



Educators for Impact at University of Bologna: Training the trainers for impactful entrepreneurship education

University of Bologna, Italy

Abstract

Entrepreneurship is part of the mission of the University of Bologna (UNIBO), and the University also seeks to develop entrepreneurship education. Until March 2024, UNIBO coordinated the project Educators for Impact, funded by the European Commission's Erasmus+ programme. The project aimed to empower educators and students to solve societal challenges. Developing and running an online training course with Personal Application Projects (PAPs) was a key operational objective. The Educators for Impact Training offers two strands: First, an Exploratory Pathway that comprises 14 hours of online workshops, seminars and networking without a certificate. Second, a Certification Pathway with 17 hours of the same workshops, seminars and networking plus PAPs. The training materials are available for free at the project website in a Training Resources site. Almost all participants assessed the course as recommendable and relevant and said it had enhanced their entrepreneurial knowledge and skills.



Authors: Dr. Stefan Lilischkis

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Overview of the university's profile and its entrepreneurial activities

Founded in 1088, the University of Bologna (UNIBO) in Italy is considered to be the oldest university in the Western world. UNIBO is made up of five Schools (Arts, Humanities, and Cultural Heritage; Economics and Management; Engineering; Medicine; Science) and 31 Departments within these Schools. In the academic year 2022/23, UNIBO had 96,984 students.¹

UNIBO provides comprehensive services to support **entrepreneurship**: Scouting for innovative business ideas, tutorship for project teams, mentorship for developing business models, advisory for funding and growth, marketing and communication for market growth, open innovation for cooperations with start-ups as well as incubators and innovative hubs. UNIBO has dedicated organisations that support entrepreneurship and start-ups: I.D.E.A. (standing for Innovation, Development, Entrepreneurship, Alma Mater) is the key organisation, in charge of "creating an entrepreneurial culture, scouting ideas, business development, business incubation, growth and development".² Among other activities, I.D.E.A. offers the AlmaEClub, a community of innovative teachers and researchers.³ Another important entity is the Entrepreneurship HUB, operated by UNIBO's Business School.⁴ In addition to that, UNIBO supports entrepreneurship via AlmaCube, the incubator of UNIBO. A yearly Start-up Day event held in Bologna and organized by UNIBO is attended by entrepreneurs from all over Italy, and by students and academics from the Emilia-Romagna region. These comprehensive activities fostered numerous new businesses. In October 2023, the UNIBO website listed 59 spin-off and startup companies.⁵

UNIBO also seeks to develop entrepreneurship education. The University was the lead partner of the project **Educators for Impact**, funded by the European Commission through its Erasmus+ programme,⁶ which took from February 2022 to March 2024⁷. Other partners included Bantani Education (Belgium), Institut Mines-Télécom Business School (France), TU Delft (Netherlands) and the University Industry Innovation Network. The project developed a specific course to train university educators in impactful entrepreneurship.⁸ This case study describes the course's objectives and content as well as lessons learned from it, outputs, impact and planned activities beyond the project.

¹ See <https://www.unibo.it/en/university/who-we-are/university-today> for facts and figures about UNIBO.

² Quoted from <https://site.unibo.it/idea/en/our-idea/our-team>.

³ See <https://site.unibo.it/idea/en/our-idea/almaclub-en>.

⁴ See <https://www.bbs.unibo.eu/entrepreneurship-hub-2-2/entrepreneurship-hub/>.

⁵ See https://site.unibo.it/idea/en/our-innovative-businesses-start-ups-and-spin-offs?b_startint=0.

⁶ See <https://educatorsforimpact.eu/>.

⁷ Ref.: Grant Agreement Nr.2021-1-IT02-KA220-HED-000032059.

⁸ See <https://educatorsforimpact.eu/training/>.

Rationale of training educators for impact

The Educators for Impact project sought to “inspire the next generation of changemakers, empowering educators and students (..) to enhance their societal impact”⁹ to solve societal challenges. The project targeted higher education educators of all disciplines and had five objectives:

- 1) Raise awareness about educators’ entrepreneurial skills and attitudes to enhance the impact of their teaching.
- 2) Develop innovative pedagogies.
- 3) Support transferability of good education practices across disciplines.
- 4) Design an assessment criterion for “impactful educators” based on the European Entrepreneurship Competence Framework (EntreComp) and assess related training needs.
- 5) Develop entrepreneurial ecosystems among academics.

Developing and running an online training course with Personal Application Projects (PAPs) was a key operational objective. The Educators for Impact Training seeks “to equip university educators (...) with competencies and tools to foster impactful teaching practices across disciplines”.¹⁰ The personal benefits for participants are to “enhance your ability to guide students in creating real-world value, expand your impact beyond the classroom, engage in reflection and collaboration with a community of like-minded educators, receive personalised support and guidance through facilitated Personal Application Projects (PAPs) sessions”.

Resources for operating the project and beyond

The partners received 299,981 EUR to run the project. 17 experts from the five partners worked on the project, out of them 15 were women.¹¹ The UNIBO team had five members.

Educators for Impact Training offerings

Training course

The Educators for Impact Training offers two strands. First, an Exploratory Pathway that comprises 14 hours of online workshops, seminars and networking without a certificate. Second, a Certification Pathway with 17 hours of the same workshops, seminars and networking plus PAPs. In the Certification Pathway, course leaders guided participants through a process of completing a PAP based on their own teaching. Throughout the programme, each participant provided details about their PAP, and they presented it in the programme’s final session.

⁹ Quoted from <https://educatorsforimpact.eu/>.

¹⁰ See <https://educatorsforimpact.eu/training/>.

¹¹ See <https://educatorsforimpact.eu/the-consortium/>.

The programme aims at developing educators' knowledge, skills and attitudes in four modules addressing mindsets of teachers and students, educational methods, partnerships, and educational institutions as such:

- 1) Innovative Mindset Master, with two sessions: 1.1 Developing Your and Your Students' Innovative & Entrepreneurial Mindset, and 1.2 Using Entrepreneurial Education for More Impactful Teaching Across Disciplines.
- 2) Empowering Learning Journey Hero, with two sessions about "Educational Tools & Approaches for Impactful Education", that is sessions on teaching methods.
- 3) Partnership Builder, teaching insights about Leveraging External Relationships for Impactful Education.
- 4) Institutional Change-Maker, including insights for "Taking Your Impact Beyond the Classroom and Into Your Organisation".

The theoretical foundations for these modules are based on a comprehensive literature review and expert interviews conducted in the first part of the project. This allowed to identify the pain points of education professionals and to structure the existing theories and studies to create an outlet for the training programme. During the desk research phase, each partner conducted an extensive review of existing literature on entrepreneurial education and innovative pedagogies. This involved systematically searching academic databases, journals and other relevant sources to gather information on good practices and theoretical perspectives in the field. The identification of topics for the modules was further informed by expert interviews. Over ten interviews with entrepreneurial educators were conducted to gain practical insights and reflections on current pedagogical practices. These interviews helped to identify specific skills and competencies required for innovative teaching, which were then cross-referenced with the findings from the literature review.

The first training course took place over six weeks in autumn 2023. 28 participants not involved in the project implementation completed the training course, seven with PAP track. The estimated number of students that are going to be taught by PhD students from UNIBO who participated in the course is 360. The following Figure provides an overview of the Educators for Impact Training schedule in that course.

EDUCATION

Educators for Impact Training Program Schedule - Fridays, 6 October - 10 November							
	Week 0	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
		06/Oct	13/Oct	20/Oct	27/Oct	03/Nov	10/Nov
10:00 – 11:00	Hand out materials	Opening & Introduction to the Programme		Module Empowering Learning Journey Hero: Educational Tools & Approaches for Impactful Education – Part 1	Module Partnership Builder: Leveraging External Relationships for Impactful Education	Module Institutional Change-Maker: Fire-Side Chat with an Impactful Educator	Final PAP Group Discussions (TBD)
BREAK							
11:15 – 12:15		Module Innovative Mindset Master: Developing Your Students' and Your Own Innovative Mindset		Educational Tools & Approaches for Impactful Education – Part 2		Module Institutional Change-Maker: Taking Your Impact Beyond the Classroom and Into Your Organisation	Closing & Reflections
BREAK							
12:30 – 13:30			PAP Group Discussion		PAP Group Discussions		
BREAK							
13:45 – 14:45			Module Innovative Mindset Master: Entrepreneurial Education for More Impactful Teaching Across Disciplines				
BREAK							
15:00 – 16:00							

FIGURE 1. EDUCATORS FOR IMPACT TRAINING MODULE SCHEDULE¹²

Learning platform

The training materials are available for free at the project website in a “Training Resources” site.¹³ Under “Practical Information”, it offers a teaching toolkit, a Personal Application Project (PAP) Handbook and PAP group discussion guidelines. Second, all session materials from the training course that took place in autumn 2023 are available.

The idea of PAPs is that participants “develop their own plan for embedding impactful teaching practices in their existing and new courses”.¹⁴ Participants receive support from mentors in designing and later implementing their PAPs. The methodology foresees six steps in developing a PAP: 1. Embed Impact and Engagement in the Learning Objectives; 2. Identify Innovative Elements; 3. Assess Your Audience; 4. Design Learning Activities; 5. Select Appropriate Technology; 6. Create a Structured Curriculum. The PAP Handbook provide detailed instructions for all six steps, including case examples, exercises and links to external resources. For example, one case study is about the learning objectives of the course “Plasma Industrial Applications” by the University of Bologna; one exercise is “Integrate a game into your educational activity/course as part of a learning experience!”; one external resource compilation is about online learning tools.

Most of the PAPs aimed at developing university courses that would integrate innovative pedagogies into the curriculum. For example, one PAP was a three-day sustainability workshop, conceptualised as described in the box text.

¹² Source: <https://educatorsforimpact.eu/training/>.

¹³ See <https://educatorsforimpact.eu/resources-platform/>.

¹⁴ Educators for Impact Training Personal application project (PAP), Methodology for Participants, slide 3.

Exemplary Personal Application Project (PAP): Sustainability workshop

- 1) Learning objectives: At the end of the workshop, the participants will be able to identify what threatens the future of the earth, critically discuss the limits of linear economy and the potential of circular economy and understand when to use the appropriate theoretical knowledge. The participants will know why firms enter circular economy networks and develop virtuous marketing strategies to attract and retain firms in the systems. Finally, students will learn how to innovate using questioning techniques to generate solutions.
- 2) Innovative elements: Communication ice-breaker game, creativity and evaluation using questioning scamper. Scamper is the acronym for "substitute, combine, adjust, modify, put to other uses, eliminate, reverse". It is supposed to help students think out of the box.
- 3) Audience: Master students with a marketing background who are willing to positively impact the future of the world.
- 4) Learning activities: Identify the contemporary grand challenges, critically discuss marketing and grand challenges, critically discuss the limits of linear economy and the circular economy paradigm, understand the five theoretical frames that explain the decision of companies to enter circular economy networks, design effective marketing strategies to attract and retain firms in circular economy systems.
- 5) Technologies used: Menti.com; Kahoot!.
- 6) Duration: The curriculum structures the learning activities along three workshop days.

Source: UNIBO.

Innovative pedagogies

The Educators for Impact project developed its pedagogies based on the following approaches common in entrepreneurship education: Project-based learning in group work on a challenge; working in multi-disciplinary teams; active learning for example in prototyping sessions, hackathons and field trips; real-world exposure through projects with companies, case studies and entrepreneurs as guest speakers; and using online technologies for example for mass open online courses, personalised learning and game-based learning tools.¹⁵

The project did not develop any specific innovative technologies. Rather, the aim was to explore innovative pedagogies that already exist and raise awareness about the importance of using them. Due to this, project partners have started using innovative pedagogies in their teaching practice and started placing more emphasis on active

¹⁵ Educators for Impact Training Investigators Report, p. 12 – 16.

learning approaches, involving students in group work, gamification and facilitating the real-world exposure whenever possible. It is applicable also to the participants of the training programme who expressed their aspiration and willingness to innovate their teaching practice.

Continuation of activities after the project

The project's materials will remain available through the project website, partners' platforms and the Erasmus Plus Project results platform. The main access point for all the resources will be the project website and, through it, the Online Learning Platform. The website gives access to the central project results, including the desk research, bite-sized case studies and interview collection, the training programme materials, teaching toolkit, Personal Application Projects (PAPs) and their implementation, online course and all promotional materials. All partners are linked to the project website and will promote the project results in their classrooms. The project's social media sites at X (formerly Twitter) and LinkedIn will be used to further enhance the project results and related events partners organise after the end of the project. The accessibility to the material is the starting point for continuing the cultivation of a sense of awareness related to the topic of the project and the development of baseline competencies for the creation of an innovative and entrepreneurial mindset toward teaching. Moreover, the different partners (both academic and practitioners) who collaborated on the project will continue to deliver services on entrepreneurial education incorporating the findings obtained in the E3Train project. Academic institutions, in addition to this, will also continue in researching on the topic with a scientific approach in order to put the base for future projects combining both the academic and the practical approach needed for understanding and contributing to this topic. Consortium members outlined an intention to submit project results into research articles and present them at international conferences and submit them to academic journals in the field of management and education.

How stakeholders contribute to the impact education concept

Internal stakeholders at UNIBO and the Educators for Impact project partners

The UNIBO team was in charge of the project management throughout the project and of the first project part; Bantani team was in charge of developing the scale for the second part; UIIN was in charge of dissemination and of the training programme. All partners collaborated effectively throughout these two years and participated in monthly meetings.

Led by UNIBO, part 1 focused on foundational research to develop a self-assessment tool and the Entrepreneurial Educator Training Programme. The consortium conducted 31 expert interviews with entrepreneurial educators from various disciplines to identify their skill needs in innovative and entrepreneurial teaching. These interviews provided deep insights into innovative pedagogies, best practices, and the role of educators' mindsets. Extensive

outreach was achieved through desk research and primary contacts established by each partner, ensuring a comprehensive understanding of the necessary competencies for entrepreneurial education.

Bantani led part 2, which aimed to create a practical framework for educators to reflect on their teaching practices and support the development of changemaker competences in students. The consortium conducted 25 bite-sized case studies on successful entrepreneurial pedagogies, including tools, approaches, HEI courses, and programmes from various countries and online collaborations. The case studies offered diverse examples of enhancing teaching methods. The self-assessment tool developed in this phase was posted online, receiving 50 anonymous responses, and was validated by over 20 educators and academics across disciplines.

Led by the University Industry Innovation Network (UIIN), part 3 focused on the design and pilot testing of the comprehensive Entrepreneurial Educator Training Programme. The programme engaged over 30 educators and academics through social media, newsletters and direct outreach. The selection process ensured participants' commitment to developing entrepreneurial pedagogical skills and implementing personal application projects (PAPs). The six-week training programme was attended by 28 participants from various academic levels, with additional resources accessed by three PhD students from UNIBO. PAPs involved interactions with external stakeholders, aiming to engage around 15 individuals from businesses and society, with an estimated 360 higher education students expected to benefit in the 2024/2025 academic year.

External stakeholders

Participants of the training programme and attendees of the multiplier events were the audience with whom project results have been shared; interviewees from and outside of partner institutions contributed to the investigation of entrepreneurial education in part 1.

Additionally, experts in entrepreneurial education were invited as speakers to take part in part 3 training programme. Thus, two entrepreneurial educators from UNIBO from the Engineering and Mathematics fields shared their experience in the transferability of entrepreneurial practices. Another session was led by an educator from TU Delft and focused on gamification as a pedagogical practice. Moreover, an interactive fire-side chat session of the training programme was led by an entrepreneurial educator from a HEI external to the consortium.

UNIBO organised two multiplier events alongside other European research projects: SME Cluster Growth which worked on SME empowerment in the engineering sector and employability of the graduates; and DIN-ECO which aims to increase the innovation and entrepreneurial capacity of HEIs. Keynotes featured representatives from the Municipality of Bologna, Centro Antartide, and FiordiRisorse. Participants included Italian education and human resources professionals as well as Master students. The students provided positive feedback, noting the events successfully achieved their goals of creating networking opportunities and raising awareness about innovative curricula and pedagogies. The

events effectively fostered open innovation and regional competitiveness through collaborative discussions and engagement with 54 stakeholders from the local innovation ecosystem, including startups, universities, and municipal bodies. Feedback indicated that participants appreciated the discussions and networking opportunities, finding the events effective in sharing insights and fostering collaboration.

Results of the project

The project produced three outputs: The “Educators for Impact Training Investigation Report”, the “Educators for Impact Reflection Tool” with 22 items for self-assessment; and the “Educators for Impact Training Programme and Toolkit” in the form of the abovementioned subsite “Training Resources” at the project website.

Educators for Impact Training Investigation Report

The main findings summarised in the report include the following:

Mindset was found to be a “fundamental driver of entrepreneurship education and its necessary component” (p. 3). An entrepreneurial mindset was found to be multi-faceted.

There are numerous innovative **pedagogies** and tools that can nourish entrepreneurship education. Such education should use this variety of innovative approaches to enhance students’ competencies rather than just knowledge.

Co-delivery of entrepreneurship education with external stakeholders is beneficial for educators, students, HEIs, industry and the region.

As regards **enablers**, the report states that “while educators and students are able to improve their own relationship with EE, it is up to the faculty and HEI to establish an environment and policies that would stimulate EE and create the microclimate corresponding to it” (p. 4).

The project discovered numerous **barriers** on individual, faculty and institutional levels. A lack of dedicated structures and units, as well as internal policies for entrepreneurship education, were found to be serious barriers to its development. Common problems include budgetary restrictions, lack of knowledge transfer units, lack of activities between the HEI’s departments, and resistance to change.

Educators for Impact Reflection Tool

The Educators for Impact Reflection Tool includes 22 slides for self-assessment of entrepreneurship educators.¹⁶ It begins with a fundamental, comprehensive overview about “Competence definitions and principles”.¹⁷ See below for the depiction. Self-evaluators can rank each answer from “None” to “A lot”. Sections with questions include the following:

- Professional knowledge and understanding of education for impact.

¹⁶ See <https://educatorsforimpact.eu/educators-for-impact-reflection-tool/>.

¹⁷ Available at <https://entrecomp.com/wp-content/uploads/Infographic-Competence-definitions-and-principles.pdf>.

- Creating an empowering learning environment.
- Teaching and training.
- Assessment.
- Professional learning and development.

Educators for Impact Training Programme and Toolkit – Training Resources

Course participants were asked to assess the training programme and resources. The following Figure shows the results:

- On a scale of 1 to 10, participants rated the likelihood of recommending the sessions to a friend or colleague at 8.2.
- 96% of participants agreed that the session topics were relevant to the expectations they had about the programme.
- 77% of participants agreed that the session content was of high quality.
- 77% of participants agreed that the session helped expand their knowledge and skills.
- 93% of participants agreed that the facilitators delivered the content in a competent way.

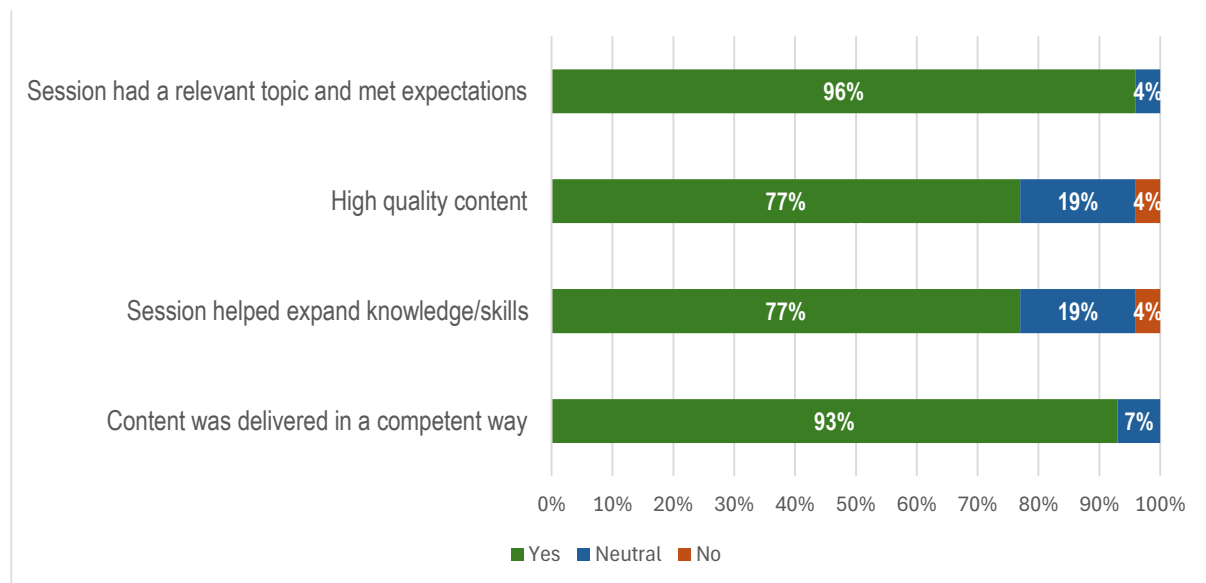


FIGURE 2. PARTICIPANTS' ASSESSMENT OF THE EDUCATORS FOR IMPACT TRAINING COURSE¹⁸

¹⁸ Source: Educators for Impact project 2024, presentation by empirica.

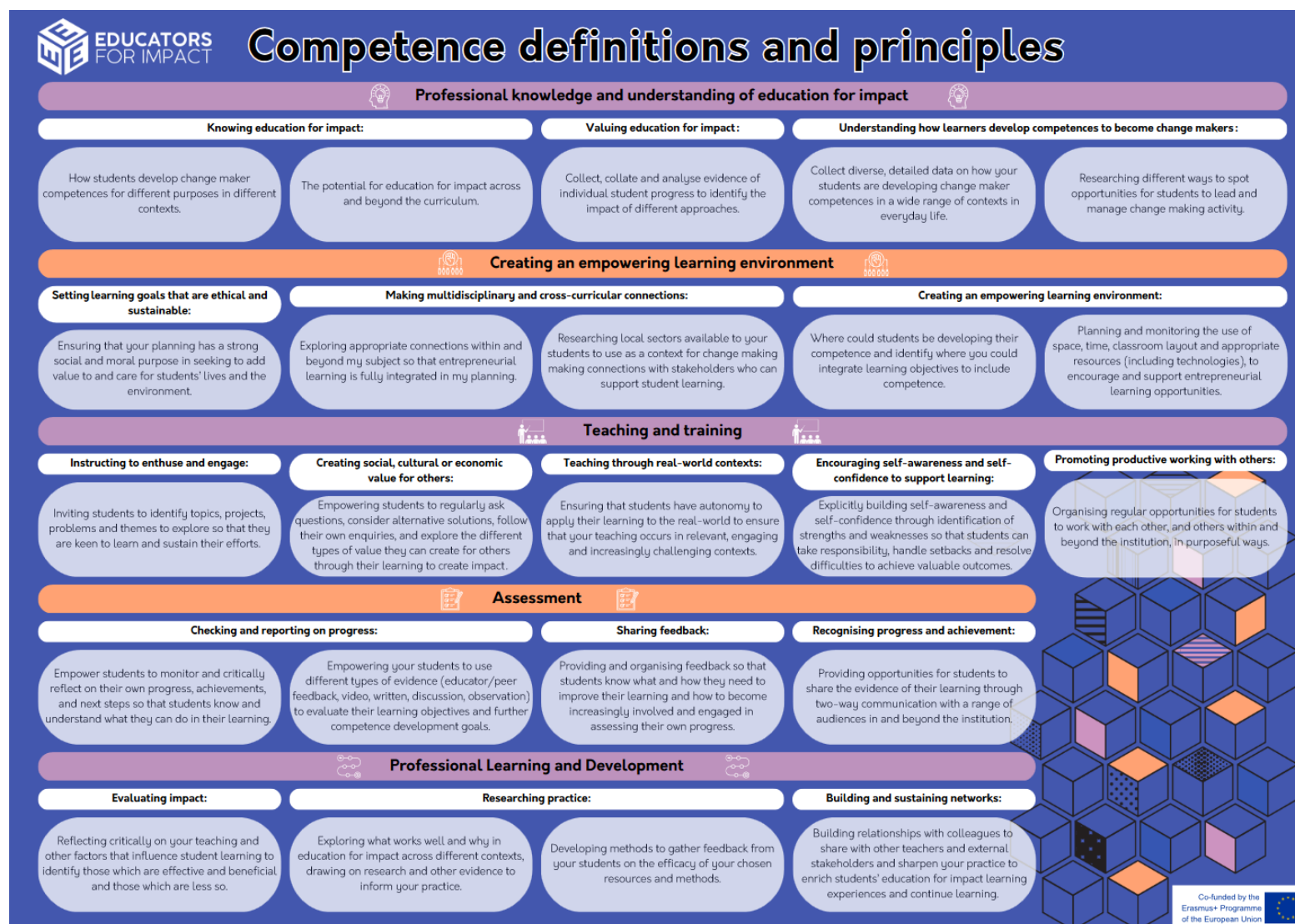


FIGURE 3 EDUCATORS FOR IMPACT COMPETENCE DEFINITIONS AND PRINCIPLES

Outcomes, impact and lessons learned

Members of UNIBO and TU Delft supported students in creating innovative opportunities during university courses. Similarly, the IMTBS team supported students in gaining entrepreneurial skills and scaling up their ideas through practical-oriented education. National multiplier events have contributed significantly to stimulating the discussions and idea generations with educators, local entrepreneurs, managers, and HRs, alongside students.

According to UNIBO, the E3TRAIN project had a positive impact on academics, students, and HEIs, benefiting partners, stakeholders, and society. Academics improved their teaching methods and entrepreneurial skills, developed international networks, and advanced initiatives within their institutions, thereby enhancing student employability and fostering closer connections with external stakeholders. Students benefited from market-relevant knowledge, hands-on exercises and links to external stakeholders, boosting their employability. HEIs gained new training concepts and materials, better-aligned courses with employer needs, and stronger community and business links. Project partners enriched their training portfolios with the Self-Assessment Framework, Training Programme, and Toolkit, gained knowledge for future projects, and increased international collaborations. Identifying and assessing educators' needs in part 1 and part 2 defined project priorities, informing the training programme design in PR3. Continuous stakeholder interaction and dissemination events were crucial for adapting activities and validating tools, with multiplier events key for disseminating results and maintaining stakeholder dialogue.

The differences were spotted via interaction with educators coming from different departments during part 1 and part 3 stages of the project in particular. The differences resulted from oftentimes dissimilar pedagogies used in the classroom since they were usually specific to the field of study (especially for mathematics and science versus social sciences). However, an emphasis was put on finding teaching approaches that would be effective universally.

A key factor in the transferability of these practices is their origin in the management field, where such pedagogical innovations are more established and readily applicable. Management education often emphasises practical, real-world applications and active learning strategies, which can be effectively adapted across disciplines. This provided a solid foundation for introducing innovative teaching methods to other fields.

However, the uptake of these practices varied across disciplines. In fields such as mathematics and science, and areas like philosophy, the adoption process was slower. These disciplines often have entrenched pedagogical approaches that are highly specific to their subject matter, making the integration of new methods more challenging. For instance, mathematics and physics rely heavily on traditional lecture-based teaching, which contrasts with the more interactive and participatory methods promoted in the management field.

Despite these differences, the project emphasised finding teaching approaches that could be universally effective. By focusing on adaptable and flexible pedagogies, the project sought to bridge the gap between disciplines, fostering an environment where innovative educational practices could be more widely accepted and implemented. This approach aimed to gradually transform educational practices across various fields, promoting a culture of continuous improvement and innovation in teaching.

The project has contributed to increasing the relevance of higher education provision through the promotion of the project at nine international events including relevant stakeholders, including EntreComp Community and the Young Entrepreneurial Teachers Initiative (YETI), an Erasmus+ project.

Sources

Links

- Educators for Impact homepage: <https://educatorsforimpact.eu/>
- Educators for Impact Training Investigation Report: <https://educatorsforimpact.eu/entrepreneurial-training-investigation-report/>
- Educators for Impact Training Resources: <https://educatorsforimpact.eu/resources-platform/>

Contact

- Anna Fedorova, Educators For Impact project manager at UNIBO, anna.fedorova2@unibo.it.
- Laura Toschi, Educators For Impact project manager at UNIBO, laura.toschi@unibo.it.