

# NON-ACADEMIC LITERATURE REVIEW EEEPHEIC PROJECT

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## Executive Summary

The purpose of reviewing the non-academic literature (policy documents and relevant background analytical papers) was to establish a platform of policy initiatives / efforts in the field of entrepreneurship education. European Union has a long record of policy discussion about entrepreneurship education (started in 1998 with the **communiqué from the European Commission** to the Council: Fostering Entrepreneurship in Europe - Priorities for the Future). Entrepreneurship education was identified as one of measures needed to create a supportive, entrepreneurially-friendly climate across all EU member states, in order to respond effectively to a challenge for job creation and competitiveness.

**The Lisbon 2000 strategy**, which established the goals to be achieved by 2010 and **the European Charter for Small Enterprises (adopted in 2000)**, committed Member States to 'nurture entrepreneurial spirit and new skills from an earlier age'.

In the beginning, the focus of the discussion on entrepreneurship education was on encouraging entrepreneurial initiatives by young people through teaching about it at all educational levels, connected to the general knowledge about the business, and on developing training programmes for small enterprises. Later, this narrow approach was broadened, by emphasising the transversal nature of entrepreneurial competence, which involves developing certain personal skills and is not directly focused at the creation of new businesses.

Opening the entrepreneurship education to all (across disciplines and at all educational levels) is embedded in EU policy documents from 2006 Oslo Agenda for Entrepreneurship Education in Europe and can be seen in all subsequent documents (2008 Small Business Act for Europe, 2013 Entrepreneurship 2020 Action Plan). Those policy documents ask also for evaluation of entrepreneurship education in order to get the insight on outputs, outcomes and potentially even impact of it. Besides presentation of major policy documents in area of entrepreneurship education, the review included specifically issues of definition of competences (2016 Entrepreneurship Competence Framework), on the role of educators (2013 Entrepreneurship Education: A Guide for Educators) and evaluation (2018 HEInnovate).

Development of policy documents in the area of entrepreneurship education is usually supported by analytical background, but not enough with results of academic research, or using intellectual outputs of global institutions like UNESCO and the OECD. From producing policy documents to their implementation there are activities of developing national policies and strategies, then building institutional capacity of HEIs (both, strategic and organisational) for implementation of those policies. This part is not visible from analysed documents, neither which communication strategy is implemented with different stakeholders on EU and national levels in order to raise probability of achieving expected results in building entrepreneurial competence on individual level. Analysed policy documents are not referring to the 2030 UN sustainable development goals, what would increase the policy relevance.

In order to make a sustainable loop of designing, implementing and innovating an entrepreneurship educational program it is of utmost importance to establish feedback:

- Regular feedback information how recommendations from analytical background papers were used (or why they are not used) – it would help in future calls for experts' inputs, for monitoring

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- the process of implementation of policy documents in the entrepreneurship education area and shortcomings and pitfalls which the implementers are facing with;
- Connect the policy recommendations and interventions on the level of EU member states with 2030 UN Sustainable Development Goals, and actively participate in the discussion on the future of education with UNESCO and the OECD;
- Regular reports on implementation of policy documents in entrepreneurship education area on member states level, using instrument of National Reform Programmes (using carefully selected few parameters), possibly from HEInnovate platform.

This policy journey from identifying entrepreneurial competences as a missing link in building a sustainable economy and society is not finished yet. It started with calling for entrepreneurship education in order to respond to needs of jobs creation and competitiveness, went through an intensive discussion on the definition of entrepreneurial competence and it is still in the area of evaluating the effects of entrepreneurship education, covering formal, non-formal and informal modalities of education.

# 1 Introduction

The review of entrepreneurship education scene in Europe covers the 20-year period 1998-2018<sup>2</sup> and is based on major documents<sup>3</sup> focused on entrepreneurship and education, produced by European Commission (EC) and OECD. The criteria used for analysing these documents is the timeline and the major topics (entrepreneurship education in general, competences, educators, evaluation / measurement / indicators). Using those two criteria, it is possible to get an insight into the dynamics of the evolution of policy thinking about the entrepreneurship and understanding the role of entrepreneurship education in the society.

<sup>2</sup> This analysis was done in 2018, at the beginning of the project and amended along the project timeline.

<sup>3</sup> There are numerous European Commission communications to member states related to education, growth, research and innovations complementing presented documents.

## 2 Overview of major documents related to entrepreneurship education

### 2.1 On entrepreneurship education

Already in a **1998 communiqué from the European Commission to the Council (Fostering Entrepreneurship in Europe: Priorities for the Future)** entrepreneurship was identified as a challenge for job creation and competitiveness. In this document the EC suggested a number of measures for fostering entrepreneurship, among which the inclusion of 'knowledge about entrepreneurship in the curricula of national education and training systems' (p.4). The EC invited the Council to endorse these measures for priority actions with the aim to create a more 'entrepreneurially-friendly' climate across the European Union member states, and to measure the progress made in this area.

**2000 Lisbon Agenda** requires the Member States, in line with their constitutional rules, the Council and the Commission to take the necessary steps within their areas of competence to contribute to the development of the European framework which should define the new basic skills to be provided through lifelong learning: IT skills, foreign languages, technological culture, **entrepreneurship** and social skills (item # 26).

Subsequent work on this topic was carried out within the framework of the **Multiannual Programme for Enterprise and Entrepreneurship, and in particular for small and medium-sized enterprises (2001-2005, extended to 2006)**, with promoting entrepreneurship as one area of action. The aim of this project was to identify and compare initiatives that promote entrepreneurship education across all educational levels from primary to university education. A **report of the expert group on education and training for entrepreneurship published in 2002** emphasised a need to find the common ground in defining the entrepreneurship teaching through the lenses of **a broader concept of education for entrepreneurial attitudes and skills, which involves developing certain personal qualities and is not directly focused at the creation of new businesses**. If needed, a more specific concept of training on how to create a business can be added. The recommendations called for more active approach in the implementation, monitoring and evaluation of initiatives (by identifying possible quantitative and qualitative indicators on education for entrepreneurship). The report also suggested the set-up of national and pan-European networks to pool and disseminate expertise and experience in implementing entrepreneurship education.

In the **2003 Green Paper: Entrepreneurship in Europe** the European Commission referred to the importance of entrepreneurship education as part of activities which Europe should take in order to respond on competitiveness gap with the USA and Japan. The major focus of this document was on definitions (what is entrepreneurship, why entrepreneurship is important) and on policy aspect of building more competitive economy and entrepreneurial society. The document emphasised that „**Entrepreneurship is multi-dimensional and although it can occur in different contexts, economic or other, and in all types of organisations, this Green Paper focuses on entrepreneurship within a business context.**“ This approach is used in all subsequent policy discussions, always starting with the broader definition, but then slipping into a narrower conceptualization of entrepreneurship in business context, by using measures related to interest for self-employment and growing own business venture. The role of formal and informal education was identified along with interventions in regulatory framework, financial instruments (micro loans) and

developing cultural values toward entrepreneurship. Proposed next steps provided very clear roadmap for introducing needed activities for building entrepreneurial economy and society among EU member states, and to strengthen the competitiveness of European Union. Understanding the transversal/horizontal feature of entrepreneurial capacity of a country, the most important recommendation was to co-ordinate entrepreneurship policy amongst all policy-makers.

The **2006 Oslo Agenda for Entrepreneurship Education in Europe** provided the framework for policy development related to entrepreneurship education, support to educational establishments, teachers and entrepreneurship activities in schools and higher education. The aim of the Oslo Agenda was to step up progress in promoting entrepreneurial mindsets in society, systematically and with effective actions, which can be contextualized to the local situation by different stakeholders. For the purpose of the EEEPHIC project it is important to emphasise following recommendations (p.3):

- „D5 As part of the final evaluation of a programme or course in entrepreneurship, test the entrepreneurial competences of students and offer them a certificate ("entrepreneurial driving licence") acknowledging the acquisition of those skills.“
- „D10 Higher education establishments should integrate entrepreneurship across different subjects of their study programmes, as it may add value to all degree courses (e.g. technical and scientific studies, but also humanities and creative studies). All faculties/disciplines should develop opportunities for students at every level to experience entrepreneurship.“
- „D15 Embed evaluation systematically into all programmes. The most effective evaluation is independent and comparative (i.e. it should be run before the beginning of the programme and after its conclusion).“
- Oslo Agenda also recognized the lack of teaching staff to run educational programs related to building entrepreneurial competences:
- „D13 Give entrepreneurship more academic esteem: establish good research programmes and PhD programmes on entrepreneurship, in order to create a "critical mass" of future teachers with this specific competence.“

The **2006 Implementing the Community Lisbon Programme: Fostering entrepreneurial mindsets through education and learning** identified the need of cross campus teaching of entrepreneurial skills and a need for involvement of business people in teaching the entrepreneurship.

The **2008 Small Business Act for Europe** (SBA) confirmed the priority of entrepreneurship education and emphasised the need for cooperation with the business community in order to develop systematic strategies for entrepreneurship education at all levels.

The **2013 Entrepreneurship 2020 Action Plan** identified three major initiatives: entrepreneurial education and training to support growth and business creation; create an environment where entrepreneurs can flourish and grow, by eliminating barriers and reigniting entrepreneurship culture. The rationale for these interventions was built on the slow recovery from 2008 economic crisis and growing gap in competitiveness comparing with the USA and Japan. It is emphasised that without far-reaching cultural change Europe will not be able to close the competitiveness gap and entrepreneurship education is identified as a major investment in the cultural change toward appraising entrepreneurship. The statement „Investing in entrepreneurship education is one of the highest return investments Europe can make“ was backed with results of surveys of Junior Achievement mini-company programme in secondary school suggesting that between 15% and 20% of students who participate in such programme will later start their own company, what is about three to five times that for the general population (Jenner, 2012). A very important features of this document are specific statements that „the role of higher education in entrepreneurship goes

far beyond the delivery of knowledge to participating in ecosystems, partnerships and industrial alliances" (p. 6) and that "universities should become more entrepreneurial" (p.7). Proposed actions on EU level and member states' levels are opening new frontiers for policy makers and higher education institutions, in boosting entrepreneurial culture. The joint activities of the European Commission and OECD in developing the framework for entrepreneurial universities are part of it. It is further emphasised in the **2015 resolution of the European Parliament on promoting youth entrepreneurship through education and training**.

#### **Additional analytical background**

**2008 Entrepreneurship and Higher Education**, editor Jonathan Potter (Ch. 5 Entrepreneurship Education in Europe, by Karen Wilson) published by the OECD. This publication opened the discussion of ***the role of universities in entrepreneurship education***, as well as the ***responsibility of policy makers and universities in designing the eco-system*** needed for successful building entrepreneurial competences among students. Additional value of this publications is an overview of entrepreneurship education in Europe (with special focus on Central, Eastern and Southern Europe, as well as on European countries in transition phase), in the U.S.A., and looking for benchmarking examples among U.S., Canadian and Danish universities.

#### **Additional analytical background**

**The 2008 Entrepreneurship in higher education, especially in non-business studies** concluded that „teaching of entrepreneurship is not yet sufficiently integrated in higher education institutions' curricula.“ (p. 7), especially not in technical, scientific and creative studies. „The real challenge is ***to build interdisciplinary approaches***... by creating teams for the development and exploitation of business ideas, mixing students from economic and business studies with students from other faculties and with different backgrounds“ (p. 7). The report recommended to develop policy / regulatory framework for ***evaluating non-formal learning*** in building entrepreneurial competences. It also emphasises an issue of ***measuring the impact of the entrepreneurship education, because of the lack of available indicators (mostly available only output indicators)***.

#### **Additional analytical background**

Based on four High Level Reflection Panels held in London, Stockholm, Prague and Rome the report **2010 Towards Greater Cooperation and Coherence in Entrepreneurship Education** suggested to use more systematic approach in making entrepreneurship education more evenly developed across EU. In order to be able to design and implement such policies, the progression model is recommended which provides an overall conceptual framework to set priorities for action, identifies sequential stages from „pre-strategy“ through to „mainstreaming“ and the 'building blocks' that players can put in place (p. III). ***Collaboration between education, business and local government*** was strongly requested.

#### **Additional analytical background**

**2011 Supporting growth and jobs – An agenda for the modernisation of Europe's higher education systems** provides an overview of issues in achieving Europe 2020 targets related and the role of higher education in these processes. Important statements are that ***the main responsibility for delivering reforms in higher education rests with Member States and education institutions themselves*** and the importance of ***strengthening the knowledge triangle between education, research and business***.

#### **Additional analytical background**

**The 2012 Rethinking education: Investing in skills for better socio-economic outcomes** was adopted by the European Commission and communicated to the Member States with an aim to „***foster entrepreneurial skills through new and creative ways of teaching and learning from primary school onwards***, alongside a focus from secondary to higher education on the opportunity of business creation as

a career destination. “ It is specifically recommended that „entrepreneurship education actions to include:...establishing, jointly with the OECD, a guidance framework for entrepreneurial education institutions; and the development of tools to monitor progress and the acquisition of entrepreneurial competences“ (p. 17).

#### **Additional analytical background**

**2017 Entrepreneurship Education at Universities – Learning from Twenty European Cases** (editors C. Volkmann and D. B. Audretsch, financially supported by the European Commission) provided information on *institutional and stakeholder context of delivering entrepreneurship education within HEIs.*

## **2.2 On competences**

The Oslo Agenda was followed by the **2006 Key competences for lifelong learning** in which the **Sense of initiative and entrepreneurship** is included as one of eight key competences (adopted by the European Parliament as the recommendation to Member States to develop the provision of key competences for all as part of their lifelong learning strategies). This document was a starting point for serious policy attention to entrepreneurship education at the EU level. A very important aspect of this document is a broad definition of entrepreneurial competence as „ *an individual's ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports individuals, not only in their everyday lives at home and in society, but also in the workplace in being aware of the context of their work and being able to seize opportunities, and is a foundation for more specific skills and knowledge needed by those establishing or contributing to social or commercial activity. This should include awareness of ethical values and promote good governance....An entrepreneurial attitude is characterised by initiative, pro-activity, independence and innovation in personal and social life, as much as at work. It also includes motivation and determination to meet objectives, whether personal goals, or aims held in common with others, including at work.* “

**2016 New Skills Agenda for Europe:** Working together to strengthen human capital, employability and competitiveness, emphasised again skills gaps and mismatches, with very strong statement that „higher education institutions need to ensure that they equip graduates with relevant and up-to-date skills“, and that „*evidence shows that policies to increase attainment alone are not sufficient. The quality and the relevance of what people learn are now centre-stage*“. Skills gaps and mismatches are stable features of the labour market in EU member states: 40% of European employers have difficulty finding people with the skills they need to grow and innovate. Public consultation on the **2011 Agenda for the modernisation of Europe's higher education systems** showed that over two thirds of students and recent graduates perceive a mismatch between the supply of graduates and the knowledge and skills the economy needs. Nearly half of higher education providers shared this assessment. Skills mismatches hinder productivity and growth what is contributing to continuous lagging behind the USA and Japan in competitiveness. Employers are increasingly demanding transferable skills, such as the ability to work in a team, creative thinking and problem solving. Analysis confirmed that some of key competences as identified in 2006 Key competences for lifelong learning already have an established place in educational systems, this is not typically the case for key competences such as entrepreneurship and citizenship, or transversal skills. It was the reason to revise the 2006 Key Competences for Lifelong Learning with a special focus on promoting entrepreneurial mindsets, and the accompanying European Reference Frameworks.

**2018 Council Recommendation on Key Competences for Lifelong Learning** replaces the Recommendation on Key Competences for Lifelong Learning adopted by the European Parliament and the Council in 2006. The goal of the new recommendation is to develop a shared understanding of key competences and to further foster their introduction in education and training curricula. Special attention has been paid to promoting entrepreneurial and innovation-oriented mindsets, including by encouraging practical entrepreneurial experiences. This new recommendation on key competences is strongly aligned with the European Pillar of Social Rights (especially, the first principle stating "*(e)everyone has the right to quality and inclusive education, training and lifelong learning in order to maintain and acquire skills that enable them to participate fully in society and manage successfully transitions in the labour market*". Support the development of entrepreneurial competences to develop essential skills and attitudes including creativity, initiative taking, teamwork, understanding of risk and a sense of responsibility, is specifically emphasised. In the **2018 ANNEX to the Council Recommendation on Key Competences for Lifelong Learning** „*competences are defined as a combination of knowledge, skills and attitudes, where: a) knowledge is composed of the facts and figures, concepts, ideas and theories which are already established and support the understanding of a certain area or subject; b) skills are defined as the ability and capacity to carry out processes and use the existing knowledge to achieve results; c) attitudes describe the disposition and mind-sets to act or react to ideas, persons or situations. Key competences are those which all individuals need for personal fulfilment and development, employability, social inclusion and active citizenship. They are developed in a lifelong learning perspective, from early childhood throughout adult life, and through formal, non-formal and informal learning.*“ (p. 1).

**The Sense of initiative and entrepreneurship** in 2006 Key competence framework has been renamed in 2018 Key competence framework as the **Entrepreneurship Competence** and defined as: „Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others. It is founded upon creativity, critical thinking and problem solving, taking initiative and perseverance and the ability to work collaboratively in order to plan and manage projects that are of cultural, social or commercial value.

Essential knowledge, skills and attitudes related to this competence:

Entrepreneurship competence requires knowing that there are different contexts and opportunities for turning ideas into action in personal, social and professional activities, and an understanding of how these arise. Individuals should know and understand approaches to planning and management of projects, which include both processes and resources. They should have an understanding of economics and the social and economic opportunities and challenges facing an employer, organisation or society. They should also be aware of ethical principles, and have self-awareness of their own strengths and weaknesses.

Entrepreneurial skills are founded on creativity which includes imagination, strategic thinking and problem-solving, and critical and constructive reflection within evolving creative processes and innovation. They include the ability to work both as an individual and collaboratively in teams, to mobilize resources (people and things) and to sustain activity. This includes the ability to make financial decisions relating to cost and value. The ability to effectively communicate and negotiate with others, and to cope with uncertainty, ambiguity and risk as part of making informed decisions is essential.

An entrepreneurial attitude is characterised by a sense of initiative and agency, pro-activity, being forward-looking, courage and perseverance in achieving objectives. It includes a desire to motivate others and value their ideas, empathy and taking care of people and the world, and accepting responsibility taking ethical approaches throughout the process.“ (p.6).

#### **Analytical background**

**2016 EntreComp: The Entrepreneurship Competence Framework** built the structure of entrepreneurial competences on the broader definition of being entrepreneurial. The document provides the platform for evidence-based policies in the field of entrepreneurship education, because it is focused on competences, as expected outcomes of the entrepreneurship education which are needed in the process of sustainable development. The framework provides flexibility in implementation in different contexts (formal, non-formal, informal). The EntreComp Framework is made up of 3 competence areas: 'Ideas and opportunities', 'Resources' and 'Into action'. Each area includes 5 competences, which, together, are the building blocks of entrepreneurship as a competence. The framework develops the 15 competences along an 8-level progression model and offers a comprehensive list of 442 learning outcomes which can be used as an inspiration for those designing interventions in different educational contexts and domains of application.

#### **Analytical background**

##### **2017 Report on a literature review of reforms related to the 2006 European Framework of Key**

**Competences for lifelong learning and the role of the Framework in these reforms** indicated that the implementation of cross-curricular competences or transversal skills which are less likely to be a discrete, standalone topic (like sense of initiative and entrepreneurship) was the most difficult for policy makers due to „*the difficulty in measuring and analysing the effects or impact of these competences; and/or the perception that these competences, with less obvious links to subjects, may be regarded as better likely to be taught outside the formal education system, for example sense of initiative and entrepreneurship.*“<sup>4</sup>

#### **Additional analytical background**

##### **2018 The European Higher Education Area in 2018: Bologna Process Implementation Report**

emphasises the importance of **identifying learning outcomes as a major basis for calculating the ECTS**, because it helps students to plan their education programs, but also teachers and educational institutions can use it for monitoring educational process (Ch. 2).

## **2.3 On educators**

Along the activities focused on competences, the attention to building a supportive institutional environment and enabling teachers for entrepreneurship education came later. **2011 Budapest Agenda: Enabling Teachers for Entrepreneurship Education** presents recommendations how to enable teachers for entrepreneurship education. Very specific recommendations were identified for different stakeholders on EU level, member states' levels, educational authorities and educational institutions. The most part of this agenda is focusing on primary and secondary schools. One recommendation was devoted to evaluation: „B3 Assessment of the entrepreneurship key competence: Put in place student assessment methods that are appropriate to entrepreneurship education so that teachers are able to put into practice the requisite facilitative teaching method“.

The **2013 Entrepreneurship Education: A Guide for Educators** has focus on teachers' competences to participate in the entrepreneurship education and identified the responsibilities of different stakeholders in it. It is closely connected with planned activities from 2013 Entrepreneurship 2020 Action Plan and 2012 Rethinking education. Teachers have a critical role in shaping the learning process and context in which learners are placed. To be able to participate in teaching process related to transversal skills such as entrepreneurial skills, initial teachers' education and continued professional developments should be adequately designed and provided for teachers across Europe. Based on experience of 170 participants from 30 countries (two events

<sup>4</sup> European Union (2017). Report on a literature review of reforms related to the 2006 European Framework of Key Competences for lifelong learning and the role of the Framework in these reforms, p.30.

in Dublin, Ireland and Brdo, Slovenia, 2012) various teaching approaches helping students to turn their ideas into action (by using experiential learning, collaborating with partners in the community and using entrepreneurship teachers' networks) were collected.

Additional analytical background – repeatedly referenced due to the focus on educators

**2018 The European Higher Education Area in 2018: Bologna Process Implementation Report**

discusses the issue **how much educators in higher education are equipped with teaching skills**.

Since the „regulations generally do not require academics with teaching responsibilities to hold a teaching qualification... (it) suggests that the development of teaching skills in academia essentially consists of 'learning on the job'. “ (p. 92). It has several implications especially in the field of teaching transversal skills, like entrepreneurial competence (needed train-the-teachers programs, including pedagogical content in doctoral programs), but there is also pending question how to include practitioners in teaching process because they do not have a doctoral degree.

## 2.4 On measurement / indicators / impact

There are not specific policy documents (recommendations to the EU member states) on measurement of entrepreneurship education. It is still uncharted territory which requires further research in order to provide a good evidence-based policy position.

In the absence of policy documents / provisions, a research report on Entrepreneurship Competence Framework and the description of the HEInnovate tool are presented in this reports, because both are stepping up from definitions and actions toward measuring the effects of implementation of entrepreneurship education. Both intellectual outputs of thorough research work are related to the process of equipping people with entrepreneurship competence defined as „*Entrepreneurship competence refers to the capacity to act upon opportunities and ideas, and to transform them into values for others.*“ On individual level, it is European Entrepreneurship Competence Framework (it is also referred to in the section on competences, but because it offers additional information on outcome, it is also located in this section). On institutional level, it is the HEInnovate, monitoring entrepreneurial / innovative capacity of a higher education institution.

The **2016 European Entrepreneurship Competence Framework (EntreComp)** is a tool to support a common understanding of entrepreneurship competence. Such common conceptual approach is built upon a broad definition of entrepreneurship and sees it as a transversal competence, which applies to all spheres of life: from nurturing personal development, to actively participating in society, to (re)entering the job market as an employee or as a self-employed person, and also to starting up ventures of cultural, social or commercial impact. A comprehensive list of 442 learning outcomes provides a platform for the development of tools for citizens to self-assess their entrepreneurial proficiency. At the same time, EntreComp provides a possibility to intervene in all types of education (formal, non-formal, informal) in order to check if implemented programs provide expected outcomes.

The **HEInnovate** is an initiative of the European Commission, DG Education, Youth, Sport and Culture and the OECD. The HEInnovate is a guiding framework for supporting innovation and entrepreneurship in higher education. HEInnovate offers an on-line self-assessment tool for higher education institutions, on eight different dimensions: Leadership and Governance; Organisational

<sup>5</sup> European Commission funded several projects focused on developing tools for evaluation of efficiency of learning process (self-evaluation, teacher's insights). Most of such projects were conducted from 2015, with a very limited implementation outreach what is a reason for not having empirical evaluation of their scalability.

The Study on Support on indicators on EE, A Final Report by GHK, 2011 is not included in this review because it is focused on secondary educational level.

Capacity: Funding, People and Incentives; Entrepreneurial Teaching and Learning; Preparing and Supporting Entrepreneurs; Digital Transformation and Capability; Knowledge Exchange and Collaboration; The Internationalised Institution; Measuring Impact. It is not supposed to be used as a benchmarking tool. „It can be used by individuals or by groups of people. The group function allows stakeholders in higher education institutions to come together and compare their assessments internally, compare against previous assessments as well as see how perceptions change over time.“ There is a process of checking entrepreneurial capacity of higher education institutions in EU member states – country review reports for Bulgaria, Croatia, Finland, Hungary, Ireland, the Netherlands, Poland and Romania are available (as per December 2019) on the HEInnovate website [www.HEInnovate.eu](http://www.HEInnovate.eu).

In November 2019, as a result of the 2018-2019 EEPHEIC project a new tool named EPIC has been added <https://heinnovate.eu/en/epic/dashboard>. The Entrepreneurial Potential and Innovation Competences (EPIC) course assessment tool was designed to help educators to measure the effectiveness of their entrepreneurship courses. It can be used to assess the skill and competence development of participants in different entrepreneurship courses, modules, summer schools, bootcamps or training programmes. The assessment (using predefined or customized tools) works with a set of statements across five thematic areas with which course participants can assess their development: (1) entrepreneurial competences, (2) entrepreneurial intentions and attitudes, (3) enterprising behaviours, (4) entrepreneurial strategies and (5) educational effects.

#### **Additional analytical background**

The most comprehensive survey for getting insights in the entrepreneurship education in Europe is **2008 Survey of Entrepreneurship in Higher Education in Europe** in which 31 countries participated: the 27 EU member states, Iceland, Liechtenstein, Norway and Turkey. Out of the 2,899 HEIs invited, 664 institutions participated in the survey (the response rate 24.5%). Throughout the survey a broad definition of entrepreneurship and entrepreneurship education has been applied, i.e. the willingness and capacity to turn ideas into practice, supported by the necessary skills. It was also used as ***an “entrepreneurship-education threshold”***. „Therefore, general economic or business courses that do not include this specific element have not been considered as “entrepreneurship education” and have thus been excluded from the survey. This threshold was imposed in the questionnaire as a screening question to ensure a sufficient level of entrepreneurship education in the institutions. ***The threshold imposed for an institution to be considered to have entrepreneurship education was that the institution should have at least one course where the subject of entrepreneurship should account for at least 25 percent of the course curriculum. For a course/module to be considered as an in curricular activity it should account for at least 5 ECTS points.***“ (p. 17). Identified major barriers were: entrepreneurship education still depends on enthusiasm of individuals, not cross-institutional strategy; educators' competence in teaching entrepreneurship is inadequate; no funding for entrepreneurship education. The survey was implemented using especially developed framework and two composite indices: a performance index and a framework index. The performance index is „*made up of three indicators – entrepreneurial students through learning, entrepreneurial students through practical experience, and knowledge transfer. The entrepreneurial-students-through-learning indicator consists of three variables, 1) share of students taking entrepreneurship courses, 2) share of students engaged in extracurricular entrepreneurship activities, and 3) share of students that get acquainted with entrepreneurship during their studies. The second indicator, entrepreneurial students through practical experience, measures the share of students having obtained actual entrepreneurial experience through activities etc. provided/facilitated by the higher-education institution. The knowledge-transfer indicator measures the number of different knowledge transfer activities in which the institutions engage, 1) academic spin-offs, 2) licensing agreements, 3) patents/IPR, 4) product/process design, 5) consultancy work and 6) other types of knowledge transfer*“ (p. 76). The framework index is based on the six dimensions (strategy, institutional infrastructure, teaching & learning, outreach, development and resources). The analysis showed a solid correlation between performance and

the framework conditions (an estimated correlation is 0.6) (p.82), but it **opened a question of the availability and quality of performance indicators** as it goes beyond graduates starting businesses, academics taking out patents etc. Very important recommendation is to include „measurements and targets for the spread of entrepreneurial education in the Lisbon 2.0 and as part of the Commission's reviews of member states' National Reform Programmes“. (p. 9).

#### **Additional analytical background**

The 2012 **Effects and impact of entrepreneurship programmes in higher education** focuses on four dimensions of impact: 1 Impact on the entrepreneurship key competence; 2 Impact on the intentions towards entrepreneurship; 3 Impact on the individual's employability; 4 Impact on society and the economy. The survey was done on alumni who attended entrepreneurship programmes at higher education institutions and on the control group without such experience. In total 1,139 entrepreneurship alumni (of which 288 are JADE alumni) and 1,443 control group alumni have completed the questionnaire. In the survey, the entrepreneurship key competence was defined as a composite indicator of an entrepreneurial attitude, entrepreneurial skills and knowledge of entrepreneurship. The study shows that entrepreneurship education has a positive impact on the entrepreneurship key competence of individuals. The survey confirmed that alumni who had entrepreneurship education are more inclined to self-employment than those who did not have such education. The same holds also for individual's employability, but it is not so clear regarding the impact on society, what **opened the question of measurement and timing**. Recommendations are to make entrepreneurship education obligatory and should be extended to all disciplines, and that learning by doing should be a part of educational process.

Additional analytical background – repeatedly referenced her, because of the recommendation on developing tools to monitor progress and acquisition of entrepreneurial competences

The 2012 **Rethinking education: Investing in skills for better socio-economic outcomes** was adopted by the European Commission and communicated to the Member States with an aim to „foster entrepreneurial skills through new and creative ways of teaching and learning from primary school onwards, alongside a focus from secondary to higher education on the opportunity of business creation as a career destination. “ It is **specifically recommended that „entrepreneurship education actions to include:...establishing, jointly with the OECD, a guidance framework for entrepreneurial education institutions; and the development of tools to monitor progress and the acquisition of entrepreneurial competences“**(p. 17).

#### **Additional analytical background**

**2015 Entrepreneurship Education: A road to success.** The DG Enterprise and Industry commissioned in 2013 a mapping exercise of examples of research on the impact of Entrepreneurial Education. This report presents 91 studies from 23 countries: 84 studies addressed initiatives and actions taken at national level, and 7 examples researched the effects of transnational projects operating in several countries. „The prevailing impression that emerged from the evidence collected is that **entrepreneurship education works**. Students participating in entrepreneurship education are more likely to start their own business and their companies tend to be more innovative and more successful than those led by persons without entrepreneurship education backgrounds. Entrepreneurship education alumni are at lower risk of being unemployed, and are more often in steady employment. Compared to their peers, they have better jobs and make more money. Notably, effects tend to cumulate and lead to acceleration: those who participated in a higher number of entrepreneurship education measures benefited more over time. **The positive impact is not restricted to students and alumni. Besides impact on the individual, evidence from the examples reviewed for this study also shows impact on educational institutions, the economy and society.** “

#### **Additional analytical background**

**Global Entrepreneurship Monitor**, the largest empirical survey of entrepreneurship capacity on a country level is based on collecting individuals' perceptions on societal values related to entrepreneurship, and on individual attitudes and entrepreneurial activities, from 1999, on annual basis. This survey confirms ***that education related to entrepreneurship matters for individual's entrepreneurial activity – higher level of entrepreneurship education is connected with higher intensity of entrepreneurial activity.*** Data in the following table indicate the percentage of the population of adults (of 18–64 years of age) who started or own a business not older than 42 months, labelled as TEA – Total Early Entrepreneurial Activity index:

Entrepreneurship education and entrepreneurial activity, GEM results, 2017

Stage of Economic Development	ECONOMY	Less	Secondar	Post-	Masters/Doctora	Early-stage
		Than Secondary	y - Percent involved	y - Percent involved	te - Percent involved in TEA	entrepreneurial activity (TEA)
		Percent involved in TEA		in TEA		
		Score	Score	Score	Score	Score
Stage 2: efficiency driven (includes transition countries to stage 3)	Bulgaria	0,0	3,2	5,6	5,7	3,7
	Croatia	8,4	8,6	10,8	12,3	8,9
	Latvia	7,2	12,2	20,4	14,6	14,2
	Poland	9,5	5,2	8,7	10,8	8,9
	Slovakia	6,8	11,0	15,2	19,3	11,8
	Total	6,4	8,0	12,2	12,5	9,5
Stage 3: innovation driven	Cyprus	1,4	2,7	9,9	9,2	7,3
	Estonia	11,4	18,0	25,7	18,3	19,4
	France	2,1	0,9	3,2	7,6	3,9
	Germany	2,9	4,3	8,9		5,3
	Greece	1,3	4,2	6,5	10,1	4,8
	Ireland	7,5	6,4	9,1	14,6	8,9
	Italy	3,1	4,6		6,4	4,3
	Luxembourg	5,8	5,5	10,0	15,6	9,1
	Netherlands	8,9	9,4	10,9	12,9	9,9
	Slovenia	5,4	5,9	7,4	15,5	6,9
	Spain	3,0	6,0	8,0	14,2	6,2
	Sweden	8,4	5,4	9,0	7,8	7,3
	United Kingdom	6,4	7,7	8,5	12,6	8,4
	Total	5,2	6,2	9,7	12,1	7,8
	EU Total	5,5	6,7	10,5	12,2	8,3
	Canada	9,0	11,3	19,7	30,1	18,8
	China	6,9	11,8	10,7	2,7	9,9
	United States	1,4	7,7	15,6	16,8	13,6

Source: Global Entrepreneurship Research Association, Database, 2017.

#### Additional background papers

Several thematic papers were prepared for the Entrepreneurship360 initiative of the Organisation for Economic Co-operation and Development (LEED Programme) and the European Commission (DG Education and Culture), which are mainly focusing on definition of entrepreneurship competence, teaching / learning methods and measurements / impact:

1. OECD (2015). Lackeus, M., Entrepreneurship in Education: What, Why, When, How, Entrepreneurship 360 – Background paper.  
[http://www.oecd.org/cfe/leed/BGP\\_Entrepreneurship-in-Education.pdf](http://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf)
2. OECD (2015). Mueller, S., Toutaine, O., The Outward Looking School and its Ecosystem, Entrepreneurship 360 – Thematic paper.  
<http://www.oecd.org/cfe/leed/Outward-Looking-School-and-Ecosystem.pdf>

3. OECD (2015). Krueger, N., Entrepreneurial Education in Practice – Part 1, Entrepreneurship 360 – Thematic paper  
<http://www.oecd.org/cfe/leed/Entrepreneurial-Education-Practice-pt1.pdf>
4. OECD (2015). Penaluna A., Penaluna K., Entrepreneurial Education in Practice – Part 2, Entrepreneurship 360 – Thematic paper  
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**Additional background paper**

**Enterprise and Entrepreneurship Education: Guidance for UK Higher Education Providers, January 2018**

In 2018 the UK Quality Assurance Agency for Higher Education (QAA) used the Guidance for UK higher education providers, developed in 2012 in the framework of the government policy Enterprise and Entrepreneurship, to check its impact. The report confirms the impact evidenced in new types of courses, new types of learning and new metrics for success. The purpose of the report is to capture the impact and to provide a future roadmap for Enterprise and Entrepreneurship Education in UK, but also to inform international initiatives such as the European Commission's EntreComp Framework about the concept and approach implemented in the UK. The conceptual approach is neutral on type of degree programme, on subject specialism or level of study. The Guidance aims to help academics, educators and practitioners who are seeking to embed enterprise and entrepreneurship across the curriculum and beyond, and already has been applied outside of the UK.

### 3 Observations, Conclusions and Recommendations

#### 3.1 Observations

European policy documents related to entrepreneurship education have five visible features:

- they are thematically consistent and build on each other (vertical consistency is there, but horizontal linkages among different policies are not so evident);
- they are supported mainly with specific research projects, commissioned by the European Commission, occasionally by academic references and literature reviews; other intellectual outputs from the OECD and UNESCO are not fully used. No reference on 2030 UN Sustainable Development Goals are identified in the analysed documents, dated from 2015 on.
- analytical background papers identify recommendations and potential stakeholders in the process of implementation;
- there is no regular / systematic evaluation reports, neither on implementation of recommendations from analytical background papers<sup>6</sup> or on implementation of policy documents across European Union<sup>7</sup>;
- timeline of intervening in policy documents is slow (reviewing period of 20 years confirmed presence of same issues like definition of entrepreneurship competence, how to measure the progress in achieving this competence, the content and teaching / learning methods, the role of educators, the role of formal and non-formal education in providing entrepreneurship competence to all). For example, quite early consensus on moving from a narrow to a broader definition of entrepreneurship competence did not help to make a needed transition toward the assessment model. Or, there are still different definitions used in national policy documents across European Union.

Development of policy documents in the area of entrepreneurship education is usually supported by analytical background, but not enough with results of academic research. From producing policy documents to their implementation there are activities of developing national policies and strategies, then building institutional capacity of HEIs (both, strategic and organisational) for implementation of those policies. This part is not visible from analysed documents, neither which communication strategy is implemented with different stakeholders on EU and national levels in order to raise probability of achieving expected results in building entrepreneurial competence on individual level.

#### 3.2 Conclusions

Lack of regular feedback on implementation (either recommendations of analytical background papers or policy documents) degrades the transparency of processes in developing policy documents. If such regular feedback would exist, the process of changing the policy documents would be more efficient.

<sup>6</sup> Few publications funded by the OECD and European Commission are dealing with entrepreneurship education in HEIs, but they are more a result of commissioned expert(s)' work and do not present consistent overview of implemented resolutions or recommendations.

<sup>7</sup> The most reviews of state of the art in entrepreneurship education are focused on secondary level (e.g. Eurydice's Entrepreneurship Education at School in Europe, 2016, 2012, 2006), almost nothing on primary or tertiary level.

Insights in analysed policy documents and analytical background papers were used in the EEEPHEIC (Evaluation of Entrepreneurship Education Programmes in Higher Education Institutions and Centres) project, especially in shaping tools for assessing entrepreneurship education programmes and their learning outcomes. In this activity, identified issues of content, teaching/learning methods and assessment approaches were taken into account.

### 3.3 Recommendations

In order to make a sustainable loop of designing, implementing and innovating an entrepreneurship educational program it is of utmost importance to establish feedback:

- Regular feedback information how recommendations from analytical background papers were used (or why they are not used) – it would help in future calls for experts' inputs, for monitoring the process of implementation of policy documents in the entrepreneurship education area and shortcomings and pitfalls which the implementers are facing with;
- Connect the policy recommendations and interventions on the level of EU member states with 2030 UN Sustainable Development Goals, and actively participate in the discussion on the future of education with UNESCO and the OECD;
- Regular reports on implementation of policy documents in entrepreneurship education area on member states level, using instrument of National Reform Programmes (using carefully selected few parameters), possibly from HEInnovate platform.

## 4 List of reviewed documents

### 4.1 European Union (Commission, Parliament, Council, Joint Research Center) – sorted by year of publication

European Commission (1998). Fostering entrepreneurship in Europe: Priorities for the future. Brussels, 07.04.1998 COM (98) 222 final. <http://aei.pitt.edu/5102/1/5102.pdf>

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European Union (2011). Supporting growth and jobs – An agenda for the modernisation of Europe's higher education systems COM (2011) 567 final  
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European Union (2012). Effects and impact of entrepreneurship programmes in higher education, Entrepreneurship Unit, Directorate-General for Enterprise and Industry.

<http://ec.europa.eu/DocsRoom/documents/375/attachments/1/translations>

European Union (2013). Entrepreneurship 2020 Action Plan.

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European Union (2014). Entrepreneurship education: A Guide for Educators, Entrepreneurship Unit, Directorate-General for Enterprise and Industry.

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4. GEM – [www.gemconsortium.org](http://www.gemconsortium.org);
5. European Comission, Entrepreneurship in Education  
[http://ec.europa.eu/education/policy/strategic-framework/entrepreneurship\\_en](http://ec.europa.eu/education/policy/strategic-framework/entrepreneurship_en);
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[https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education/projects-studies\\_en](https://ec.europa.eu/growth/smes/promoting-entrepreneurship/support/education/projects-studies_en).