, advanced, expert) for each of the 15 competences, the flower can look like a garden pansy, a daisy flower or a sunflower.



L33

Critique for the future

Assess the learning activity

PRIMARY COMPETENCES

- Learning through experience
- Motivation and perseverance

REFERENCE METHODS

6. Classrooms as learning communities

As a last activity of your entrepreneurial learning ventures, it is a good practice to collect some feedback from your learners. This does not have to be a complex evaluation exercise. You can ask them questions like:

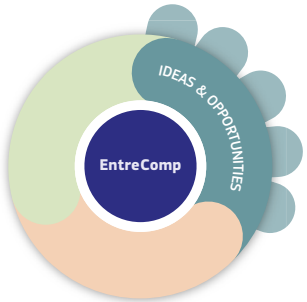
- What was the best aspect of this learning experience?
- What would you do in a different way?
- What has surprised you?
- What have you learnt?

Ask everyone to write their comments individually on different sticky notes. Once done, the notes are harvested, presented and discussed. To conclude, the group can agree on how certain things should work in the future. This constructive reflection process can also be performed by each team individually to appraise their entrepreneurial projects.



ADAPTED FROM: The initiative cookbook

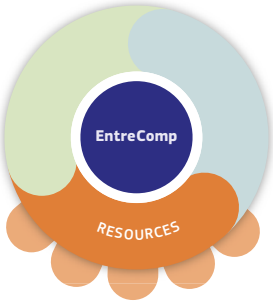
EntreComp vs tools



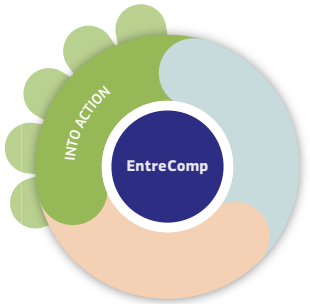
ENTRECOMP AREA: IDEAS & OPPORTUNITIES

COMPETENCE	TOOLS
Spotting opportunities	F4 L5 L6 L7 L12 L16 L20 L24 L25
Creativity	L1 L2 L6 L7 L8 L9 L10 L12 L21 L27 L28 L29
Vision	F1 F4 F5 F6 F7 F8 L5 L7 L8 L11 L12 L13 L16 L18 L22 L23 L24 L25 L27
Valuing ideas	L8 L9 L10 L11 L12 L14 L16 L18 L22 L23 L24 L25 L27
Ethical & sustainable thinking	L1 L2 L6 L7 L8 L9 L10 L12 L21 L27 L28 L29

ENTRECOMP AREA: RESOURCES



COMPETENCE	TOOLS
Self-awareness and self-efficacy	F8 L3 L4 L12 L18 L24 L25 L29 L30 L31 L32
Motivation & perseverance	F4 L2 L11 L16 L24 L25 L10 L29 L31 L32 L33
Mobilising resources	L3 L7 L13 L20 L28
Financial & economic literacy	L19 L22 L23
Mobilising others	F3 L2 L25 L28 L29



ENTRECOMP AREA: INTO ACTION

COMPETENCE	TOOLS
Taking the initiative	F1 F7 L16 L24 L25 L28 L33
Planning ad management	F2 F3 F5 F6 F7 L11 L13 L17 L24 L25 L26
Coping with uncertainty ambiguity and risk	L1 L2 L4 L8 L9 L10 L11 L12 L13 L17 L24 L25 L26
Working with others	L1 L2 L4 L7 L11 L25 L30 L33
Learning through experience	L2 L4 L14 L15 L17 L18 L20 L28 L29 L33

Sources of inspiration

ENTREPRENEURIAL METHODS

Mansoori, Y., Lackéus, M. Comparing effectuation to discovery-driven planning, prescriptive entrepreneurship, business planning, lean startup, and design thinking. *Small Bus Econ* 54, 791–818 (2020).

Effectuation: www.effectuation.org

Lean startup: www.learningstartup.org

Design thinking: dschool.stanford.edu

Design Thinking for Educators designthinkingforeducators.com

PEDAGOGICAL APPROACHES

Lucas, Bill & Spencer, Ellen. (2017). Teaching Creative Thinking: Developing learners who generate ideas and can think critically. Crown House Publishing Ltd, Camarthen (UK).

Project based learning: www.pblworks.org

Value creation pedagogy: vcplist.com/vcp

EU FUNDED RESOURCES

Entrepreneurial challenges: youthstart.eu/en

Teacher competence framework: entrecompedu.eu

Entrepreneurial learning assessment: entreassess.com

TOOLKITS

Ideo design kit: www.ideo.com/post/design-kit

Nesta DiY: diytoolkit.org

Service Design: servicedesigntools.org

Project management, fundraising and social media toolkit: www.global-changemakers.net/toolkits

Initiative cookbook: www.mitost.org/en/about-us/mitost-editions/initiative-cookbook.html

IN ADDITION

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McCallum E., Weicht R., McMullan L., Price A. (2019) *EntreComp into Action: get inspired, make it happen* (M. Bacigalupo & W. O'Keeffe Eds.), Publications Office of the European Union, Luxembourg

McCallum, E., McMullan, L., Weicht, R. and Kluzer, S. (2020) *EntreComp at Work. The European entrepreneurship competence framework in action in the labour market: a selection of case studies*. (M. Bacigalupo Ed.), Publications Office of the European Union, Luxembourg

Notes

PRINCIPLES

METHODS

TOOLS

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