



ICA-Edu Colloquium 2019 Action Summary

“Let the entrepreneurial genie out of the bottle! How will we stimulate the nascent entrepreneurial skills of our students?”

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ICA-Edu, the Network for Innovation in Life Sciences Higher Education of the Association for European Life Science Universities (ICA), introduces an annual ICA-Edu Colloquium. The Colloquia are designed to bring together staff from ICA Member institutions and external experts who have a particular interest in developing innovative approaches in teaching and their students' learning.

Entrepreneurship education is such a field in which innovative approaches to teaching and learning - like student challenges, innovation spaces, incubators and extra-curricular activities - go hand-in-hand with discussions on graduate profiles and professional identities. The new generation of Agri-food and Life Sciences graduates are expected to show creativity, resilience, pro-activeness and risk taking in a world that is characterised by uncertainty. In this 3-pager we report on how to make steps in introducing entrepreneurship education in Agri-food and Life Sciences curricula. These insights are the result of the ICA-Edu Colloquium “*Let the entrepreneurial genie out of the bottle! How will we stimulate the nascent entrepreneurial skills of our students?*”.

What's in the name “entrepreneurship”? start-up of a business AND/OR a competence?

Whereas traditionally entrepreneurship was the domain of business schools to stimulate new venture creation (i.e. start-ups), entrepreneurship has become more and more a university wide approach, **focussing on the development of an entrepreneurial mind-set and entrepreneurial competence among all staff and students.**

This means that entrepreneurship is not only about starting new businesses, but also includes the development of entrepreneurial competencies. The European Union as well as the European Society for Engineering Education support this view and emphasize the significance of entrepreneurship as one of the key competencies necessary for all (life-long) learners. This, so-called ‘wide-view’ on entrepreneurship - entrepreneurship as a competence not only a start-up - is also embraced by all ICA-Edu partners.

What are entrepreneurial competencies?

There are many ‘lists’ of entrepreneurial competencies¹. To provide clarity in this confusion of tongues, the European Commission has developed the EntreComp framework². EntreComp provides a comprehensive handbook on the most relevant entrepreneurial competencies, including

operationalisations, proficiency levels and assessment indicators. Core domains are: your ability to “generate and evaluate ideas & opportunities”, “to mobilise resources” and “to get into action”. Especially the latter two domains are perceived by the ICA-Edu partners as ‘underdeveloped’ among graduates. Entrepreneurial competencies are not independent from their domain or context: they get their meaning in a specific domain or context, a *couleur locale*. Such domain specific competence models exist, for instance the sustainable entrepreneurship competence model developed by Wageningen University. This competence model is one of the few scientifically validated competence models for higher education³. It highlights that entrepreneurship is in essence about value creation⁴, which, inevitable, from a sustainable development point of view, involves balancing economic, social and environmental values. The model describes six competence domains (see figure below), providing a good starting point for program directors, teachers and staff developers in Agri-food and Life Sciences universities who would like to stimulate sustainable entrepreneurship. As can be seen in the figure, some of these competencies are already (more or less) addressed in many Agri-food and Life Sciences curricula (e.g. interpersonal competence), others are relatively new (e.g. foresighted thinking competence or normative competence).



Bird-in-hand: an embedded, co-curricular approach

A focus on developing (sustainable) entrepreneurial competencies - next to stimulating start-ups - has significant consequences. For instance, the responsibility for entrepreneurship in education goes beyond specialised departments or centres, but moves to joint responsibility in the core curriculum of all life sciences subjects. Steps that program directors and coordinators should take (not necessarily in this order) are:

- **Define and operationalise** the universities core entrepreneurial competencies (see e.g. figure),
- **Screen the existing core curriculum** on whether these competencies are enacted, and if so, where. Study programs could already (implicitly) stimulate the development of entrepreneurial competencies in their courses without explicitly knowing or referring to entrepreneurship. Good places to start are courses that involve out-of-class learning experiences (like site-visits and internships), project-based or problem-based learning projects. Finding these (hidden)

'entrepreneurial gems' in the curricula is of extreme importance in the eyes of the ICA-Edu partners, as it creates the entry point for discussing entrepreneurial competence without directly adding new courses. Finding them creates legitimacy to further pave the road for another step: thinking in learning trajectories.

- Start thinking in **learning trajectories** that span degree programme curricular, and which can also strengthened or broadened further in extracurricular activities in the university educational ecosystems. Entrepreneurial competencies do not develop overnight, nor is it likely that they are developed solely in curricular education. Examples of the powerful extracurricular activities include university challenges and incubator programs. The concept of learning trajectories, learning lines or progression models is a powerful concept to take entrepreneurship education to the next level. It implies that those who offer entrepreneurial learning activities, either curricular or extra-curricular, should be able to locate each other to create synergies between their offerings allowing students to become more proficient in (areas) of entrepreneurial competence.
- Reconsider **assessment**. Learning trajectories for graduates requires capturing the development of entrepreneurial competence at regular time intervals. Assessment of entrepreneurial competencies are a genuine challenges for Agri-food and Life Sciences Universities. Competence includes knowledge, attitudes, skills and experience, therefore requiring more advanced assessment methods beyond traditional cognitive, knowledge-testing. All ICA-Edu partners seem to agree that *reflection* should be at the heart of entrepreneurial competence assessment. Moreover, assessment should be *formative* in nature, rather than summative, as it is more about competence *development*, thus capturing learning progress which may differ from student-to-student.
- Define a **minimum level** of entrepreneurial competence. The partners indicated that Agri-food Life Sciences universities should define a minimum level of entrepreneurial competence for their graduates. This means starting early with recognising entrepreneurial prior experience, needs and outlooks and include at the end of the curriculum a more summative assessment to make a final judgement whether the minimal competence level has been obtained. A good look at the current university course evaluation system is key here.

How to start and involve faculty?

Defining and spotting the gems of entrepreneurial competence in our curricula, developing them further into learning trajectories and associated formative assessments, requires cross-disciplinary faculty efforts. *Start small and build further from there on, is the advice here.* Good practices to do so, include:

- 1) bringing **together** entrepreneurial minded faculty in special interest groups. Enterprise Educators UK, <http://www.enterprise.ac.uk/>, successfully does this across universities in the UK already for many years. For the Agri-food Life Sciences universities, a network is kick-started within the INTRINSIC project, <http://intrinsic.eu/>, powered by ICA-Edu;
- 2) provide **incentives and support** those who start integrating entrepreneurial competencies into their courses. Incentives that are experienced as valuable by ICA-partners include, 1) showing the additional impact entrepreneurial projects conducted by students can have of faculty research 2) further acknowledge and support efforts via fellowship programs or teacher qualification programs.

Follow-up entrepreneurship education: ICA-Edu Colloquium 2020

The participants indicated that support for introducing the entrepreneurial competencies into their curricula is needed. Part of this support comes from exchanging information, experiences and good

practices (see point 1 above). As such ICA-Edu in collaboration with INTRINSIC will organise a follow-up colloquium in May 2020 to further support the actual implementation of entrepreneurship education in Agri-food and Life Sciences curricula. The audience for this colloquium is senior faculty like program directors, teacher coordinators and staff developers.

- Please contact Simon Heath (clues@abdn.ac.uk) or Thomas Lans (thomas.lans@wur.nl) for more information and early-bird expression of interest in attending the Colloquium.
- Contributions that were presented to the 2019 ICA-Edu Colloquium can be found here www.ica-europe.info under the Conference Tab

Footnotes

- 1 Lilleväli, U. & Täks, M. Competence Models as a Tool for Conceptualizing the Systematic Process of Entrepreneurship Competence Development. *Education Research International* **2017** (2017).
- 2 Bacigalupo, M., Kampylis, P., Punie, Y. & Van den Brande, G. EntreComp: The entrepreneurship competence framework. *Luxembourg: Publication Office of the European Union* (2016).
- 3 Ploum, L., Blok, V., Lans, T. & Omta, O. Toward a validated competence framework for sustainable entrepreneurship. *Organization & environment* **31**, 113-132 (2018).
- 4 Moberg, K. Assessing the Impact of Entrepreneurship Education. (2014).