Training Fiche

Title	Critical Thinking for professional development: EntreComp's "Ideas & Opportunities"
Keywords	Critical Thinking, Lifelong Learning, EntreComp, Ideas & Opportunities, Soft Skills, IPO Model, Analysis, Inference, Evaluation
Provided by	IHF asbl
Language	English
Objectives	Supporting Learners in: ● Experimenting with operative frameworks for Critical Thinking *Analysis → Inference → Evaluation* ● Understanding how Critical Thinking is framed into EntreComp *IDEAS & OPPORTUNITIES' pillar for Critical Thinking* ● Having a deepen look into EntreComp *Three Training Areas: IDEAS & OPPORTUNITIES, RESOURCES, INTO ACTION* ● Get more familiar with the EntreComp Framework… *…the official EU framework for education and training on sense of initiative and entrepreneurial competences*
Learning outcomes	● **The EntreComp Framework to nurture your entrepreneurial attitudes** ● **Critical Thinking in EntreComp: IDEAS & OPPORTUNITIES' pillar** ● **Critical Thinking from "soft" to "employability" skills** ● **Analysis → Inference → Evaluation** ● **IPO: Input → Process → Output**
Training Area	Complex problem solving	
	Critical thinking	X
	Creativity	
	People management	
	Coordinating with others	
	Emotional intelligence	
	Judgement and decision-making	
	Service orientation	
	Negotiation	

Cognitive flexibility	
Content index	**Module name: Critical Thinking for professional development: EntreComp's "Ideas & Opportunities"** **Unit 1: An introduction to EntreComp** Section 1: Opportunities for upskilling and capacity building Section 2: A brief timeline of the framework Section 3: Eight key competences for Long Life Learning Section 4: Sense of initiative and entrepreneurship Section 5: Linking Critical Thinking to competence no.7 Section 6: The publication of the EntreComp Framework Section 7: Training areas and competences: a deepen look into EntreComp Section 8: IDEA & OPPORTUNITIES Section 9: RESOURCES Section 10: INTO ACTION **Unit 2: Critical Thinking among the most-desired competences for employability** Section 1: From Soft to Employability Skills Section 2: A look into the future Section 3: The Future of Jobs Section 4: Top 10 skill for employability Section 5: An EntreComp approach to Critical Thinking Section 6: Spotting opportunities Section 7: Creativity Section 8: Vision Section 9: Valuing ideas Section 10: Ethical and Sustainable Thinking **Unit 3: Critical Thinking in a nutshell: merging new takeaways and recommendations** Section 1: A formula for Critical Thinking Section 2: Analysis → Inference → Evaluation Section 3: IPO: Input → Process → Output Section 4: The "Critical" element in IPO Section 5: IPO in team's dynamics

Content development	**Module name: Critical Thinking for professional development: EntreComp's "Ideas & Opportunities"**
	Unit 1: An introduction to EntreComp **Section 1: Opportunities for upskilling and capacity building**
	In the context of this module, you will be introduced to the official European Competence Framework for education and training on entrepreneurial competences and what use you can make of it talking about Critical Thinking.
	Although formally conceived to enhance, foster and sustain the entrepreneurial spirit(s) of EU citizens, the EntreComp Framework responses to a much broader landscape of needs and opportunities for employability and upskilling, i.e., long life learning (LLL) opportunities.
	In other words, the EntreComp can be strategically referred to all domains of education and training as many of the competences listed by the framework are equally relevant and meaningful for professional career development, sense of initiative and self-reliability, development of soft-skill – including Critical Thinking.
	Section 2: A brief timeline of the framework
	To track the origins of the EntreComp Framework, we have to go back to December 2006: *Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning*
	This policy document identifies eight key competences of interest to boost the excellence of LLL programmes implemented at EU level, and their overall responsiveness to the emerging social and economic challenges of the given historical period.
	By the term competences, the European Parliament refers to: "…a combination of knowledge, skills and attitudes appropriate to the context. Key competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment".
	Section 3: Eight key competences for Long Life Learning
	The aforementioned competences are the following: 1. Communication in the mother tongue 2. Communication in foreign language 3. Essentials in STEM disciplines 4. Digital Competences 5. Learning to learn 6. Social and civic competences 7. **Sense of initiative and entrepreneurship**

8. Cultural awareness and expression

Section 4: Sense of initiative and entrepreneurship

Sense of initiative and entrepreneurship (LLL competence no.7) is described as the person's ability to:

"…turn ideas into action [helping] individuals in the workplace in being aware of the context and [surrounding] opportunities".

Furthermore, this same competence refers to:

"…the ability to identify available opportunities for personal, professional and/or business activities, including 'bigger picture' issues that provide the context in which people live and work, such as a broad understanding of the workings of the economy, and the opportunities and challenges facing an employer or organisation".

Section 5: Linking Critical Thinking to competence no.7

From here, we can start seeing some clear linkages with what it is commonly understood as "Critical Thinking", meaning:

"…the intellectually disciplined process of actively conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action".
Source: Michael Scriven & Richard Paul, 8th Annual International Conference on Critical Thinking and Education Reform, 1987.

In both contexts, we are referring to an ability/process in which, based on some inputs, people reacts by assigning meanings to what they experience and finetune their thoughts/actions accordingly.

Section 6: The publication of the EntreComp Framework

The EntreComp Framework came exactly ten years after EU Parliament's recommendations.

Competence no.7 as we know it has been "splitted" into a three-dimension training areas including 15 competences – five for each area.

As of today, the EntreComp framework remains – together with DigComp and LifeComp – the most reliable and robust reference model for education and training at EU level

Section 7: Training areas and competences: a deepen look into EntreComp

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

As we mentioned already, the EntreComp framework includes 15 competences divided equally among three training areas that are closely interrelated each other's:

1. IDEA & OPPORTUNITIES
2. RESOURCES
3. INTO ACTION

Once again, it is important to reiterate the fact that the EntreComp's design conceived Entrepreneurship not as a profession, but rather as a competence:

Entrepreneurial competences apply to all domain of social and professional life, included employability, professional empowerment and even active citizenship.

Section 8: IDEA & OPPORTUNITIES

- Spotting opportunities
- Creativity
- Vision
- Valuing Idea
- Ethical and Sustainable Thinking

Section 9: RESOURCES

- Self-awareness and self-efficacy
- Motivation and perseverance
- Mobilising resources
- Financial and economic literacy
- Mobilising others

Section 10: INTO ACTION

- Taking the initiative
- Planning and Management
- Coping with uncertainty, ambiguity and risk
- Working with others
- Learning through experience

Unit 2: Critical Thinking among the most-desired competences for employability
Section 1: From Soft to Employability Skills

Nowadays, as the automatization of tasks and functions is slowly replacing both "manual" an "intellectual" workforce, your opportunities to access the job market are increasingly depending on soft and relational skills.

Technical proficiency and effectiveness in the work place comes, firstly and foremost, from practices, exercise and

experiences/lessons learned based on a trial-and-and-error approach. During interviews, employers do not have enough information to assess candidate profile's and his/her potential performance in the workplace.

Furthermore, most of times the jobs you're applying for requires specific knowledge/know-how that you might not have acquired during your formal education (simply because not included in the curricula).

So how do employers orientate their evaluation of your profile?...

Section 2: A look into the future

Employers are perfectly aware that new recruits – specifically if fresh graduates – requires in-depth education and training with focus on their future roles and responsibilities before being fully autonomous and independent.

During the first interview, rather than on what you can do, they will be seeking for other kind of information that might be not related at all to your education.

This kind of information, represents the very origin of the ESSENCE project and the assumptions on which it is rooted.

Section 3: The Future of Jobs

Back in 2016, the World Economic Forum predicted a major shift by 2020 in the "top 10 skills" for employability, recruitment, career development and business competitiveness.

According to the report, soft and relational skills are essential for new graduates and HE students to enter the job market as recruiters and employers develop new sophisticated models to assess the "human" profile of candidates (i.e., ability to work with others, sense of initiative, reliability and trustworthiness, etc.).

Section 4: Top 10 skill for employability

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgement and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

Section 5: An EntreComp approach to Critical Thinking

When we think about it, finding a job – or the opportunity for an interview with a company that you would like to work for – is a process that resemble EntreComp's design:

1. Identify IDEAS & OPPORTUNITIES to achieve that objective
2. mobilising your RESOURCES to nurture further
3. and finally, putting yourself INTO ACTION

So at first, you need to think critically on how to plan, strategize and move on with your job-hunting…not by chance, according to many, finding a job is a job per se.

Section 6: Spotting opportunities

Spotting opportunities for employability is the very first task you are require to comply with so as to maximize your chances of employability.

Applying Critical Thinking to spotting opportunities for employability means analyzing, inferencing and evaluating relevant information (data, statistics, etc.) emerging from the job market: which is the industry with the highest growth potential? Where are located its key players? Etc. This qualitative and quantitative phenomenon should be cross-referenced with your personal aspirations, motivations and achievements. Threats and opportunities from the market remain subjective from person to person.

Take some time to reflect on what drives your interests, what stimulate your curiosity, what might be a personal talent of yours from which to leverage on…

Section 7: Creativity

Very often, when it comes to job hunting, the one-solution-fits-all approach can lead very easily to negative effects.

Unfortunately, at times, the job-market becomes an extremely competitive arena. On a daily basis, hundreds of applications flood the "work with us" inbox of companies and organization, in order to really stand out from masses you need to be very creative in your approach.

Luckily for you, LinkedIn provides for new numerous and exciting opportunities to network with people that can be of great support. However, this does not imply that the task it's easier…

Seek for guidance and feedbacks, do your research and learn from experts key tips and hints on how to "relate" with employers,

based also on companies' recruiting process. In other words, do not stop assimilating external inputs.

Section 8: Vision

Once new opportunities are spotted and you have a plan to stand out and valorizing your strengths, go back to your "inner" self so as to pinpoint those key elements that will influence and impact on your future decisions.

This is really about to put on the scale, on one hand your passions, aspirations, desires and expectations, on the other, concrete opportunities that surrounds you.

You need to be aware that you might not be able to access your "first choice" option (the one that you were really dreaming for) fresh of university. Job-hunting can put you in compromise situations with or without your will…be sincere with yourself and ask you how would you deal with, how many steps would you need to get closer to what you were actually pursuing.

Section 9: Valuing ideas

Now that you have a semi-defined roadmap with new and consolidated coordinates orienteering your focus, you can start to narrow down even further your targets of reference – the ones that seems compliant and coherent with your personal expectations, empowerment and professional development opportunities, etc.

Considering all the multiple alternative you might have, try to highlight and process inputs by looking at the most that you can make out of each one of them.

Each item (i.e., salary) will be assigned to a value that is measured on a numerical scale (for instance, 1 = very disadvantageous; 5 = very advantageous), at the end of process each option will present a certain score. Of course, the higher the score, the higher the appealing of the solution.

Math should not dictate your final decision, but it will certainly be of support…

Section 10: Ethical and Sustainable Thinking

When we talk about job-hunting, employment and professional development, let's not forget that once you will be embraced by the ecosystem, your actions will impact someone somewhere near you.

After acquiring enough responsibility and experience, there will be a moment in which your vote might decide the output of a delicate

decision. This scenario can make quite a big difference if you work in the healthcare sector, defence, finance, and more in general, industries that impact societies and economies at large.

While valuing the different alternative for employability, take into the equation your accountability and potential exposures to unpleasant situations… will you be ready and mentally prepared to cope with the consequences?

Unit 3: Critical Thinking in a nutshell: merging new takeaways and recommendations
Section 1: A formula for Critical Thinking

In this last Unit, we will look at interesting and defining features of Critical Thinking so as to sustain you in better familiarise with the notion and start experimenting with new "critical" approaches applied to real-life scenarios.

Back in the previous unit, we mentioned the fact that an application of Critical Thinking in its very essentials follows a three-stage approach as follows:

1. Analysis
2. Inference
3. Evaluation

Section 2: Analysis → Inference → Evaluation

Out of all the conceptual models relied on to frame Critical Thinking as a cognitive function, the one here proposed is also the most common and reliable one.

- *Analysis* pertains to the absorbing process from the external environment of insight, inputs and information that are relevant to decode and interpret "what is happening" in that given moment.

- *Inference* pertains to establishing cause-effect correlations upon what we are experiencing based on assumptions and following deductions.

- *Evaluation* pertains to assigning meanings and recognizable patterns of thought and actions as long as they are predictable.

Section 3: IPO: Input → Process → Output

What we just saw does not differ significantly from a much well know model applied in software engineering as well as in psychology.

The IPO model has been in fact – and still is – the core theoretical framework of cognitive psychology (a.k.a. Cognitivism), a branch of the discipline involved in the research filed of memory and learning. When interfacing with social systems, people rely on the IPO model to orientate their actions/reaction on constant basis, without even being aware of it…

- INPUT: Trigger of the action/reaction
- PROCESS: Computation of the input (based on external factors, cultural background, experience, etc.)
- OUTPUT: Response to the input (as adequate, coherent and consistent as possible)

Section 4: The "Critical" element in IPO

Some might argue that Critical Thinking is an intrinsic element of the P as here more than in other cycles, intervenes an in-depth evaluation and assessment of the surroundings.

However, Critical Thinking permeates the entire process as people can "critically discern" the inputs that are of greater relevance for them as well as the content, structure and variability of the output.

We experienced already this fluidity of Critical Thinking across the stages of a process when we re-built the IDEAS & OPPORTUNITIES' flow. From Spotting Opportunities to Sustainability, Critical Thinking took different shapes and form while moving across the whole training area.

Section 5: IPO in team's dynamics

When applied to formal organization, the IPO model looks mainly into:

1. Strategic Planning (i.e., budgeting)
2. Monitoring and Evaluation
3. Auditing
4. Risk Management
5. Communication and PR
6. Networking and STKH Management
7. People management (i.e., trust-building, resolution of conflicts)

It is correct to say that what constitutes and Input in specific situations, might result as Output if contextualized in another.

Glossary

Competence: a combination of knowledge, skills and attitudes appropriate to the context. Key competences are those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment.

	Sense of initiative: the ability to identify available opportunities for personal, professional and/or business activities, including 'bigger picture' issues that provide the context in which people live and work, such as a broad understanding of the workings of the economy, and the opportunities and challenges facing an employer or organisation.
	Critical Thinking: the intellectually disciplined process of actively conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action.
	Analysis: absorbing process from the external environment of insight, inputs and information that are relevant to decode and interpret "what is happening" in that given moment.
	Inference: establishing cause-effect correlations upon what we are experiencing based on assumptions and following deductions.
	Evaluation: assigning meanings and recognizable patters of thought and actions for what predictable they can be.
Self-evaluation (multiple choice queries and answers)	1. Which one of the following is NOT a key competence for longlife learning? A) Basics in STEM disciplines B) Accounting and Finance C) Communication in the mother tongue 2. Sense of initiative includes… A) Turning ideas into action B) The ability to influence your peers C) Design thinking 3. About the "Creativity" competence of EntreComp, which one of the following it's not a descriptor: A) Explore and experiment with innovative approaches B) Combine knowledge and resources to achieve valuable effects C) Identify needs and challenges that need to be met 4. Inference means: A) establishing cause-effect correlations upon what we are experiencing based on assumptions and following deductions. B) process insights, inputs and information that are relevant to decode and interpret "what is happening" in that given moment. C) recognizing patters of thought and actions for what predictable they can be.

	5. Which one of the following does NOT apply to critical thinking: A) Make decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes B) Knowledge, know-how and internal beliefs contributing to the generation and processing of (new) skills C) personal commitment to replicate and adjusts successful and adequate behaviours to navigate the social/relational ecosystem Answers: 1b, 2a, 3c, 4a, 5a
Bibliography	n/a
Resources (videos, reference link)	**PPT Critical Thinking** **Best Practices no. 1, 2, 3, 4, 5** **Case study for Critical Thinking no. 1, 2, 3**