



preparing people to succeed in global economy

Thematic Working Group on Entrepreneurship Education

Final Report
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Final Report of the Thematic Working Group on Entrepreneurship Education

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This report is intended as a contribution to the debate on policy development in entrepreneurship education. It reflects the work of the Thematic Working Group on Entrepreneurship Education, established in the framework of the Open Method of Coordination under the work programme of ET2020.

It is provided for further dissemination among policy makers at national and European level as well as social partners, civil society organisations and other stakeholders.

The cover picture of the report is a word-cloud visually representing the contributions from members of the Thematic Working Group, during a workshop on ‘What is Entrepreneurship Education’ at the first meeting of the group in December 2011.

Executive Summary

With this policy guidance document, the European Commission aims to support improvements in the quality and prevalence of entrepreneurship education across the EU Member States, providing direction for the next steps in the entrepreneurship education policy agenda at EU and national level. This work has been driven by the Thematic Working Group on Entrepreneurship Education (2011-2014), made up of representatives from Member States, EFTA countries, partner countries and stakeholders and drawing in expertise from across the continent¹.

Based on the discussions, research and conclusions from this group, it identifies policy success factors for entrepreneurship and illustrates these with examples of good practice from Europe and beyond. The aim is to identify what needs to happen next, both at EU level and in countries at different stages of development, building on previous reports by the Commission and other European organisations, in particular Towards Greater Coherence in Entrepreneurship Education in 2010².

To help fight the impact of the economic crisis, most importantly youth unemployment, Europe needs more entrepreneurial individuals. Education and Training policy has an important role to play in ensuring that the necessary knowledge, skills and attitudes are delivered through the educational system.

National governments are encouraged to step up their efforts to driving up the necessary levels of creativity and innovation of Europe's future work force by further intertwining entrepreneurship and education. Using experiential pedagogies, solution-based learning and real life challenges, i.e. practice-based learning, can help in developing a generation of Europeans able to be creative, work together and turn ideas into entrepreneurial action.

Calling for action, the document provides guidance to Member States to enhance their efforts to develop and implement the most appropriate approach for their country context. It does this through the following means:

- Gives rationale to embed entrepreneurship as a key competence into European education and training
- Presents an overview on actions taken and results achieved in the Member States
- Outlines the policy success factors making up the entrepreneurship education ecosystem
 - Stakeholder engagement: working together to create change
 - Entrepreneurial curriculum and teaching methods
 - Entrepreneurial learning outcomes and assessment
 - Supporting educators and leaders

¹ See Annex 2 for a full list of nominated Member State representatives and contributors

² European Commission 2010 http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/education-training-entrepreneurship/reflection-panels/files/entr_education_panel_en.pdf

- Pathways for aspiring entrepreneurs
- Measuring progress and impact
- Provides practical ideas and frameworks for implementation, supported by examples of successful practice

The concrete objective is to bring entrepreneurship into the mainstream of national educational policy and practice in every country in the EU, to enhance the understanding of education as growth-friendly investment and inspire long-term policy reform at Member State level.

The ambition is for education to be entrepreneurial in its very thinking, for young people to benefit from practical entrepreneurial experiences throughout their learning, and for learners to be immersed in education delivered through entrepreneurial curriculum across all subjects. This document hopes to support this ambition.

State of play in Europe

- Most EU Member States have yet to develop a cross-cutting policy or strategic approach on entrepreneurship education.
- Stakeholders are not sufficiently engaged in the development and implementation of entrepreneurship education in Member States. There is not enough coherence between levels of education or existing partnerships that can address this effectively.
- Entrepreneurial curricula and teaching methods are rarely embedded throughout all age groups; where there is entrepreneurship education this is more commonly found at higher levels and related primarily to business skills.
- Entrepreneurial learning outcomes remain an undeveloped area across the EU, characterised by a piecemeal and fragmented approach and lacking a lifelong learning perspective.
- Assessment of entrepreneurial learning is very under-developed, does not link to entrepreneurial learning outcomes and generally follows traditional methods.³
- Educators and education leaders in Europe are not sufficiently trained in entrepreneurship education, which negatively impacts on the potential for entrepreneurship to become embedded in education systems.
- There are significant challenges to our ability to evaluate and monitor entrepreneurship education due to a lack of robust data and indicators at an EU level and in most Member States.
- In many countries in Europe, business start-up (of any type including social entrepreneurship or business for personal profit) is not recognised or included as a career pathway, and there is little support for aspiring entrepreneurs in education.
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The Way Forward

The Entrepreneurship Education Ecosystem

- Ensure a **coherent ecosystem approach** addressing all of the identified policy success factors to maximise impact.

³ Eurydice report: Developing Key Competences at School in Europe. CF chapter 3: http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/145EN.pdf

- Foster the entrepreneurship ecosystem at **institution level**, stimulating entrepreneurial teaching, learning and organisational change across all areas of education and training.
- Promote and expand use of the **HEInnovate** online tool and resources for universities to develop their entrepreneurial and innovative capacity.
- Encourage and support entrepreneurial schools and VET institutions, through the development of **Entrepreneurship360** as an online self-assessment tool assisted by practical guidance and case studies.
- Build the connection between practice and policy.

Cross-cutting policy support for entrepreneurship education and training

- Develop a **cross-cutting strategy** for entrepreneurship education in Member States and/or regions to build political support, involving different policy areas of government and starting with agreement on a clear joint vision.
- Promote the **use of European funds** (European Structural and Investment Funds) & programmes such as Erasmus+ (especially strategic partnerships & policy experimentations) as tools to support investment at national and local level.

Stakeholder engagement: working together to create change

- Involve stakeholders in designing, planning, implementing and evaluating policy and activity at policy and institution level.
- Build stakeholder engagement via existing structures and organisations at national and local level to make it more relevant to the local/national context.
- Identify individuals to be champions of entrepreneurship education and promote the relevance and benefits of engagement in entrepreneurship activities. This is particularly relevant at institution and student-to-student level.
- Ensure that stakeholder engagement is developmental and not static.
- Involve the end-user – learners - in the design of policy approaches and education activity.

Entrepreneurial Curricula and teaching methods

- Introduce entrepreneurship as an **explicit curriculum objective** for formal and non-formal education at national level, supporting this with implementation guidelines.
- Ensure that **curriculum frameworks are flexible** enough to enable introduction of **more innovative teaching and assessment methods**, giving educators and education institutions the flexibility to choose the most appropriate approaches for their teaching.
- **Encourage interdisciplinary curriculum approaches** to support and enhance the introduction of entrepreneurial methodologies at education institution level.
- **Make practical entrepreneurial experiences widely available** throughout all stages of education and training, with a minimum of one during compulsory education for all learners.
- **Make entrepreneurial learning relevant to the real-world** through active engagement between education, business and community, particularly in the design and development of practical entrepreneurial experiences.

- Encourage the **use of innovative ICT** based learning in entrepreneurship education.
- Share good practice and encourage collaboration between formal and non-formal education environments.

Entrepreneurial learning outcomes and assessment

- Develop a **competence reference framework for entrepreneurship** at European level to break down the entrepreneurship key competence into its composite learning outcomes, relevant across all levels of education and adaptable to fit local and national contexts.
- Collate a **good practice guide** at European level to demonstrate how the use of entrepreneurial learning outcomes can embed entrepreneurship education into new and existing curricula across Europe.
- Establish **national guidelines on the assessment of entrepreneurial learning**, building on experiences and exemplars from Erasmus+ policy experimentation actions where appropriate.
-

Supporting educators and leaders

- Introduce **national programmes in entrepreneurial leadership for managers and leaders** in schools, VET and higher education to support them to deliver curricular, institutional and cultural change.
- Establish **policy-to-practitioner networks** at national level, to ensure that isolated or local practice informs national/regional policy development.
- Embed **educator training in entrepreneurship education** into initial teacher training and continuous professional development, including development of **MOOCs at European level** and national networks with peer-learning opportunities for educators tailored to different education levels.
- Value educator skills, for example by establishing **recognised national certification for educators** through evidence-based practice portfolio of entrepreneurship education in their teaching.
- **Involving partners in development and delivery of educator training** at national and institution level, including teachers themselves, education leaders, trade unions, business and community.

Pathways for aspiring entrepreneurs

- Use **national policy tools to reinforce the relevance of start-up** as a career path, such as including start-up within career destination surveys, or asking publicly funded education and training providers to provide information on provision for aspiring entrepreneurs as part of their annual plan or application for public funding.
- Raise awareness through targeted national campaigns.
- Include **business or social enterprise start-up as a career pathway** in career guidance at all levels of education and training. Support this with additional training for career guidance professionals.
- **Maximise resources through clustering education and training institutions**, to develop joint provision and signpost to external sources of support for aspiring entrepreneurs seeking to start-up.

- Build **close ties between education institutions and local economic development bodies**, to ensure that curriculum and start-up provision is linked to local labour market needs and wider strategies.
- Promote entrepreneurship education to **non-formal education**, building on its role in mentoring young people to achieve their potential in life.

Measuring progress and impact

- Establish **new EU-level data and monitoring** to broaden the evidence base beyond existing reliance on start-up data and provide robust indicators on key areas of entrepreneurship education.
- Create **built-in monitoring frameworks as part of national action plans or strategies** for entrepreneurship education, linked to developments at EU level and agreed by all relevant Ministries and stakeholders.

1 Introduction

For Europe to compete globally, we need future generations to have the mind-set and skills to be entrepreneurial in society, in work and in business.

Europe needs citizens who are creative, socially responsible, can spot opportunities, understand and take risks, and can work in teams and solve problems. This can not only boost the number of start-ups and increase the number of people working as entrepreneurs; entrepreneurial employees within an established business or entrepreneurial start-up can help enhance productivity, increase adaptability, and ensure that opportunities are fully realised.

Learning systems need to be entrepreneurial in their very design. Engaging with partners should be a pre-requisite of a modern learning environment, while high quality and effective training for both educators and educational leaders should be the rule rather than the exception. Practical entrepreneurial experiences must become a reality for every learner across all levels and disciplines. For aspiring entrepreneurs, a clear career pathway to start-up is an important basis for a more entrepreneurial economy.

Entrepreneurship can be taught and must be learned, to enable society to benefit from the full potential of its people. It can never be the only answer, but it provides a tangible contribution by developing the knowledge, skills and attitudes important for employability, active citizenship and new business creation.

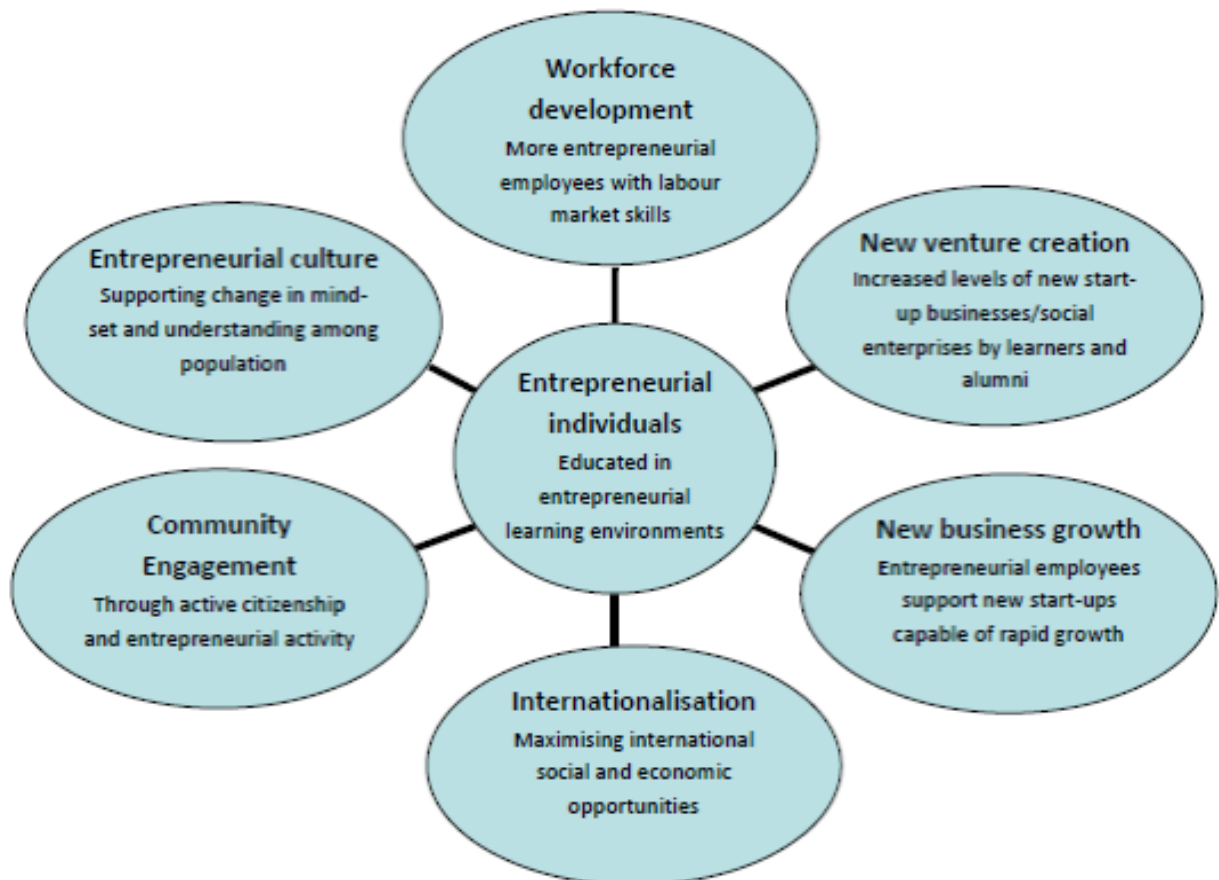


Fig 1.1 Exploring the potential social and economic impact of entrepreneurship in education

The last ten years have seen policy progress, but there are still large gaps in provision and severely fragmented approaches inside Member States. Bold action is now needed. Europe has identified the policy priority for entrepreneurship education; national governments must now step up efforts and raise levels of entrepreneurial creativity and innovation within Europe's future work force.

Putting ideas into action: emphasising the key competence

Entrepreneurship education is about learners developing the skills and mind-set to be able to turn creative ideas into entrepreneurial action. This is a key competence 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) which contribute to an entrepreneurial spirit or behaviour, with or without a commercial objective.⁴ At European level, it is defined within the 2006 European Key Competences for Lifelong Learning framework⁵.

Sense of **initiative** and **entrepreneurship** refers to 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**.

A framework condition for employability, growth and jobs

The Europe2020⁶ strategy identifies entrepreneurship education as a key driver for growth and jobs,⁷ focusing on supporting countries to bring entrepreneurship into the mainstream of national educational policy and practice. Building on the Strategic Framework for Education and Training 2020⁸ objective to enhance creativity, innovation and entrepreneurship, the 2012 Rethinking Education⁹ policy communication sets out the main messages for entrepreneurship education, calling for it to be embedded at a systemic level and for all learners to receive at least one practical entrepreneurial experience during their compulsory education. To support the delivery of these ambitions, the new Erasmus+ programme has entrepreneurship education as a clear priority theme across all fields of education, training and youth. This commitment is reflected across European policy areas, with the Entrepreneurship2020 Action Plan¹⁰ identifying entrepreneurship education as a key area for action at both EU and country

⁴ This is based on a framework definition agreed by an international working group on entrepreneurial learning in Geneva on 18 January 2012. The working group comprised representatives from ETF, GIZ, ILO, UNESCO and UNEVOC.

⁵ http://ec.europa.eu/education/policy/school/competences_en.htm

⁶ http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/index_en.htm

⁷ http://ec.europa.eu/europe2020/index_en.htm

⁸ http://ec.europa.eu/education/policy/strategic-framework/index_en.htm

⁹ http://ec.europa.eu/languages/policy/strategic-framework/rethinking-education_en.htm

¹⁰ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF>

level¹¹, and the 2013 Annual Growth Survey underlining its importance for both employability and business creation.

Studies have shown that entrepreneurship education has a range of positive effects. Training on entrepreneurship has positive effects on entrepreneurial awareness and self-perception of skills for start-up.¹² In UK-Wales, activity inputs across schools, VET and higher education coordinated through a strong Youth Entrepreneurship Strategy (YES) has resulted in a steady rise in youth entrepreneurial activity (among 18-24 year olds) 3.5% in 2002 to 10.2% in 2011.¹³ In Denmark, evaluation of the entrepreneurship education strategy shows a strong impact on students' enterprising behaviour, with 78% more of those students receiving entrepreneurship education in ninth grade becoming leaders, and twice as many founding new activities or ventures outside school.¹⁴ There was a similarly strong impact at university level, where the number of students who started their own company during their education increased by 50% if they had received entrepreneurship education.¹⁵ Danish studies have also shown the more entrepreneurship training and education an individual has, the higher their income, even when other factors are taken into consideration, such as gender, age, or other education and employment.¹⁶

It is vital that education, training and youth policy continue to bring entrepreneurship into the mainstream of educational policy and implementation, to build impact of education as growth-friendly investment and inspire long-term policy reform at Member State level.

Europe's entrepreneurial potential is not fully developed

The recent economic crisis underlined that Europe struggles to respond to unexpected shocks: unemployment rates have risen alarmingly in many Member States with the youth and disadvantaged groups bearing the greatest cost. At the same time, employers face difficulties in filling available job positions, with reasons including lack of experience and lack of key competences.¹⁷ However, there has been an overall increase in the level of early stage entrepreneurship activity amongst 18-29 year olds since 2003, rising from 4.3% in 2003 to 6.7% in 2012¹⁸, with a slight dip during the crisis. This bucks the trend of youth employment levels that have been decreasing steadily.

However on many measures of entrepreneurship, Europe lags behind other areas of the world. The rate of total early stage entrepreneurial activity is only 8% in Europe compared to nearly 13% in the USA and 14% in China.¹⁹ According to a Eurobarometer

¹¹ Entrepreneurship 2020 Action Plan; available at:

http://ec.europa.eu/enterprise/policies/sme/entrepreneurship-2020/index_en.htm

¹² Analysis of GEM data between 2003 and 2012.

¹³ GEM UK report2011 - links between strategy and business start-up outcomes. <http://www.gemconsortium.org/docs/download/2425>

¹⁴ The corresponding values for the students in the control group were 18% for leaders and 33% for founders of new activities. FFE-YE, Impact of entrepreneurship education in Denmark, 2012 http://eng.ffe-ye.dk/media/256547/effektm_ling_2012_eng_til_net.pdf p7.

¹⁵ Ibid p7

¹⁶ Impact of Entrepreneurship Education in Denmark, FFE-YE 2012 http://eng.ffe-ye.dk/media/256547/effektm_ling_2012_eng_til_net.pdf p8

¹⁷ Manpower Talent Shortage Survey, 2013.

¹⁸ Based on secondary analysis of GEM data

¹⁹ GEM survey 2013

survey on entrepreneurship in 2012, only 37% of Europeans said that they preferred self-employment to being an employee. This compared to 82% in Turkey, 63% in Brazil or 56% in China.²⁰

Available data suggests that European education systems have been less successful than global competitors. As seen in fig 1.2, barely half of those surveyed felt that their education helped develop entrepreneurial initiative, and they also feel less equipped with the skills needed to run a business (less than half of them, in contrast to 72% in Brazil). Education systems in Europe also have much work to do to make learners understand the role of entrepreneurs in society (the lowest level among the benchmarking countries). While the percentage of Europeans who have attended an entrepreneurial course (about a quarter) equals or even exceeds the respective levels for the other countries, only one in three Europeans has been inspired by school education to become an entrepreneur.

Figure 1.2 Entrepreneurial activity, attitudes and perceptions²¹

	EU COMPARISON	EU	USA	China	Brazil
My school education is helping me/has helped me to develop my sense of initiative and a sort of entrepreneurial attitude	LOW	53%	59%	69%	80%
Have you ever taken part in any course or activity about entrepreneurship? (turning ideas into action and developing one's own projects)	AVERAGE	26%	26%	18%	26%
My school education is helping me/has helped me to better understand the role of entrepreneurs in society	LOW	50%	59%	70%	78%
My school education is making me/has made me interested in becoming an entrepreneur	LOW	32%	39%	63%	74%
My school education is giving me/has given me skills and know-how to enable me to run a business	LOW	46%	54%	61%	72%
Desire to become self-employed in the next five years	LOW	36%	41%	68%	63%
Prefer being self-employed to employee, if they could choose	LOW	38%	51%	56%	63%
% of early-stage entrepreneurial activity	LOW	8%	13%	14%	17%

²⁰ Eurobarometer 2012

²¹ Sources: "% of early-stage entrepreneurial activity" for EU-28 calculated based on 2013 GEM Global Report results; in 2013, 23 EU countries participated in GEM Research: BE/HR/CZ/EE/FI/FR/DE/EL/HU/IE/IT/LV/LT/LU/NL/PL/PT/RO/SK/SL/ES/SE/UK. Other indicators from 2012 Flash Eurobarometer "Entrepreneurship in the EU and beyond". EU-28 average calculated based on data from source. Average percentages unweighted.

2 The Entrepreneurship Education Ecosystem

State of play

- Most EU Member States have not addressed an ecosystem approach at policy or institution levels.

Key conclusions

- Bringing together the different success factors for entrepreneurship education can maximise impact and develop an ecosystem, to support the proliferation of entrepreneurship education culture and practice.

The Way Forward

- Ensure a coherent ecosystem approach addressing all of the identified policy success factors to maximise impact.
- Foster the entrepreneurship ecosystem at institution level, stimulating entrepreneurial teaching, learning and organisational change across all areas of education and training.
- Promote and expand use of the HEInnovate online tool and resources for universities to develop their entrepreneurial and innovative capacity.
- Encourage and support more entrepreneurial schools and VET institutions, through the development of Entrepreneurship360 as an online self-assessment tool assist backed by practical guidance and case studies.
- Build the connection between practice and policy.

Building the ecosystem

The idea of an ecosystem originated from environmental sciences, but it is becoming commonly used in to speak of the different areas that relate to the entrepreneurship education²² and the wider entrepreneurial economy.²³ It presents an entity consists of multiple factors which are interlinked and together form a balanced whole. Changes in one factor affect all the others, and hence impact on the entire ecosystem. The Thematic Working group's findings identified these policy success factors, and emphasises the importance of addressing these in a coherent approach, and closing the gaps between policy and practice.

This document identifies seven contributing factors that together drive the development of an entrepreneurship education ecosystem. These factors function together to deliver an environment in which entrepreneurship education can flourish:

2.1 Cross-cutting Policy Support for Entrepreneurship Education & Training

If countries are to maximise the efficiency and impact of entrepreneurship education, governmental strategies - which bring together different actors working in partnership - to ensure coherence are essential.

²² World Economic Forum (2009), Educating the Next Wave of Entrepreneurs

²³ Moore, James F. (1996). The Death of Competition: Leadership & Strategy in the Age of Business Ecosystems. New York: Harper Business.

2.2 Stakeholder Engagement: Working Together to Create Change

Stakeholders should be recognised for their contribution to this work and involved closely in the development of all actions, through a participatory approach involving agenda setting and decision-making as well as in implementing, evaluating and reviewing actions.

2.3 Entrepreneurial Curriculum and Teaching Methods

Entrepreneurship education is based on entrepreneurial curricula. An entrepreneurial curriculum framework should allow flexibility and encourage educational institutions to interact and engage with the wider social and economic environment, developing an outward-facing approach in collaboration with stakeholders. Sticking to traditional classroom teaching/lecturing) leaves out significant elements of entrepreneurship, such as creativity, understanding risk, collaboration and problem-solving. Emphasis should be on pedagogies and teaching methods that allow learners to develop a range of entrepreneurial learning outcomes within one activity to maximise impact on their entrepreneurial confidence. Practical entrepreneurial experiences should be introduced for all, to allow learners to explore and feel entrepreneurial actions first-hand.

2.4 Entrepreneurial Learning Outcomes and Assessment

A logical next step is the development of knowledge, skills and attitudes related to specific entrepreneurial learning outcomes at all educational levels, and the importance of integrating them into curricula. But what is not assessed may not be taught nor valued. Entrepreneurial learning outcomes must be appropriately assessed, ensuring that entrepreneurial skills are encouraged throughout the learning process.

2.5 Supporting Educators and Leaders

Equipping educators and leaders at all levels with the skills and knowledge they need is vital. They are the ones who ultimately ensure that entrepreneurship in education takes place in practice.

2.6 Pathways for Aspiring Entrepreneurs

Entrepreneurial potential may be fulfilled within society or work. But for some of those who experience entrepreneurship education, it will spark an interest or aspiration to start their own business, social enterprise or community venture. This should be supported from the career guidance perspective, and nurtured through local support pathways.

2.7 Measuring Progress and Impact

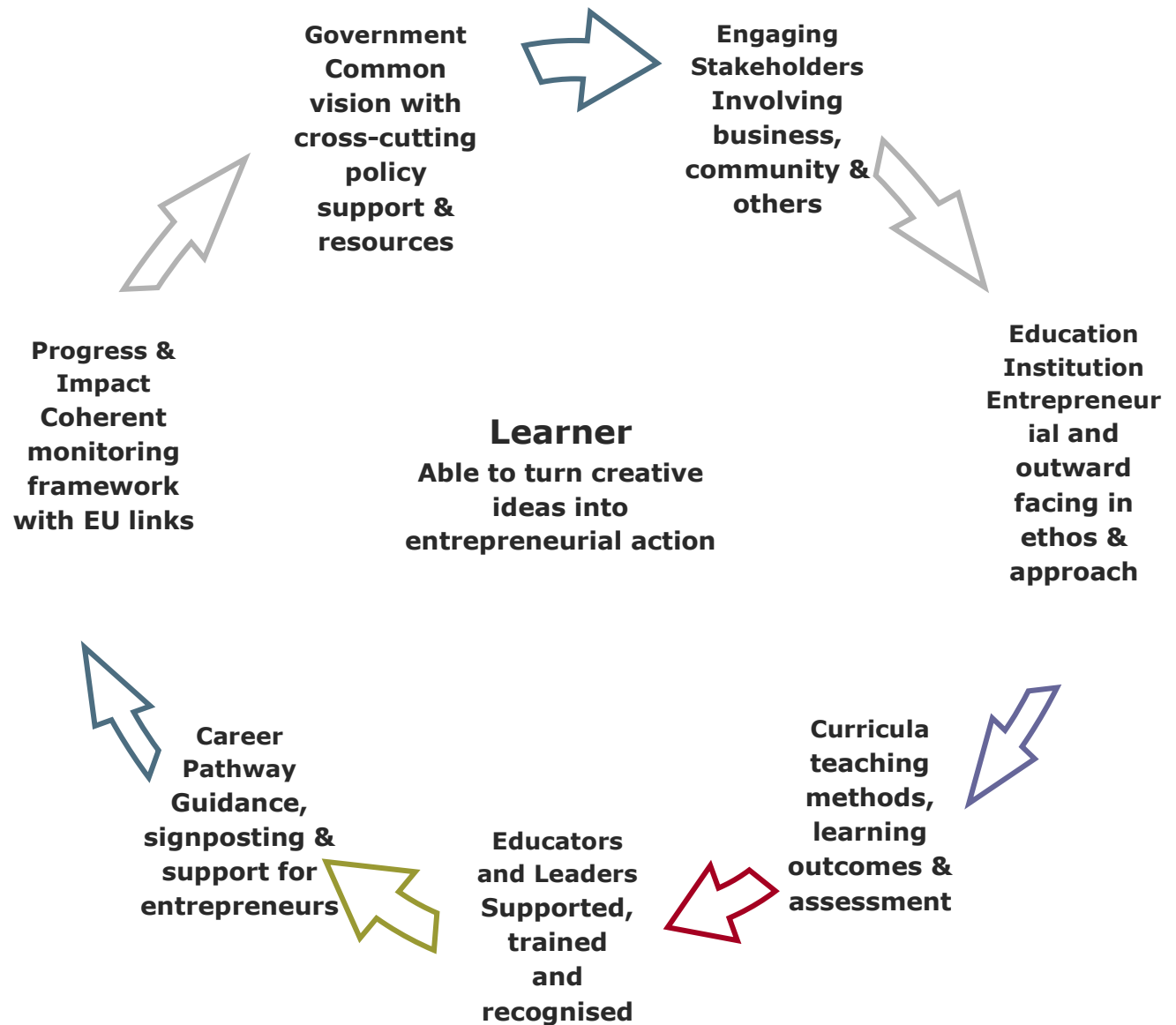
To ensure sustainable engagement in entrepreneurship education, there must be robust monitoring and evaluation of the impact of strategies and actions at a Member State and EU level.

A picture of the entrepreneurship education ecosystem

Figure 2.1 demonstrates this with the learner at the centre, surrounded by elements that impact on the wider entrepreneurship education ecosystem. They combine to place the

learning system into the wider economic and social community, recognising the place entrepreneurship education must hold as a framework condition for employability, social well-being, workforce development and new venture creation.

Figure 2.1 – The Entrepreneurship Education Ecosystem



The Institution Perspective: moving towards the entrepreneurial school, VET and university

The ecosystem works at multiple levels, and the institutional focus is fast emerging as a driving force behind policy development in this area at EU level. If entrepreneurship in education is to become an integral and embedded part of education and training, an institutional approach is vital. This means that there is support for the teaching of entrepreneurship, but also means that the education institution itself has an entrepreneurial approach. This does not mean that schools become businesses, but instead helps ensure that the whole ecosystem nurtures an entrepreneurial spirit and that the institution is better placed to take advantage of opportunities or to adapt to change.

Tools are needed to bring together the different areas that need to be addressed in order to create a coherent approach to entrepreneurship education that is embedded and sustainable. These tools enable the entrepreneurship ecosystem to be reflected at institutional level, guiding education professionals on how to address key success factors both separately and together to create and sustain truly entrepreneurial learning environments. It results in the development of the entrepreneurial school, VET and university.

The European Commission, in collaboration with OECD, is developing tools to enable the self-assessment of European education institutions at all levels, to support improvement and share good practices. This is the convergence of policy and practice to create real change at implementation level, which can both feed into and embed reform at policy level.

- **HEInnovate**²⁴ is a self-assessment tool for higher education institutions looking for advice and inspiration to develop and improve as "entrepreneurial" and innovative institutions. It gives higher education institutions the capability to explore their entrepreneurial potential, providing advice, ideas and inspiration for the effective management of institutional and cultural change. It is available online but is also being rolled out through workshops in Member States.
- **Entrepreneurship360**²⁵ is a development tool for schools and VET institutions currently being trialled and the pilot version will be available in 2015. The objective is to enable institutions to assess the progress they are making, begin a dialogue about entrepreneurship with different stakeholders, and access resources to help them improve.

Entrepreneurship education is not just a module or a teaching method. The entrepreneurial approach needs to be core to the way education operates. It is a stance; a culture of leadership, learning and teaching. It can already be noticed in classrooms across Europe, but is not systemic and is not supported by policy.

²⁴ <http://www.heinnovate.eu>

²⁵ <http://www.oecd.org/site/entrepreneurship360>

2.1 Cross-cutting Policy Support for Entrepreneurship Education

State of play

- Most EU Member States have yet to develop a cross-cutting policy or strategic approach on entrepreneurship education.

Key conclusions

- A coherent approach drawing on a shared vision and goal across different policy areas can increase the effectiveness and impact of an entrepreneurship education strategy.
- An entrepreneurship education strategy should be multi-faceted and should have evaluation built into it.

The Way Forward

- Develop a cross-cutting strategy for entrepreneurship education in Member States and/or regions to build political support, involving different policy areas of government and starting with agreement on a clear joint vision.
- Promote the use of European funds (European Structural and Investment Funds) & programmes such as Erasmus+ (especially strategic partnerships & policy experimentations) as tools to support investment at national level.

State of play: entrepreneurship education in policy

If countries are to maximise the efficiency and impact of entrepreneurship education, governmental strategies - which bring together different actors, working in partnership - to ensure coherence are essential. At the policy level, administrations can work to bring together the different policy areas impacting on the successful introduction, implementation and outcomes of entrepreneurship education. This consolidates efforts and accelerates implementation, ensures continuity and engages partners both inside and outside government to realise joint visions and outcomes. The state of play across Europe shows different approaches to how entrepreneurship education is reflected in the policy environment.

Data gathered through the Working Group and additional research²⁶ shows that 21 EU countries have recognised and embedded entrepreneurship education in a policy document. Fifteen countries have included this in education policy documents.²⁷ This approach can ensure that entrepreneurship education is clearly recognised as an objective within the learning environment, and is gradually embedded into the learning experience. Eleven countries mention entrepreneurship education in a policy document from the economic or innovation policy areas.²⁸ This can be important to make the links between economic-related policy and entrepreneurship education as growth-friendly investment.

²⁶ Desk research and the 2012 Eurydice report on Entrepreneurship Education. http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135EN.pdf

²⁷ Austria; Belgium-NL; Czech Republic; Estonia; Finland; Greece; Spain; Hungary; Lithuania; Latvia; Luxembourg; Malta; Poland; Slovakia; UK (N. Ireland, Scotland, Wales)

²⁸ Belgium-NL; Denmark; Estonia; Spain; France; Netherlands; Portugal; Romania; Slovenia; UK-Wales

Nine countries and a number of EU regions have developed a specific strategy²⁹. Not all address all education and training fields or levels, not all bring together different Ministries and not all involve partners. In Italy, the strategy addresses solely the VET environment, while in UK-Wales the strategy covers the whole age range of 5-25 years with sector specific actions within it. Although many strategies do include a number of different ministries such as education and economic development, informal feedback highlighted that a common strategy may dilute responsibility and not result in real engagement or buy-in from all. This can affect the design and implementation. Therefore, active involvement and clear lines of responsibility for all relevant ministries needs to be central from the start to ensure real engagement from the different policy areas.

Different policy approaches across the EU

There are a range of approaches that can be taken when planning and implementing an entrepreneurship education strategy. The table below outlines the different approaches and considers their advantages and disadvantages.

Figure 2.1.1 – Overview of Policy approaches, advantages and disadvantages

POLICY APPROACH	POLICY ADVANTAGES	POLICY DISADVANTAGES	EXAMPLES - list not exhaustive
Specific Strategy on entrepreneurship education	Common vision across government Outcomes and impact reflect policy drivers for all involved Ministries Direct engagement from stakeholders on theme	Not embedded into policies that directly target education and training audience May not translate into tangible engagement by all Ministerial partners	Croatia; Italy (national for VET, some regions have strategies); Sweden
Education policy explicitly mentions entrepreneurship education as objective	Entrepreneurship education highlighted as priority within education policy Directly embedded within policies directed at learning system	May not be recognised as contributor to economic and employment policies or outcomes	Austria; Czech Republic; Finland; France; Greece; Spain; Hungary; Latvia; Malta; Poland; Slovakia; UK-Northern Ireland; UK-Scotland; Portugal

²⁹ Belgium-NL; Croatia; Denmark; Estonia; Finland; Italy (national for VET, some regions have strategies); Luxembourg; Sweden; UK-Wales

<p>Both specific strategy AND other policies (education, economic and/or employment) explicitly mention entrepreneurship education</p>	<p>Comprehensive approach reflecting joined up government policy Specific strategy translated into tailored approaches in key areas such as education, careers, employment and economic growth</p>	<p>Not all policies may be properly linked without common vision</p>	<p>Belgium-NL; Denmark; Estonia; Finland; Lithuania; Luxembourg; UK-Wales</p>
<p>Education policy implicitly mentions knowledge, skills and/or attitudes associated with entrepreneurship</p>	<p>Entrepreneurship related knowledge, skills and attitudes included within curricula objectives</p>	<p>Education and training audience do not recognise importance of entrepreneurship education as a thematic priority May not be recognised as a contributor to economic and employment agenda Does not reflect key competence approach</p>	<p>Belgium-FR; Bulgaria; Cyprus; Germany; Ireland; UK - England</p>
<p>Wider policy (economic or employment policy) explicitly mentions entrepreneurship education</p>	<p>Entrepreneurship education recognised as a framework condition for economic growth and employment (as well as social wellbeing) Can be pre-cursor for joined up approach with education policy</p>	<p>Not directed at education and training audience Does not directly engage education policy areas</p>	<p>Spain; France; Netherlands; Portugal; Romania; Slovenia</p>

Strategic approaches are implemented in different ways across Europe:

- At regional or national level – depending on where responsibility for education policy lies. Examples of regional approaches can be seen in the UK, Belgium and Germany;
- Led by a ministry – such as Lithuania, Sweden and Finland;
- Led by an external body – such as the specially created Danish Foundation for Entrepreneurship-Young Enterprise in Denmark;
- Involve different cross-ministerial collaborations e.g. with Ministries of Labour and Social Affairs and/or Ministries of Economics and Innovation). However, Ministries of Education hold a central role in the majority of countries with a strategy in place. In Denmark, the strategy involves four Ministries and is implemented by an external agency.

Different Ministries or departments bring different contributions to policy and strategy approaches for entrepreneurship education. These are illustrated in Figure 2.1.2 below:

Figure 2.1.2 – Examples of Contributions of Different Ministries to Entrepreneurship Education³⁰

Education Ministries	Enterprise/Economy/Trade Ministries	Other Ministries
<ul style="list-style-type: none"> • Typically the lead on entrepreneurship education strategy development • Legal responsibility for education • Development of National Qualifications Frameworks (learning outcomes) • Setting standards, performance assessment, monitoring and evaluation • Educator training • Funding development of teaching resources 	<ul style="list-style-type: none"> • Highly variable role in strategy development, ranging from initiator (though rarely), partner or consultee. • Focus on business start-ups and existing entrepreneurs • Contributing to the definition of the contents of entrepreneurship education, and to the production and dissemination of pedagogical material. • Supporting complementary activities, e.g. private associations and organisations, practical project based initiatives (extra-curricula), academies, foundations, trusts • Promotional role, e.g. to universities (link to innovation strategies) • Inputting business skills needs into process • Conduit for EU structural funds 	<ul style="list-style-type: none"> • Ministry of Labour or Employment – entrepreneurship for the unemployed • Ministry for Regional Development – incorporation of entrepreneurship education into regional strategies • Ministry for Youth – embedding of entrepreneurship education in strategies for young people, e.g. development of creativity and citizenship

It is important that, however entrepreneurship education is represented in policy terms, there is coherence across the different policy Ministries/department leads and a common vision of what needs to be achieved.

Entrepreneurship education policy approaches should draw upon the vision and the goals that each country or region aims to achieve, identify the competent authorities that design and monitor the implementation of all agreed steps, and lay out procedures and allocate funding based on need. Policy documents should create a joint vision across departments and across educational levels, promote cooperation between government and other stakeholders, provide visibility to entrepreneurship education, raise awareness and bind all actors involved. Policy may have a national, regional or even local coverage, depending on the governance structure of each country. At the core of any proposed policy approach, is the concrete need to be cross-cutting.

³⁰ Sourced in 'Towards Greater Cooperation and Coherence in Entrepreneurship Education' Report and Evaluation of the Pilot Action High Level Reflection Panels on Entrepreneurship Education initiated by DG Enterprise & Industry and DG Education and Culture. European Commission 2010

An entrepreneurship education strategy should:³¹

- **Involve all education levels** and disciplines, including non-formal learning
- **Engage across government** - such as education, lifelong learning, employment and economic development
- **Consider a lead organisation** and regular reviews of actions by all partners involved
- **Engage stakeholders** – developed in collaboration with education providers and practitioners, as well as a range of wider stakeholders such as business and community
- **Draw on experience from practice**
- **Encourage and develop partnerships** between business, community and education at all levels
- **Have evaluation and monitoring built in**, with links to internationally comparable data to provide measure of progress.
- **Identify resources and funding** to be used from local, national and/or EU level
- **Address curricula** reform and innovation at all levels, including flexibility, pedagogies, learning outcomes and assessment,
- **Include practical entrepreneurial experiences** for all learners
- **Include training for educators and educational leaders** receive sufficient training and overall support
- **Ensure career guidance is a focus** at all levels and pre-start support is included to support aspiring entrepreneurs

In Denmark, a coherent strategy was launched in 2009. The strategy was developed and signed jointly by four ministries, the Ministry of Culture; the Ministry of Science, the Technology and Innovation; the Ministry of Education and the Ministry of Economic and Business Affairs. Denmark offers a unique example regarding the way the strategy is implemented, as it is under the responsibility of a private organisation, the Danish Foundation for Entrepreneurship - Young Enterprise (FFE-YE). The Foundation was established in 2010 and since then has promoted collaboration between educational institutions and government organisations. This helps ensure that the contribution of different ministries is made coherent and also ensures the involvement of key stakeholders. FFE-YE ensures the integration of entrepreneurship education in all education levels, and aims at “strengthening and creating a coherent national commitment and initiative for promoting entrepreneurship”. Relevant educator training and teaching resources are also administered by the Foundation. Denmark is also one of the few countries that have embedded impact assessment in their strategy for entrepreneurship education: FFE-YE is also the centralised, national knowledge and research centre for entrepreneurship education.

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http://europa.eu/legislation_summaries/education_training_youth/general_framework/n26111_en.htm, cited 12/6/13, enriched with findings of TWG on Entrepreneurship Education

Creating longer-term commitment to support entrepreneurship education through engaging stakeholders

A strategy cannot be developed overnight; there are clear steps that need to be taken to ensure relevance, impact, and sustainability. Figure 2.1.3 provides an example of the potential phases of development, outlining aspects such as the necessity of not only involving a range of different ministries but also a broader range of stakeholders. The Commission document *Towards Greater Cooperation and Coherence in Entrepreneurship Education: Report and Evaluation of the Pilot Action High Level Reflection Panels* also indicates a progression model for the development of entrepreneurship education strategies.³² Fig 2.1.3 moves this forward by providing an action-based perspective, demonstrating the objectives, activities, results, products and who should be involved at each stage. This model is a plan of action, which can provide inspiration for those starting out on this journey, or for those seeking to identify gaps and weaknesses in their current approaches.

It is clear that both developing and improving an entrepreneurship education strategy takes time and effort, but it is essential in order to achieve a tangible, comprehensive and sustainable impact on the learning system and results in terms of employability, business development, and active citizenship.

³² http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/education-training-entrepreneurship/reflection-panels/files/entr_education_panel_en.pdf, p. 25

Figure 2.1.3 – The Phases of Development of an Entrepreneurship Education Strategy

PHASES	I. EQUIPPING (INITIAL PREPARATION & BENCHMARKING)	II. ENGAGE PUBLIC SECTOR, EDUCATIONAL ORGANIZATIONS & EXPERTS	III. ENGAGE PRIVATE SECTOR (PROFIT AND NON-PROFIT)	IV. EMPOWERING YOUNG ENTREPRENERUSHIP AT THE LOCAL LEVEL	V. MANAGEMENT, EVALUATION & DISSEMINATION
OBJECTIVES	<ul style="list-style-type: none"> Nomination of inter-ministerial working group and lead partner for the development of national strategy in entrepreneurship education and training Benchmark good practices from other Member States; 	<ul style="list-style-type: none"> Develop a platform with representation from the key entrepreneurship education & training public entities Stakeholder consultation to establish wide-ranging buy-in and comprehension Develop high level strategic aims and objectives Integrate strategy with identified good practice 	<ul style="list-style-type: none"> Prepare and execute the preliminary roll-out of national strategy to share and discuss the strategy with the private and non-profit sector across all regions Revise strategy with private sector and NGO input resulting from national roll-out meetings 	<ul style="list-style-type: none"> Provide guidance (capacity building) to public, private and third sector entities on youth entrepreneurship at a local level Engage municipalities to promote pilot actions at the local level targeted at specific issues of local concern (e.g. highly ambitious youth or economically inactive/at-risk/unemployed) 	<ul style="list-style-type: none"> Develop a policy brief with actions for future direction in line with changing economic priorities & model in country Promoting management and ongoing monitoring to ensure the efficiency and effectiveness of the results Test evaluation framework that allows analysis of processes, outcomes and assessment presented by the public – private partnership
ACTIVITIES	<ul style="list-style-type: none"> Engage a group of key stakeholders (ministries and public entities) and prepare the international exchange Possible visit to and exchange with good practice countries Integrate previous actions 	<ul style="list-style-type: none"> Build the national strategy from good practices and key documents (e.g. Oslo Agenda; Rethinking Education; Entrepreneurship 2020 Action Plan) Involve and consult with Ministries that have a role for entrepreneurship and education 	<ul style="list-style-type: none"> Presentation of National Strategy on Entrepreneurship Education Share good practices from International Partners Collect inputs/feedback for improving the Strategy 	<ul style="list-style-type: none"> Develop a workshop run by lead national partner(s) Provide technical inputs for the development of pilot actions targeting at risk young at the local level Follow-up on pilot actions 	<ul style="list-style-type: none"> Conducting coordination meetings Conducting partnership meetings Developing evaluation framework National symposium event Create policy brief
RESULTS	<ul style="list-style-type: none"> Diagnosis of entrepreneurship education Benchmark entrepreneurship education developed Sharing experiences between different countries Increased awareness of public and private sector on the added-value of developing a national strategy Increased knowledge 	<ul style="list-style-type: none"> Cross-ministry involvement of key stakeholders Preliminary strategy from public sector entities Co-development of national roll out and NGO engagement plan 	<ul style="list-style-type: none"> An agreed definition for a National Strategy on Entrepreneurship Education Increased participation of NGOs and the private sector on the development and implementation of public policies 	<ul style="list-style-type: none"> Municipalities and key local stakeholders develop their entrepreneurship agenda in their region / local level Municipalities and key stakeholders promote and deliver entrepreneurial awareness, experiences and opportunities for young people 	<ul style="list-style-type: none"> National strategy endorsed at the highest political level Capacity building of project partners on management and evaluation
PRODUCTS	<ul style="list-style-type: none"> Benchmark report Diagnostic on national entrepreneurship education 	<ul style="list-style-type: none"> Public sector platform for the development of a national strategy Protocols established between governmental entities 	<ul style="list-style-type: none"> Regional workshops around the country “National Strategy on Entrepreneurship Education and Training” document 	<ul style="list-style-type: none"> Pilot actions reports 	<ul style="list-style-type: none"> Policy report Quarterly reports and Final report Follow-up report Communication materials Dissemination event
STAKEHOLDERS	<ul style="list-style-type: none"> Public Entities (recommended) Ministry of Education Ministry of Economy Ministry of Employment / Social Affairs Commission on Gender Equality Commission on Immigrant Affairs Public Entities (other possible) Ministry of Agriculture Ministry of Finance Regional governments Stakeholders & Governments in other Member States 	<ul style="list-style-type: none"> Recommended and possible Public Entities (see Phase I) National/international experts Educational Organisations/Institutions Teachers unions Associations of students & young entrepreneurs 	<ul style="list-style-type: none"> Recommended and possible Public Entities (see Phase I) National/international experts Educational Institutions Teachers unions Parent groups Social partners: Trade unions & employer groups Entrepreneurs & companies Relevant NGOs & local community organizations Associations of students & young entrepreneurs 	<ul style="list-style-type: none"> Actors at the local level community level of entities in phase III 	<ul style="list-style-type: none"> Principally Responsible: Lead public entities Lead private entities Involve: All actors involved in national and regional/local level roll out

2.2 Stakeholder Engagement: Working together to create change

State of play

- Stakeholders are not sufficiently involved and empowered across all EU Member States in the development and implementation of entrepreneurship education. There is not enough coherence between levels of education, and there are no existing partnerships to effectively engage stakeholders as real partners in this work.

Key conclusions

- Engaging stakeholders is the backbone of a sustainable policy or strategy for entrepreneurship education and key to its success. Stakeholders can become indispensable partners contributing to the implementation of strategies on the ground.
- Stakeholders can be involved in designing, planning, implementing and evaluating policy and activity at all levels.
- Give specific attention and funding to the creation of partnerships to ensure their success, and partnerships should be regularly evaluated and reassessed.

The Way Forward

- Involved stakeholders in designing, planning, implementing and evaluating policy and activity at all levels.
- Build stakeholder engagement for entrepreneurship education via existing structures and organisations to make it more relevant to the local/national context.
- Allocate a specific individual to champion and promote the relevance and benefits of engagement in entrepreneurship activities. This is relevant at all levels, particularly for educators and students.
- Ensure that stakeholder engagement is developmental and not static.
- Identify individuals to be champions of entrepreneurship education and promote the relevance and benefits of engagement in entrepreneurship activities. This is particularly relevant at institution and student-to-student level.
- Involve the end-user - learners - in the design of policy and activity

Bringing together key actors for entrepreneurship education

Stakeholder engagement is more than just pitching the importance of this work or consulting them on their views. They are those people, institutions or groups who are affected by, have interests in or have the ability to influence the outcome of activities³³. But they need to see a real value from their engagement. Stakeholders can and should play an important role in tailoring strategies and actions and supporting their implementation. This can be done through building stakeholder engagement – with stakeholders as partners in the design, planning, implementing and evaluating of entrepreneurship education policy and activity at all levels.

³³ Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets. IFC, 2007. Available online: http://www1.ifc.org/wps/wcm/connect/938f1a0048855805beacfe6a6515bb18/IFC_StakeholderEngagement.pdf?MOD=AJPERES

State of play: stakeholders engagement is fragmented and insufficient

Although significant steps have been made, stakeholders are not sufficiently involved and empowered across all EU Member States in the development and implementation of entrepreneurship education.³⁴ Involvement is fragmented in most countries.

- Stakeholders are often consulted and involved in the development of strategies on entrepreneurship education, but only anecdotally and on an ad hoc basis;
- There are only a few countries where the role of stakeholders is evidenced in the national strategy for entrepreneurship education³⁵ or explicitly linked to entrepreneurship education in wider policies³⁶;
- Stakeholders are rarely involved in all levels of education, except in Austria, Luxembourg, Sweden and UK-Wales;
- In most EU Member States, stakeholders are generally more actively engaged in VET and higher education, while in other education levels they are not often consulted or do not have a leading role;
- Stakeholders are involved in the training of VET educators only in about one third of EU Member States;
- Representatives from the labour market have a more active role than other stakeholders, such as parents or student organisations.

Who are the stakeholders in entrepreneurship education?

There is a range of potential stakeholders for entrepreneurship education (see Figure 2.2.1). In particular, it is recognised that educators, trainers and youth workers (and the organisations which represent them) are crucial, because they are often ultimately responsible for the approach to and implementation of entrepreneurship education at grassroots level.³⁷

Figure 2.2.1 - Stakeholders and potential partners for entrepreneurship education

Learning Environment	Employers and Business	Wider Community and Interest Groups
<ul style="list-style-type: none"> • Educators / trainers / youth workers • Education/VET institutions • Training providers • Youth organisations • Educational leaders • Exam & Qualification Awarding Bodies • Research and academia • Trade Unions • And others 	<ul style="list-style-type: none"> • Businesses & business Associations • Employers & employer organisations • Trade Unions • And others 	<ul style="list-style-type: none"> • Students & student organisations • Parents & parent associations • Community / relevant NGOs • Media • And others

³⁴ Based on data from country reports and European Commission (2011) Entrepreneurship Education: Enabling Teachers as a Critical Success Factor

³⁵ BE-nl, DK, EE, FI, LU, SE, UK-Wales

³⁶ AT, CZ, SI

³⁷

[http://www.etf.europa.eu/webatt.nsf/0/32FE9A69B45747F3C1257BA600329BD4/\\$file/INFORM_16.pdf](http://www.etf.europa.eu/webatt.nsf/0/32FE9A69B45747F3C1257BA600329BD4/$file/INFORM_16.pdf)

It is important to not only focus on routes to engage business and employers. Other types of organisations such as community organisations, NGOs or engagement with parents can bring benefits and increase relevance to local social or economic contexts.

In **Sweden** stakeholders are involved in the provision of entrepreneurship education at all levels of education. These are NGOs, foundations, associations, businesses and working life organisations that promote entrepreneurship education through both national and regional programmes³⁸.

For the South East Europe Centre for Entrepreneurial Learning (SEECCEL), based in **Croatia**, parents and students are seen as a unit of change for the development of entrepreneurial schools across the Western Balkan region. The SEECCEL pilot school "Murat Atilgan" in **Turkey** has an 'Entrepreneur Social Club' where both students and parents work together to develop ideas.

Without the end-user as a stakeholder, policy may respond only to the perceived need rather than the actual need. Therefore, learners must be engaged to help shape and design strategies to achieve more impact in terms of the learner development of the skills and attitudes associated with the entrepreneurship key competence.

Involvement throughout the implementation cycle

Identifying stakeholders and engaging them as partners is important and has an impact in all stages of the policy and implementation cycle:

- *Agenda-setting stage* - stakeholders can be important drivers or lobby groups that gain policy momentum and push the political agenda. They can help ensure a common vision and agreement on the intended activity;
- *Developing strategy/policy* - stakeholders can be part of steering groups or task forces to define the concept, the actions and the benchmarks of a strategy and make it more representative and sustainable. They might have an instrumental role in leading the strategy or national delivery;
- *Implementation phase* - stakeholders can support communications, give actions added credibility and facilitate buy-in from wider groups. They can also contribute resources and expertise to concrete activities such as educator training or curriculum development, providing sustainable and more cost-effective solutions. They might be involved in the delivery of methodologies, or road test the efficacy of certain approaches. They can help support the link between educational institutions and the wider social and economic environment, or be involved in the validation and recognition of entrepreneurial learning outcomes;
- *Evaluation stage* – stakeholders can bring a wider perspective on outcomes and access additional information. They can also provide expertise and rigorous evaluation methods;
- *Review stage* – stakeholder experiences and opinions are valuable to help improve strategies and actions.

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<http://www.ee-wow.net/download/doss-donts/english/EE%20&%20WOW%20Policies%20Strategies%20and%20Networks.pdf>

Building engagement through concrete objectives

In order to ensure the participation of key stakeholders in a strategy to implement an entrepreneurship education ecosystem, it is important to identify objectives and a sound stakeholder engagement plan. Working in partnership with stakeholders can be effective at all levels of governance, all stages of policy and implementation, and in all thematic aspects of entrepreneurship education, such as educator development or defining concrete learning outcomes. Partnership approaches should work and link across education levels to ensure coherence and a clear sense of progression³⁹.

In Andalucía in southern **Spain**, the regional entrepreneurship education plan creates structured engagement with actions that are designed by and for Commission to supervise implementation and evaluation of all activity, such as involving stakeholders in a Monitoring and Coordination board.

The role of stakeholders should be recognised in national strategies on entrepreneurship education or other policies:

In **Finland**, a broad range of stakeholders is engaged and involved in every part of the national strategy. The national strategy was developed through collaboration between education and employment authorities with stakeholders such as social partners, regional representatives, youth NGOs, organisations entrepreneurship and entrepreneurship education, as well as academics, teachers and trainers⁴⁰. The Ministry of Education has an Entrepreneurship Steering Group, comprised of different stakeholders from the education system and organisations promoting entrepreneurship. The role of the group is to ensure information exchange among experts and diffuse information within the education system to promote entrepreneurship⁴¹. Employers and entrepreneurs also sit in teacher training councils in all vocational teacher-training units⁴².

In **Denmark**, through the National Strategy on Entrepreneurship Education, the role of social partners is explicitly expressed in policy and planning documents⁴³. Social partners are involved in the articulation of curricula and of educational planning, and they promote the matching of skills acquired in education to those demanded from the labour market.⁴⁴ Social partners create links between VET schools and the business world, through participation in national trade committees and local training committees.⁴⁵

Each country or region has its own specific national context and there are different challenges and opportunities at both policy level and at the level of the learning environment; approaches may need to be tailored accordingly. Whilst in some countries

³⁹ Gribben, A.A. (2013). Entrepreneurial learning: keystone to an entrepreneurial culture. INFORM Policy Briefing. European Training Foundation. Issue 16. Turin. June 2013

⁴⁰ GHK (2011) Order 121 - Study on Support to Indicators on Entrepreneurship Education

⁴¹ 2009 National report on Key Competences - Finland

⁴²

http://www.nordicinnovation.org/Global/_Publications/Reports/2013/Entrepreneurship_Education_in_Nordics_web.pdf

⁴³ European Commission (2011) Entrepreneurship Education: Enabling Teachers as a Critical Success Factor

⁴⁴ CEDEFOP (2012) Towards the short term deliverables of the Bruges Communiqué. Country fiche Denmark

⁴⁵ CEDEFOP (2012) Towards the short term deliverables of the Bruges Communiqué. Country fiche Denmark

there are deeply rooted traditions of collaboration between different sectors, in others there is only a very basic level of cooperation. It is important that approaches are built on existing structures. This will ensure efficacy and value of guidance developed to policymakers.

For example, countries such as Germany and Austria have work-based learning as part of the system while the UK already has a history of Education Business Partnership organisations. Strong cooperation between education and business is already well-established and may even be supported in law.⁴⁶ In other countries without established structures, working with relevant channels that bring together business, employer or community organisations can be effective routes.

Adding value through stakeholder engagement

Stakeholders can lend credibility to activities, and increase reach, interest and buy-in with target audiences. Organisations like Child and Youth Finance International or Junior Achievement-Young Enterprise (JA-YE) work at the governmental level but also can leverage valuable relationships with a wider network of stakeholders in their policy and implementation, particularly the private sector. This type of support can bring additional visibility at all levels, and help reach critical mass and move entrepreneurship education up the policy agenda.

In **Luxembourg**, Young Entrepreneurs Luxembourg is a public-private partnership that coordinates the promotion of entrepreneurship education at all levels of education. It coordinates activities in primary, secondary and university, such as mini-enterprise, job shadowing, innovation camps and age-appropriate entrepreneurial games. It involves partners to build and participate in these activities, creating strong links between the world of work and education by bringing together representatives from schools and business⁴⁷.

The **German** region of Baden-Württemberg launched Ifex, an initiative for business start-ups and business transfer, through the Ministry of Economic Affairs in 2001.⁴⁸ Ifex includes over 1,800 partner organisations, such as chambers, associations, business development bodies, universities, schools, authorities and representatives from private businesses⁴⁹. This is part of an entrepreneurship education strategy of working to support new ventures from students as well as increasing the number of entrepreneurial students, offering opportunities for practical entrepreneurial experiences and meet entrepreneur role models. Through its partner organisations, Ifex runs campaigns and competitions, coordinates projects and participates in regional and international projects.

Credibility is important at every level. The creation of a high profile European Network of Envoys for Entrepreneurship in Education, working as national ambassadors for entrepreneurship in education tasked with driving policy action and partnerships at

⁴⁶ For example, in the German training regulations for VET: http://www.gesetze-im-internet.de/bbig_2005/

⁴⁷ National report on Key Competences Framework - Luxembourg, 2009 <http://jonk-entrepreneuren.lu/>

⁴⁸ GHK (2011), Study on Support to Indicators on Entrepreneurship Education

⁴⁹ <http://www.gruendung-bw.de/ifexwirueberuns/Seiten/Englishinformation.asp>

national level, could be explored to champion the contribution of this work. Champions could also be identified at institution or peer-group level, promoting the relevance of entrepreneurship education and sharing information on teaching methods, classroom speakers or simply student-to-student promotion of entrepreneurial activities that learners can participate in.

Keeping stakeholder engagement dynamic

There should also be a sense of progression in the stakeholder engagement process, with a focus on developing and evolving engagement rather than remaining static. A means of looking at this process can be found below:⁵⁰

- Informing key stakeholders about the actors' intentions and actions regarding entrepreneurship education
- Consulting with relevant stakeholders as part of the process of enhancing and developing entrepreneurship education
- Involving stakeholders to ensure that issues and concerns about entrepreneurship education are understood and considered as part of the decision-making process
- Collaborating with entrepreneurial stakeholders to develop partnerships to formulate options, provide recommendations and develop actions for entrepreneurship education
- Empowering participant stakeholders in the decision-making process and to help implement and manage change regarding entrepreneurship education

In **Portugal** stakeholders are connecting through a partnership between government and civil society. The Portugal Entrepreneurship Education Platform (PEEP) is an NGO working with stakeholders at all levels of education to: 1) further develop public policy and foster systemic cooperation 2) focus on evidence-based research and impact assessment 3) build capacity and develop educational experimentation.

Stakeholders need to perceive a clear benefit from their engagement. But while the evidence gathered in the TWG showed that the majority of approaches do not go beyond the 'informing' phase, meaningful involvement must mean stakeholders as partners and collaborators. For policy makers, the drivers are most likely connected to their political agenda and to strategic goals and benchmarks that are set with regard to the overarching goal of building skills for the 21st century. Policy makers might want to engage stakeholders to support the shape and design of their strategies and achieve more impact for their actions regarding entrepreneurship education. However valid arguments are needed to promote or 'sell' entrepreneurship education to each type of stakeholder.

Working to increase stakeholder engagement with education institutions

Member States could use European Structural and Investment funds or Erasmus+ funding to promote partnerships between business, community and education to maximise stakeholder engagement in entrepreneurship education design and delivery, particularly at local level. This would increase educational links to local economic and

⁵⁰ See, for example, literature by the International Association of Public Participation.

social environment, bringing education closer to real life. Education can identify a lead organisation to promote and develop education-business partnerships to support learning, as well as provide opportunities for educators to take up work experience in local business or community organisations. This type of stakeholder engagement increases the real-life relevance of education and training, in turn impacting on the employability and entrepreneurial capacity of learners themselves.

Creating channels of engagement and sharing practice

Other suggestions to help with engaging stakeholders and partners include:

- Member States could use Erasmus+ funding to promote partnerships between business, community and education to maximise the partner engagement in entrepreneurship education design and delivery at all levels, and educational links to local economic and social environment;
- Education institutions can identify a lead person to promote and develop education-business partnerships, with an emphasis on bringing business and community links into the design and delivery of entrepreneurial learning;
- The creation of a high profile European Network of Envoys for Entrepreneurship in Education, working as national ambassadors for entrepreneurship in education tasked with driving policy action and partnerships at national level;
- Share experience at policy level by partnering those countries who wish to develop a strategy for entrepreneurship in education with countries who have an existing strategy.

2.3 Entrepreneurial Curricula and Teaching Methods

State of play

- Entrepreneurial curricula and teaching methods are rarely embedded throughout all age groups; where there is entrepreneurship education this is more commonly at higher levels and related only to business creation.

Key conclusions

- Entrepreneurship education should be offered at all levels of education and in all disciplines.
- An entrepreneurial curriculum requires a holistic approach to all elements of entrepreneurship education, and the flexibility for education organisations and educators to choose and work with the most appropriate teaching and assessment methods.
- Entrepreneurial learning depends on the teaching methods and pedagogies used. Learners should have a series of opportunities to develop and action their own ideas – a practical entrepreneurial experience - through the curriculum, taking place across the curriculum or through an interdisciplinary approach.
- Entrepreneurship should be introduced as an explicit element within curriculum for formal and non-formal education, with national guidelines on good practice to achieve this.
- Additional research is needed to understand how the key competence is reflected in national curriculum approaches, alongside exploring small-scale good practice and translating these into scalable models of embedded curriculum approaches.

The Way Forward

- Introduce entrepreneurship as an explicit curriculum objective for formal and non-formal education, and support this with implementation guidelines.
- Ensure that curriculum frameworks are flexible enough to enable introduction of more innovative teaching and assessment methods, giving educators and education institutions the flexibility to choose the most appropriate approaches for their teaching.
- Encourage interdisciplinary curriculum approaches to support and enhance the introduction of entrepreneurial methodologies
- Make practical entrepreneurial experiences widely available throughout all stages of education and training, with a minimum of one during compulsory education for all learners.
- Make entrepreneurial learning relevant to the real world through active engagement with and between education, business and community, particularly in the design and development of practical entrepreneurial experiences.
- Encourage the use of innovative ICT based learning in entrepreneurship education
- Share good practice and encourage collaboration between formal and non-formal education environments.

At all levels and in all disciplines

Studies show that entrepreneurship in education should be integrated from an early age to develop entrepreneurial skills and attitudes⁵¹, with an increasing focus on entrepreneurial knowledge and business creation for older age groups in both formal and non-formal education. Crucially, it should be integrated at all levels and in all disciplines.

The TWG also identified the value of developing and testing entrepreneurial skills in practical environments, such as through participation in business, social enterprises or through community engagement. One means to drive up entrepreneurial capacity is to intertwine entrepreneurship and education, using experiential pedagogies, solution-based learning and real life challenges to shape student creativity, innovation and ability to turn ideas into entrepreneurial action.

Entrepreneurship in the curricula: state of play in Europe

Entrepreneurship education is not yet taught nor embedded across all education levels in EU Member States.

- In only a few countries is entrepreneurship as a key competence fully embedded or used holistically⁵²
- Only Finland includes entrepreneurship education from a life-long learning perspective: from pre-primary to adult education.
- In primary education, about one in three Member States does not include entrepreneurship education as a compulsory component in its steering documents⁵³.
- Even in VET, entrepreneurship education is not compulsory in all countries: so, at least some alumni may not have attended an entrepreneurship course/subject.⁵⁴
- In VET and higher education, entrepreneurship education is primarily linked to business skills and knowledge.
- At primary and secondary education levels in particular, from the evidence available⁵⁵, it is not always clear which specific skills or learning outcomes are addressed through entrepreneurship education curricula and whether these address all aspects of the key competence.
- Practical entrepreneurial experiences are not available across all EU Member States, nor are they mandatory. However broader experiential learning has been evidenced in all Member States.

⁵¹ The Effect of Early Entrepreneurship Education: Evidence from a Randomized Field Experiment <http://papers.tinbergen.nl/12041.pdf>

⁵² Compulsory in at least ISCED1-3: AT, **EE, FI**, NO, **PL, SE,SI**, UK-SCO. **UK-Wales** For those in bold, evidence shows is also compulsory at for initial VET.

⁵³ Entrepreneurship education is not compulsory for ISCED 1 in BE-fr, BE-nl, BG, CY, DE, DK, EL, ES, FR, HR, HU, IE, IT, LU, MT, NL, PT, RO, UK-Eng, UK-NI

⁵⁴ Compulsory for at least initial VET in BG, CZ, DK, EE, ES, FI, FR, IT, PL, RO, SE, SI, UK-NI, UK-SCO, UK-Wales

⁵⁵ See the 2012 Eurydice survey – Entrepreneurship Education at School in Europe. This survey is being done again in 2015 and will be expanded to include additional detail. http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135EN.pdf

Entrepreneurial teaching methods: the state of play in Europe

In general, traditional teaching methods still prevail in the EU:

- Teachers in primary and secondary education mainly use conventional teaching methods, irrespectively of the course, although they recognise the importance of creativity in the classroom. Less traditional methods such as experimenting with new ways of teaching and learning, multi-disciplinary work and play work are 'always' applied by only a few teachers (15%, 11%, and 5% respectively).⁵⁶
- Learning activities such as projects are used less frequently, compared to more structured and traditional teaching methods.⁵⁷
- Analysing the working methods used in 50 entrepreneurship education programmes from all education levels in Austria, Ireland and the UK, research showed that traditional teaching methods were the most common, whilst "games, competitions and practical training" were the least popular.⁵⁸
- ICT is not yet widely used in education and training.⁵⁹

Developing the entrepreneurial curriculum

The entrepreneurial curriculum aims at serving the specific learning needs and goals of the individual. It facilitates entrepreneurship as a key competence and fosters all types of teaching that promote this. Likewise, an entrepreneurial curriculum must link to innovative assessment, suitable to the teaching methods used. Flexibility and space for reflection and improvement should be central. Member States should empower educators and schools with the flexibility to shift between teaching methods. In the context of entrepreneurship education, this is of great importance, since the multiple elements of entrepreneurship education cannot be addressed by just one method.

Flexibility within the curriculum is a key determinant of the autonomy of educators and institutions in introducing entrepreneurial teaching methods and learning experiences. This underlines the important role of policy makers in promoting and supporting entrepreneurship education through policies on structure, content and methodology of teaching.

The entrepreneurial curriculum facilitates the cross-subject perspective of entrepreneurship education, and fosters all types of teaching that promote entrepreneurial competences. Likewise, an entrepreneurial curriculum includes assessment suitable to the teaching methods used.

Due to its broad range of elements, entrepreneurship education can be included in curricula through the adoption of new ways of teaching-, which will lead to new ways of

⁵⁶ Joint Research Centre, European Commission (2010), "Creativity in Schools: A Survey of Teachers in Europe", Romina Cachia, Anusca Ferrari, JRC Scientific and Technical Reports, URL: <http://ftp.jrc.es/EURdoc/JRC59232.pdf>

⁵⁷ Creating Effective Teaching and Learning Environments - Teaching and Learning International Survey. OECD 2008. : <http://www.oecd.org/dataoecd/17/51/43023606.pdf>

⁵⁸ Hytti & O'Gorman (2004), "What is enterprise education? An analysis of the objectives and methods of enterprise education programmes in four European countries", Education + Training, Vol. 46, no.1

⁵⁹ Opening up Education: Innovative teaching and learning for all through new Technologies and Open Educational Resources COM/2013/0654 http://europa.eu/rapid/press-release_IP-13-859_en.htm

learning. This learning should be expressed in entrepreneurial learning outcomes, which are assessed with appropriate methods.

An entrepreneurial curriculum follows a quality circle: ⁶⁰



In Member States where reforms have not yet taken place, a holistic approach would be beneficial. Curricula can be reformed to ensure transition between the levels and foster lifelong learning, and representatives from all education levels can be involved in the consultation and decision process. Such an approach allows insight into existing entrepreneurial teaching methods and tools that could be implemented at a specific education level or across levels. The contribution of higher education is important: higher education institutions, due to their autonomy in designing and implementing their curricula and teaching methods, are a great pool of information and know-how.

Flexible curricula and provision of relative freedom of action to educators does not mean a lack of framework. Member States can identify curriculum objectives for entrepreneurship education and agree a toolkit of teaching methods with stakeholders (that include curricula and pedagogy experts). If methods are linked to specific entrepreneurial learning outcomes and innovative assessment, governments can systematically evaluate how the framework is used.

Linking entrepreneurship education goals to other policy areas - such as employment, citizenship or economic development - can allow for the design and agreement on content and teaching methods that serve both the learners' goals and national policy goals. Entrepreneurship education can and should be used as a medium of achieving short and long-term goals of Member States, and can be of relevance to the European Semester.

⁶⁰ Based on the idea of continuous improvement and a phased quality cycle, as described by the Future of Learning sub-group of the TWG and based on the Kolb learning cycle.

Teaching methods for entrepreneurship education

Entrepreneurship education should be taught through methods that are connected with entrepreneurial competences, adjusted to every education level and type of education. Using a portfolio of teaching methods is better suited to entrepreneurship education, rather the obligation to follow a lecture-based approach.

Some methods are easily implemented but some require more structural change and a longer-term view. Educators and schools should be empowered to have the flexibility to shift between teaching methods. The teaching of entrepreneurship education should focus on the individual, an approach that is facilitated when the educator can adjust or change the teaching method used.

Types of entrepreneurial teaching methods

The working group identified a wide range of teaching methods as being particularly supportive of entrepreneurship education. These teaching methods can be grouped based on their level of implementation and the subsequent practice and policy changes they demand. Depending on the intensity of the approach used, some methods may work at more than one level and entail different levels of input and investment.

Micro level:

Short interventions that can easily and immediately be included in existing lessons or subjects can be categorised as micro level. The educator can implement them in their classroom, within existing curricula and across all types of subjects. The table below gives an overview:⁶¹

Micro-level interventions for immediate inclusion in existing teaching	
<ul style="list-style-type: none">• More intensive use of ICT, e.g. digital story-telling or blogging	<ul style="list-style-type: none">• Problem-orientated teaching
<ul style="list-style-type: none">• Real-life practice examples	<ul style="list-style-type: none">• Provocation
<ul style="list-style-type: none">• Action learning	<ul style="list-style-type: none">• Creating learning posters
<ul style="list-style-type: none">• Self directed learning	<ul style="list-style-type: none">• Using metaphor
<ul style="list-style-type: none">• Mind mapping	<ul style="list-style-type: none">• Card structuring techniques
<ul style="list-style-type: none">• Story-telling / role-play	<ul style="list-style-type: none">• Podcasts and video/film sequences
<ul style="list-style-type: none">• Using objects for visualisation	<ul style="list-style-type: none">• Question-based discussions
<ul style="list-style-type: none">• Reflective practice	<ul style="list-style-type: none">• Invention challenge

⁶¹ As identified by the TWG members during the Vienna meeting, 17-19 April, 2013

Meso level:

Methods and activities that require some adaptation of existing teaching approaches, that can be agreed and implemented on a school basis. For example, creating a challenging learning environment orientated at each student's individual capabilities and previous learning outcomes.⁶² Some methods identified – for example, student mini-companies – demand that schools have certain infrastructure in place. Teaching time needs also to be dedicated to specific subjects where these projects or activities will be incorporated.

Meso-level activities to be agreed and implemented on a school basis	
<ul style="list-style-type: none"> • Creation of business plans for own ideas, up to budget 	<ul style="list-style-type: none"> • Project-oriented lessons
<ul style="list-style-type: none"> • Self directed learning 	<ul style="list-style-type: none"> • Case method/case studies
<ul style="list-style-type: none"> • Design based learning 	<ul style="list-style-type: none"> • Group puzzle
<ul style="list-style-type: none"> • Exercises involving marketing and selling 	<ul style="list-style-type: none"> • Mini company or practice firm
<ul style="list-style-type: none"> • Shadowing entrepreneurs 	<ul style="list-style-type: none"> • Complex business simulations
<ul style="list-style-type: none"> • Creative idea generation and development 	<ul style="list-style-type: none"> • Debate clubs / entrepreneurship clubs
<ul style="list-style-type: none"> • Games or apps planning 	<ul style="list-style-type: none"> • Reflective practice

Macro level

Entrepreneurial curricula can also involve teaching methods that demand implementation *on a macro level*. This can mean that their adoption would require a certain amount of *structural change* in most countries - either on school level or on policy level. The implementation of these methods also demands specific circumstances or conditions that must be permissible or promoted at the relevant national/regional/local policy level. Examples include:⁶³

Macro-level activities to be agreed and implemented on a school or policy level	
<ul style="list-style-type: none"> • 24 hour idea boot camps 	<ul style="list-style-type: none"> • Project methodologies (class/small group) with innovation accounting
<ul style="list-style-type: none"> • Inter-institution entrepreneurial challenges 	<ul style="list-style-type: none"> • Entrepreneurial internships in start-ups / businesses / social enterprises / NGOs

⁶² Ibid.

⁶³ Ibid.

Macro-level activities to be agreed and implemented on a school or policy level	
<ul style="list-style-type: none"> • Company simulation/ mini-company integrated into learning & assessment 	<ul style="list-style-type: none"> • Student start-up project/business/social enterprise as part of learning & assessment
<ul style="list-style-type: none"> • Real-life challenges set by companies – accessed via national database 	

Entrepreneurship curricula should include teaching methods that develop entrepreneurial learning outcomes that can be assessed both during and at the end of the learning process. Entrepreneurial teaching methods do not need to evidence all the skill and attitudes that can be seen in the entrepreneurship key competence. The portfolio approach can enable the learner to develop a wide range of learning outcomes through participation in curricula that uses a combination of different teaching methods. For example, the micro level interventions may provide a small range of entrepreneurial learning outcomes, but would not cover the full spectrum of the entrepreneurship key competence. Therefore it is important to recognise that curricula may include micro, meso and macro level teaching methods across all disciplines and at all levels, providing a rounded entrepreneurship education experience.

Practical entrepreneurial experiences

The practical entrepreneurial experience is one where a wide range of entrepreneurial learning outcomes could be mapped and assessed. The importance of practical entrepreneurial experiences has been identified at European level through the 2012 rethinking Education Communication, which called on all Member States to provide at least one such experience for all learners during their compulsory education. A practical entrepreneurial experience is an educational experience where the learner has the opportunity to come up with ideas, identify a good idea and turn that idea into action. Importantly, a key feature is the involvement of external partners in the design and/or delivery of this learning, to ensure relevance to the real world. Students need to be able to use new skills and try out ideas in a supportive environment, where mistakes are embraced and failure is a learning tool. This enables them to gain the confidence and experience to turn their ideas into action in the real world. The experience should be a student led initiative either individually or as part of a small team, involve learning-by-doing and producing a tangible outcome. The aim of such an opportunity is for learners to develop the skills, confidence and capability to spot opportunities, identify solutions and put their own ideas into practice.

This type of learning would be more likely to happen at meso and macro level, as the implications for adaptation of traditional approaches are significant. Concrete examples of a practical entrepreneurial experience would be:

Meso:

- Doing project based work – where there is a clear ideas generation process and a specific end product.

- Responsibility for coming up with new ideas for innovation and implementing the change within an established business which is embedded into the education environment. This could be a mini company that is handed on to the next cohort of students, or a school/college-based business providing work experience to learners.
- Creating a mini or junior company – having an idea for a business or social enterprise, setting up and running it for a set period of time.

Macro:

- Taking part in a community challenge – using innovative ideas to develop concrete solutions tackling local or community problems.
- Micro-financing student initiatives – concrete ideas to create profit and/or social impact⁶⁴
- Being given a practical challenge – projects set by business or community organisations to address a problem they face in their work.
- Projects emerging from entrepreneurial boot camps or hackathons – time-limited environment where teams have to think of and develop ideas such as new community projects or businesses.

Member States are encouraged to make practical entrepreneurial experiences a core part of compulsory education. European policy experimentations are taking place from 2015 to pilot how methodologies can be scaled up to support mainstreaming, drawing on Erasmus+ funding to support the development of these exemplar projects.

How can entrepreneurial curricula and teaching methods be developed and embedded?

Recent studies show that all Member States have introduced at least some aspects of entrepreneurship education into curricula in at least one education level⁶⁵. However it is not clear what specific skills are/are not being addressed, whether the approach is comprehensive in terms of the key competence and the level of implementation. There are nevertheless, many areas of excellent practice across Europe, demonstrating high levels of effectiveness and providing templates for others to replicate.

EU funded projects can be a source of information, such as the *JA-YE Virtual Guide to Entrepreneurial Learning*, part of The Entrepreneurial School project, providing practical examples and inspiration for educators.⁶⁶ Erasmus+ funding is also available for the piloting of new approaches in entrepreneurial learning.

ICT in education is an important channel to build upon. Entrepreneurial teaching methods can easily be integrated with ICT methodologies. Teaching methods are increasingly becoming digital and entrepreneurship education teaching methods can be facilitated and expanded by the adoption of technology.

⁶⁴ One example is the Tenner Challenge in the UK: <http://www.tenner.org.uk/#/>

⁶⁵ Eurydice 2012 - Entrepreneurship Education at School in Europe http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135EN.pdf

⁶⁶ <http://theentrepreneurialschool.eu/the-entrepreneurial-school>

A qualitative audit of what is already taking place is a resource-saving approach for further expansion in all education levels. Innovative ways of teaching can be found across Member States and across education levels. This underlines the possibilities of adjusting entrepreneurial teaching methods for all age groups of learners. Identifying pioneer educators will underline that entrepreneurship education already takes place, as well as teaching methods that deviate from the traditional ones. These educators can function as multipliers for other educators. Establishing or promoting educator networks can help build confidence in other educators and allow for overcoming possible resistance. Excellent practice can be an inspiration for innovation and change at policy level.

Good practices and small-scale pilots should be taken to a broader scale at a pace that suits local systems and norms. The implementation of these practices can be expanded through communication campaigns, attribution of motives to schools or local authorities that are responsible for education. At the same time, linking the adoption of such practices to educator and institution evaluation could also be beneficial.

Examples of entrepreneurial learning techniques in different Member States can be found in Annex 2.

2.4 Entrepreneurial Learning Outcomes and Assessment

State of play

- Entrepreneurial learning outcomes remain an undeveloped area across the EU, characterised by a piecemeal and fragmented approach and lacking a lifelong learning perspective
- Where learning outcomes are available, they demonstrate different interpretations of the key competence definition and are usually defined in terms of either contribution to business skills (market model) or contribution to employability and/or citizenship (equity model).
- Assessment of entrepreneurial learning is underdeveloped generally follows traditional methods, and entrepreneurial learning outcomes are not explicitly assessed.

Key conclusions

- Entrepreneurial learning outcomes, defined in terms of the entrepreneurship key competence, should be an explicit part of national curricula and curricular frameworks.
- Integration of entrepreneurship into national curriculum is complex and the resulting implications for teacher development important to ensure that entrepreneurship education is given due focus within the national entrepreneurship agenda.

The Way Forward

- Develop a competence reference framework for entrepreneurship at European level to break down the entrepreneurship key competence into its composite learning outcomes, relevant across all levels of education and adaptable to fit local and national contexts.
- Collate a good practice guide to demonstrate how the use of entrepreneurial learning outcomes can embed entrepreneurship education into new and existing curricula across Europe.
- Establish national guidelines on the assessment of entrepreneurial learning, building on experiences and exemplars from Erasmus+ policy experimentation actions where appropriate.

A new emphasis on entrepreneurial learning outcomes and their assessment

The key competence is broad and multi-faceted, requiring innovative techniques and methodologies for both teaching and assessment. Integral to this is the need for learning outcomes to accurately identify what the learner knows, understands and is able to do as a result of the learning process⁶⁷, and what should be assessed. Entrepreneurial learning outcomes – that is those dealing with entrepreneurship as a key competence - are undeveloped at EU level, while limited data was found at country level. Exacerbating this, there is little or no evidence of the any assessment of entrepreneurial learning outcomes. Yet without assessment, very little importance may be placed on this in the learning process or through formal recognition channels.

⁶⁷ See key terms in Cedefop, 2014 'Terminology of European education and training policy: second edition. A selection of 130 key terms.

A rationale for entrepreneurial learning outcomes and assessment

Learning outcomes in entrepreneurship education will:

- **make learning explicit:**⁶⁸ learning outcomes help to clarify the expectations from each entrepreneurial learning activity and recognise what the learner will be able to do at the end. Learners understand better how a learning activity will help build their entrepreneurship competence, a fact that engages them more with their learning and ensures focus on entrepreneurship as a key competence;
- **empower educators as learning facilitators:**⁶⁹ a learning-outcomes approach facilitates the structuring and planning of a course of lessons aimed at enhancing entrepreneurship, in terms of choosing appropriate instruction and assessment methods and tools. It can give educators more direction and sense of an end-point to work towards;
- **enhance employability:** employers are increasingly pointing to key competences as the essential ingredient in the wider skillset to improve workforce performance and productivity. The entrepreneurship key competence is critical to fast-changing, innovative and entrepreneurial economies;⁷⁰
- **enable a broader understanding of learning to include non-formal and informal entrepreneurial learning:** entrepreneurial learning experiences often take place outside the classroom. They can be acquired through work experience or participation in civic groups, or learning provided by a specialised external organisation. These experiences expand people's learning horizons and equip them with skills, attitudes and knowledge that are essential in the current economy. Entrepreneurial learning outcomes allow the individual to make sense of the wider learning paradigm and to make the connections between formal, non-formal and informal learning;⁷¹
- **facilitate labour market flexibility and career changes:** a feature of the 21st century labour market is that the individual may need to change employment and career direction regularly over his/her working life. Entrepreneurial learning outcomes provide a basis for the individual to better manage their career choices and, in particular, prepare for self-employment and business start-up.⁷²

Assessment is the proof of value for the learner, the labour market and the economy⁷³. For entrepreneurship education, it can:

- **emphasise the importance of entrepreneurship as a key competence:** making it visible to learners and stakeholders. What is assessed is considered important and thus a priority;
- **act as a passport for learning transition:** a model of lifelong entrepreneurial learning outcomes can support transition of learners across education levels and between education systems (e.g. VET to higher education);
- **adapt teaching and learning to the learner's needs:** by providing feedback to the educator and learner, allowing for improvements or adjustments to take place;

⁶⁸ Cedefop, (2009), The shift to learning outcomes; Using learning outcomes. European Qualifications Framework Series: Note 4, 2011

⁶⁹ Ibid.

⁷⁰ Lasku, G. & Gribben, A. A. (2013). Creating competitive edge: promoting SME skills. INFORM Issue 17, December 2013. European Training Foundation, Turin.

⁷¹ Council Recommendation on the validation of non-formal and informal learning (20/12/2012)

⁷² Cedefop, (2009), The shift to learning outcomes

⁷³ European Commission (2012), Assessment of Key Competences in initial education and training; Policy Guidance and input from the TWG.

- **motivate the learner:** a more developed entrepreneurial learning framework will generate greater ownership of learners, particularly where young people see the direct implications for entry to the labour market;
- **measure impact:** systematic assessment of learner achievement can demonstrate the impact of entrepreneurship education, which in turn can allow policy makers to take evidence-based decisions;
- **promote non-formal and informal entrepreneurial learning:** acknowledging and assessing entrepreneurial skills gained outside formal education increases the employability of individuals.

State of Play: entrepreneurial learning outcomes are fragmented and underdeveloped

With little evidence or intelligence on entrepreneurial learning outcomes and assessment readily available, the TWG administered a survey to all EU member states to capture the level and extent of development. The survey addressed all levels and built on initial research in primary and general secondary education by EURYDICE⁷⁴. The findings underline that, within the ongoing learning outcomes development process happening across Europe, entrepreneurial learning outcomes are underdeveloped and fragmented. The survey clearly highlighted that learning outcomes are not well articulated across Europe, with onward implications for policy-makers, educators, assessors and learners.

There were differences between countries in terms of coherence across the levels. These differences reflect the diversity in education systems and associated transition points from one level to the next, but also highlight differing interpretations of the role and purpose of entrepreneurship education. In particular, two distinct policy perspectives were identified from the survey results.

a) Equity model - specific emphasis on learning outcomes for employability and civic empowerment, as demonstrated in Portugal where entrepreneurial learning outcomes are couched within a wider policy drive to develop citizenship and civic engagement;

b) Market model – learning outcomes were narrower in scope and business-focussed, as demonstrated by Romania and Czech Republic where learning outcomes were marked by market-driven principles.

Financial literacy was the most prominent theme in the survey returns, linked to the market model. While financial literacy is an important element, it cannot be considered a substitute or the only relevant learning outcome for entrepreneurship education.

The lack of development of learning outcomes for the broader more skills-based European entrepreneurship key competence indicates that the definition provided at EU level is not yet sufficient to support a coherent curriculum response. The entrepreneurship key competence is being interpreted in different ways in different countries, to the detriment of effective or coherent policy and practice.

⁷⁴ EACEA (2012) Entrepreneurship education at school in Europe: national strategies, curricula and learning outcomes.

Not all sectors of education and training were addressed, with no clear transition or pathways between sectors, resulting in a fragmented approach. This undermines the development of a lifelong entrepreneurial learning perspective. It also frustrates any incremental learning impact for young people progressing through the education system, and severely impacts on the potential for entrepreneurship education to contribute to employment and growth at macro level.

The outcomes of the survey highlighted the need for a coordinated approach to entrepreneurial learning outcomes, building on the involvement of relevant stakeholders (see point 2.1), to form a learning progression through the different levels in a lifelong learning model, and the need for a balanced consideration of both the market and equity models.

Entrepreneurship as a key competence

The **Entrepreneurial Skills Pass** (ESP) is an international qualification that certifies that students (15-19 years old), who develop their skills and competences through a real entrepreneurship experience, and their learning outcomes assessed through an international written exam. It includes a full-year in-school mini-company experience; an examination of business, economic and financial knowledge; the possibility to access further opportunities offered by small and large businesses and international organisations across Europe. A collaboration between European and Member State organisations, it is being piloted by 29 countries including 22 Member States with the support of European funding.

The **South East European Centre for Entrepreneurial Learning** (SEECEL) with headquarters in **Croatia** provides concrete examples of how entrepreneurial learning outcomes can be embedded into the secondary school curriculum (e.g. languages, mathematics, sciences and the arts) as well as in tertiary education with particular reference to non-business subjects. SEECEL's breakdown of entrepreneurial learning outcomes in terms of required knowledge, skills and attitudes reflects in broad terms the structure of the European Qualifications Framework and against which further developments in entrepreneurial learning outcomes could be modelled.

State of Play: if it is not assessed, it is not addressed

The survey reflected the findings of wider research⁷⁵, and demonstrated that assessment of entrepreneurial learning has followed traditional methods. Recurrent examples included written essays, submission of business plans or other written work, alongside oral and/or written examination and observation.

However, there were good examples of more innovative assessment methods including self-assessment (Cyprus), peer assessment and '360' feedback (UK-Northern Ireland), and action-based portfolios (Romania). Assessment of entrepreneurship in higher education was generally better developed, though with a greater emphasis on business skills and less on the broader key competence. Other research illustrated small-scale

⁷⁵ Pittaway, L. and Edwards, C. (2012) Assessment: examining practice in entrepreneurship education, *Education+Training*, Vol. 54 Iss: 8/9, pp.778 - 800.

highly innovative case studies where a specific aspect of the key competence, such as creativity⁷⁶, is assessed.

In policy and institutional support terms, the UK's Quality Assurance Agency for Higher Education (QAA) stands out for its assessment framework (standards and code of practice) that gives particular attention to the "entrepreneurial mind-set" with guidelines for educators and practitioners⁷⁷ who are seeking to embed entrepreneurship across the curriculum. The QAA approach also underlines the possibility of applying assessment tools from diverse fields and topics 'as long as they fit the entrepreneurial learning outcomes'.

Overall, evidence showed that entrepreneurial learning, despite featuring in the education process, is usually not subject to formal assessment, and subsequently not given sufficient status in planning, resource allocation and development.

Designing new approaches to learning outcomes and their assessment

Commitment to the Europe2020 drive to develop entrepreneurship education will require a more concerted effort across all member states. As EU countries move forward with entrepreneurial learning, curricula reforms, learning outcomes and assessment arrangements will need to be co-worked. Co-working learning outcomes and assessment provides an opportunity to bring further innovation into the assessment process e.g. involvement of non-school stakeholders (e.g. local businesses/community in the assessment process) as well as ICT-based assessment tools. Examples of e-portfolio assessment in Austria, Belgium, Bulgaria, France, Greece, Portugal and the UK in wider key competences provide a reference point for developments.⁷⁸

Given that most countries do not have a comprehensive approach to entrepreneurial learning outcomes or assessment, a number of considerations are provided here with potential for follow-up.

The survey demonstrates three primary concerns that need to be addressed in future development.

1. Entrepreneurial learning outcomes **should balance both market and equity models, reflecting the entrepreneurship key competence.** This will **support the relevance of entrepreneurship education across society, life and business.** For example, while financial literacy was a recurrent theme in many of the survey returns (particularly Romania for the VET field), learning outcomes were defined primarily in market terms. This narrower perspective focused on mathematical or computational skills to arrive at a cost-benefit analysis. With a focus on equity, learning outcomes could encompass socio-economic issues that impact on the individual, the family and the community.

⁷⁶ Penaluna, A., Coates J. and Penaluna K., (2011) Creativity-Based Assessment and Neural Understandings: A Discussion and Case Study Analysis. Education + Training, Volume 52, Issue 8/9, pp. 660 – 678. Case study presented to TWG in Jan 2013.

⁷⁷ <http://www.qaa.ac.uk/en/Publications/Documents/enterprise-entrepreneurship-guidance.pdf>

⁷⁸ European Commission (2012). Assessment of Key Competences in initial education and training.

2. Entrepreneurial learning outcomes should take a **lifelong learning approach with a clear developmental progression across all levels of learning**, and not be limited to specific education levels. For example, evidence from the EU survey demonstrated that while creativity (as a component of the European entrepreneurship key competence) featured in a number of countries, these were largely confined to specific levels e.g. invariably only associated with vocational curricula.
3. **The core ingredients of the entrepreneurship key competence⁷⁹ should be identified and learning outcomes elaborated for each.** More effort is required to demystify the composite character of the entrepreneurship key competence by defining its contents, including wider cognitive and behavioural phenomena associated with the entrepreneurial character (e.g. resilience to failure, competitive spirit etc.) not present in existing country approaches.

The step by step approach to developing entrepreneurial learning outcomes

Step 1: Defining Learning Outcomes

The first step is the definition of learning outcomes, addressing the knowledge, skills and competences which learners can be expected to learn. This will help make entrepreneurship more understandable and visible to learners, educators and those in the world of work. The development of a European competence framework for entrepreneurship, based on the 2006 key competence description⁸⁰, would provide a policy reference tool against which EU Member States, as well as other countries following developments in EU entrepreneurship education, could develop specific entrepreneurial learning outcomes within their own education environments.

As a precursor to this process, the TWG elaborated framework entrepreneurial learning outcomes based on knowledge and skills requirements identified from the Member State survey - see Annex 1. As framework learning outcomes, they would act as a reference or example for the curriculum designers or schools to move forward with their own developments on entrepreneurial learning. These three entrepreneurial learning outcomes exemplars, developed by the Thematic Working Group (other areas for development are proposed below), address:

- Financial literacy: this refers both to the business/economic facets of entrepreneurship, but also includes skills and attitudes that assist individuals throughout life.
- Creativity: this refers to an individual's ability to use imagination, exploring multiple solutions and determining innovative responses to problems.
- Risk and opportunity: this refers to spotting opportunities and managing risk as cognitive and behavioural traits typically associated with being entrepreneurial. No

⁷⁹ As defined in the 2006 European Framework of Key Competences http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11090_en.htm

⁸⁰ 2006 European Reference Framework on Key Competences http://ec.europa.eu/education/policy/school/competences_en.htm

specific learning outcomes were articulated in this area, although related phenomena were identified in various member states.

A more developed 'unpacking' and definition of the constituent elements of the entrepreneurship key competence at EU level would allow for a final set of key competence entrepreneurial learning outcomes to be developed. This would build on the 2006 European key competence framework definition⁸¹, and provide a clear reference framework of learning outcomes to cover all the areas of the entrepreneurship key competence. An outline of the wider list of potential skills and competences that could be included in the reference framework can be found in a 2010 report from the European Commission:

Fig 2.4.1 Entrepreneurial Learning Outcomes⁸²



Step 2: Interface between formal and non-formal entrepreneurial learning

Much innovative development in entrepreneurial learning takes place outside the formal education systems, where non-governmental organisation, private and non-statutory education and training bodies are instrumental in its design and delivery. In many instances, non-formal entrepreneurial learning provision happens within the school/training environment but is not subject to formal assessment arrangements. It is important to note, however, that the acquisition of entrepreneurial skills might occur outside formal system. Non-formal entrepreneurial learning provision can be more flexible and respond more to the interests of the learner, engaging with different

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http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11090_en.htm

⁸² European Commission 2010 http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/education-training-entrepreneurship/reflection-panels/files/entr_education_panel_en.pdf

methodologies to develop skills such as creativity and innovation⁸³. Organisations such as JAYE⁸⁴ function across both learning environments depending on the local context, delivering practical entrepreneurial experiences in almost all EU Member States either as part of the formal curriculum, as an add-on to formal learning or as out-of-school activity. Other providers lie firmly outside the formal learning environment, but have relevance to and can share expertise with formal education and training.

In line with the recommendations in Rethinking Education, the potential for more developed cooperation between the formal and non-formal entrepreneurial learning should be explored to determine how the non-formal entrepreneurial learning provision could contribute to the development of learning outcomes within the proposed key competence reference framework. Entrepreneurial skills and competences can be developed through experiences outside formal education (for example, through volunteer work, on-the-job-training, youth activities etc.). Developing learning outcomes of such learning experiences will develop the skill sets of citizens, boosting their employability. Recent developments at EU level on the recognition and validation of non-formal and informal learning, and the extensive non-formal delivery in the area of entrepreneurial learning, offers real opportunity for valuable interface. Both areas - development of learning outcomes and their assessment - stand to gain from experiential and action-based delivery often characterising non-formal entrepreneurial learning, creating a model that works seamlessly across both areas.

Non-formal Learning

Assessing training firms

In Romania, training firms are embedded in curricula in VET. Assessment takes place through a combination of formal and informal exams. Students participate with their training firms in competitions, where they are observed and assessed by their teachers and business stakeholder. The results of the informal exams are not documented, but teachers take them in consideration for the final assessment of students.

ENACTUS

Working across Europe, Enactus is a global non-profit organization that brings together student, academic and business leaders committed to using the power of entrepreneurial action to improve the quality of life and standard of living for people in need. Guided by academic advisors and business experts, students within the Enactus program create and implement entrepreneurial community empowerment projects at their educational institutions. Enactus students form a team at their respective higher education institution (HEI), supported by an Enactus country operation and by their academic institution. The students follow a criterion-focused approach to community empowerment through entrepreneurial action and business skills, and build portfolios of community outreach projects. They receive training and coaching throughout the year and compete annually at a National Competition, presenting their results of the last academic year to a jury of business representatives. The winner of the respective National Competition competes at the annual Enactus World Cup, alongside up to 36 other countries. In 2013 Enactus operated in six EU countries involving 5771 students at 152 universities.

⁸³European Commission Youth Report: Developing the creative and innovative potential of young people through non-formal learning in ways that are relevant to employability (November 2013)

⁸⁴<http://www.ja-ye.org/>

YouthStart

Previously known as NFTE (Network For Teaching Entrepreneurship), YouthStart Belgium is part of NFTE Global, a global organization offering training programs in entrepreneurship to underprivileged youth and young adults. Focussing on interactive, creative and practical courses that develop the social, professional and financial self-confidence of young people, it has a high level of engagement from business, community and social organisations, academia and government. The process follows the route from taking first steps to forming an independent business, initially with a fictitious company with the potential to create a real company later if they choose. YouthStart see the quality of their trainers and mentors as one of the most important factors. There are six European partners of NFTE Global in Belgium, Germany, France, Ireland, Austria and UK.

How can this be achieved?

At EU level, a competence reference framework for entrepreneurship to identify the composite parts of the key competence, with learning outcomes defined at each level of learning, should be developed building on the work of the TWG. The framework would demonstrate how the entrepreneurship key competence could be integrated into curricula design, and could be accompanied by a practical guide to support implementation. Specific guidelines on how entrepreneurial learning can be innovatively assessed, including large-scale pilots to identify innovative and effective good practice. The development process should actively engage educators from across the formal and non-formal education sectors, in recognition of complimentary expertise and to expand the scope of the final tool.

A number of core principles should guide the process:

- **Communication:** effective communication on entrepreneurial learning outcomes will be essential for all stakeholders (e.g. teachers/educators, learners, education leaders, business, parents, curriculum specialists) to reach common understanding, expectations and commitments in the learning environment;
- **Comprehension:** entrepreneurial learning outcomes should be articulated to allow understanding by key stakeholders (e.g. policymakers, teachers/educators, curriculum specialists, business and learners) as well as facilitating pedagogic design, delivery and assessment;
- **Cross-curricula:** learning outcomes for the entrepreneurship key competence should not be annexed to curricula but embedded within the existing curriculum;
- **Continuity and coherence:** learning outcomes should be sequenced up through progressive levels of learning, with successive levels building on the learning outcomes developed downstream;
- **Coordination:** given the cross-curricula nature of entrepreneurship as a key competence, coordination of learning outcomes between subject specialisms within the formal education environment is imperative as well as between the formal education environment and the external entrepreneurial support structures (e.g. business and community organisations);
- **Consolidation:** entrepreneurial learning outcomes should be subject to a consolidated assessment drive comprising both formative and summative assessment.

2.5 Supporting Educators and Leaders

State of play

- Educators in Europe are often not sufficiently trained in entrepreneurship education.

Key conclusions

- Training is vital to embed entrepreneurship education in Europe's education systems, building on the existing skills and expertise of educators. Educators need to recognise the value that entrepreneurship education can bring to their own teaching, and that any teacher can introduce this to their practice.
- Good practice exists at all levels, but may not be nationally recognised or supported.

The Way Forward

- Introduce national and international programmes in entrepreneurial leadership for managers and leaders in schools, VET and higher education to support them to deliver curricular, institutional and cultural change.
- Embed training in entrepreneurship education into initial teacher training and continuous professional development, and develop networks and peer-learning opportunities for educators tailored to different education levels.
- Develop MOOCs for educator and leader training at European level
- Establish policy-to-practitioner networks at national level, to ensure that isolated or local practice informs national/regional policy development.
- Value educator skills and recognise existing good practice, for example by establishing recognised national certification for educators, through evidence-based practice portfolio of entrepreneurship education in their teaching.
- Enhance quality of educator development by Involving partners in development and delivery, including teachers themselves, education leaders, trade unions, business and community (also see fig 2.2.1).

Educators are the facilitators of entrepreneurial learning. Enabling them through training and the provision of support lays the groundwork and paves the way for thorough implementation of entrepreneurship in education. Teacher educators should be familiar with new and emerging practice in entrepreneurship education to provide guidance to both new and established educators at all levels. Educational leaders, including management, create the entrepreneurial learning environment and culture that encourages and supports firstly the radical shift in teaching and learning, and secondly a more learner centred and outward-facing organisation.

State of Play

Information drawn from members of the Thematic Working Group and additional research identified that overall, educators and leaders are not sufficiently trained or supported to embed entrepreneurship education in their approaches to teaching and learning.

Development for educators and leaders:

- Often educators do not know enough about the aims, contents and work methods of entrepreneurship education. At best, they know *what* they should implement but not *how*, nor are they aware of how it links to their existing teaching practice.

- Some educators and leaders do not believe that entrepreneurship can be taught, especially through mainstream subject disciplines. There can be a misconception that it is about business or economic education rather than broader skills and competences (see also
- Where it takes place, training on entrepreneurship education does not often cover educators from all levels.
- In formal education, entrepreneurship education is not included in all educator development except Finland and Poland (from primary to higher education).
- In initial teacher training (ITE), entrepreneurship education is included in very few countries, such as Cyprus, Estonia, Finland, Luxembourg, Malta, Norway and Sweden. It is rarely compulsory, except in three teacher colleges in Finland
- In continuous professional development (CPD), about half of EU Member States offer educator training on entrepreneurship education at school level. Evidence for training for entrepreneurship education is available for educators in primary education in six Member States (Austria, Bulgaria, Denmark, Finland, and Ireland), not all are systemic approaches embedded in policy.
- VET educators are given training in entrepreneurship in most EU Member States, however the focus is often on business rather than development of wider entrepreneurial skills.
- Higher education, with its increased level of autonomy in most countries, has very limited educator development at national level. There are large numbers of higher education practical training initiatives, but these are voluntary and attract those with an existing interest in entrepreneurship education. Training relies on the institution and is rarely systematic. Good examples can be found in UK-Northern Ireland (St. Mary's University College, Queens University Belfast) and Denmark (School of Entrepreneurship at Aalborg University), while EU funded trans-national programmes such as EFER⁸⁵ are also evident.⁸⁶
- In non-formal learning, little evidence has been found of professional development on entrepreneurship education for those working in the youth field (in non-specialist organisations), although entrepreneurial methodologies are rooted in the more experiential approaches to learning supported by non-formal education
- In adult learning, very little information can be found nationally. However, a few inspiring examples exist, for example the Latvian Adult Education Association participated in an EU project to identify appropriate and efficient tools and teaching methods that adult trainers can use to transmit entrepreneurship, innovation and creativity to adult learners.⁸⁷

Guidance for educators on entrepreneurship education:

- Only one third of countries provide practical guidelines to help educators implement entrepreneurship education in their curriculum. This is the case in the Belgium-FR, Estonia, Ireland, Lithuania, and UK-Wales.
- Tailored material for entrepreneurship education is provided to educators in less than half of the EU countries, such as in Belgium-NL, Ireland, Malta and Romania. Online and interactive tools are provided in Slovakia and Sweden.

⁸⁵ EFER provides training for university faculty - see <http://www.efer.eu>

⁸⁶ Niras consultants, FORA, ECON Pöyry, (2008) Survey of Entrepreneurship of higher education in Europe; European Commission (2011) Entrepreneurship Education: Enabling Teachers as a Critical Success Factor.

⁸⁷ <http://web.spi.pt/cessit/objectives.htm>

- Few countries develop teaching material on entrepreneurship education through the joint partnership of ministries other than Education (e.g. Ministry of Finance) and stakeholders, such as private NGOs, businesses and other organisations set by the government. This is the case, for example, in Austria, Finland and Spain.

Developing educators – key success factors

Since 2000, there has been a growing momentum on the EU-level around equipping educators with the knowledge, skills and attitudes they need for entrepreneurship education. Significant work has been done to develop knowledge in this area, but this has not yet translated into systemic approaches at national level.⁸⁸ Research, expert input and group discussion has identified the following as factors as necessary interventions to support this:

- **Educators** able to implement everyday entrepreneurial practice and reflection in the classroom at all levels and in all disciplines;
- **Teacher educators** able to deliver effective and up-to-date training;
- **Teacher education institutions** active in the development and dissemination of new and cutting edge practice in entrepreneurship education;
- **Educator development programmes** at all levels of education, built around new entrepreneurial curricula and pedagogies and based both in initial teacher education as well as in continuing professional development;
- National or regional **guidelines** to support educators to implement entrepreneurship in education at every level;
- Support **systems and networks** for educators to support their delivery of entrepreneurship education, and facilitate dissemination of methods and experience;
- Strategies for **institution wide implementation**, with pilot education institutions equipped for testing and experimentation;
- Involvement of partners including business, civil society, community and representative organisations such as trade unions (see figure 2.2.1);
- Training targeting **education management and leaders** to support wider entrepreneurial culture change.

Educator development necessarily varies at each level of education, because of different (often compulsory) training requirements and the different learning stage of the learner. However, there are common messages relevant to all areas of education, training and youth fields:

- Include the requirement for training in entrepreneurship education at a strategic level for both policy and educational organisations;

⁸⁸ Towards Greater Cooperation and Coherence in Entrepreneurship Education, European Commission, March 2010. http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/education-training-entrepreneurship/reflection-panels/files/entr_education_panel_en.pdf, p. 23. See also Entrepreneurship Education: a Guide for Educators. Available online: http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/files/education/entredu-manual-fv_en.pdf.

- Ensure a broad offer of training in entrepreneurship education, both compulsory and elective as appropriate, using entrepreneurial methodologies within the training process;
- Promote the benefits of entrepreneurship education for both educator and learner, and raise awareness of entrepreneurial career pathways;
- Identify and promote effective pedagogies and teaching methodologies;
- Provide entrepreneurial learning outcomes and effective entrepreneurial assessment processes based on the European key competence, relevant to both educator and student outcomes;

Place emphasis on the role of all educators to make links with the local community, such as social enterprises, businesses and community organisation

- Reward and incentivise educators for excellent in this approach, as champions of entrepreneurship education;
- Support networks and peer learning for educators at all levels, to disseminate and share good practice.

Initial teacher training

The groundwork for the implementation of entrepreneurship education in schools and VET should be laid in initial teacher education, ensuring that learning outcomes, pedagogy and pedagogical content knowledge for entrepreneurship is included in the study programmes of primary and secondary educators. This can happen in four different ways:⁸⁹

1. **Horizontal approach:** Applied in various subjects and not limited to one single module or course.

In the Group T. Leuven Educational College in Belgium-NL and the Avans University of Applied Sciences in the Netherlands the horizontal approach is evident. The Group T. Leuven College has been a pioneer in introducing entrepreneurship in teachers' studies. A 'portfolio-concept' is included, allowing future teachers to reflect their personal vision and mission. Project work is mandatory across the study programmes⁹⁰. The curriculum of teacher studies in the Avans University includes methods such as projects, events and work placements to stimulate the entrepreneurial mind-set.⁹¹ This approach aims at creating a specific culture of teaching and an overall understanding of the teaching profession along the lines of entrepreneurial thinking.

2. **Compulsory training module:** For instance, it could be mandatory to ask student educators to implement a school project on entrepreneurship, get acquainted with certain related teaching methods and be able to apply assessment methods.
3. **Elective courses and modules:** Students choose. For example, the Pedagogical College of Vienna, Austria includes an elective module 'Understanding economy–

⁸⁹ Mapping of teachers' preparation for entrepreneurship education. ICF-GHK report for DG EDUCATION AND CULTURE. August 2011

⁹⁰ *ibid*

⁹¹ *Ibid*

Shaping the future: Economic competence for teachers); and there is the 'Enterprise in Education' module in University of Strathclyde, Scotland.⁹²

4. **Extracurricular activities:** Some activities can be voluntary while others deliver extra credits or count for a part of the required practical training. They are often provided by NGOs and take place outside of the regular curriculum (for instance summer universities or the activities of JA-YE). For example, the Initiative for Teaching Entrepreneurship (IFTE) in Austria offers a summer school for educators from VET and general secondary education.⁹³

In **Finland**, entrepreneurship education is incorporated across disciplines and is offered in almost all teacher education institutions. However, institutions have full autonomy to decide if entrepreneurship will be compulsory or optional in the teacher training curricula. Entrepreneurship education for teachers is compulsory only in three teacher education institutes (Kajaani Department of Teacher Education of the University of Oulu, crafts teachers' programmes in the Rauma Department of Teacher Education of the University of Turku and the Vaasa Department of Åbo Akademi University). It should be noted that in Finland, individuals with experience in entrepreneurship can be recruited as educators/trainers under specific criteria. They are also eligible for teacher training in entrepreneurship.⁹⁴

Continuing professional development

The majority of active teachers are already in the workforce. Relying only on actions in initial teacher training would take time to have impact across the education system, and training would soon be out of date. Established educators already have a wealth of professional experience to draw on with an established style of teaching, which may be either supportive of or resistant to change. The barriers faced may be higher with this audience.

To encourage buy-in, CPD approaches should seek to recognise and build on existing experiences, knowledge, skills and attitudes. This can be achieved through courses and modules, but also through opportunities for reflection, observation or participation in lessons and projects – for instance through team teaching.

National and international teacher networks are also available to complement centrally provided CPD. At European level, e-twinning⁹⁵ provides a channel for schoolteachers to connect, while transnational networks such as SEET⁹⁶ aim to provide a forum to disseminate methods and tools for educators. Importantly, CPD should provide opportunities for developing bridges between the school and the local (business) community. This could be an integral part of each school action plan or comprehensive programme, encouraging educators to go and observe work processes in businesses or establish cooperation with local businesses. Business representatives, social entrepreneurs and business entrepreneurs can be involved in active teaching in the classroom, or participate as role models or speakers.

⁹² *ibid*

⁹³ European Commission (2010) Towards Greater Cooperation and Coherence in Entrepreneurship Education.

⁹⁴ *Ibid*

⁹⁵ <http://www.etwinning.net/en/pub/index.htm>

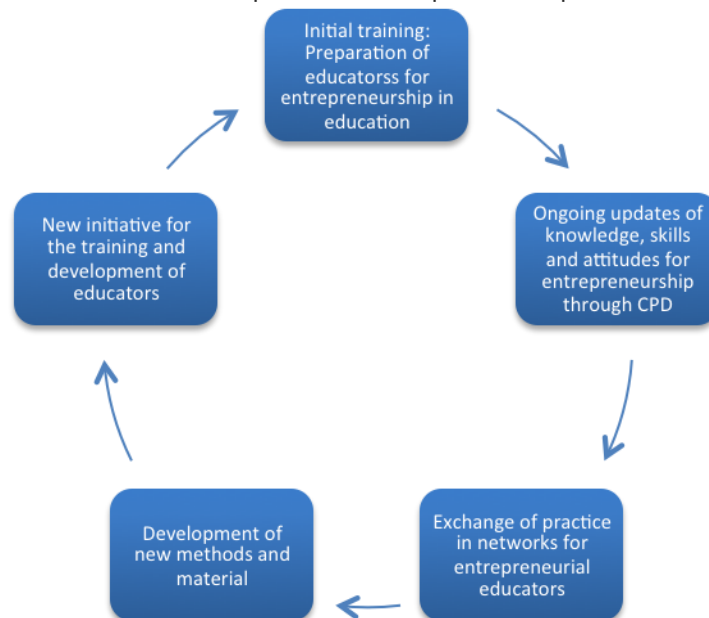
⁹⁶ SEET (Stimulating Entrepreneurial Education and Training) was a partnership project established with European Commission funding – see www.seetnetwork.eu

In **Ireland**, Junior Achievement Ireland and city and county enterprise boards offer teachers resources for entrepreneurship education as from ISCED 1. Support to teachers is also offered by the Second Level Support Service. Regarding higher education, the Irish Network of Teachers and Researchers of Entrepreneurship (INTRE), impacts practices of entrepreneurship education. The engagement of higher education educators is also the focus of the UK's National Council for Entrepreneurship Education that supports INTRE and promotes the International Entrepreneurship Educators' Programme, with financial assistance from Enterprise Ireland.

The cycle of educator development

There is a need for continuity in educator and leader development. One-off actions should be avoided, and the process should be seen as a continuum that builds on each previous step. This is a process of development that is designed to work with the educator and enhancing their personal experiences and existing skills, to develop their current and future practice.

Figure 3.5.1 – the cycle of educator development in entrepreneurship education



Actions to support change

The Commission publication, *Entrepreneurship Education: a Guide for Educators*, provides an outline of successful educator education in entrepreneurship education, along with a rich and varied selection of case studies.⁹⁷ Building on the actions in this document, further steps to support change could include:

1. Introducing specific training for entrepreneurship education into initial teacher training and continuing professional development at all levels, or include explicitly within existing training provision

⁹⁷ European Commission 2013 http://ec.europa.eu/enterprise/policies/sme/promoting-entrepreneurship/files/education/entredu-manual-fv_en.pdf

For higher education professionals from across **Europe**, the European Entrepreneurship Colloquium is a one-week programme specifically designed for and aiming at professors and faculty staff.⁹⁸ The programme runs on annual basis and its goal is to improve the way entrepreneurship is taught, through the adoption of more effective and interactive teaching approaches. This is run by the European Forum for Entrepreneurship Research (EFER) and supported through the CIP programme of the European Commission.

2. Initiate approaches to test and develop improved educator development approaches in entrepreneurship education, and disseminate through networks including schools, teacher education institutions and lead organisations/policy-makers.

In **Croatia**, SEECCEL, an entrepreneurship education centre leading policy and practice actions in eight EU pre-accession countries, has recognised the pre-service and in-service educator training on entrepreneurship education as one of the milestones of its overall approach. The development of educators in entrepreneurial learning is the focus of a trans-national laboratory, working with schools, VET and higher education. Pre-service training is ensured thorough the collaboration of SEECCEL with one university/teacher college from each of the eight participant countries. The training focuses on entrepreneurship as a key competence. Optionally, student educators can take a course on the entrepreneurial school and the development of entrepreneurial characteristics in students. In-service training is a responsibility of the education agencies of each country. Those that have been trained in entrepreneurship test the taught methods in pilot schools. In the school year 2011/2012, 32 schools were included in all eight participant countries.⁹⁹

3. Facilitate peer learning through support of educator networks and channels to disseminate good practice

In **Hungary**, the Young Enterprise Organisation promotes teachers' networking and exchange of experiences and good practices through a teachers' club.¹⁰⁰

In **Finland**, the Virtual Learning Environment for entrepreneurship education was developed by the University of Turku.¹⁰¹

In **Poland**, the Centre for Citizenship Education runs various activities to inform, train and bring together educators to promote the use of formative assessment.

In **Denmark**, the Foundation for Entrepreneurship – Young Enterprise has established a "network for primary and secondary educators in entrepreneurship education" (NEIS). The network offers educators with a virtual platform, where knowledge and experience can be exchanged. The platform also offers the possibility to find collaborators. NEIS hosts annual conferences. An additional entrepreneurship portal exists for VET, created by the Danish Institute for Educational Training of Vocational Teachers (DEL).¹⁰²

⁹⁸ http://www.efer.eu/pro/pro01_02.htm

⁹⁹ <http://www.seecel.hr/default.aspx?id=4860>

¹⁰⁰ CEDEFOP (2011) Guidance supporting Europe's aspiring entrepreneurs Policy and practice to harness future potential

¹⁰¹ European Commission (2011) Entrepreneurship Education: Enabling Teachers as a Critical Success Factor.

¹⁰² CEDEFOP (2011) *ibid*

In **Malta**, networking opportunities are offered to teachers along with relevant training, company visits and entrepreneurship teaching material.¹⁰³

In **Slovenia**, a network of teachers is to be developed aiming at supporting entrepreneurship educators and promoting their communication and exchange of experience.¹⁰⁴

4. Raise awareness of entrepreneurship education and provide clear understanding of the aims, working methods and intended learner outcomes of these approaches

In **Austria**, the national strategy for teacher training was developed in 2010 and it recognises pre-service and in-service training for secondary level entrepreneurship education. Raising awareness of the rationale for entrepreneurship education is an important part of the training embedded in initial teacher education. This work is supported by the Entrepreneurship Education for School-based Innovation (EESI) organisation, which provides assistance and materials to teachers, as well as works with them to enhance their collaboration with businesses.

5. Embed entrepreneurial pedagogies and methodologies into all training for educators at every level. This will develop entrepreneurial skills and mind-set as well as understanding of how to include these approaches in their own teaching and learning. There should be a focus on developing the expertise and capacity of the individual teacher to deliver entrepreneurship education in their teaching, rather than a uniform approach to training.

In **Norway**, the Sogn Og Fjordane University runs the REAL project, aimed at student teachers. The project is deeply rooted in the Norwegian strategy on entrepreneurship education. Student teachers are invited to set up entrepreneurial projects. The project also tries to set up relations with the local business community and aims at creating new ventures and jobs. At the end of 2012, about two thirds of teachers had been trained.

6. Equip educators with the knowledge of and access to the tools they need to develop entrepreneurial skills, attitude and knowledge in the learners they work with

Competento offers teachers a large database of materials on entrepreneurship education, while functioning as an exchange platform between pedagogical supervisors, educators, coaches in specific courses and business representatives. The platform "Knowledge Sharing - Higher Education" is also available for higher education institutions in the Flemish region. Participants can exchange experience, share knowledge and collaborate through brainstorming initiatives. The platform is an initiative of the Flemish Ministry of Education and Training, the Flemish Ministry of Work and Social Economy and of Enterprise Flanders, which also oversees the platform management.¹⁰⁵

7. Develop courses to train education leaders and managers at all levels

¹⁰³ EACEA (2012) Entrepreneurship education at school in Europe

¹⁰⁴ European Commission (2010) Towards Greater Cooperation and Coherence in Entrepreneurship Education

¹⁰⁵ <http://www.competento.be/>

The **UK** National Council for Entrepreneurship Education leads a consortium of partners to provide the Entrepreneurial University Leaders Programme, a programme for senior higher education leaders to develop their own entrepreneurial leadership skills and drive forward an entrepreneurial ecosystem approach for their institutions. Participants come from both Europe and globally.¹⁰⁶

¹⁰⁶ <http://eulp.co.uk/>

2.6 Pathways for Aspiring Entrepreneurs

State of play

- In many countries in Europe, business start-up (of any type such as social entrepreneurship and business for personal profit) is not recognised as a career pathway and there is little support for aspiring entrepreneurs in education.

Key Conclusions

- Education, in conjunction with other policy areas, can provide a crucial factor in supporting aspiring entrepreneurs.

The Way Forward

- Use policy tools to reinforce the relevance of start-up as a career path, such as including start-up within career destination surveys and using targeted campaigns to raise awareness.
- Include business or social enterprise start-up as a career pathway in career guidance at all levels of education and training. Support this with additional training for career guidance professionals.
- Clusters of education and training institutions can maximise resources by developing joint provision and signposting to external sources of support for aspiring entrepreneurs seeking to start-up.
- Ask publicly funded education and training providers to provide information on provision for aspiring entrepreneurs as part of their annual plan or application for public funding.
- Build close ties between education and local economic development bodies, to ensure that curriculum and start-up provision is linked to local labour market needs and wider strategies.
- Promote entrepreneurship education to non-formal education, building on its role in mentoring young people to achieve their potential in life.

Whilst the primary purpose of entrepreneurship in education is not just to encourage start-ups or persuade every young person to be an entrepreneur, it is a critical factor in supporting young entrepreneurs. It can contribute to and accelerate the development of entrepreneurial potential, in conjunction with other key policy actions.

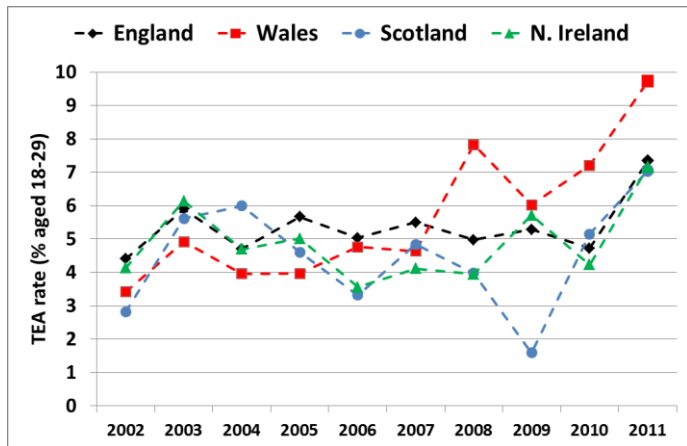
Closer collaboration between education, academia, business and community, can enable a shared approach to exploiting entrepreneurial potential. Employment and enterprise policy provide the next step in an individual's entrepreneurial journey through practical support programmes, mentoring and access to finance for nascent entrepreneurs and start-ups; collaboration across policy areas is necessary to ensure effective joint approaches.

Young entrepreneurs in Europe

It is clear that starting a business is not a career choice for all learners. However, Europe still has capacity to increase the numbers of learners who consider this as a serious option. Positive trends in early-stage business start-up across Europe, and the wide gap between start-up rates for this age group between Europe and other global regions,

demonstrate that there is capacity in the population for more young people to take this career pathway.¹⁰⁷ Where structured support is provided and framework conditions have been simplified, then start-up rates among targeted age groups can increase.

UK-Wales has focused heavily on supporting the next steps for aspiring and nascent entrepreneurs in education. The Youth Entrepreneurship Strategy has been in place since 2004, and outlines specific actions being taken to equip young people with the knowledge and support needed to take business ideas forward while still in education or as



graduates. There is a focus on developing links between vocational and higher and nationally available business support, as well as providing support within the institution to nurture those with ideas. Workshops tailored to young people are held across the country led by entrepreneurs themselves, designed to inform young people to make an informed decisions about starting a business. European Structural Funds have been used to support this work,

and results show early stage entrepreneurial activity rising from just over 3% in 2002, to 10.2% of all 18-29 year olds by 2011. The diagram above shows the variance in the trend in Wales compared to the rest of the UK. In 2011, more young people in Wales wanted to start a business of their own, and the percentage actually doing so was significantly ahead of the EU average.

Guidance as part of the learner experience

One important role of education is to develop entrepreneurial young people who have the skills and experience to turn ideas into action and an awareness of the economic and business environment, then the logical next step must be to showcase business start-up as a career option. This is not yet widespread across Europe. In many countries, business start-up (of any type such as social entrepreneurship and business for personal profit) is not recognised as a career pathway. Career guidance does not provide advice on what next steps an aspiring entrepreneur should take, support mechanisms are not in place to support business formation, and even career destination surveys in many countries do not record starting a business as a valid or valued job. This is in contradiction to the economic growth priorities of all Member States, where business start-up is encouraged as a road to job creation, and entrepreneurs are seen as the lifeblood of an economy.

Guidance can occur in any area of the education or training environment, either directly or indirectly.

¹⁰⁷ For example see <http://www.gemconsortium.org/docs/download/3106> p. 37.

Fig 2.7.1. Education and training support for Aspiring Entrepreneurs¹⁰⁸

1. Indirect - Learning Exposure

- Practical teaching methods, including assignments for companies or entrepreneurs
- Mini and virtual companies
- Engagement with entrepreneurs through workshops or meetings with successful business owners
- Awareness raising activities, including dedicated days, meetings, weeks and festivals on entrepreneurship, or enterprise awards and competitions
- Entrepreneurship ambassadors and entrepreneur role models
- Private sector interventions
- Community based holistic interventions for hard to reach groups and to promote social inclusion

2. Direct - Formal Guidance

- Formal guidance offered or developed by trained guidance professionals working in or for education
- Work placements, company visits and shadowing opportunities
- Involvement in embedding guidance into design of entrepreneurship education

3. Direct – Pre-Start Support

- Student or institution led entrepreneur clubs and networks
- Entrepreneurship centres
- Business start-up workshops
- Mentoring and business coaching
- Access to finance such as micro-finance loans, grants, spin-off funding
- Business incubators
- Virtual entrepreneur communities

1. Learning Exposure

Section 2.3 expands on entrepreneurship education pedagogies and teaching methods, many of which can include a strong business focus. This embeds a more informal guidance element into the learning experience itself – an indirect approach. It can take place in both formal and non-formal education.

However, it is important to emphasise that through the learning environment, students should be exposed to new venture creation (including the full range of venture creation, not just traditional personal-profit businesses) or self-employment as a valid career route. Such a learning experience should be accompanied by a process of reflection and the recognition of the relevance or context of the learning.

Awareness raising is a crucial part of this indirect guidance. It is about promoting the opportunities of starting a business and the valued place that an entrepreneur holds

¹⁰⁸ Adapted from table Fig 2 P.33, Guidance supporting Europe's aspiring entrepreneurs (CEDEFOP 2011)

within society. At national level, weeklong celebrations such as Global Entrepreneurship Week or European SME Week, often led by stakeholder organisations, can provide a platform on which to build awareness and engage education and training institutions. National and regional governments can use these large-scale international events as a means of working with partners to deliver efficient and effective promotion of common messages, and encourage meaningful engagement from education. It can leverage educational involvement by including campaigns targeting young people or institutions at any level, while for the institution it can demonstrate levels of interest and be a catalyst for further activity throughout the year.

2. Formal Guidance

Despite an increasing emphasis on entrepreneurship education, learners are not sufficiently aware of business start-up as a career pathway.¹⁰⁹ For business creation in particular, of any type, the role of formal guidance is not as strong as informal guidance. In fact, role of formal career guidance should be used to normalise this option.

In research and analysis undertaken for this document, little evidence has been found of strategic approaches to embrace entrepreneurship as a recognised career choice for learners, and to ensure that guidance professionals have the skills and understanding to include business creation in their guidance delivery. Training in this area needs to be systematic, to develop the untapped potential amongst learners. There should also be more effective links between guidance professionals and the local economic development and start-up community, to increase knowledge of local labour market needs and make links to support available for aspiring entrepreneurs.

At the simplest level, business start-up should be included within the menu of options that are open to young people when they access formal sources of career advice. National life-long guidance websites should provide easy to access information about being an entrepreneur, case studies relevant to regional and sector-specific contexts, as well as signposting to next steps support such as tailored websites, mentoring, workshops or access to finance.

Involving entrepreneurs directly can bring a more realistic view of both the positives and negatives of running a business. Available mechanisms include work placements in new start-ups or entrepreneur-led businesses. Alternatively, there could be placements in local businesses or NGOs, with a specific focus on gaining a holistic view of how the organisation is run and spotting opportunities for development, measured through an end-of-placement report. Shadowing entrepreneurs in their place of work can be a very effective tool for extending understanding, though tailored work experience placements. Workshops from entrepreneurs, discussing their own stories and analysing the skills or support they have used, can provide useful insight for learners into what this career really entails.

3. Pre-Start Support

Over the last decade, higher education in particular has started to develop tailored support for aspiring entrepreneurs, identified within the current student pool or from recent alumni. Universities have recognised the value of entrepreneurs to the social and

¹⁰⁹ <http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/eurobarometer/>

economic fabric of their institutions, as they increasingly focus on exploiting student innovation and creating real value for the university. There are numerous different approaches being taken, between countries as well as between HEIs. Other education sectors need to develop more tailored support, especially VET with its pool of sector-focused aspiring entrepreneurs.

Bridging Education and Business Creation: Examples

In the **Basque Country in Spain**, all young people going through secondary level vocational education are required to participate in a real enterprise project: they develop a business idea around a concrete product or service to be commercialised, and they create their own mini-company during the school year. Students are accompanied to the creation of a real company by the end of their studies. Mentoring services and office spaces for the new companies are provided. Thus, more than 40 new businesses every year have been created in the Basque region since the inception of the programme in 2004, and the survival rate of these companies at September 2013 was 76%. The ambition of the regional government is that between 100 and 200 new companies will be started every year. Teachers in vocational schools are central to this initiative: as part of their continuing education they are encouraged to work on entrepreneurial and innovation projects, and they use the results of these projects to train their students.

Higher Education Institutions in **Finland** use mentoring as a form of enterprise start-up support. More specifically, the Lahti University of Applied Sciences has created a programme called 'Business Succession School', linking students with business owners who are looking for a successor.

In **Poland**, the Polish Agency Enterprise Development launched capacity-building programmes for two networks of financial engineering institutions operating in 2010: non-banking loan funds and loan guarantee funds. Their purpose is to facilitate further development and professionalisation of lending and guaranteeing services, especially in the light of earlier capitalisation programmes that substantially strengthened the financial capacity of the funds.

In **Lithuania**, Innovation Camps and Business Contests are organised for students. The objective is to develop and promote entrepreneurship, creative ideas, teamwork, real-life problem solving. The camps and business contests aim at encouraging students in achieving their goals.

Student or institution led entrepreneur clubs and networks

Student-led clubs and networks provide a peer-led approach, directly engaging across the learner population to bring together like-minded individuals. They aim to inspire their members and support them to take the next step into business start-up, offering signposting and sometimes direct access into support available either locally or within their institution. Again, an important feature is the link to the local start-up community to bring in entrepreneur role models and to signpost out to additional services such as community incubator facilities or local grants provision.

Policy support is instrumental in driving up levels of activity. Financial resources can support expansion, quality and effectiveness through adequate resourcing to overcome the challenges of leader transition as learners graduate.

In two regions of the **UK** – Wales and Scotland - funding is provided for student-led entrepreneurship networks in higher education, with VET also funded in Wales. This supports a small salary or stipend for a student intern or champion to develop the club and its membership, and ensure it links with wider institution and national activities available for students and graduates interesting in developing entrepreneurial skills and/or starting a business. In England, NACUE have now developed student-led entrepreneurship societies in 80 of the 91 English HEIs. They have been given core funding to provide central support for the development of societies across VET, with the target of having student-led societies in 160 colleges in England by 2015. Peer to peer promotion is an important tool at institutional level, to engage learners into business start-up activities and increase the potential of start-ups both during and after graduation.

JADE is an umbrella organisation of more than 280 student-run businesses (junior enterprises) across 200 universities in 13 European countries. This network is run by the students themselves with the objective of bridging the gap between academia and real business world.¹¹⁰

Entrepreneurship centres

Within education environments, entrepreneurship centres can form a focus for related activity across institutions and a central point for developing links across the local economic and start-up community. They can be based in different areas of the institutions, such as business faculty, guidance section or student support/liaison.

Centres are more widespread in higher education, however this practice is spreading across the VET environment. Non-formal education providers can make valuable links to formal education-based centres, to promote the activity and support through these channels. Alternatively, they can work with community-based centres where these exist.

Business start-up workshops, mentoring and coaching

Learning entrepreneurial skills within the curriculum is often a good baseline for aspiring entrepreneurs, but more specialized workshops can offer detailed knowledge to support the aspiring entrepreneur.

Access to finance such as micro-finance loans, grants, spin-off funding

Financing a new start-up can be hard for younger aspiring entrepreneurs who have no financial resources of their own, particularly in countries with higher start-up costs. An Ernst and Young survey of entrepreneurs¹¹¹ found that half emphasised the importance of access to finance as the most effective way to accelerate entrepreneurial activity. This provides a policy impetus for the entrepreneurship education effort to be more directly

¹¹⁰ JADE Net - <http://www.jadenet.org/>

¹¹¹ Ernst & Young - EY G20 Entrepreneurship Barometer 2013

dovetailed with access to finance.¹¹² From a learning perspective, this builds on the early inclusion of financial literacy.

Business incubators and accelerators

Dedicated environments for either hot-desking or more intensive incubation of new businesses are springing up across Europe. These play a vital role in nurturing new start-ups, and often provide a holistic environment where a number of different support mechanisms can come together.

The Technical University of Munich (UnternehmerTUM) in **Germany** inspires and empowers students, academics and professionals by providing practically oriented training in entrepreneurship education, combined with innovation and start-up projects. UnternehmerTUM identifies and evaluates promising technologies in science and industry. In collaboration with start-ups and established companies, it develops and realizes projects to successful new business creation. A systematic approach was developed for the rapid establishment of start-ups, spin-offs and new business concepts. UnternehmerTUM analyses the ideal financing alternatives for start-ups and corporate innovations, and helps clients to acquire subsidies and venture capital.

¹¹² Loughran, D. (2014). Empowering a next generation of young entrepreneurs. Inform Policy Briefing. Issue 19. European Training Foundation. Turin, July 2014.

2.7 Measuring Progress and Impact in Entrepreneurship Education

State of play

- There are significant challenges to our ability to measure progress and impact of entrepreneurship education due to a lack of robust data and indicators at an EU level and in most Member States.

Key conclusions

- In order to ensure sustainable engagement in entrepreneurship education with substantial and measureable impact, there must be robust monitoring and evaluation of the impact of strategies and actions at a Member State and EU level.

The Way Forward

- Establish new EU-level data and monitoring to broaden the evidence base beyond existing reliance on start-up data and provide robust indicators on key areas of entrepreneurship education.
- Create built-in monitoring frameworks as part of national action plans or strategies for entrepreneurship education, linked to developments at EU level and agreed by all relevant Ministries and stakeholders.

The importance of evaluation and monitoring – the work of the Expert Group on Indicators for Entrepreneurial Learning and Competence

To ensure sustainable engagement in entrepreneurship education, there must be robust monitoring and evaluation of the impact of strategies and actions at a Member State and EU level. Monitoring can help assess what is (or is not) working regarding the achievement of goals. This allows for an assessment of outcomes and impact of measures. Based on such data, authorities can better forecast expected outcomes of entrepreneurship education programmes and initiatives. In that way, resources can be invested in policies/programmes that are actually effective, and demonstrate areas for improvement, allowing for:

- Effective policy planning, programme/initiatives design and implementation;
- Efficient choice of suitable tools (for example, teaching methods);
- Understanding of reasons of “underperformance” and act correctively;
- Understanding of what is feasible to achieve and accordingly accommodate planning, programme designing etc.

Systematic monitoring of entrepreneurship education also provides the possibility to compare between different programmes in the long term, allowing for the identification of trends and areas for improvement.

Consequently, *monitoring can positively affect all stages of the policy cycle*, since it provides specific data on all the above aspects of decision, planning, implementing and reviewing.¹¹³ Thus, by allowing for evidence-based policy making, monitoring can **support the development of suitable policies and initiatives, engage government**

¹¹³ Evalsed (2012) The Resource for the Evaluation of Socio-Economic Development; available at http://ec.europa.eu/regional_policy/sources/docgener/evaluation/guide/guide2012_evalsed.pdf.

authorities as well as all relevant stakeholders, and facilitate the attraction of funding.

Collaboration between various Ministries and/or governmental agencies can be found in **Croatia, Denmark, Finland, the Netherlands, Sweden and UK-Wales.**

A broad range of policy authorities, besides the Ministry of Education, is involved in monitoring practices in Member States. For example in **Croatia**, entrepreneurship education strategy and its monitoring is under the responsibility of various Ministries (Entrepreneurship and Crafts, Science, Education and Sports, Agriculture etc.) and other bodies, such as Chambers of Economy, Commerce, Crafts etc.

Besides monitoring on a country-level, acquiring a view on the state of play on a European level can add significant value.¹¹⁴

Given the focus on entrepreneurship education at European policy level, **there exists a key requirement to understand and develop the state of play of entrepreneurship education across Europe.** A monitoring framework and relevant indicators on an EU level are a precondition to assess progress against strategic objectives and targets (in this context, progress towards realisation of the EU2020 objectives). Based on the information regarding progress and effectiveness, monitoring indicators can support evidence-based decisions on policy changes.

In December 2012, as a result of the interim conclusions of the Thematic Working Group on Entrepreneurship Education, the European Commission created an Expert Group on Data and Indicators for Entrepreneurial Learning and Competence. This expert group has developed a set of main and sub-indicators for monitoring entrepreneurial learning and competences at EU level, and identified how to deliver the data needed for these new indicators. It also has provided recommendations of how data and monitoring can be improved at national level, how it can be aligned to support work at EU level and provided supporting case studies to demonstrate current approaches within at Member States. This group has now made its final recommendations, which have been presented to the European Standing Group on Indicators and Benchmarks, and pilots are now planned to establish new data sources for entrepreneurship education. A summary of relevant content is presented in this chapter, and more detailed information can be found in the group's final report¹¹⁵.

State of Play: Few developed or advanced approaches

At Member State level:

Although interest in entrepreneurship education has grown significantly within the policy agendas of Member States, there is room for improvement regarding measuring progress, performance and the impact of relevant education policies, projects and initiatives: for example, only about half of EU Member States monitor entrepreneurship education at all. In countries that do, monitoring takes place either through an

¹¹⁴ European Commission (2012) Effects and impact of entrepreneurship programmes in higher education

¹¹⁵ http://ec.europa.eu/education/library/reports/2014/entrepreneurial-expert-report_en.pdf

established monitoring framework that promotes systematic evaluation or through the collation of indicators from national or regional statistics offices (e.g. Regional Statistical Bureaus in Germany), national/regional surveys, and international surveys (such as the Global Economic Monitor (GEM) and Flash Eurobarometer). Overall, however, monitoring and evaluation frameworks and associated indicators in Member States are, at best, “in their infancy”.¹¹⁶

Monitoring frameworks can be found in countries/regions that have a *targeted strategy on entrepreneurship education*. More specifically:¹¹⁷

- From the 11 EU countries that have such a strategy in place, about one third (Belgium-NL, Croatia, Denmark and UK-Wales) monitor entrepreneurship education in a systematic way. The methodology, focus and breadth of these frameworks varies considerably;
- Another third of those countries collect relevant indicators on an annual basis. This is the case, for example, in Finland and Sweden;
- The rest of the countries that have a strategy in place do not monitor entrepreneurship education through any tool or framework;
- Approximately half of the EU countries that do not have an entrepreneurship strategy in place collect indicators and/or run ad hoc evaluations and surveys on specific education programmes and initiatives (for example, in Austria, England, Poland and Slovenia).
- Most indicators used at national level focus on impact, with many linking entrepreneurship education with new business creation outcomes using data from the annual GEM survey¹¹⁸.

At EU level:

At EU level, key data gaps and monitoring challenges exist:

- Lack of coverage of the full set of entrepreneurship education activities taking place – at all educational levels and in all learning environments;
- Current inability to report against a single individual or cohort of individuals through the progression model of entrepreneurship education i.e. from education through learning outcomes and assessment through to entrepreneurial activity;
- A key weakness that learning outcomes are self-reported though this provides insight into perceived self-efficacy; and
- That no robust and credible impact indicator exists for entrepreneurship education at the level of the population (although it exists at project level). International data sources to support EU level indicators of entrepreneurship education were identified:
 - Eurydice Q&A on Entrepreneurship Education at School in Europe;
 - Flash Eurobarometer;
 - Global Entrepreneurship Monitor (GEM): Annual Population Survey;
 - Global Entrepreneurship Monitor (GEM): Special Topic, 2008;
 - OECD Programme for International Student Assessment (PISA).

¹¹⁶ GHK (2011)

¹¹⁷ The analysis for existing frameworks and indicators is from DG EAC country reports and GHK study (2011).

¹¹⁸ <http://www.gemconsortium.org/docs/download/3106>

Moving Forward at EU level – developing priority indicators for entrepreneurship education

Aligning with the DG EAC Joint Assessment Framework methodology for regular monitoring of indicators and benchmarks, the group identified a set of priority Main and Sub-Indicators for EU-level entrepreneurship education (see Table below).

To achieve the Priority Indicators, the following developments in data sources are required:

- An indicator on collaborative problem solving using results of OECD Programme for International Student Assessment (PISA, 2015) to be published in 2016;
- A small expansion in the range of qualitative policy input indicators collected in Eurydice (2012) and which is due to be repeated in 2015;
- A new indicator on educator development – to be explored through discussion with OECD Teaching and Learning International Survey (TALIS) about the potential to insert questions to teachers on entrepreneurship education training for 2018;
- New indicators on entrepreneurial learning activity, entrepreneurial self-efficacy and gain from entrepreneurial learning using data collected through a small survey module for inclusion in an existing international survey vehicle.

Figure 3.6.1: A set of priority indicators for monitoring entrepreneurship education at EU level

Priority Indicators for Entrepreneurship Education for EU-level Monitoring	
<p>Main Indicator</p> <p>% of population age 18-29 who have taken part in a practical entrepreneurial learning activity (defined as turning ideas into action and/or developing your own project to achieve a goal) as part of their primary/secondary/tertiary education</p> <p>Data Source: New survey module that builds on existing international survey activity (results expected 2015)</p>	
Qualitative Sub-Indicator	Quantitative Sub-Indicator
<p>There is a specific national (regional) strategy for the implementation of entrepreneurship education and/or objectives related to entrepreneurship education as part of a broader education strategy</p> <p>Data Source: Eurydice analysis of Entrepreneurship Education in Europe (2014/15)</p>	<p>% of population age 18-29 who have taken part in a practical entrepreneurial learning activity (defined as turning ideas into action and/or developing your own project to achieve a goal) outside of their primary/secondary/tertiary education</p> <p>Data Source: New survey module that builds on existing international survey activity (pilot results expected 2015)</p>
<p>Learning outcomes (attitudes, skills, knowledge) related to entrepreneurship education are explicitly stated in the national (regional) curriculum</p> <p>Data Source: Eurydice analysis of Entrepreneurship Education in Europe (2015)</p>	<p>Educators' training in entrepreneurship education</p> <p>Data Source: OECD Teaching and Learning International Survey (TALIS, 2018)</p>

<p>There is a policy and/or framework for educator education in entrepreneurship education</p> <p>Data Source: Eurydice analysis of Entrepreneurship Education in Europe (2015)</p>	<p>% of 15 year-olds below intermediate proficiency level in collaborative problem solving</p> <p>Data Source: OECD Programme for International Student Assessment (PISA) assessment of "collaborative problem solving" (2015)</p>
	<p>Gain from entrepreneurial learning on entrepreneurial activity of the population age 18-29 years in the last 12 months</p> <p>Data Source: New survey module that builds on existing international survey activity (pilot results expected 2015)</p>

Supporting change at national level - key messages to Member States

Monitoring activity should be understood as a continuous development process embedded in the education system. The lessons and recommendations put forward in this document can hold relevance for countries at all stages of development in this area. However, there is increased importance and relevance for those countries where this work remains in its infancy.

Ideally, a monitoring framework should be forward-looking and recognise the long-term nature of impacts within entrepreneurship education. This implies a long-term developmental goal for countries/regions to include indicators/measures that cover all stages of the logic model and a monitoring framework that can support a culture of long-term improvement and increased efficiency and effectiveness of entrepreneurship education policy and activity.

Countries/regions that do not have an existing monitoring framework should firstly gather all relevant public authorities and stakeholders and agree on what will be monitored i.e. an agreed definition of entrepreneurship education. This definition will allow for the subsequent selection of meaningful indicators and measuring tools, which should involve all levels and types of entrepreneurship education. This process can highlight the links to policy areas beyond education.

In **Spain**, autonomous communities are responsible for implementing education policies. Despite the highly devolved governance system of the country, the main education law (Organic Law 2/2006) that refers to all education levels and describes national curricula introduces the concept of entrepreneurship. The Regional Ministries of Education put in practice the law in the different autonomous communities and base entrepreneurship education initiatives/programmes on the common definition.

Monitoring means continuous improvement. So, *even countries/regions that already have a monitoring framework* in place may be minded to go back to these "early steps" and re-affirm the definition of entrepreneurship education and the basis of measurement and monitoring.

Countries that are about to launch an entrepreneurship education strategy have the opportunity to simultaneously develop a monitoring framework. Existing monitoring practices, even on an ad hoc basis, can help to shape a broader framework. Thus, a **qualitative audit** of how entrepreneurship education is already monitored (through studies, evaluation of isolated programmes etc.) can identify useful tools, which are the stakeholders at what education levels, what capacity and expertise for monitoring exists, etc.

In Denmark, the effect of entrepreneurship education is measured by the Foundation for Entrepreneurship –Young Enterprise (FFE-YE) through longitudinal surveys. Selected samples of students from different levels of education are followed for a number of years. This allows for the collection of solid data that can be used for identification of trends, and facilitate forecasting of training needs. Most of all, the Danish approach allows for the evaluation of the long-term effect of learning outcomes of entrepreneurship education- although learning outcomes are not per se embedded in the national curricula.

A long-term view is also recognisable in the monitoring approaches in Finland, Norway, Sweden and UK-Wales.

Countries with an existing entrepreneurship education strategy/action plan, but no monitoring framework should use their strategy as a compass for the monitoring framework. Both should be based on the same definition and address all stakeholders. Since the monitoring framework should be embedded in the strategy, developing or improving the framework can support improvements in the strategy and vice versa.

Countries with a monitoring framework already in place can review the lessons and recommendations of this report to support continuous improvement and improved understanding of what works. Actions could include:

- a. Strengthening links between entrepreneurship education and other strategies and goals such as innovation, competitiveness, employment and economic/regional development;
- b. Develop a more mature monitoring position with the inclusion of additional tools and measures that have been proved efficient in delivering additional intelligence on entrepreneurship education; and
- c. Consider extending the use of the monitoring framework as a performance management measure for stakeholders.

A strong monitoring framework set out from the beginning that includes performance indicators and development tools provides a strong signal of intent.

UK-Wales provides an inspiring example of engaging policy-makers.

The Youth Entrepreneurship Strategy and Action Plan (YES) was a joint initiative of the Welsh Government Department for Economy, Science and Transport and the Department for Education and Skills. All programmes and initiatives of YES involve local communities and entrepreneurs as key players.

YES is evaluated by two sets of measures. The first one includes inputs, outputs and impact indicators and the second monitors the progress of YES against quantified impact indicators. The impact indicators underline that the Strategy aims at promoting employment goals, as well, through monitoring start-up rates.

Most importantly, countries/regions at any stage of developing a monitoring framework should ensure that their framework is not inward looking. Including indicators from already existing sources (national, European and international) will allow for benchmarking between regions (where relevant), with other EU Members and with global competitors. In this way, the monitoring framework can function as a bridge between evidence-based policy on entrepreneurship education and improved outcomes and impacts.

European Training Foundation (ETF)

The ETF has developed a set of policy indicators to track developments on entrepreneurial learning in the EU's neighbouring regions (pre-accession, Eastern Partnership and Southern Neighbourhood). The battery of indicators has a double function: a) the indicators support policy-based evidence progress reviews every 24 months within each country, and b) allow for benchmarking between countries, including networking and exchange of good practices. The indicators and assessment process form part of a wider assessment of each country's performance on the **Small Business Act for Europe**. ETF's regional partner organisation, SEECCEL, cooperates and supports the policy assessment drive in the pre-accession region.

It should be noted that **there is no "best approach or monitoring model" put forward here:** the framework and the tools used should fit the relevant national/regional structure, needs and culture. Nevertheless, the development of lessons and recommendations undertaken here does assume that the benefits of benchmarking, cross-country collaboration and an outward-looking perspective are part and parcel of defined national/regional needs.

In **Belgium**, the Entrepreneurship Education Action Plan for the Flemish community is monitored through various ways that try to grasp different forms of entrepreneurship education. Monitoring takes place through:

- Collection of indicators concerning the outcomes of entrepreneurship education activities, work placements and "performance" of relevant websites (Competento);
- Studies that evaluate specific educational projects and/or entrepreneurship attitudes of students, such the Effecto report; and
- Self-assessment tools, such as the ENTRE-mirror.

Although each Member State should adjust its monitoring framework to national/regional specificities, recommendations can be provided to support Member States as to what a framework for monitoring entrepreneurship education could entail and what should be considered when creating such a framework and its constituent indicators.

3 Concluding Remarks

Embedding entrepreneurship into education is a challenging task, but one in which there has been progress in the past few years. Member States are at different points on the policy journey, and needs vary as a result. This report supports countries to identify areas for further development, and provides examples of how they can take this work forward.

As prominence of the policy area increases, so do the channels to support and drive improvement. Working with Member States, social partners and wider stakeholders, the ET2020 Working Group on Transversal Skills¹¹⁹ is continuing to build on the work of the previous TWG, exploring a European competence reference framework for entrepreneurship, shaping Entrepreneurship360, disseminating HEInnovate and considering how entrepreneurship can best learn from the successes of other transversal skills.

Work will continue to develop robust data sources so that entrepreneurship education will be more effectively monitored at both national and EU level, and results can be brought to the centre of the political stage. Policy experimentations on the widespread implementation of practical entrepreneurial experiences at regional and national level will take place, yielding results that can act as European exemplars.

The Erasmus+ programme sees a significant emphasis on both increasing the quality and efficacy of entrepreneurship education, as well as ensuring that aspiring entrepreneurs are nurtured within all fields of education, training and youth. This offers clear opportunities for funding new and innovative approaches within teaching and learning at all levels and in all fields:

Key Action One – This Action supports mobilities for learners and staff, to undertake a learning and/or professional experience in another country, and entrepreneurship education is relevant to the anticipated outcomes of these mobilities.

Key Action Two – Cooperation for Innovation and the Exchange of Good Practices. There are three areas of relevance in this Action including transnational Strategic Partnerships, Knowledge Alliances and Sector Skills Alliances.

Key Action Three – Support for Policy Reforms includes opportunities for Prospective Initiatives linked to entrepreneurship education, with Forward Looking Cooperation Projects to try out new policy approaches or Policy Experimentations to pilot up-scaled versions of proven methodologies¹²⁰.

Bringing together this work at European and national level is vital for the development of the entrepreneurship education ecosystem approach. It must be coordinated and coherent, to create a fully embedded approach that maximises the outcomes for the learners themselves. It is changing both policy and practice to drive the emergence of

¹¹⁹ http://ec.europa.eu/education/policy/strategic-framework/expert-groups_en.htm

¹²⁰ Such as the 2014 call for policy experimentations for Practical Entrepreneurial Experiences

truly entrepreneurial schools, VET and universities, embracing entrepreneurship across culture, teaching, learning and community engagement.

There are positive signs that this progress will continue and will accelerate, as the importance of entrepreneurship at a time of high youth unemployment and economic crisis becomes all the more apparent. Efforts at European level need to be paired with investment at national level, working in tandem to deliver tangible change in both policy and practice. Only working together can we improve the quality and effectiveness of entrepreneurship education, and ensure that this key competence becomes truly European.

Annex 1: Learning Outcomes Tables

Framework Learning Outcomes - Financial Literacy			
Rationale: Financial literacy is considered important for ensuring the necessary knowledge and skills for managing personal finance. It also provides the foundations for building finance skills for business operations. These learning outcomes work towards supporting an education system in promoting financial literacy, particularly amongst young people, as they progressively move through the various levels of education.			
Level	Knowledge	Skills	Competences
	Learner understands	The learner	The learner
1	<ul style="list-style-type: none"> • scarcity & choice in relation to money • money as means of payment and exchange • the difference between saving, sharing, spending and borrowing 	<ul style="list-style-type: none"> • applies basic numerical and digital skills in the use of money 	<ul style="list-style-type: none"> • manages money with guidance of others
2	<ul style="list-style-type: none"> • the implications of the financial climate for personal and career development • the rewards of financial responsibility and the risks of financial illiteracy • an employment contract including salary, remuneration, pension and taxation. 	<ul style="list-style-type: none"> • uses simple numerical and digital skills applied to a financial problem; • understands and interprets • recognises factors contributing to wealth creation, poverty and income inequality • interprets notions as salary, remuneration, pension and taxation. 	<ul style="list-style-type: none"> • takes simple financial decisions independently, based on information and advice
3	<ul style="list-style-type: none"> • the financial and regulatory context for self-employment, small business and 	<ul style="list-style-type: none"> • identifies finance options to support self-employment, small business and projects 	<ul style="list-style-type: none"> • takes independent financial decisions relating to self-employment, business

	<p>projects</p> <ul style="list-style-type: none"> • how businesses source finance for their operations 	<ul style="list-style-type: none"> • proposes and negotiates financing support for self-employment or small business 	<p>operations or projects</p> <ul style="list-style-type: none"> • is responsible for and justifies his/her financial decisions and actions
4	<ul style="list-style-type: none"> • financial planning for commercial and/or non-commercial projects 	<ul style="list-style-type: none"> • plans, budgets, controls and reports on financial performance of a project (commercial and non-profit enterprises) 	<ul style="list-style-type: none"> • advises others on most appropriate course of action in relation to a project's finance
5	<ul style="list-style-type: none"> • financial implications for the feasibility of a new venture or growth within existing business 	<ul style="list-style-type: none"> • justifies the most appropriate financing options for a business start-up or development opportunity for existing business • undertakes financial planning and administration related to new venture or growth business scenarios 	<ul style="list-style-type: none"> • seeks out advice and decide on most appropriate financial option in relation to business start-up or existing business
6-7	<ul style="list-style-type: none"> • the financial feasibility of a commercial or non-commercial project • financial and societal implications of a financial decision 	<ul style="list-style-type: none"> • undertakes financial planning and administration related to a project • maximises value from available financial resources 	<ul style="list-style-type: none"> • provides critical advice to others on financial interests
7 & 8	<ul style="list-style-type: none"> • the implications of macro-economic environment for commercial and financial decisions; • the comparative strengths and weaknesses of different financial management instruments and methodologies 	<ul style="list-style-type: none"> • use appropriate financial and digital tools to address difficult or non routine problems relating to a project; • assess the financial risks in making investment decisions • effectively communicate the finance of a project 	<ul style="list-style-type: none"> • independently plan, develop and evaluate projects with a specific focus on the financial dimension

Framework Learning Outcomes – Pursuing Opportunity and Managing Risk

Rationale:

Spotting opportunities and managing risk are cognitive and behavioural traits typically associated with an entrepreneurial person. These learning outcomes work towards supporting an education system in developing these traits particularly amongst young people as they progress through different levels of education.

Level	Knowledge	Skills	Competences
	In assessing opportunity and risk, the learner uses	The learner	The learner
1	<ul style="list-style-type: none"> concrete, context specific information experience of his/her successes and failures 	<ul style="list-style-type: none"> acts on explicit opportunities and risks available to him/her draws on personal and others' experience of success and failure to find opportunities available to him/her, others or his environment 	<ul style="list-style-type: none"> seeks support from others on opportunities and risks to him/herself, others' or environment
2	<ul style="list-style-type: none"> concrete and abstract information, experience of his/her, others' successes and failures 	<ul style="list-style-type: none"> acts on implicit and explicit opportunities for him/herself, others or his environment seeks out possible opportunities for him/her defines hypothetical ('what if') outcomes of his/her or others' decisions in relation to opportunities in his/her environment. 	<ul style="list-style-type: none"> takes decisions in relation to opportunities available but seeks opinion of others particularly where she/he deems there are risks.
3	<ul style="list-style-type: none"> ideas, knowledge and feedback from peers, teachers and other education support agents (e.g. careers guidance services) 	<ul style="list-style-type: none"> justifies opportunity-driven decisions and associated risks proactively seeks out opportunities for him/her, others and his/her environment, including resources (financial, material, intellectual) to 	<ul style="list-style-type: none"> makes responsible, risk-taking decisions independent of others in respect of opportunities available.

		<p>realise opportunities</p> <ul style="list-style-type: none"> • demonstrates risk avoidance or minimisation in relation to opportunities sought 	
4	<ul style="list-style-type: none"> • ideas, knowledge and feedback from peers, teachers and other vocational support agents (e.g. financial/banking advisors, business mentors, careers guidance) 	<ul style="list-style-type: none"> • creates opportunities and success from experience of personal and others' failure • in respect of a self-employment or start-up opportunity (commercial or non-commercial) can elaborate a business plan and promote and defend the plan in presence of business people, financing agents or potential sponsors 	<ul style="list-style-type: none"> • makes responsible, risk-taking decisions independent of others in respect of competing opportunities and varying degrees of risk.
5	<ul style="list-style-type: none"> • theoretical knowledge acquired through curriculum • ideas, knowledge and feedback from peers, teachers and other education support agents (e.g. financial/banking advisors, business mentors, careers guidance) • information and knowledge (web-based, curriculum and social networks) for developing opportunities 	<ul style="list-style-type: none"> • demonstrates risk avoidance or minimisation in relation to opportunities sought • assesses resource challenges to opportunities sought and acts on those opportunities for him/herself, others or his environment • creates opportunities and success from experience of failure (personal and others') 	<ul style="list-style-type: none"> • makes responsible decisions independent of others in respect of competing opportunities and varying degrees of risk. • advises fellow students on most appropriate decision set against a student's or team's risk assessment
6-7	<ul style="list-style-type: none"> • ideas, knowledge and feedback from peers, teachers and other education support agents (e.g. financial/banking advisors, business mentors, careers guidance) • theoretical knowledge and primary research undertaken as part of studies • experience of his/her, others' successes and failures 	<ul style="list-style-type: none"> • with fellow students commits to and co-creates opportunities resulting in material, financial or intellectual advantage • leverages opportunities from web-based knowledge and social networks • in pursuit of opportunity, merges information from a range of sources and reconciles conflicting information to 	<ul style="list-style-type: none"> • makes responsible decisions independent of others in respect of competing opportunities and varying degrees of risk. • demonstrates entrepreneurial leadership through constructive advice and feedback to fellow students on options (and associated risks) in relation to

		support decision-making;	individual and team opportunities.
7 & 8	<ul style="list-style-type: none"> • experience of his/her, others' successes and failures • ideas, knowledge and feedback from peers, teachers and other education support agents (e.g. financial/banking advisors, business mentors) • primary and secondary research 	<ul style="list-style-type: none"> • creates and realises high-value generating opportunities; • reconciles and chooses opportunities as a function of quality, advantage and associated risk • on the basis of research results, produces at least two business plans to exploit market opportunities 	<ul style="list-style-type: none"> • can make responsible decisions independent of others in respect of competing opportunities and varying degrees of risk • responds constructively to feedback (supervisor) and wider coaching support (e.g. careers guidance, entrepreneurs) to maximise commercial potential research

Framework Learning Outcomes - Creativity

Rationale:

Creativity is as an integral part of an entrepreneurial mind-set, and is a pre-requisite for entrepreneurial success. It involves generating new ideas, approaches and techniques individually or as part of a team. These learning outcomes work towards supporting an education system in promoting creativity, particularly amongst young people, as they progressively move through the various levels of education.

Level	Knowledge	Skills	Competences
	The learner	The learner	The learner
1	<ul style="list-style-type: none"> has experience and understanding of idea generation at the individual and group level; understands why ideas can generate value to the individual and community; 	<ul style="list-style-type: none"> identifies creative solutions to real life challenges for (a) his/herself, and (b) community has the confidence and motivation to express diverse and divergent ideas; approaches problems creatively with a positive attitude and perseverance to resolve them 	<ul style="list-style-type: none"> participates in creative activities facilitated by others. responds constructively to alternative ideas and feedback.
2	<ul style="list-style-type: none"> has experience of different techniques for generating ideas has learnt over time to use creative ways to resolve individual and group problems 	<ul style="list-style-type: none"> identifies creative solutions or proposals to 'what if' situations formulate questions designed to generate creative responses from others 	<ul style="list-style-type: none"> demonstrates original approaches to enhance his/her future employability
3	<ul style="list-style-type: none"> understands one's creative capacity is important for sustainable and quality employment understands why creativity is important for commercial or non-commercial developments understands the regulatory environment for protection of 	<ul style="list-style-type: none"> employs creative techniques to generate innovative ideas in the learning environment plans, implement and evaluate a creative project (commercial or non-commercial) to foster and challenge creative ideas as part of a group dynamic 	<ul style="list-style-type: none"> applies original approaches to each stage of the job search cycle: a) identification of vacancies, b) compiling a job application or CV submission, c) interview process

	intellectual property.		
4	<ul style="list-style-type: none"> • knows why his/her creativity is important for employability in fast-changing labour markets • understands intellectual property procedures as a part of a creative process 	<ul style="list-style-type: none"> • employs creative techniques, including digital sources, to generate innovative ideas; • develops a creative product and writes a model intellectual property application to protect it. 	<ul style="list-style-type: none"> • applies original approaches to each stage of the job search cycle: a) identification of vacancies, b) compiling a job application or CV submission, c) interview process
5	<ul style="list-style-type: none"> • knows why his/her creativity is important for employability in fast-changing labour markets • has specialised knowledge for protection of intellectual property 	<ul style="list-style-type: none"> • to write a model intellectual property application • to advise others in defending their intellectual property 	<ul style="list-style-type: none"> • as part of personal career planning, employs creative approaches specifically for self-employment or business start-up. • seek advice on issues related to individual or group intellectual property
6	<ul style="list-style-type: none"> • uses primary research to develop knowledge for creative applications • specialised knowledge for protection of intellectual property 	<ul style="list-style-type: none"> • uses a range of skills (academic inquiry, inter-personal, digital) to complete an assignment requiring creative planning and implementation. • demonstrates capacity to facilitate others in pursuing a creative process or creative outcome. 	<ul style="list-style-type: none"> • uses self-critical reflection to complete individual assignments requiring a creative process or outcomes. • maximises his/her creative capacity through teamwork
7 & 8	<ul style="list-style-type: none"> • uses primary and secondary research to creatively exploit his/her research outputs • has knowledge and experience to protect the social and market value of his/her intellectual property. 	<ul style="list-style-type: none"> • exploits personal, professional and virtual networks to source and integrate creative capital within his/her research field. • initiates, develops, manages and completes a creative project • completes a full-cycle patent application (real or simulated) in respect of his/her research objectives. 	<ul style="list-style-type: none"> • demonstrates leadership in advising and supporting others resulting in a creative outcome.

Annex 2: Examples of Entrepreneurial Learning in Member States

Primary education:

Entrepreneurial teaching through the use of technology – Belgium, Primary education

“Dorp-op-School” (“Village at school”) is an advanced practical model, implemented in the Flemish Community of Belgium.¹²¹ According to the model, children study science and technology in a realistic manner. It is based upon an open framework approach in which it is important for children to take initiative, while also being supported and encouraged by a teacher. During the project, children design a village, applying different technological features, carrying out experiments, and consulting different information sources. Children must be proactive: they have to decide themselves what to include, how and where to place the various elements and, most importantly, they have to manage the finances of the project themselves. To achieve this, children are provided with 150 Euros, which should cover all expenses including the board on which the village is placed. In order to work to this budget, pupils have to network and use negotiation skills, find creative solutions, and utilise recovered or recycled materials.

Secondary education:

Entrepreneurial teaching through the use of technology – UK-Northern Ireland

In St Paul’s High School, in Bessbrook, Northern Ireland, learning experiences take place through experimentation, supported by intensive use of ICT and social media. Group work is encouraged, as well as the resourcefulness of students to use any source that will facilitate their problem-solving exercises. Flipped classrooms are also used as learning method: teaching takes place at home, through the school’s platform and internet research and homework is developed during school classes. In this way, students take ownership of their learning.

Schools on the Rise (‘Schule im Aufbruch’) - Germany¹²²

The model concept of ‘Schule im Aufbruch’ (Schools on the Rise) runs in around 150 model schools in Germany. It is based on the idea that in order to educate the workforce of the 21st century, schools should move away from the idea of *transmission of knowledge* and should rather *pursue an approach of unfolding the potential of students*. Students that participate in the model concept learn through three types of projects/activities:

Challenge: For three weeks, students aged 13-14 years old, freely choose a challenge that they will undertake, having to live with a specific amount of money (€150).

¹²¹ <http://www.dorpopschool.be/>

¹²² <http://www.schule-im-aufbruch.de/>; As presented during the meeting of the TWG in Vienna, in 17-19/4/2013.

Accompanied by an adult they go sailing, hiking etc. Through this experience, students are taught how to combine an activity with managing resources, and finding ways to satisfy even their basic needs, such as accommodation;

Responsibility: Students are asked to choose community work. This may be for example working as “language ambassadors”, i.e. teaching German to unprivileged children that are usually of immigrant background. This project lasts for six months and it develops a “can do” attitude to students, while developing a sense of community;

The sustainable classroom: In the participating schools, one week is completely dedicated to a project on making each classroom sustainable, by using a small budget. During that week, no basic subjects are taught. Through this project, students are taught how to effectively use the specific budget, but also create links with research. Students learn to use advanced science tools (3D printing, nano-experiments etc.) The results of this project are encouraging - it has even led students to patents registration.

To Be Enterprising – Learning by Doing. Innovative programme for learning entrepreneurship in senior secondary schools – Poland¹²³

The objective of the project is to shape and reinforce the entrepreneurial attitudes of students in senior secondary schools by:

- Shaping their attitudes and characteristics, such as creativity, proper self-assessment, openness, assertiveness, and self-improvement
- Developing planning and organisational skills – such as the ability to organise their own work as well as the acquisition, collection and arrangement of data and information
- Developing skills such as communication, teamwork, team building, negotiation

In the long run, it is anticipated that students participating in the project will be more interested in studies in fields that are of key importance to a knowledge-based economy.

The project runs through an internet platform. Teachers take students through scenarios, using an e-book. Teachers need to become familiar with the recommended set of scenarios to be used during the classes, the set of proposed educational projects, and the e-book. All the necessary resources can be found at the knowledge website www.portal.bycpzedsiebiorczym.pl. The website contains a ‘self-learning’ section with video tutorials on the use of the application and its resources, to include working with students.

Classes are conducted in accordance with the curriculum, to include evaluation of students’ work based on written assignments, verbal examinations, involvement of students in the performance of projects and in the discussions, presentations of groups and self-presentation, creation of professional portfolios, and participation in school contests.

Various resources for teachers are available (lesson scenarios, presentations, interactive exercises to be used during classes, descriptions of projects and supporting materials for project, the e-book, the exercise book, business simulations, a module for work with

¹²³ As presented during the meeting of the TWG in Vienna, in 17-19/4/2013.

students and for checking students' progress – their activity in the website) and for the students (the e-book, exercises and games assigned by the teachers, exercises with a knowledge self-testing module, and the communicator).

The project is co-financed by the European Union through the European Social Fund.

Upper-secondary / vocational:

Austria - Co-operative Open Learning (COOL)¹²⁴

Co-operative Open Learning (COOL) is a teaching concept developed in upper-secondary vocational schools in Austria, sponsored by the Federal Austrian Ministry of Education. It focuses on the promotion of self-organised learning strategies and the development of personal qualifications for improving social skills.

Co-operative Open Learning is based on the principles of the Dalton Plan pedagogy: freedom & responsibility, co-operation, budgeting time (self-organised working). Teamwork among teachers as well as among students is one of the essential aspects of the concept. The concept allows teachers to differentiate and individualise parts of their lessons. Co-operative methods enable students to develop communicative and creative skills while they are working on assignments. Regular class-meetings (chaired by students) and regular teachers' meetings are important elements of reflecting and evaluating the process, as are seminars to support team development. Teachers are trained on COOL training methods through on-the-job training. The centre involves partners in networking-activities and continuously improves the concept. The centre works with schools in Germany and Italy.

Business Plan Competition "Plan(k)gas" – Belgium¹²⁵

In the Flemish Community, Plan(k)gas competition students have to invent a good business idea, and prove its feasibility through a realistic business plan (as if they want to start tomorrow). A jury of experts will select the semi-finalists and finalists. Every participant receives a document with feedback of the jury. Students are assessed based on the originality of the idea, the logo and the business name, completeness and feasibility of the plan (marketing plan, financial plan, and description of the idea) and their communication skills. The competition lasts for one school year and students can participate individually, in small groups of two to four students or with the whole class (one business plan for the whole class). The competition promotes learning by doing, and develops students' creativity and research competences. Teachers act as coaches. They are provided with relevant material and training, while they can be supported by experts who visit schools on request.

¹²⁴ As presented during the meeting of the TWG in Vienna, in 17-19/4/2013.

¹²⁵ www.plankgas.be; www.ondernemendonderwijs.be ; www.agentschapondernemen.be

Higher education - Under-graduate level:

Undergraduate level: Entrepreneurship Top-Up Degree Module – Malta¹²⁶

This undergraduate module is implemented in a VET/HE institution. The module is offered as a compulsory core module to all students reading for a vocational top-up undergraduate degree at the Malta College of Arts, Science and Technology (MCAST). It is a hands-on entrepreneurship module offered across all Institutes including business and commerce, electrical engineering, mechanical engineering, ICT, social care, art and design and agribusiness.

Through mentoring, learners are guided into launching virtual mini-companies. Previous business knowledge is not a prerequisite. The module is based on a self-directed learning approach. Students are given a chance to create, innovate, take decisions and learn from their mistakes in a controlled environment.

The module aims at instilling a spirit of enterprise, creativity and innovation in students through the intra/entrepreneurial aspects of everyday life and of organisations and businesses.

The following example displays the type of projects that students undertake, the teaching methods and assessment used:

Step 1: Following 4-8 hours of idea generation, students are asked to shortlist their best idea. Subsequently students need to prepare 3 PowerPoint slides. Slide 1: 5 keywords related to the business idea; Slide 2: A brief description of the idea; Slide 3: Why is this idea better than anything else in the market?

Step 2: In class, learners present Slide 1 and invite peers to guess what the idea is all about based on the 5 keywords displayed. This exercise ensures that students are able to explain their idea in a simple way.

Step 3: Students proceed to present slides 2 and 3 and after peers are invited to provide feedback/critique on the idea which has just been presented. Team members take note of such feedback. However, at that stage they are not allowed to answer questions raised or engage in a debate. Instead students are invited to reflect on the feedback and to develop a way forward.

Step 4: Once the feedback session is over, peers cast a vote as to whether they believe the business idea will work.

Higher education- Post-graduate level:

Introduction to “Entrepreneurship” – Person and Process – Sweden¹²⁷

This Masters course for one/two year programmes at Jönköping International Business School (JIBS) provides an understanding of different contents, roles and contexts of entrepreneurship, and helps students to find their ‘entrepreneurial selves’ through critical

¹²⁶ TWG meeting in Vienna, in 17-19/4/2013.

¹²⁷ As presented during the meeting of the TWG in Vienna, in 17-19/4/2013.

reflection and practical experimentation. The course covers various perspectives on the following topics: entrepreneurship in new and existing organisations, entrepreneurial creativity, business opportunities, feasibility of venture ideas, and preparing new venture ideas.

Traditional lecturing is limited to create space for social interaction, both between peer students and external stakeholders. Accordingly, group assignments dominate, whether they concern pitching own venture ideas, where the students' determination to enact a venture or a game exercise, where their ability to deal with urgency and to improvise are tested. Further learning offerings include conversations with experienced academics and practitioners who visit the business school. More (inter)active encounters with external stakeholders include short-term in-house projects with firms in the adjacent science park or in the local business community. Further communities, such as the social and cultural, are invited to create partnerships with students during the course.

Equally important as the different primary teaching tactics focusing on different subjects is an intense blogging activity by the students in which these tactics are embedded and which creates a foundation for advanced reflexivity.

A broad set of assessment procedures are adopted, associated with both the different teaching tactics mentioned above. The overall blogging is, as many of the other activities, based on the exchange in peer groups and evaluated accordingly.

Considering that several of the course components are co-constructed by the students themselves, their competences, initiatives and interaction, only part of the teaching efforts can be designed and prepared in advance. Instead the teachers have to be prepared to deal with theoretical and practical problems as they arrive over the course period. The staff accordingly must be both academically qualified and well acquainted with different communities in the local/regional setting of the university.

Annex 3: Membership and Involvement in the Thematic Working Group

Members of the Thematic Working Group on Entrepreneurship Education (as at end 2013)

Ania	Bourgeois	EU	EURYDICE - Education, Audiovisual and Culture Executive Agency
Anna	Gethings	IE	AG Education Services Ltd
Anthony	Gribben	EU	European Training Foundation
Brian	Cookson	EU	ETUCE
Charlotte Romlund	Hansen	DK	The Education Agency, Department of General Education
Dana	Redford	PT	Portugal Entrepreneurship Education Platform
Danuta	Pusek	PL	Ministry of National Education
Darko	Belović	HR	Ministry of Science, Education and Sports
Ekim	Sincer	NL	Ministry of Economic Affairs
Elin	McCallum	EU	DG Education & Culture
Ernesto	Villalba-Garcia	EU	CEDEFOP
Frank	Hennessey	UK	St Mary's University College, Belfast
Friederike	Sözen	EU	UEAPME
Friedrich	Janko	DE	Hessisches Kultusministerium
Gaby	Gopie	NL	Ministry of Education
Hans	Isaac	BE	Ministère de la Communauté française
Ilda	Figueiredo	PT	Ministry of Education
Isabelle	Goudeseune	BE	Flemish Ministry of Education and Training
Johannes	Lindner	AT	eesi - Impulscenter of the Ministry of Education, Initiative for Teaching Entrepreneurship (IFTE), Department for Entrepreneurship Education at the University Teacher College Vienna/Krems
Katharina	Kiss	AT	Ministry of Education
Lukáš	Hula	CZ	National Institution of Technical and Vocational Education
Maria Grazia	Biggiero	IT	Ministry of Education, University and Research
Maryte	Skakauskiene	LT	Ministry of Education and Science
Nadine	Nerguisian	FR	Ministry of National Education
Pavlina	Chatzitheodoulou	CY	Pedagogical Institute Cyprus
Rachel	Curmi	MT	Ministry of Education, Employment and the Family
Rosa María	Molina Martínez-Riesco	ES	Ministry of Education
Simone	Baldassarri	EU	DG Enterprise

Tom	Muller	LU	Ministère de l'Education nationale et de la Formation professionnelle
Zoica Elena	Vlăduț	RO	Ministry of Education, Research, Youth and Sports

Speakers contributing to the work of the TWG through meetings and country-based Peer Learning Activities (in order of involvement):

Hanna	Dumont	DE	University of Tuebingen
Nick	Henry	UK	GHK
Lene	Vestergaard	DK	Danish Foundation for Entrepreneurship - Young Enterprise
Jonathan	Levie	UK	University of Strathclyde
Paul	Collard	UK	Creative Partnerships Programme
Ilse	Boeykens	BE	Flemish Ministry of Economy
Efka	Heder	HR	SEECCEL
Inger Karin Roe	Odegaard	NO	Sogn OG Fjordane University
Paul	Schram	BE	Flemish Ministry of Education & Training
Peter	Coenen	BE	Vlaamse Jonge Ondernemingen / Flemish Young Enterprises
Petra	Weininger	DE	Ministry of Finance and Economics of Land Baden-Württemberg
Andrew	Penaluna	UK	University of Wales Trinity Saint David
Mihaela	Ciuchi	RO	Colegiul Economic Ion Ghica Bacau
Ferre	Laevers	BE	University of Leuven
Dáithí	Murray	UK	St. Paul's High School, Bessbrook
Caroline	Jenner	EU	Junior Achievement Europe
Wim	de Winter	NL	Jong Ondernemen
Christian	Vintergaard	DK	Danish Foundation for Entrepreneurship - Young Enterprise (FFE-YE)
Torben	Laustsen	DK	NORDEA & Vice-Chairman of the Board for FFE-YE
Arnold	Jullens	DK	YES! Delft
Jared	Pennar	NL	Child and Youth Finance International
Christian	Bason	DK	Mindlab
Sara Green	Brodersen	DK	Gate To Create
Lucia	Velasco	DK	CSE Lab
Dorte	Lange	DK	Danish Union of Teachers
Pernille	Berg	DK	Copenhagen School of Design and Technology
David	Rosendo	ES	Department for Entrepreneurship, Junta de Andalucía
Dieter	Wicek	AT	Vienna Board of Education
Stephan	Breidenbach	DE	Schule im Aufbruch

Sven	Ripsas	DE	Berlin School of Economics and Law
Katarzyna	Bordziuk	PL	Ppwn.pl – multimedia software for education
Erika	Hammerl	AT	Schumpeter College
Clemens	Ragl	AT	Business Start-up Programme of the Public Employment Service
Stuart	Simpson	AT	SMART seven-city hubs for innovation and entrepreneurship training
Barbara	Wimmer	AT	Center for Cooperative, Open Learning Steyr (COOL)
Monika	Mott	AT	KulturKontakt
Bengt	Johannisson	SE	Linnaeus and Jönköping Universities
Inge	Koch-Polagnoli	AT	Commercial College Vienna
Katharina	Kiss	AT	Federal Ministry for Education, the Arts and Culture
Catherine	Danielopol-Hofer	AT	Federal Ministry for Education, the Arts and Culture
Clara	Weiss	AT	Student - Schumpeter College
Valentin	Mayerhofer	AT	Student - Schumpeter College

Members of the Expert Group on Indicators on Entrepreneurial Learning and Competence (see section 2.6)

Ania	Bourgeois	EACEA-Eurydice
Efka	Heder	SEECCEL
Nick	Henry	ICF GHK (and Coventry University since September 2013)
Caroline	Jenner	JA-YE Europe
Gavril	Lasku	ETF
Jonathan	Levie	GEM
Maja	Ljubić	SEECCEL
MariaRosa	Lunati	OECD Statistics
Martino Rubal	Maseda	ETF - alternate member
Jim	Metcalfe	Carnegie Trust
Guillermo	Montt*	OECD Education (*attended first meeting)
Anthony	Gribben	ETF - alternate member
Kjartan	Steffensen	DG EAC
Elin	McCallum	DG EAC
Georgi	Dimitrov	DG EAC
Simone	Baldassarri	DG Enterprise