

1.2.1. Importance of a European common framework for skills development

Introduction

The following chapter introduces and describes different frameworks that provide a shared language and understanding at the European level, around how the education realm is defining the students' required skills for the coming years in the 21st century. These frameworks help to understand the expected role of HEIs and their capacity to develop soft skills in students and how it is awaited from students to be responsible of their own learning process. Developing agency, intrinsic motivation and a commitment to their professional project and societal development are some of the competences described in the frameworks. Thus, the selected frameworks are aligned with the GRIT project and its purpose of improving the development of non-cognitive skills in young researchers and students to support social-awareness, civic commitment and public engagement and increase resilience in the academic communities.

1. Student agency – OECD Learning Compass

With the participation of academic experts, students, teachers, social leaders, and policy makers from around the world, the OECD developed a learning framework to respond to what knowledge, skills, attitudes, and values will students need to thrive and shape their world. The OECD Learning Compass 2030 (OECD, 2018) provides orientation and a common language in terms of what is globally relevant to direct education towards individual and collective well-being. Thus, it focused on what students need to navigate through uncertain contexts and how they can find their direction by themselves in a meaningful and responsible way.

One of the key concepts within the compass is Student Agency, although it is interpreted differently around the world, it is characterized by students' sense of responsibility to take part of society by seeking to influence people and circumstances for the betterment (OECD, 2018). It constitutes an "intentional, purposeful and meaningful learning" (Jääskelä et al., 2020, p. 791). Therefore, Student Agency can only be learned and exercised in social contexts, the interaction with community, peers, and teachers develops students' identity, a sense of belonging that motivates their actions and gives them a sense of purpose (OECD, 2018). Thus, it is claimed that HEIs should broaden their objective of increasing skills and knowledge to make students be engaged purposively with the complexities and uncertainties of the world, including working life (Jääskelä et al., 2016).

For students' agency play an active role in society, it requires a meaningful learning environment and the development of non-cognitive skills for finding a life purpose and deciding for their own what and how they want to learn, as well as defining, motivations, objectives, and a professional identity (OECD, 2018; Vähäsantanen et al., 2016; Jääskelä et al., 2016). It does not mean to act in isolation or in self-interest, on the contrary agency implies reflecting on morality and questioning which is the right action to take; social understanding of society's rights and responsibilities along with relationships with others; an economic perspective on which opportunities could contribute to the local, national or global economy; and finally, developing creative, being innovative for practical or research purposes and add new value to the world (Leadbeater, 2017). Thus, higher education institutions should provide an environment that allows students decision making, structures for equal participation and reciprocal relations between students and teachers (Vähäsantanen et al., 2016). Moreover, agency could be further applied in the professional setting since it helps students to determine their professional identity and be reflective about their mission and work practices (Vähäsantanen et al., 2016)

To improve students' thinking and intentional action toward individual and collective well-being, the Future of Education and Skills 2023 project (OCDE, 2018) recognizes that exercising the transformative competences, knowledge, attitudes, values, and skills are critical to transform society and meeting the 21st-century challenges. The OCDE (OCDE, 2018) has identified three transformative competences:

1) Creating new value, which refers to students acting entrepreneurially, finding new approaches to solve old and new problems. By developing knowledge, strategies ideas, and creating new jobs or business, always addressing global challenges and understanding value in terms of economic, social and cultural (Bentley, 2017; Rychen, 2016). To do so, skills such as critical thinking, risk management, adaptability, open mindset, and creativity are fundamental, their agency is seen as their capacity to be self-reflective and interact in a creative way with the environment and its structures (Inouye et al., 2022).

2) Reconciling tensions and dilemmas, indicates the ability to see issues and solutions from different perspectives, by having a more complex picture and the tensions within, students' approach would be more holistic; and they would consider short- and long-term consequences of their actions. Thus, empathy, respect, tolerance, flexibility, conflict resolution and resilience are skills that students need to develop (OCDE, 2018).

3) Taking responsibility is the last transformative competence but also the one that is transversal to others and to maturing a sense of agency, since it implies "an understanding that actions have consequences and that people have power to affect others" (Leadbeater, 2017, as cited in OCDE, 2018). Acting responsibly requires having a strong moral scope and acknowledgement of whether actions will benefit others, moreover it implies taking the initiative for learning, the learning-to-learning competency which is periodized in European countries as an education goal for lifelong learning (Kikas and Jõgi, 2016; Jääskelä et al., 2016). Besides the skills already mentioned, integrity, self-awareness and reflective thinking are also needed for student's taking responsibility and enhancing agency.

For student agency, the transformative competences and the skills required to develop them are part of the recent Higher Education framework, as it was mentioned there is a current need for students' active participation in shaping a future for the better. Agency is also a tool to deal with uncertainty and the constant changes in the working atmosphere, to be able to act intentionally,

respond to intrinsic motivations, co-construct and be responsible for their identities, sense of meaning, learning and professional purposes (Leadbeater, 2017).

The OECD Learning Compass describes student agency as the key component to achieve its aspirational vision of the skills that today students need to navigate and act towards individual and collective well-being. The following frameworks expose how Europe is approaching this objective and fostering non-cognitive skills within similar student agency objectives on lifelong learning and the connection between higher education and the labor market.

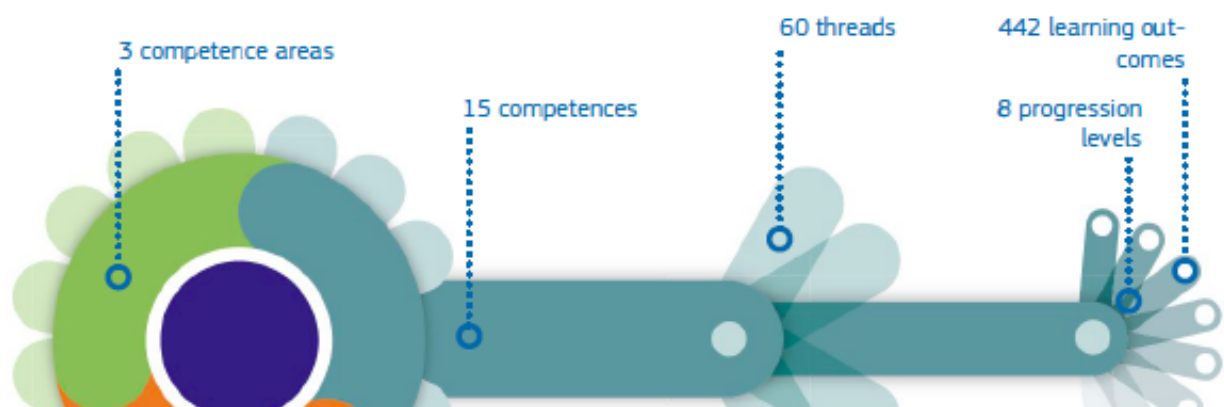
EntreComp into Action

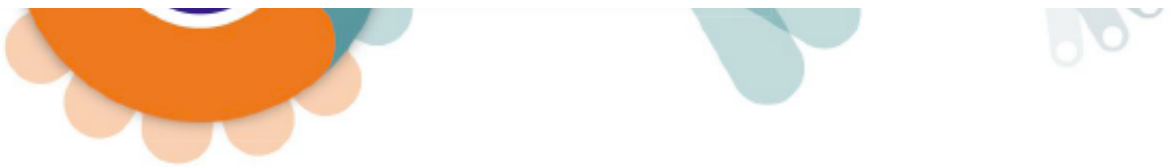
The European Entrepreneurship Competence Framework “EntreComp” was published by the European Commission as a tool to establish entrepreneurship as a competence for life. It aims to be used for lifelong learning in education, communities, work, and enterprise. By understanding entrepreneurship as acting upon opportunities and ideas and transforming them into financial, cultural or social value for others (McCallum et. al., 2018), the framework seeks to improve European citizens' entrepreneurial capability, through creativity, taking initiative, and putting efforts into actions, building a bridge between education and working life.

As shown in Figure 1 and Table 1, EntreComp is a framework of 15 entrepreneurship competences classified into 3 areas: 1) Ideas and Opportunities 2) Resources 3) Into action. These are broken down further into threads, which are represented across 8 progression levels from beginner to expert. Moreover, the framework also could be applied according to the project or organizational goal: a) mobilize interest in entrepreneurship and inspire action; b) create value by adapting the framework to specific contexts, c) appraise & assess levels of entrepreneurship competence; implement entrepreneurial ideas and projects; d) recognize entrepreneurship skills. According to McCallum et. al. (2018) The framework has been used in education and training to:

- Tailor entrepreneurial learning outcomes to a specific context
- Create new or enhance existing teaching and learning activities to develop entrepreneurial competences
- Design assessment of entrepreneurial learning

Figure 1 Mapping different goals against the elements of EntreCom





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Table 1 EntreComp Competences and threads

Area	Competence	Threads
Ideas and Opportunities	Spotting opportunities	Identify and seize opportunities to create value
		Focus on challenges that need solutions
		Analyze the context and identify personal opportunities to create value
	Creativity	Be curious and open
		Develop ideas that create value to others
		Define and approach open-ended problems
		Be innovative, respond to emerging needs
	Vision	Imagine alone and with others future scenarios

		Think strategically and serve to a convincing vision
		Guide action based on committed vision
	Valuing ideas	Recognize the value of ideas from different perspectives
		Share and protect ideas, considering property rights
	Ethical and sustainable thinking	Behave ethically and act against unethical behavior
		Think sustainably, contribute to the sustainability impact
		Assess impact of my value-creating activity
		Be accountable and responsible to stakeholders
<i>Resources</i>	Self-awareness and self-efficacy	Follow your aspirations and translate my interest into goals
		Identify strengths and weakness
		Believe in your ability to achieve intended goals and make changes for the better
		Shape your future and design professional strategies
	Motivation and perseverance	Stay driven and turning ideas into action
		Be determined and motivated by challenges

		Focus on what keeps you motivated
		Be resilient and coping with aversities
		Don't give up and keep committed to my vision and goals
	Mobilizing resources	Manage resources to turn ideas into action
		Use resources responsibly
		Make the most of your time, effective time management
		Get support and develop a supporting network
	Financial and economic literacy	Understand economic and financial concepts
	Mobilizing others	Inspire and get inspired, and act collectively
		Persuade providing arguments
		Communicate effectively
		Use Media effectively
		Take responsibility
<i>Into action</i>	Taking the initiative	Work independently
		Take action and showing initiative
		Set long, medium-, and short-term goals
	Planning and management	Be flexible and adapt to changes

		Develop emotional intelligence
	Coping with uncertainty ambiguity and risk	Listen actively
		Team up
		Expand your network
		Reflect
	Learning through experience	Learn to learn
		Learn from experience

Note: Adapted from “EntreComp into Action: get inspired, make it happen,” by McCallum et al, 2018, *Publications Office of the European Union, Luxembourg*. Copyright 2018 by European Union

EntreComp offers a European common framework and provides examples on how it has been used as a reference point by diverse institutions and projects in Europe. For the GRIT Project, this approach helps to delimitate the European panorama in terms of the soft skills or competences relevant for the region, how they are aligned to the OCDE learning compass and with the student’s commitment to their purposes and its alignment with society well-being. EntreComp provides a common European framework and understanding of entrepreneurship as the ability to transform ideas into action satisfying citizen need of being active and creating personal and community value. As an example, the following table summarizes how institutions and projects have been used it.

Figure 2 *EntreComp application examples*

Institution or project	Goals	EntreComp application
DOIT – Horizon project. Entrepreneurial skills for young social innovators in a digital world	<ul style="list-style-type: none"> ● Mobilize partners ● Create value ● Implement the framework ● Recognize entrepreneurship competences 	Comprehensive consensus about Entrepreneurship in Europe, used for assessing children’s changes and developments, and impact of the activities.
I-LINC-MOOC MOOC ‘Boosting a Sense of Initiative and	<ul style="list-style-type: none"> ● Implement the framework 	Contextualizing the 15 framework competences and mapping them to classroom activities that

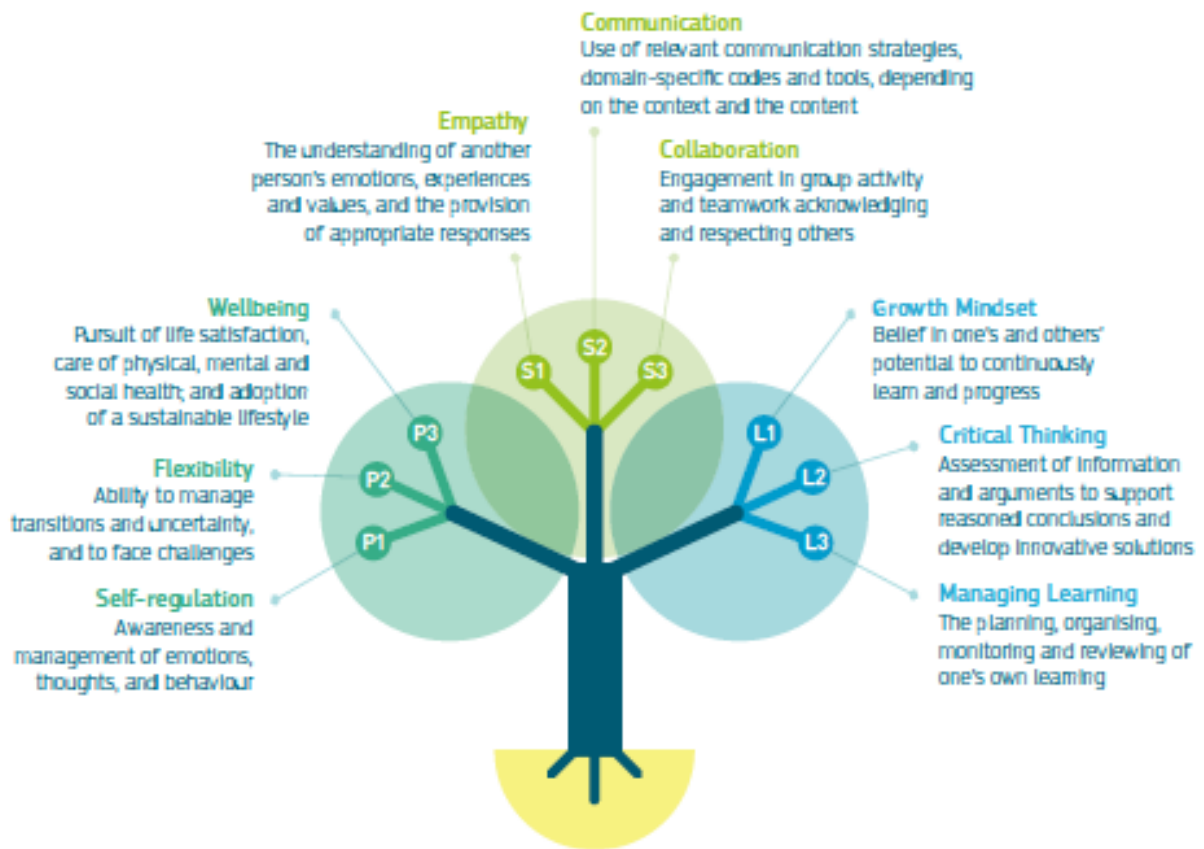
Entrepreneurship in Your Students' for primary and secondary teachers in any subject		enable students to take their future in their hands
University of Turku - Strategy for Entrepreneurship and Entrepreneurship Education- Ensure entrepreneurship education for all degree students	<ul style="list-style-type: none"> ● Mobilize partners ● Appraise and assess. 	Define a common language about entrepreneurship among varied stakeholders and integrate entrepreneurial competences into their personal development
SIMULIMPRESA Simulation game to teach entrepreneurial skills	<ul style="list-style-type: none"> ● Appraise and assess 	Define the competences and skills, and progression levels that want to foster in learners, according to the learning outcomes. Bridging education and training with the labor world using challenge-based learning.

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LifeComp - The European Framework for Personal, Social and Learning to Learn Key Competence

Personal, Social and Learning to Learn was set as key competences in 2018 by the Council Recommendation on Key Competences for Lifelong Learning. LifeComp is a European conceptual reference framework for competences that should be developed by citizen, through formal or informal education, to empower them to actively participate in society, responding to a rapid changing global context and the relevance of developing soft skills to manage challenges. In fact, the LifeComp is presented as a tool that supports the development of competences in the personal, social and learning to learn areas within a context. The LifeComp framework is a growing model represented metaphorically by a tree, in where each individual is rooted to a certain sociocultural context, the areas are represented by overlapping branches and buds, flowers and fruits symbolized the coexisting competences at different stages of progression. Each area has three competences that usually follow the model of awareness, understanding and action (Figure 2).

Figure 2 The LifeComp



Note: Reprinted from "LifeComp: The European Framework for Personal, Social and Learning to Learn Key Competence" by Sala et al, 2020, *Publications Office of the European Union, Luxembourg*. Copyright 2020 by European Union

Sala et al. (2020) describes the figure as follows: 1) self-regulation, 2) flexibility and 3) well-being are the main competences in the personal area. It refers to personal development, to the "learn to be", the ability to act autonomously, manage one's career, act with an introspective attitude and self-motivation, coping with uncertainty, adopt new approaches and ideas in response to changing contexts, and understanding the personal and collective responsibility aspects of well-being. Personal development happens in the interaction with others, within a social context where these competences help citizens to have a self-understanding, develop a sense of purpose and the ability to make decisions for personal and communal well-being. In the social area, 1) empathy, 2) communication and 3) collaboration are the main competences. Referring to the ability to take other's perspective, understand, and manage interactions and communication in person and digital contexts, cope with conflicts and the willingness to learn with peers and contribute responsibly to a common good. Finally, 1) growth mindset, 2) critical thinking, and 3) managing learning are the belonging competences of the learning-to-learn area. It implies individuals to take responsibility for their own development, this requires them to be conscious of their own capacities but also keeping the motivation to develop their potential, being capable of assessing and evaluating information. Thus, they would improve their learning capacities and strategies to ensure their use and potential transfer. Although LifeComp has not been put into practice, it

complements the EntreComp and the OECD frameworks by including other competences and reinforcing the agency's relevance in the development of life-long learning. The three frames give importance to a self-compass that drives into agency, into action, for personal and others' well-being.

ResearchComp framework - European Competence Framework for Researchers

The last relevant framework for GRIT is the European Competence Framework, it is part of two initiatives, the European Research (and Innovation) Area Skill Agenda need to develop set of skills for researchers and the recent classification update of European Skills, Competences, Qualifications and Occupations (ESCO) which includes a set of skills and occupations for researchers. Thus, ResearchComp formulates a European “shared understanding of competences that researchers need for a successful career, both inside and outside the academia” (European Commission, 2022).

The objective of developing the framework is to have a tool that supports researchers' self-assessment, education and training development of curricula and sustain the labor market and career trajectory for researchers. It responds to the challenges that researchers are facing:

1. Researchers' tendency to stay in the academia realm and the disproportion between the positions offered by the academia and the PhD degrees awarded
2. Clash with the labor market. Employers outside the academia do not have the knowledge to estimate the added value that researchers could bring to their institutions. Lack of a shared taxonomy of occupations for researchers.
3. Lack of acknowledgement about including transferable skills, entrepreneurship, and experiences outside the academia in the researchers training.
4. Large focus on publication records as research outputs.

Like the above-described frameworks, ResearchComp grouped interconnected competences. Each one has four levels of proficiency and shows suggested outcomes that researchers should demonstrate. It consists of 38 interconnected competences grouped into 7 areas: 1) cognitive abilities, 2) self-management, 3) working with others, 4) doing research, 5) managing research, 6) managing research tools and 7) making an impact.

Figure 3 Research Comp





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Figure 3 depicts the areas and competences; it is not suggested that researchers should reach the highest level of proficiency, but it recommends the development of competences in the 7 areas. The competences were identified from the ESCO update and the list of transversal skills associated with researcher’s occupations.

According to the European Commission (2022) ResearchComp is still a work in progress, it is even mentioned that the name is provisional. For them it is advisable to further develop it, among the recommendations there is special attention to optimize training for transferable skills in researchers, to apply the framework in real-life settings. The recommendation is for HEIs to go beyond the core research competences and the inclusion of competences such as engagement with society and entrepreneurship during the entire research career. Transferable competences would facilitate the exchange of knowledge and good practices between researchers, HEIs and industry, facilitating the diversification and shared languages of the diverse research carriers and intersectoral mobility.

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It is noticeable how the different frameworks agreed on the development of skills for long-life learning, which are beyond technical or cognitive skills and are more transferable, dynamic, responding to the complexities of the 21st century. Some skills such as entrepreneurial mindset or spirit; self-regulation, coping with uncertainty, promote transfer knowledge and being able to lead the learning process through a personal and communal purpose are transversal to all of the frameworks. The presented frameworks are relevant to the GRIT project, because they present a common European understanding and language about the competences that the region is requiring and the relevance of fostering soft skills in young students and researchers.

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