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Linking university culture and entrepreneurship for leadership

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Abstract This paper focuses in the leading pathways for linking university culture and entrepreneurship for achieving a leading position in education and business. Many universities become leading hubs for start-ups and small companies that would later prosper and become the leaders of economy. Moreover, universities become the leaders in innovations and innovative ideas and approaches thanks to the scientific and research base they are capable of utilising.
Our results show that in the 21st century it is important that universities embrace the rules of the modern game that includes digitalisation, commercialisation, as well as globalisation. Thence, it is important to introduce business education to the universities as one of the key courses for the students. Moreover, it makes sense to engage in collaboration with the business sector and support commercialisation of education and research.

1 Introduction

University entrepreneurship programmes and strategies have always been one of the most successful ways how to prepare future entrepreneurs and business managers (Shirokova et al. 2018).
Innovations that address the world's biggest problems require an understanding of human relationships, an appreciation of interpersonal relationships that brings different perspectives to the table, and a relentless pursuit of collaboration (Porter and Kramer 2006). Thence, the study of the humanities and social sciences which is conducted at the higher educational institutions is crucial to the skills and world view that successful entrepreneurs need in all sectors.

With vast financial and intellectual resources, high expectations from donors and sponsors of all kinds, and a generation of students committed to making a difference in the world, the concept of the "Entrepreneurship University" is naturally attracted to and buys from large, complex societal problems the entire community in the search solutions. A wide public discussion that contemplates the role of the university in the 21st century addresses fundamental questions about the nature of entrepreneurship in relation to social norms and institutions (Jiroudkova et al. 2015; Maresch et al. 2016; Batkovskiy et al. 2016; or Popova et al. 2018). This discussion aims to help identify a diverse phenomenon of entrepreneurship by focusing on its cultural and institutional facets, histories and consequences. The aim is to create a discussion forum for research on the topic of entrepreneurship from a cultural and institutional point of view. Such topics as the advances in research on hybrid organization (findings from the study of social enterprises), examining the origins of social entrepreneurship (compassion and the role of the embedded agency) might be very helpful in this debate (Akberdina and Malyshev 2011).

At the same time, a methodological innovation may be required to capture the consequent accumulation of evaluation criteria and a variety of registers in which entrepreneurial activity could add value. In particular, the explosion of digital media has solved the problem of finding new and interesting data. The two preceding

approaches to cultural entrepreneurship which were described sequentially, developed somewhat in parallel, though rarely crossed paths. While CE 1.0 has become an impressive label for the theorizing of change agents in the arts and culture industry, CE 2.0 has gained in importance among management and organizational scientists interested in starting new businesses. At the same time, there is a burgeoning work that blurs some of these boundaries, suggesting that a third wave of research, which we have called Cultural Entrepreneurship 3.0, is emerging. The focus of this new wave of cultural entrepreneurship research cannot easily be categorized as the production or use of culture.

Universities can introduce their students to the latest advances in creativity, creative industries and economy, knowledge management and entrepreneurship (Vershinina et al. 2017). Moreover, students might be introduced to a variety of creative problem-solving techniques and learn to apply these techniques in the context of developing, evaluating and applying ideas and concepts with commercial potential (Etzkowitz 2017; Strielkowski et al. 2018). University culture should include course on commercialisation of research and development so that students would understand that their studies is not just pure theory that cannot be applied in some practical form.

The same applies to the faculty trying to integrate innovation and entrepreneurship on campus. While some programs exceeded expectations for many of the desired learning outcomes, the projected business outcomes are often not met. Programmes like “Improving the Innovation and Business ecosystem” might be of some help either.

Universities can be grouped according to the structure developed for teaching entrepreneurship: universities that do not offer any training in entrepreneurship; universities offering students a number of courses in entrepreneurship, innovative management, and risk management in entrepreneurship; universities with structural units that provide training in entrepreneurship and support MBA programs; universities with a comprehensive infrastructure of entrepreneurship, including business incubators, centers for supporting entrepreneurship, etc. (Freel 2019). However, without the inclusion of entrepreneurship training in their educational “menu”, universities will not be able to provide a country's economy with qualified young personnel who are competent in matters of creating and running a business, or improve students’ competitiveness positioning for the big players of the regional economy. Large businesses and banks are currently rushing into that niche: banks offer online courses as a part of their Business Environment projects; some corporate universities launch startup programs, create business accelerators, and form other elements of the infrastructure for breeding and growing new entrepreneurs. The needs for gaining knowledge and skills in the field of running business are crucial, which brings new participants to this market and encourages the development of general approaches to the issues of methods and practice of teaching entrepreneurship. In case universities do not perceive the objective of forming entrepreneurial competencies as one of the most important and will not be ready to consider it as their chance to leave the “ivory tower”, then someone else will implement this socially important function.

2 University leadership and prestige

University leadership is an important part of the curricular in many countries. Take the United States as an example. University of Michigan is one of the top universities when it comes to administrators becoming college presidents. University of Michigan, similar to other US universities, offers informal leadership programs for chairs and deans, including information on university finance details and donations. These meetings are useful to administrators but are limited in finding more proactive ways to presidency. Presidents of the universities are hired by a board and report to a board. On campus, however, most interaction presidents interact with faculty and students. In particular, the latter group is gaining influence over the campus, and it would be advisable for the presidents to pay attention to the increasing activism in their ranks (Yen et al. 2019).

For the most part, the presidency has become an external task, and as a result, the presidents are spending their time increasingly off campus. College leaders should spend more time on campus to engage with faculty and students, and to interweave in the structure of the institution they represent on a daily basis.

In order to get a better understanding of the role of the presidents in the search committees and form an interim team that supports the president, one need to understand the system that lies beneath. The group responsible for hiring university presidents often lacks a deep understanding of the job. The committees should include seated presidents or former executives who can provide the members of the search committee with the best possible perspective of the skills and competencies required for the role. Such stories form the basis for identifying and developing future leaders and building the leadership pipeline. When one defines what the organization stands for and what abilities enable leaders to execute the strategy, she or he can set expectations for the look and feel of the leadership. Executives should work together to communicate the skills, behaviours, and attributes that executives should display (Keast 2007). Such stories form the basis for identifying and developing future leaders and building the leadership pipeline. The major in Management and Leadership is aimed at individuals who wish to acquire a mix of theoretical and practical management knowledge and skills to work as professional managers and leaders

in the organization of the future. The focus is on learning the interpersonal, systematic and strategic skills required to build and manage an effective business team.

The courses on organizational behaviour, personnel management, administrative theory and international management deal with the processes of planning, organization, management and control of organizations. Applicants for Ideal Apprentice Leaders have been at least one year out of high school, have experience as a member of SCA programs, and have demonstrated their passion for SCA's mission (Decter et al. 2007). Basic knowledge of conservation projects and an interest in a conservation position in nature conservation are preferred. Application Deadlines for Community Crew Apprentice Crew Leader positions vary from city to city.

Each enrolled student organization must have an active counsellor selected from the staff or faculty of the university. The Advisor is selected and approved by the members of the student organization and approved by the Office of Student Activities. A counsellor provides continuity to the organization from year to year by sharing the history of the student organization and assisting new executives during the transition process.

As the new head of the student orientation team, one becomes the face of the university. They are an integral part of the successful transition not only for students but also for their families. The leaders of the orientation team will welcome the students and their families guiding them through the process of enrolling for new students (Freel et al. 2019).

The University Library is the largest academic research library of the State University of New York (SUNY) and a member of the prestigious Association of Research Libraries (ARL) and training in physical and virtual environments. Over the past ten years, university libraries have been actively involved in transforming library holdings, reusing physical library space, and introducing new services to meet the evolving needs of the faculty and students whose teaching, learning and research are increasingly digitally operated. Universities are looking for a creative, entrepreneurial, and collaborative leader who builds on these activities and the academic, educational, and creative needs of university faculties, staff, and students, as well as the intellectual aspirations of alumni and the community toward the 21st century. With technology and digital media fundamentally changing the way that information is stored, curated, accessed, and used, information technology continues to be widely used.

Moreover, it makes sense to attract people with international experience and originating from other countries and other educational system. For example, internationally recognized researcher and transformative university leader Dr Satish Tripathi was named the 15th president of the University on Buffalo on April 18, 2011. As a fellow of the Institute of Electrical and Electronics Engineers and the American Association for Advancement of Science, he has received honorary doctorates from the Indian Institute of Information Technology in Allahabad and Brock University in Ontario, Canada. In 2009 he was awarded the Distinguished Alumnus Award by Banaras Hindu University. Dr Tripathi was chosen due to his international experience and vivid academic background. Moreover, he knows well India educational market and the needs and requirements of Indian students who constitute a considerable group of students in American universities.

However, the academic community and even advanced universities are neglecting clear connection between entrepreneurship education and the development of entrepreneurial activity among the population, as well as how and in which formats entrepreneurship should be taught in universities. Acquiring entrepreneurial competencies increases the chance of creating a successful and sustainable business in the future. It would not be true to conclude that by investing state funds in entrepreneurship courses and programs, one can expect quick returns in the form of an increase in the share of the population involved in creating their own businesses. Although participation in entrepreneurship training programs is correlated with overall entrepreneurial activity and the economic effect of newly created firms (Cruz at al., 2009; Sánchez-Barrioluengo and Benneworth 2019; Henry et al. 2005, 2006; Martin et al. 2013), entrepreneurship education at the university is more related to the entrepreneurial intentions of students. Nevertheless, it takes a lot of time to make entrepreneurial intentions a sustainable economic result. Moreover, even with a developed system of entrepreneurial education, it is still acquired only by a small part of potential entrepreneurs. Therefore, it would be strange to expect visible and quick results from such educational programs.

Perhaps the whole point is that the short modules that students attend along with the core educational program are not as effective as purely entrepreneurial training? An attempt to introduce the so-called entrepreneurial Bachelor studies, that is, to teach entrepreneurship with an appropriate educational certificate, seems to be a serious misconception. There is such a practice everywhere, but if you carefully look at the list of universities offering such training, it is easy to see that these are either universities that combine the entrepreneurial Bachelor with training in a certain type of activity (trade, design, food industry technology, etc.), i.e., train technologists with entrepreneurial competencies, or second-tier universities (Kuratko 2005). Why is there no undergraduate business in Princeton, Harvard or MIT? Western universities have already gained some experience in introducing undergraduate entrepreneurship, and it is mostly negative. But above all, there is an understanding that entrepreneurship is not a profession, but rather activity, which is as much a craft as art. It is closer to the so-called liberal professions, in which, despite the appropriate educational institutions and programs, talent and vocation are no less important than a set of knowledge and skills.

Therefore, the idea of some university leaders who propose to defend a startup project instead of a thesis, is truly perplexing. One should comprehend that if a student team is ready with their startup as a graduate qualification work, then this in reality means that they have stopped their main academic activities, i.e. the development of skills and competencies in a previously selected profession, at least one year before the completion of training. What is startup defend anyway? Expert assessment of its feasibility? But what kind of experts will they be - professors or business angels? The former are often incompetent to evaluate the startup business component, and the latter are hard to find. Furthermore, business angels are often mistaken, that is why they take several projects into development at once, so that at least one of them "shoots". Everything will end in the wrong way as usual: students will present "demo versions", and professors in the field of engineering and technology will evaluate them from the point of view of engineering and business technology (Riviezzo et al. 2019). Leading universities existing in entrepreneurial environment, create options for students in which training in entrepreneurship does not come down to writing business plans in a "copy-paste" manner. Georgetown University, University of Miami, Stanford, University of Texas at Austin, Arizona University at Tucson and many others have excellent initiatives to create an entrepreneurial cohort among students outside the classroom, whether it is summer intensive courses based on business incubators, business plans competitions, and hackathons.

The foregoing does not mean that entrepreneurship cannot be taught at a university; on the contrary, a modern university cannot but have some kind of modules for teaching students to learn entrepreneurship.

3 Promoting entrepreneur education

Whatever it is, universities in the United States are increasingly using resources to finance, promote, and study. In the past four years, the universities have consolidated and renewed their entrepreneurial initiatives. There are now centres at universities that support student undertakings, create business incentives, and offer courses that deal with entrepreneurship theory and practice. The stated goals of these efforts are generally divided into three areas: creation of an entrepreneurial culture, education and support for student companies (Lynch 2019).

In India, the story is pretty much the same. At the institutional level, it is a relatively new model for higher education institutions in India to provide student support and advice on start-ups. Under the National Skills Development and Entrepreneurship Strategy carried out in India (Raval 2016), the government relies heavily on higher education institutions to implement programs and programs to promote entrepreneurship in the country. Various governmental institutions also invest in venture capital funds to meet the capital requirements of start-ups and has set up an India Aspiration Fund to support its corporate ecosystem. New knowledge and practices are essential to transformation. This requires testing existing entrepreneurship education practices, maintaining the usefulness and developing new practices to replace obsolete practices.

Universities can and should do much more to ensure that entrepreneurship education truly supports present and future potential and existing entrepreneurs. The founding of ICTE followed a focus on microenterprises under the auspices of the Institute for Applied Entrepreneurship (IAE), which was restructured into ICTE and Coventry University Social Entrepreneurship Ltd. from the United Kingdom. Business schools are a great way to get to know entrepreneurship, as business and related aspects are part of the curriculum. Such educational institutions must demonstrate their ability to improve the key scientific and technical skills their students need to be competitive in the future.

Entrepreneur education must convey both the theoretical aspects of entrepreneurship and the required entrepreneurial skills. The fourth level lies between all these university innovation and entrepreneurship activities that work as a whole and the broader development agendas of society. The main purpose of any innovation and entrepreneurship is to make more people economically efficient, economically independent, reduce inequality and poverty, reduce unemployment and broaden the tax base. The main purpose of our paper is to share the study, which sought to better understand the conditions under which maximum social impact can be derived from faculty, innovation centre, and entrepreneurship centre activities.

The concept of an entrepreneurial university and its practical consequences for universities (Etzkowitz et al. 2000; Philpott et al., 2011; Urban B) has been in the discussion on changes taking place in the institutional field of higher education of the recent 10–15 years. The third-generation university, or entrepreneurial university, is characterized by both the visible manifestations of a new quality: diversification of income sources, the development of flexible periphery through the structures of commercialization of intellectual capital; and some "invisible" characteristics: a university-wide entrepreneurial culture, the spread of entrepreneurial beliefs and values in the university community.

By supporting startups, i.e. entrepreneurs among students and young teachers, the university acts in the interests of the regional and national economies, which will only benefit if there are more new companies based on modern technology in the country that satisfy the needs of potential Entrepreneurs from among students and gain competitive advantages in the educational market, adding to its traditional line of educational products.

Thence, the mission of an entrepreneurial university is to provide knowledge in the field of entrepreneurship, to develop entrepreneurial abilities among students - potential agents of the so-called pre-

entrepreneurship on campus and increase their chances of a successful business start. We will describe one of the possible models of such training, which can be demanded by leading universities. It is compatible with the experience of leaders in supporting innovative entrepreneurship, such as MIT, Columbia University, and the University of North Carolina, where minors for entrepreneurship have been introduced, that is, structured sets of educational modules that students of different areas of study can choose in parallel with their major.

The module on entrepreneurship should be adequate both to the needs of students and the level of development of entrepreneurial education in leading universities, where it is one of the drivers of a knowledge-based economy and entrepreneurial innovation. Thus, it should:

- provide for the formation, consolidation and development of basic entrepreneurial competencies;
- be integrated into the university's innovative infrastructure system, which provides technology transfer and commercialization;
- be available to students of various educational programs and contribute to their "mixing up" and the formation of entrepreneurial teams;
- recruit student enrolment on the basis of students' own preferences;
- provide not only free entry for participants, but also assess their achievements.

The methodological and didactic task of the minor is in developing and consolidating new methods for transferring knowledge (Table 1), which are formed in the framework of courses aimed at developing entrepreneurial skills among students (and teachers), and then can be transferred to the traditional field of educational and pedagogical activity, contributing to the accumulation of pedagogical competencies for the establishment of a new generation entrepreneurial university.

Table 1. Knowledge transfer methods in a classical university and in a university of the third generation ("entrepreneurial university")

Traditional model	Entrepreneurial model
Focus on content	Focus on the process
Teacher as an expert	Students as discoverers
Teacher at the center of the process	Students at the center of the process
Learning via listening	Learning via acting
Learning via reading books	Learning in the process of communicating and exchanging ideas
Rigidly structured environment	Flexible environment
Predefined learning objective	Learning objectives crystallize in the process of learning
Fear of mistakes	Mistakes as a learning tool
Theoretical and functional approach	Applied and multidisciplinary approach
Focus on evaluation	Problem solving

Source: Own results based on Gibb (2002)

The most complete answer to the question about the possibilities and boundaries of entrepreneurship education in the framework of the competence approach was given by Johannisson (1991) who identified five key competencies of an entrepreneur (Table 2).

Table 2. Personality traits of entrepreneurs and social context

Competence	Personality	Social context
Know why	Readiness for self-giving, risk, endurance, self-belief	Stimulates entrepreneurship, there are mentors and role models
Know how	Professional knowledge and skills	Structures of higher education
Know who	Communications networking	Economic and social networks
Know when	Skills and intuition	Entrepreneurial traditions
Know what	General knowledge, technological knowledge	Professional and social life, information networks

Source: Own results based on Johannisson (2016)

The most important objectives of the minor are to contribute to the growth of human and social capital of potential entrepreneurs (investments in people), as well as the formation of business projects and entrepreneurial teams (investments in ideas). Investing in people is the task of basically the first two levels of the minor, while investing in ideas is the third level of the minor.

4 Conclusions and limitations

Higher education can only lead to a return to society in the distant future and therefore cannot be measured immediately and reflected in the latest data. However, if the excellence initiatives spurred research on the university landscape (with a long-term horizon to be effective in society), spill over effects, economies of scale, and the perception of academic work could provide a positive return for newly created knowledge to be expected.

The academic entrepreneurial activity, and in particular the patenting of inventions and industrial cooperation as two of the main channels for marketing knowledge, should therefore have a side effect of the policy approach.

However, there are a number of limitations. The first serious limitation is the state of the economy and the place of the entrepreneurial ecosystem within it. In a situation where business is associated with non-commercial risks, and the prospects for changing the business climate are unclear, innovative entrepreneurship becomes the lot of comparatively few desperate heads, for whom mainly international business angel and venture structures compete. In other words, the entrepreneurial minor risks becoming a “foreign agent” in the sense of training entrepreneurial personnel for entrepreneur-focused economies. The highest chances of success such a major has in metropolitan cities and few regions with an established ecosystem of entrepreneurship.

The second limitation is the lack of an effective combination of innovative, educational, and educational policies in the field of promoting entrepreneurship and small business. Meanwhile, when universities transfer the student to sites supporting startups, and further, entrepreneurship training becomes one of the social elevators. As a rule, universities are not powerful enough and influential to act as a communicator and integrator. Therefore, for the successful launch of a “factory for training innovative entrepreneurs” within the framework of a leading university, strong support from representatives of regional authorities and business elites is needed.

The third limitation is the lack of close ties with successful entrepreneurial universities, and inability to invite promoted business coaches to increase students’ interest and attract regional attention. Well-established relations with university alumni who have become entrepreneurs or regional administrators can help.

The fourth limitation is the lack of capacity in fundamental and applied research that allows commercialization. Without research support for entrepreneurship will inevitably be expressed in promoting business projects that have little to do with competencies accumulated at the university and, exploit products and services that are already well-represented on the market. It would be a mistake to consider that such capacity could be found only at universities with strong engineering departments. The development of modern financial technologies is the result of teamwork of specialists in finances and economics (one of the most popular majors offered at almost all world universities) who were able to partner with pros with good skills in computer and information sciences to create a new industry of financial services. Therefore, strong universities for social and economic sciences or services can become a launch site for a minor in entrepreneurship.

The fifth limitation is possible perception of entrepreneurship as something frivolous and doubtful in contrast to true science by the existing corporate culture of the university. This limitation cannot be underestimated: if the academic community of the university does not share the idea of rooting entrepreneurship at a university, both students and that part of the academic community that will be involved in designing an entrepreneurial educational module will feel it. The limitation should and can be overcome primarily through constant and patient dialogue, explanation to the conservative part of the university community of global trends in university education and the emerging threats and alternatives, as well as through public support by the leadership of entrepreneurial education as a university strategy.

Entrepreneurial education is a mandatory element of the third-generation university. It should allow studentы of any field of study to complete the educational path based on their own professional and career choice. Even for those students who eventually do not become entrepreneurs, participation in such a minor will allow to differentiate between the usual (causal) and entrepreneurial (effectual) behavior logics, understand the importance of the social microenvironment, and conduct a self-evaluation of entrepreneurial inclinations and abilities. Before launching the minor, the university leadership should decide what it wants to create a module in entrepreneurship for and how it will overcome various limitations and attract the resources necessary to turn entrepreneurial education in a university into a driver for growth and development. This is the biggest issue when starting a modern entrepreneurial education, even at leading universities.

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