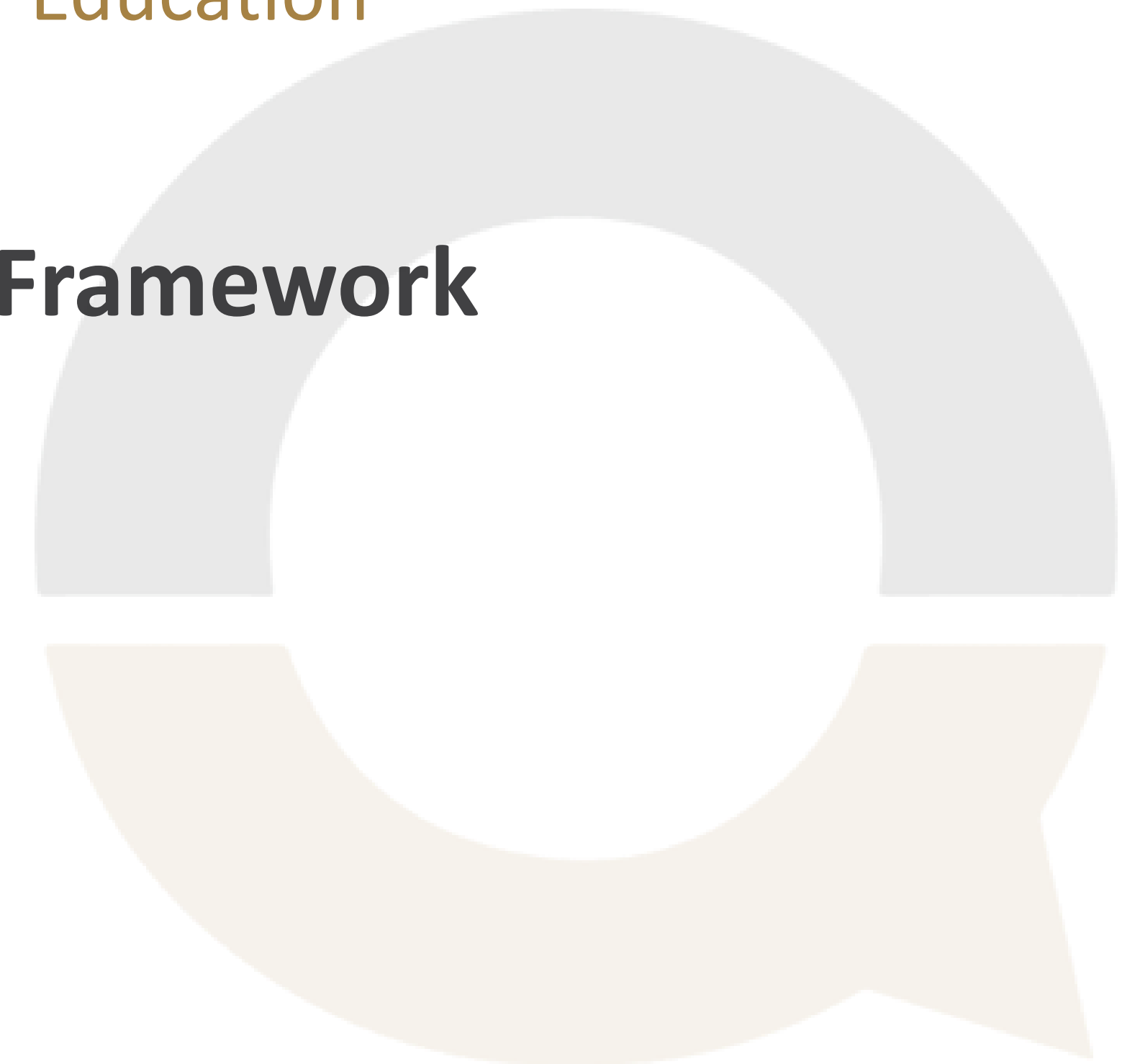Challenge-Based Learning in Higher Education

Entrepreneurial Competences Framework

Developed by

Entrepreneurial Competences Framework

The following Competences Framework allows you to provide students with a guideline/resource for identifying their transversal entrepreneurial skills' levels, as well developing action plans for the skills that they would like to improve upon. This framework can be used in various situations such as when conducting a challenge-based learning program.

The 7 skills covered in detail by the framework are:

1. Creativity and innovation: Defining problems and generating innovative ideas;
2. Motivation and perseverance: The process that initiates, guides, and maintains goal-oriented behaviour;
2. Communication: Impart or exchange information by speaking, writing, or using some other medium;
4. Teamwork and collaboration: The ability to influence and guide a group of people or an organization;
5. Risk management: Managing risks and uncertainty;
6. Leadership: The ability to influence and guide a group of people or an organization;
7. Project management: Plan, adapt and manage

But the framework can also be adapted and developed for other competences as well.

Competencies framework – **CREATIVITY/ INNOVATION**

Define problems and generate innovative ideas

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Level 1 - basic

Alone or in a team, I can explore new ways of using existing resources, approach problems from various angles and generate solutions.

I know how to transform ideas into innovations.

I quickly deploy test phases and involve internal and external customers in them.

I understand the policies and processes involved in publishing and exploiting research outcomes.

I am able to determine the appropriate means of exploiting my results (e.g., patent, publication).

Level 2 - intermediary

I can test the value of my solutions with users and identify the basic functionalities of the prototype

I can differentiate innovation, idea, product, process.

I proactively always seek news ways to improve my performance.

I know how to detect opportunities liable to lead to a commercial application.

I manage the transition from research to innovation.

I meet the challenges and opportunities for value creation in my field.

Level 3 - expert

I can implement or design innovative processes to create value over time.

I can adapt the ways of involving the actors around me to the needs of my activity.

I have proven experience with bringing a new product to market or starting a company/entity.

I manage innovation processes from the birth of an idea through its delivery to market.

I use different techniques to test them with users.

I am recognized in my field for the strength of my results.

Competencies framework – **MOTIVATION AND PERSEVERANCE**

The process that initiates, guides, and maintains goal-oriented behaviour

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Level 1 - basic

I know how to find different ways to motivate myself and motivate others.

I am determined, I persevere and I am not afraid to work hard to achieve my goals.

I see obstacles as calls to do my best, and I am motivated to do something good (for myself or others).

I am curious to explore my topic.

I work effectively with limited supervision.

Level 2 - intermediary

I am motivated by the idea of creating value and innovation.

I use strategies to stay motivated (goals, performance, progress).

I can prolong the effort despite setbacks but I know how to understand when to stop developing an idea.

I dedicate a lot of effort to market research of my field to learn all about it.

I'm not afraid of failure.

Level 3 - expert

I can adapt to unexpected changes and setbacks by staying focused on my vision and goals.

I can create a favorable climate and reward in a way in order to motivate my team.

I am motivated by my desire for personal achievement & confidence in my ability to succeed.

I manage to overcome my failures easily and know how to celebrate successes.

I work effectively under pressure and to meet deadlines.

Competencies framework - **COMMUNICATION**

Impart or exchange information by speaking, writing, or using some other medium

Level 1 - basic

I know how to put together a persuasive presentation and communicate about my project or activity.

I understand, interpret and communicate easily my area of expertise to small groups.

I master a range of communication tools.

I master my online identity.

I contribute to the dissemination of knowledge and demonstrate effective teaching skills.

I'm proficient in English and one other language.

Level 2 - intermediary

I adapt my register to communicate with experts in other fields at both national & international levels.

I master communication techniques for various contexts and media.

I communicate effectively when addressing a diverse and lay audience.

I am able to work and lead a group in at least English and one other language.

I am able to use logical argument to persuade others and debate issues in a collegial manner.

I am able to write effective grant proposals.

Level 3 - expert

I am asked to provide input on key questions in my area of expertise.

I choose content and channels of communication appropriate for the circumstance or to serve my strategy.

I use national and/or international media.

I can manage and negotiate complex matters in English and at least one other language.

I initiate and promote actions to disseminate knowledge.

Competencies framework – **TEAMWORK / COLLABORATION**

The ability to influence and guide a group of people or an organization

Level 1 - basic

I know how to develop and maintain cooperation networks.

I can build professional network for myself and at the service of the lab/unit/team.

I am identified as a resource person in my field of expertise.

I am aware of the value of working collaboratively to benefit research and for maximising the potential for impact.

I have experience of working in a team, and know how to support the contributions of the different members.

Level 2 - intermediary

I can lead, manage and delegate impartially.

I facilitate/coordinate networks and participate in the development of exchanges between various structures.

I actively participate in and contributes to collaborations and external relationships.

I am able to co-produce results and / or innovations with a range of colleagues within my own and adjacent disciplines/research areas

I recognise the strengths and contributions of team members and work effectively to achieve mutual goals.

Level 3 - expert

I know how to identify and mobilize different networks.

I am able to establish collaborative relationships with a range of external organizations, nationally and internationally.

I am able to use the networks to advance my project.

I create a nurturing/supportive culture for others.

Competencies framework grid – **RISK MANAGEMENT**

Managing risks and uncertainty

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Level 1 - basic

I analyze and identify the risks created by an activity.

I'm aware risks and downsides during the innovation process.

Level 2 - intermediary

I can determine the risks related to my project and define the means for controlling them.

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I prioritize tasks while anticipating potential problems.

I educate and train colleagues and partners in the implementation of appropriate risk management procedures.

I take social and environmental imperatives into account in the projects I manage.

Level 3 - expert

I have the ability to manage the project's risks through the use of risk management strategies, including prevention, acceptance, mitigation and transfer.

I encourage collective understanding of the implications and principles of social and environmental responsibility in the context of my activity.

Competencies framework grid – **LEADERSHIP**

The ability to influence and guide a group of people or an an organization

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Level 1 - basic

I am able to perform a leadership function within the framework of my projects.

I know how to convince and obtains adhesion around a project.

I mobilize skills on a project without having the authority, manage human resources without hierarchical link.

I know how to build alliances and relationships based on trust.

Level 2 - intermediary

I facilitate group discussions or conduct meetings.

I know the different styles of leadership and how to adapt them according to the projects and team composition.

I am recognized within my team/unit as a leader capable of promoting ideas/initiatives and contributing effectively to their implementation.

I animates and mobilize networks.

I'm able to prepare others for leadership roles.

Level 3 - expert

I build and sustain networks of skills, projects, teams and structures.

I understand and can share the meaning of the actions we undertake.

I effectively mentor subordinates and/or peers.

Through my actions, I create confidence in the structure and the projects I direct.

I have international influence and reputation: my contributions, opinions and recommendations are sought after by decision-makers.

Competencies framework – **PROJECT MANAGEMENT**

Plan, adapt and manage

arQus European University Alliance

Level 1 - basic

I plan projects to meet goals in accordance with strategy and priorities, taking quality, deadline and budget constraints into account.

I'm accountable for resources used and for meeting the deadlines and quality requirements of the deliverable.

I react efficiently and appropriately to change and unforeseen events.

I conduct my project within a framework of auditing and evaluation, deploying the appropriate systems.

Level 2 - intermediary

I recognize good opportunities, ideas and best practices, identify weaknesses and gaps.

I consider and implement any necessary changes in objectives, organization, schedule, resources and quality system requirements.

I utilize a wide range of project management strategies, follow scheduling & time constraints.

I successfully complete complex projects, manage several projects simultaneously and efficiently.

I conduct project audits & propose action plans.

I provide support to my staff; take over projects that lack leadership.

Level 3 - expert

I take the general environment of projects into account and I'm able to have a long-term view.

I develop complex, high-impact projects.

I allocate resources strategically to different projects, and am able to synchronize tasks in inter-dependent projects.

I manage my time strategically as my level of responsibility increases, particularly through careful use of delegation.
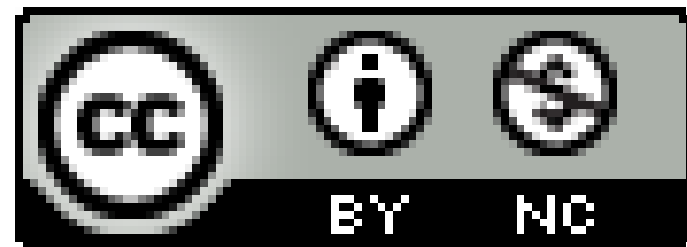
I take ownership of difficult or unpopular decisions and explain them with clarity and rigor.

I know when it is **time to abort a project.**

Resources and references

This simplified framework is based on and inspired by several resources:

- EntreComp: The Entrepreneurship Competence Framework (Bacigalupo et al., 2016)
    - https://publications.jrc.ec.europa.eu/repository/handle/JRC109128
    - https://ec.europa.eu/jrc/en/entrecomp/competence-areas-and-learning-progress
    - https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8201&furtherPubs=yes

- http://mydocpro.org/fr

- Researcher Development Framework - Vitae

- Compétences docteurs - Projet Career