10. Entrepreneurial education, social sciences and humanities: the case of LUCI – Laboratory for Humanism, Creativity and Innovation

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INTRODUCTION

As we think of entrepreneurial education, the collective imagination usually recalls the sunny side of a street where smiling kids serve drinks at a lemonade stand, enabling a pleasantly bitter business to blossom and, then, hopefully, to ignite the flame of entrepreneurship in young talented individuals. In 2009, an article appeared in *The Economist* stressing that entrepreneurial education programmes were booming around the globe, and they are still today. Nevertheless, the article wondered whether entrepreneurs really need such education. Several top-ranked international schools wittily argued that "they don't actually profess to create entrepreneurs, rather they nurture innate ability" (*The Economist*, 2009).

Although universities have historically played a key role in providing education and performing research (Aghion et al., 2009; Bloom et al., 2017; Valerio and Van Reenen, 2019), they have recently embraced the so-called Third Mission (TM) which seeks to stimulate the openness of the academic community towards the socioeconomic ecosystem (Vorley and Nelles, 2009). In this framework, universities have increasingly engaged both public and private stakeholders in the design of entrepreneurial education programmes. However, the majority of such programmes have mainly focused on business- or technology-driven approaches. Furthermore, several programmes have been influenced by a "star-player syndrome", since they have been modelled on the basis of some exemplary cases of top-ranked international universities (Compagnucci, 2023).

Some scholars have labelled such programmes as "temporary fashion" (Lautenschläger and Haase, 2011, p. 147) since students have created neither market-disruptive innovations nor billion-dollar companies, climbing to the

top of the elite club of unicorn start-ups. Since this approach is solely based on the economic benefits of entrepreneurship, it sounds too narrow or even controversial. From a humanistic standpoint, such a utilitarian perspective is incompatible with the public education mandate (Mittelstädt et al., 2023). Indeed, universities, as part of their TM, should also provide their students with valuable entrepreneurial experiences to enable social growth, awareness of solidary and sustainability issues, as well as leveraging the contribution of the social sciences and humanities (SSH) disciplines (Cerquetti et al., 2021; Compagnucci and Spigarelli, 2023).

The European Commission et al. (2016, pp. 121–122) have stressed that

> entrepreneurship education is about learners developing the skills and mind-set to turn creative ideas into entrepreneurial action. This competence is crucial for all learners, supporting personal development, active citizenship, social inclusion, and employability. It is relevant across the lifelong learning process, in all disciplines of learning, and to all forms of education and training (formal, non-formal, and informal) that contribute to an entrepreneurial spirit or behaviour, with or without a commercial objective.

Nevertheless, it is still unclear how universities can build bridges between entrepreneurial education and SSH disciplines, whose contribution to TM and, more specifically to entrepreneurial initiatives, has been often neglected by scholars, industry representatives and policymakers (Compagnucci and Spigarelli, 2023). At the same time, there is a need to assess how SSH disciplines can contribute to the well-being of local communities by leveraging on an entrepreneurial mind-set. Such investigation becomes even more complex since, along with educational programmes' characteristics and participants' personal traits, the distinctive features of the economic, business and institutional context might influence students' participation and their performance in the programme (Ahmed et al., 2020; Valerio et al., 2014).

To contribute to bridging the above described research gaps, this chapter presents the case of the Laboratory for Humanism, Creativity and Innovation (LUCI) of the University of Macerata (UNIMC), an SSH university founded in Italy in 1290. From 2013 to 2022, with the support of the Office for the Valorization of Research and Placement, namely the Technology Transfer Office (TTO), LUCI aimed at promoting a cross-disciplinary and cross-sectoral mind-set to entrepreneurship among undergraduates, postgraduates and PhD candidates in the field of SSH. By integrating entrepreneurial education, SSH disciplines, cross-disciplinary teamwork and digital tools, LUCI students have been trained to co-create responsible business or social ideas, strengthening a "humanistic" approach to understand and to address social, economic and environmental challenges at the local level.

THEORETICAL FRAMEWORK

Entrepreneurial Education Programmes

The first course on entrepreneurship, Management of New Enterprises, was introduced at Harvard Business School in 1947; a year later the first Research Centre in Entrepreneurial History was created (Cooper, 2003; Landström, 2020). Since then, entrepreneurial education has become a growing phenomenon in terms of the number of programmes in the USA, in Europe and around the globe. Universities have developed, with different pace, a broad variety of practices to design and implement entrepreneurial programmes (Green and Rice, 2007). Furthermore, entrepreneurial education has been increasingly included in the agendas of both national and regional policymakers (Kuratko, 2005; Nabi et al., 2018).

From the nomenclature standpoint, Lackéus (2015) has reported that the two most frequent terms used are "enterprise education" and "entrepreneurship education". The first term is mainly used in the United Kingdom, to refer to aspects such as self-fulfilment, mind-set and skills development, whereas the term entrepreneurship education is more diffused in the USA and is focused on creating and running a venture. Erkkilä (2000) has suggested an umbrella expression, "entrepreneurial education", which encompasses both enterprise and entrepreneurship education.

Thus, this chapter adopts the term entrepreneurial education which has been defined as "any pedagogical program or process of education for entrepreneurial attitudes and skills" (Fayolle et al., 2006, p. 702). According to Heinonen and Poikkijoki (2006, p. 81), entrepreneurial education is a set of "activities aimed at developing enterprising or entrepreneurial people and increasing their understanding and knowledge about enterprise and entrepreneurship".

Although the literature has widely explored whether, to what extent, why, when and how entrepreneurship should be taught, the most cited empirical papers in this field have sought to measure the effects of entrepreneurial educational programmes at the individual, firm or country level. Nevertheless, these studies have reported inconsistent results.

Souitaris et al. (2007) have analysed the impact of entrepreneurial programmes on entrepreneurial attitudes and intention of science and engineering students in two major European universities, with excellent reputations, in London and Grenoble. Findings showed that such programmes increased participants' entrepreneurial intention and that inspiration is the programmes' most influential benefit, thus revealing the need for introducing an emotional angle to the entrepreneurship literature.

Building upon the theory of planned behaviour, Wilson et al. (2007) have investigated the interactions of gender with entrepreneurial self-efficacy and entrepreneurial career intentions. To do so, the authors analysed data gathered in separate studies conducted between 2002 and 2004 with two groups representing different points in the educational and career pipeline. The first study analysed over 5,000 middle/high school students in four geographic states or regions of the USA. In the second study, MBA students in seven graduate programmes in the USA were given a reduced version of the teen questionnaire. Findings demonstrated that entrepreneurship is still be perceived as a "male" field, and that young women may be limiting their career aspirations because they feel that they do not have the requisite skills and abilities. However, entrepreneurial education programmes seem to reduce these gender differences, especially for those women with entrepreneurial aspirations.

Oosterbeek et al. (2010) have explored the effects produced by a leading entrepreneurial education programme, namely the Junior Achievement Young Enterprise student mini-company (SMC) programme, on both the skills and the motivation of 562 college students in four study programmes at Breda and Den Bosch, in the Netherlands. To do so, the authors used an instrumental variables approach in a difference-in-differences framework. Findings revealed that the programme did not exert the expected outcomes since the effect on students' self-assessed entrepreneurial skills was insignificant and the effect on entrepreneurial intention was even negative.

Then, Kuratko (2005) has reviewed both the trends and the challenges in entrepreneurial education for the 21st century, stressing, among other things, the urgent need for teachers to become more competent in the use of technology and to be innovative in their teaching approaches. Although entrepreneurial programmes should fit, in some way, into all existing curricula, grading systems, and calendars, renewed energy is always needed to encourage institutional reform to affirm entrepreneurial education legitimacy.

International and European Initiatives

Along with the commitment of distinguished scholars, international organizations have also studied, designed, implemented, monitored and assessed entrepreneurial education programmes, thus offering valuable practical implications for improving such programmes. Among the several initiatives at the international level, it is worth mentioning the Global Entrepreneurship Monitor (GEM) that began in 1999 as a joint research project between Babson College (USA) and London Business School (UK). Since then, about 120 countries have participated in the consortium which has become the richest source of information regarding entrepreneurship, including entrepreneurial education (GEM, 2023). Moreover, the contribution of the Global University

Entrepreneurial Spirit Students' Survey (GUESS) that was established in 2003 has been remarkable and, today, it can be considered one of the largest entrepreneurship research projects, involving more than 50 countries globally.[1]

At the European level, Junior Enterprises Europe (JEE) represents more than 35,000 young entrepreneurs in over 400 local non-profit organizations, called Junior Enterprises. JEE is active in 17 European countries and has supported higher education students to develop entrepreneurial skills and obtain practical experience to complement their theoretical knowledge while fostering social and economic growth, and facilitating their employability.[2]

More recently, in 2016 the European Commission launched the European entrepreneurship competence framework (EntreComp) as part of the New Skills Agenda for Europe. EntreComp aims at supporting initiatives to strengthen the entrepreneurial capacity of both European citizens and organizations, recognizing the opportunity to be entrepreneurial in any context, including school, workplace, community initiatives and applied learning at academic level. Along with training the competences for starting and running a venture, such as business modelling, accounting, marketing and risk assessment, EntreComp seeks to stimulate a broader entrepreneurial mind-set which should also rely on ethical and sustainable thinking, motivation and learning through experience.[3]

Along with EntreComp, since 2013 the Digital Competence Framework for Citizens (DigComp) has been developed and updated by the Joint Research Centre (JRC) of the European Commission, involving more than 200 experts and diverse stakeholders from the member states of the European Union. DigComp offers a descriptive reference framework to support the development of digital competences of individuals. In particular, DigComp aims to promote the use of digital technologies in a confident, critical, collaborative and creative manner to achieve both personal and professional targets related to several dimensions, including learning, employment, leisure and inclusion. The framework identifies five core digital competence areas: information and data literacy, communication and collaboration, digital content creation, safety and problem-solving (Vuorikari et al., 2022).

On the one hand, the diffusion of entrepreneurial programmes has been mainly driven by both technology-focused approaches and the economic interests of key stakeholders, namely policymakers seeking job creation and economic growth; students addressing the challenges of an increasingly competitive labour market; and, universities having to perform teaching, research and, more recently, TM which also includes actions for commercializing knowledge (Compagnucci, 2023).

On the other hand, entrepreneurial programmes have recently started becoming more action-oriented towards the development of personal traits, including self-confidence and leadership; soft skills such as creativity and

personal branding; and digital skills (Micozzi et al., 2022). The combination of such factors deserves further attention as it may encourage students to turn their ideas into more responsible and human-centred business projects for ameliorating the well-being of local communities (Compagnucci and Spigarelli, 2020).

METHODOLOGY

The analysis is based on a case study (Yin, 1993, 1994, 2018). The case is about the LUCI of the UNIMC. Nine editions of LUCI were held between 2013 and 2022. The Laboratory provided cross-disciplinary and soft-skills training on entrepreneurship, creativity and innovation, involving about 400 participants.

On the one hand, the case study method does not allow for generalization of results. Furthermore, this methodology leads to results that could be influenced by the perspective of the researchers involved (Hakim, 2000). Nevertheless, the case study method is particularly appropriate when the context investigated is articulated and relevant to explore and to understand a complex phenomenon (Stake, 1994; Yin, 2018) such as entrepreneurial education.

Qualitative analysis was conducted through primary and secondary data (Denzin and Lincoln, 2011; Gibbert et al., 2008).

Based on the results obtained from the literature review, a semi-structured interview was drafted and tested in order to collect primary data. The instrument of the semi-structured interview ensures ample flexibility to the interviewee and favours a broad view of the phenomenon studied (Seidman, 2006). In total, 12 semi-structured interviews were conducted, including with the Vice Rector for Third Mission and Entrepreneurship of the University of Macerata, as scientific coordinator in charge of designing and supervising LUCI; the head of the Office for the Valorization of Research and Placement, who was in charge of managing and monitoring LUCI for 10 years; three collaborators of the Office who have provided administrative support for organizing and implementing the nine editions of LUCI; two scientific tutors who have mentored participants and their teams; and five LUCI alumni.

Interviews were held between February and July 2022. Each interview lasted on average one hour. Interviews were held in Italian and then transcribed into English. Secondary data were collected through digital channels and materials made available by the Office for the Valorization of Research and Placement.

RESULTS AND DISCUSSION

The Third Mission Strategy of the University of Macerata: 2013–2022

The University of Macerata was established in 1290 in Marche Region (Italy) and it is among the oldest academic institutions in Europe. UNIMC is a small to medium-sized university, completely focused on SSH.

Before 2013, UNIMC was strongly anchored to the distinctive features of a traditional SSH-driven university. No effort was undertaken to promote a culture of innovation and soft skills that would have enabled both a study and a workplace environment for creativity and an entrepreneurial mind-set.

Between 2013 and 2022, following from university governance discussions, both the academic and the administrative staff have been increasingly encouraged to innovate teaching, research and TM by leveraging on the motto "Humanism to Innovate". In this period, humanism, innovation, creativity, digitalization and internationalization were the drivers that shaped the strategy of UNIMC for supporting young talents and the growth of the local community.

Since 2013, UNIMC has been engaged in a broad variety of TM initiatives, especially focused on the promotion of an entrepreneurial mind-set among undergraduates, postgraduates, PhD candidates and scholars in SSH disciplines. UNIMC has positioned itself as a facilitator between its student and academic communities, and local stakeholders, namely firms, schools, associations and public bodies, such as the Municipality, the Province and the Regional Government.

It is worth noting that Marche Region was one of the Italian regions dramatically hit by the earthquakes in 2016. Since these terrible events, UNIMC has intensified its relations with local stakeholders, and has promoted several entrepreneurial-oriented TM initiatives to contribute to the recovery of the areas hit by the disaster.

More recently, the Strategic Plan 2019–2022 formally recognized the TM of UNIMC as a key tool to move academia towards society at large. This strategy emphasized the contribution that UNIMC can offer to the sustainable development of the local community, by contributing to analysis and understanding of the complexity of current economic, social and environmental challenges.

Nevertheless, the promotion and the adoption of both the TM and an entrepreneurial mind-set have paved the way for changes which have deeply challenged both the management and the organizational culture of the university. As found in previous studies (e.g. Cerver Romero et al., 2021), also in the case of UNIMC, it has taken some years for these changes to be accepted by both the academic and the administrative staff. There were, and there still exist, important prejudices and factors, both internal and external to the university,

which hinder the implementation of the TM at both individual and community levels. In particular, not all SSH scholars are fully aware that the results of their scientific activities can (and should) produce an impact outside of the academic community.

Office for the Valorization of Research and Placement

The Office for the Valorization of Research and Placement of UNIMC, the TTO, was established in February 2013, from the former Area for Research and Internationalization. In the period 2013–2022, the Office aimed at designing, implementing and managing the initiatives related to the TM of UNIMC. In particular, the Office supported the transfer of knowledge from academia to the market and, especially, to society at large, by taking actions to engage both the academic community and the stakeholders of the local ecosystem.

On the internal side, the Office fostered the employability of students and PhD candidates by supporting the acquisition of soft skills. To this end, the Office has arranged several initiatives for promoting an innovative approach to entrepreneurship and creativity, by drawing on the potential of SSH disciplines. Furthermore, the Office has selected a group of non-academic experts to mentor students and scholars about business plan drafting, intellectual property protection and market analysis, thus easing the creation of both academic spin-off companies and start-ups.

On the external side, the Office has increasingly engaged with entrepreneurs, alumni, schools and associations, to design and implement cross-sectoral initiatives and research projects. The Office has also collaborated with science, technology, engineering and maths (STEM)-driven universities and high schools to develop cross-disciplinary projects for students and scholars. The Office has also facilitated the formation of local, national and international networks to support the generation and the development of business ideas, by leveraging the resources provided by the actors of the local innovation ecosystem, including incubators, accelerators, business angels and companies.

Among the most important initiatives enacted by the Office in the field of entrepreneurial education is the LUCI, which has engaged a broad variety of stakeholders, both internal and external to UNIMC.

Laboratory for Humanism Creativity and Innovation

Aim, organization and main achievements

The Laboratory for Humanism, Creativity and Innovation of UNIMC was active between 2013 and June 2022. LUCI aimed at developing an entrepreneurial mind-set, focusing on a more responsible citizenship to address the future of work and current economic, social and environmental challenges.

Indeed, LUCI was not the "traditional" entrepreneurial programme for starting and running a business, whereas the Laboratory encouraged a proactive approach to problem-solving. To do so, LUCI privileged active training to foster the development of soft and digital skills in order to provide students with tools useful for their personal life and professional career.

Over 10 years, LUCI involved about 400 students. Furthermore, the Laboratory enabled the formation of a network of more than 40 teachers, industry professionals, entrepreneurs and experts in the field of innovation and creativity. Although LUCI has achieved important results, also acknowledged at the national and international level, the Laboratory's efforts were interrupted in June 2022 following a change in academic governance.

LUCI was designed on the basis of UNIMC governance in 2013. On the one hand, the Ministry of Economic Development and the Ministry of University and Research published guidelines for creating and financing laboratories on entrepreneurship, namely Contamination Labs, at the end of 2013. On the other hand, LUCI was already a pioneer in the field of entrepreneurial education among Italian public universities. Indeed, LUCI was the first laboratory of this type, running since the academic year 2013–2014. Furthermore, the governance of UNIMC invented the name "LUCI", based on the distinctive features of both the SSH-driven university and the objectives of the entrepreneurial programme.

Between 2013 and June 2022, the Laboratory was implemented and improved, under the supervision of the following academic governing bodies: the Rector, the Academic Senate, the Board of Directors, and the Vice Rector for Entrepreneurship and Third Mission; and, with the support of the Office for the Valorization of Research and Placement, namely the TTO of UNIMC.

LUCI was open to undergraduates, postgraduates, graduates, PhD candidates and young scholars in SSH disciplines. The Laboratory wasn't mandatory and no fee was required for attendance. However, application and admission to LUCI were regulated by an annual public call, disciplining both selection process and criteria. As regards the most important criteria, participants were selected on the basis of their academic performance, engagement in extra-academic initiatives, international mobility, language skills, attitude to teamwork, participation in voluntary associations, and work experience. Participants did not need to have prior knowledge of business, economics and management.

LUCI offered both theoretical lectures and practical activities to encourage knowledge transfer from academia to society at large, by leveraging an entrepreneurial approach. Starting from real-world challenges, students worked in cross-disciplinary teams in order to generate and develop business or social ideas.

Table 10.1 LUCI: an overview

Academic year	Edition	Participants	Business ideas presented
2013–2014	1st	47	8
2014–2015	2nd	31	6
2015–2016	3rd	100	13
2016–2017	4th	40	8
2017–2018	5th	35	7
2018–2019	6th	32	5
2019–2020	7th	43	7
2020–2021	8th	42	7
2021–2022	9th	30	8
Total	—	400	69

Notes: The table shows an overview of the Laboratory on Humanism Creativity and Innovation of the University of Macerata. The table comprises four columns. The first column reports the academic years in which LUCI was held, namely 2013–2014 to 2021–2022. The second column indicates the corresponding edition of LUCI; in total, nine editions were held. The third column shows the number of participants in each edition. The fourth column illustrates the number of business ideas that have been presented in each edition. In total, LUCI recorded about 400 participants and 69 business ideas.
Source: Author's elaboration.

In total, about 70 business ideas have been created and presented by the participants over the nine editions of the Laboratory. The business ideas have usually fallen within the following sectors: culture and creativity; food and beverage; sustainable and inclusive tourism; recovery of "left-behind" places; gender equality; fashion; video games; quality education; innovative educational tools (i.e. edutainment); management, digitalization and protection of cultural heritage; digital devices for inclusion; good health and well-being; reuse, recycle, reduce and repair; and urban mobility. Table 10.1 provides an overview of LUCI.

Programme, training and skills

The activities were structured over 14 modules (six to seven hours each) on topics related to entrepreneurship, creativity and innovation. Each module corresponded to a meeting that was held on a weekly basis. Along with the leading role of the scientific coordinator, the work groups and the organization of LUCI were supervised respectively by a scientific tutor and three representatives of the Office for the Valorization of Research and Placement. The activities were carried out by non-academics.

The Laboratory was arranged in three areas, namely Company Basics, Innovation Café and Feed Your Idea, which are described below.

Company Basics illustrates the main tools for generating and managing a business idea, for exploring innovation, and for identifying business opportunities. Emphasis is also given to the development of soft skills which are not usually addressed in traditional academic courses. The training focuses on a selection of topics that are presented in an understandable manner to participants who do not have a background in business, economics or management.

Training areas include team building, communication, problem-solving, creativity, leadership, entrepreneurial mind-set, introduction to the local entrepreneurship and innovation ecosystem, social innovation, consumer behaviour, co-creation strategies, design thinking, business model canvas, market analysis, project management, financing and crowd-funding, business plan drafting, personal branding, intellectual property protection, business idea presentation, digital tools and contents for entrepreneurship, and the role of SSH disciplines in entrepreneurship.

Based on both the distinctive features of the SSH-driven university and the industrial specializations of the geographical area in which UNIMC operates, LUCI also offered a selection of special modules focused on both the challenges posed by the cultural and creative sector, and the 2030 Agenda for Sustainable Development, adopted by the United Nations member states in 2015.

Regarding the second area, Innovation Café stimulates participants to develop a proactive, entrepreneurial, cross-disciplinary approach for addressing current challenges in the economic, social and environmental domains. To do so, students encounter entrepreneurs, especially from the cultural and creative sector. Along with sharing their personal and professional experience, these experts offered free extra mentoring sessions to student teams. Young entrepreneurs who graduated from UNIMC and LUCI alumni were also invited as speakers, in order to further reduce the distance between LUCI participants and their action in the labour market.

In the third area, Feed Your Idea, students join cross-disciplinary teams at the first meeting to develop innovative business ideas. Teams have to work during classes, as well as on their own at the university or wherever they prefer, by adopting the most suitable co-creation strategies and digital tools. The scientific tutor periodically revises the tasks assigned to the teams and mentors them to improve the business projects. On “pitch day”, the ideas are presented publicly in front of students and a panel of judges, including invited scholars, entrepreneurs, innovators, investors and representatives of public institutions. The pitch usually lasts about five minutes. To develop their presentation, teams can use any software or digital tools. Teams can also show

prototypes of products or services developed. After the presentation, the panel of judges can engage with the teams in a 10-minute Q&A session.

The best ideas have been awarded with further mentoring sessions by UNIMC staff or external experts for fine-tuning the business project in order to participate in national or international business competitions, and for setting up the venture.

Partnerships

The design and the evolution of LUCI strongly relied on the linkages that the scientific coordinator, the scientific tutors, and the staff of the Office for the Valorization of Research and Placement have developed with non-academic teachers, innovators, experts and entrepreneurs, who were then invited to contribute to the training sessions.

On an annual basis, the Office signed agreements with a selection of local and national stakeholders, in order to strengthen the network of UNIMC partners. This means that LUCI acted as facilitator within the local ecosystem of entrepreneurship and innovation. This aspect should not be taken for granted, especially in the case of a SSH-based university that did not have such relationships or did not enhance local partnerships in a systematic way. The collaboration with regional, national and international stakeholders also permitted enrichment of the portfolio of initiatives and training experience offered to UNIMC students, as well as arranging on-site visits to firms, incubators and accelerators.

Over the years, industry representatives have collaborated with LUCI, providing important insights on how to design and re-design the activities and training offered by the Laboratory. Based on the distinctive features of their business, industry representatives and entrepreneurs were periodically asked to propose a selection of challenges related to product/service development and customer/user engagement. Then, such challenges have been addressed by student teams under the supervision of the entrepreneurs. Moreover, firms' representatives mentored the teams for simulating product/service development and for testing their business strategies in a real entrepreneurial environment. In addition, some companies offered traineeships and further professional collaboration to the most committed LUCI alumni.

The Office also collaborated with the local Chamber of Commerce in selecting students from high schools and engaging them in LUCI along with university students and PhD candidates. Such action permitted high school students to gain entrepreneurial training at the academic level, while discovering the opportunities offered by both the university and the labour market.

In addition, LUCI benefitted from collaboration with the local municipality and with the governing body of the province. Such cooperation was functional to ensure further resources and infrastructure at the local level, thus ameliorat-

ing the training offered to students, as well as for enhancing their entrepreneurial intention to transform business ideas into marketable products or services. In particular, the synergy between UNIMC and the local governing bodies resulted in the refurbishment of CreaHUB which was opened in July 2016 in the town centre of Macerata, in a large area reserved for pedestrians. CreaHUB was a co-working space for fostering the development of entrepreneurial ideas or the re-generation of existing business activities in the cultural and creative sectors. To do so, CreaHUB offered meeting rooms, offices and Wi-Fi for students willing to work on their business ideas or launching a start-up.

UNIMC governance was forward-looking since it arranged some activities of LUCI in collaboration with STEM-driven universities. Such cooperation enabled the exchange of good practices for improving the design and the management of LUCI. Furthermore, the organization of joint activities permitted SSH students to work on assigned business tasks with STEM students. In particular, problem-solving activities were proposed and addressed by adopting a cross-disciplinary approach. These activities included the creation of personas for Design Thinking; the development of a Value Proposition Canvas; and the use of digital tools and strategies for designing and promoting business or social ideas.

LUCI also organized activities in synergy with selected national and international networks which enabled students to develop innovative business ideas to contribute to achieving the Sustainable Development Goals laid down by the United Nations, while producing a social impact on local communities.[4]

Business competition

Since 2020, UNIMC has participated in several business idea competitions, organized at regional, national and international level.[5] In preparation for such competitions, LUCI has provided student teams with further training on market analysis and business plan drafting. In addition, mentoring sessions have been organized for preparing the final pitch.

The participation in regional, national and international events offered a unique opportunity for both teams and students to improve their sense of accountability and motivation to enhance the quality of their projects. Team-based events also provided LUCI students with the opportunity for networking with STEM students, entrepreneurs, business angels, venture capitalists, and representatives of private and public institutions. Furthermore, such events enabled students to share good practices, to strengthen their learning experience and to become more informed about the trends of the labour market and entrepreneurship.

Alumni, communication and dissemination, course monitoring

LUCI alumni have played a key role in re-designing the activities of the Laboratory, as well as in contributing to the promotion of LUCI in both university and non-academic environments, thus strengthening or building new relationships with the stakeholders of the entrepreneurship and innovation ecosystem. Furthermore, the most committed alumni have usually been invited as speakers at LUCI lectures and at the final pitch. On such occasions, alumni brought added value to LUCI training by sharing their experiences and by focusing on strategies and digital tools for managing both business projects and the dynamics which characterize teamwork.

The Office for the Valorization of Research and Placement has also developed a web page and a social media page dedicated to LUCI for engaging with new participants, keeping in touch with alumni, promoting knowledge sharing, and ensuring a virtual link between academia and the business community.

To improve the quality of the Laboratory and to address both student expectations and the emerging trends of the labour market, the staff of the Office for the Valorization of Research and Placement has administered an anonymous questionnaire to participants at the end of each scheduled module, in the course of the nine editions of LUCI. The aim of this questionnaire was to obtain feedback about a selection of domains related to the modules, including the topic, the ability of the teacher, the theoretical knowledge acquired, the suitability of tools used for performing practical activities, and the skills in which they were trained. Questionnaires were analysed by the staff of the Office in order to take action towards improving the overall quality of the service provided. Over the years, the questionnaire has been modified according to the comments and opinions expressed by both the students and the teachers.

CONCLUSIONS

The Laboratory for Humanism, Creativity and Innovation of the University of Macerata has demonstrated that entrepreneurship represents a mind-set that could be fostered among undergraduates, postgraduates and PhD candidates in SSH disciplines.

On the one hand, LUCI has promoted a cross-disciplinary, cross-sectoral and proactive approach to problem-solving and entrepreneurship. The Laboratory was not a programme about "how to start and run a business", whereas LUCI privileged active training to foster the development of soft and digital skills. This permitted students to acquire tools useful not only for their professional career, but also for their personal life.

Indeed, LUCI encouraged students to obtain more realistic perspectives of themselves, to be more responsible and ethical citizens, to be more resilient

and adaptable, and to make better informed decisions in order to address the emerging challenges posed by both the labour market and entrepreneurship.

On the other hand, LUCI was the result of an initiative of UNIMC governance in 2013. Such governance had a crucial role since it has promoted a culture of innovation and soft skills, departing from a "traditional" SSH-driven university towards an academic institution as facilitator among the stakeholders of the entrepreneurship and innovation ecosystem. This effort was channelled towards both the academic and the student community to facilitate a slow change in the organizational culture of the university and its missions.

Although entrepreneurial education programmes can achieve heterogeneous outcomes that the literature has sought to measure in several ways, LUCI objectives were clear and realistic: making self-employment a viable career pathway also for those studying in the SSH field.

Moreover, the Laboratory avoided the uncritical adoption of role models represented by top-ranked international universities. Indeed, the design of LUCI was aligned with the distinctive features of the university, and of the economic, social and institutional stakeholders of the local entrepreneurship and innovation ecosystem.

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NOTES

1. See https://www.guesssurvey.org/
2. See https://www.linkedin.com/company/jeeurope/
3. https://publications.jrc.ec.europa.eu/repository/handle/JRC101581
4. Among the international and national networks, it is worth mentioning ENACTUS which stands for ENtrepreneurial – igniting business innovation with integrity and passion; ACTion – the experience of social impact that sparks social enterprise; US – student, academic and business leaders collaborating to create a better world. ENACTUS is an international network of universities, alumni and students, which aims at engaging the next gener-

ation of entrepreneurial leaders to use innovation and business principles to improve the world (https://enactus.org/).

5. Among the regional and national competitions, LUCI teams participated in the Start Cup Marche (https://www.unicam.it/impresa-e-territorio/start-cup-marche) and the Italian National Innovation Award, which is the most important innovation event dedicated to Italian universities (https://www.pnicube.it/). LUCI has also provided teams with further mentoring sessions for participating in the ENACTUS National Competition which takes place on an annual basis in an Italian town, in collaboration with the local university. Teams present their business and social ideas in front of a panel of judges which selects the national championship team that will represent Italy at the ENACTUS World Cup. The competition is held in English (https://www.enactusitaly.org/).

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