



PEER-LEARNING ACTIVITIES IN ENTREPRENEURSHIP EDUCATION:

PRELIMINARY INSIGHTS FOR POLICY-MAKING

Summary of key policy issues to date from workshops EE1 and EE2

The first two EE workshops have identified six interconnected areas for which the project team has collected policy ideas. The policy ideas will be adjusted based on further input from the 3rd workshop. The six areas under which the policy issues so far are organised are the following:

- 1. LEADERSHIP & STRATEGY**
- 2. INITIAL TEACHER TRAINING**
- 3. CONTINUOUS PROFESSIONAL DEVELOPMENT OF TEACHERS (CPD)**
- 4. COOPERATION & NETWORKING**
- 5. AWARENESS & VISIBILITY**
- 6. RESEARCH & KNOWLEDGE TRANSFER**

The titles of the six areas may change as some can be merged or some may need to be split into sub-categories. All the different areas are closely connected with each other. An action in one of the areas may need support from another field in order to work. Some actions will depend on each other. We have seen from several research projects and evaluations and heard in the workshops that a national strategy can help moving EE forward in the schools. But, without resources to train the educators, progress will be slow. And sporadic teacher training (CPD) without support from school plans or the headteacher will not be sustainable in the long term. Input from the second EE workshop showed that, among several factors, training and information towards school leaders had an important effect on their effort to increasing EE in their schools.

The format of the policy recommendations may also change based on advice on contents, how to present the content, evaluation, and monitoring progress. An alternative to “traditional” policy recommendations could be to present “Actions” with clear objectives, indicators, existing levels, and percentage increase, as in the European Commission’s European Skills Agenda 2020.

1. Leadership and strategy

Policy ideas and background

Input from the two first workshops show that leadership and strategies are important factors to move EE forward in a country. Leadership and strategies cover all levels from the national political and administrative bodies to schools. Moreover, there is a clear link between EE and EE policy. National experts in the GEM rate the status of entrepreneurship education in schools and in universities more positively in countries that have a specific or broader strategy at place.

A shift towards more competence based national curricula

Several countries that participated in the two first workshops are in the process of completing or have just completed national curricula reforms.

An example can be **Estonia** where their vision document is reflected in the new 2020 education reforms, and the trend is more competence-based training, upgrading of vocational training, not keeping entrepreneurship it as a separate subject.

Another example is **Finland** where the curricula emphasises the complex outcomes of a learning process (i.e. knowledge, skills, and attitudes to be applied by learners) rather than mainly focusing on what learners are expected to learn about in terms of traditionally defined subject content. *"Pupils are not compared to each other. Instead, pupils are guided to reflect on their own learning against the objectives. The teachers help the pupils understand the objectives and recognise their own strengths and development needs. The teachers provide opportunities for the pupils to develop their skills for self-assessment and peer assessment so that they can both give and receive constructive feedback. Assessment supports the pupils as life-long learners."*¹

Germany considers competences in terms of the learning outputs. The approach is based on the concept of action competence (Handlungskompetenz) as subject-centred including implicit knowledge and skills. The role of the learner in the context of a profession (Beruf) and in society is important for this approach. "Handlungskompetenz" includes four dimensions: occupational competence (Fachkompetenz), personal competence (Personalkompetenz – attributes of a person), methodological competence (Methodenkompetenz) and social competence (Sozialkompetenz). Educational standard (called "Regulation on profession") has two parts. First, school-based, includes outputs as learning objectives; second part, work-based, includes the main activities, tasks and knowledge areas identified in the Berufsbild (professional profile). Other countries with a VET system resembling the German system are adopting similar approaches, for example, Denmark, Switzerland, and Austria.²

These reforms are focusing on a competency-based curriculum and are often designed around a set of key competences that can be cross-curricular and/or subject-bound and which are in line with the European key competences for lifelong learning and EntreComp. The reforms also create opportunities to introduce entrepreneurial tools and methods in different subjects and projects, as "learning by doing", skills and skills training is at the root of entrepreneurial learning. The EntreComp framework describes entrepreneurship as

¹ See Finnish National Board of Education (2016).

² See Esenina/Blinov/Satdykov (2019), p. 7.

a transversal competence, which can be applied by citizens to all spheres of life from nurturing personal development, to actively participating in society, to (re)entering the job market as an employee or as a self-employed person, and to starting up ventures (cultural, social or commercial).

Yet, many national education systems in Europe still rely heavily on passive forms of learning focused on direct instruction and memorisation, rather than interactive methods that promote the critical and individual thinking needed in today's society. In general, the competency-based curricula reforms focus more on innovation and creativity skills, including complex problem-solving, teamwork and leadership. The pedagogy has shifted into problem-based and collaborative learning, requiring peer collaboration, and mirroring the future of work.

European Union

In the European Union, entrepreneurship education has been on the agenda for more than a decade:

The European Commission first referred to the importance of entrepreneurship education in 2003, in the European Green Paper on Entrepreneurship in Europe. By 2006, the European Commission had identified a "sense of initiative and entrepreneurship" as one of the eight key competences necessary for all members of a knowledge-based society. The 2008 Small Business Act for Europe, the 2012 Communication on Rethinking Education, the 2013 Entrepreneurship Action Plan 2020, and more recently the New Skills Agenda for Europe, have kept the need to promote entrepreneurship education and entrepreneurial learning under the spotlight. This has led to a wealth of initiatives across Europe.³

The Commission adopted a skills package on 1 July 2020, including:

- A Communication on the European Skills Agenda.
- A proposal for a Council Recommendation on vocational education and training.
- A Communication on youth employment support.
- A proposal for a Council Recommendation to reinforce the Youth Guarantee.

Strongly anchored in the EU employment policy, the European Skills Agenda is clearly an element of a coordinated effort:

- To achieve the European Green Deal.
- To put in practice the Industrial and SME strategy.
- To implement the EU Digital strategy.
- To achieve a European Education Area

World Economic Forum

A report from World Economic Forum (WEF) is in line with the New Skills Agenda. They are listing eight critical characteristics in learning content that have been identified to define high-quality learning in the Fourth Industrial Revolution – "Education 4.0":

³ Quoted from JRC (2016), p. 5.

- Global citizenship skills
- Innovation and creativity skills
- Technology skills
- Interpersonal skills
- Personalized and self-paced learning
- Accessible and inclusive learning
- Problem-based and collaborative learning
- Lifelong and student-driven learning

Policy proposals "leadership and strategy"

Stakeholders should encourage and facilitate a broad policy platform for the work on entrepreneurship education, set targets and evaluate the results:

- *Seek broad collaboration at all levels, establish cross-ministerial collaboration including as many stakeholders as possible and establish a policy platform on EE.*
- *Set targets at national and European level.*
- *Evaluate the results of implementing national EE strategies.*

The participants in EE workshop 1 and 2 (EE WS1 and EE WS2) filled in a pre-workshop survey about EE in their country. The results show that less than 50% of the participants agree that their country has a well-established strategy for EE and less than 40% indicates collaboration at the national level to implement EE.

The ICEE project report (Innovation Cluster for Entrepreneurship Education): "*Comparative Analysis of Eight National Strategies on Entrepreneurship Education*" identifies several dimensions as being important in any country's efforts to move ahead with entrepreneurship education in a structural and efficient way. The countries with high level of EE implementation had a broad policy platform for the work with cross-ministerial collaboration and with actors from as many policy domains as possible involved. They had strong involvement from the business sector and had intensive engagement from different organisations.

Based on conclusions from the two EE workshops and from the Eurydice reports, one should still have strong focus on leadership and strategic actions within EE at the national level. Workshop outcomes and findings from literature suggest that a more systematic structure for the exchange of information and experience about EE needs to be created, as well as a framework for monitoring progress in EE according to widely agreed indicators. Research and good practice demonstrate that coordination between the departments in charge of Education, Economy, Entrepreneurship, and other governmental and European policies is crucial for effective implementation of EE strategies. Coordination between all other relevant stakeholders from the public, private and non-profit sectors, as well as academia and educators, is equally critical for succeeding to develop EE further.

With regard to specific groups of actors, and based on input from the workshops EE1 and EE2 as well as literature research, we suggest to focus on the following policy proposals in the area "Leadership and Strategy":

- At national level, **national governments** should organise their EE policies as cross-ministerial collaboration, with the Ministry of Education in a leading role and with players from as many stakeholders as possible and integrated in areas such as education initiatives, social inclusion, job creation, employment, innovation, digital learning.
- To follow up on the national policy, **education institutions** should include EE as part of the strategy of the school, based on discussions with teachers, students, parents, and the local community.
- **NGOs** should be a sustainable and flexible co-operator and co-implementer at different levels and act as the “broker” enabling the broad cooperation needed to successfully increase the uptake of EE.
- The **business community** and their intermediaries should actively and regularly embrace partnership with schools, VET, and universities through EE activities.
- Strengthen the leadership role of the **European Commission** for EE with a joint strategy and financing of projects by the relevant Directorates General.

Specific new actions / policy recommendations Leadership and strategy.

The following table indicates new EE policy actions which the project has identified as potentially valuable so far. They could be named preliminary recommendations. The actions will have to be verified with stakeholders in the last year of the project, particularly in the course of the final workshop and the related online community.

National/regional public authorities (e.g. Ministries)	Education institutions (schools and higher education)	NGOs	Private sector	European level
<i>Stakeholders should encourage and facilitate a broad policy platform for the work on Entrepreneurship Education, set targets and evaluate the results.</i>				
Broad collaboration and policy platform on EE				
<p>NEW ACTION: Governments should evaluate national strategies on a regular basis.</p> <p>NEW ACTION: Seek out and establish a good legal/financial framework to support practical entrepreneurship experiences at school (handling money and insurance, for example)</p>	<p>NEW ACTION: Involve the local community in the design and delivery of entrepreneurship education and related activities, evaluate their effort and communicate the results.</p> <p>NEW ACTION: Schools should integrate entrepreneurial learning across different subjects so that it is a natural part of the curriculum and focuses on learning through entrepreneurship</p>	<p>NEW ACTION: Support the evaluation of EE strategies.</p> <p>NEW ACTION: NGOs to invent and organise a forum for business-education-policy dialogue (e.g. through kick-off events for EE programmes, thematic Round Tables and competition final events)</p>	<p>NEW ACTION: Employers organisations, unions, chambers of commerce should encourage their members to connect to schools and support with their expertise and knowledge at both European, national, and local level.</p>	<p>NEW ACTION: Provide tools for national governments to compare and benchmark the content and impact of their national strategies as well as their implementation.</p> <p>NEW ACTION: Benchmarking and mapping among countries according to identified success criteria related to the stakeholders involved. The EC should provide leadership by encouraging national governments to share practices and collaboration frameworks with neighbouring countries (collecting results and organize sharing through face-to-face and digital means).</p>

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Set targets at national and European level				
NEW ACTION: National / regional plans for EE should include recommended entrepreneurship programmes and seek broad cooperation with providers of such.		NEW ACTION: Support the process by creating innovative tools and programmes to meet ambitious EE targets.	NEW ACTION:	NEW ACTION: As a basis for setting the European targets, undertake a mapping of student participation in EE in each European country. Compiling the data for cross-country comparisons needs to be done at European level.
Evaluate the results of implementing national EE strategies – NEW!				
NEW ACTION: Governments should evaluate national strategies on a regular basis.	NEW ACTION: Involve the local community in the design and delivery of entrepreneurship education and related activities, evaluate their effort and communicate the results.	NEW ACTION: Support the evaluation of EE strategies.	NEW ACTION: Evaluate the effort of the business community on a regular basis.	NEW ACTION: Provide tools for national governments to compare and benchmark the content and impact of their national strategies as well as their implementation. It may be more sustainable to mandate an external entity with implementing, assessing, monitoring and driving EE in close cooperation with several DGs.

References:

- COS-WP2014-4-06 Entrepreneurship Education (Pan-European Entrepreneurial Learning Initiative)
- ICEE Comparative Analysis of Eight National Strategies on Entrepreneurship Education
- Eurydice report 2016
- EE-HUB policy recommendations
- Recommendations from the Oslo agenda 2006
- Sidhu, R., Ho, K. C., & Yeoh, B. (2011). Emerging education hubs: The case of Singapore. *Higher Education*, 61(1), 23-40.

- Unger, M., & Polt, W. (2017). The knowledge triangle between research, education and innovation—a conceptual discussion. Фортсайт 11.2 (eng) (2017).
- Magalhães, A., & Veiga, A. (2019). Reconfiguring education and research in the European Higher Education Area. Revista Lusófona de Educação, 42(42).
- Aarrevaara, T., & Berg, E. (2014). Higher Education and Research in Academe: Who Should Pay?. Luleå tekniska universitet.

2. Initial teacher training

Policy ideas and background

The updated European Skills Agenda 2020 includes twelve flagship actions organised in four building blocks:

- Calling for all stakeholders to join forces for skills.
- Ensuring that skills are fit for jobs.
- Providing people with tools for lifelong skills development.
- Unlocking the investment potential of the Recovery plan for Europe.

The skills challenge calls for ambitious upskilling objectives. By 2025:

- 50% of adults should participate in learning at least once per year (increase the number of adult learners to 120 million per year).
- 30% of low-qualified adults should participate in learning at least once a year (around 14 million every year).
- 20% of unemployed people should have a recent learning experience (around 2 million job seekers every year).
- 70% of adults should have at least basic digital skills (an increase of a third).

Action 7 in the new European Skills Agenda includes promotion of entrepreneurship skills at all levels of education and training, from primary and secondary school education, to VET and higher education to provide students with the knowledge and motivation to encourage entrepreneurial activity.

All these actions include educators in various forms. Initial teacher training and teacher training in universities are the main providers of educators to the school system including vocational training and adult education. In order to increase the uptake of EE in schools and to support the Skills Agenda, it is urgent to introduce more EE in initial teacher training.

We have 5.8 million teachers in Europe at primary through upper secondary level. The European Commission estimates that the EU needs to attract 1 million new qualified teachers over the next ten years, just to replace those retiring. Initial teacher training can be an important driver for more entrepreneurship education. Observations, surveys, and input from workshop participants clearly show we have some way to go before new teachers have the necessary qualifications in entrepreneurial teaching. Searching for and establishing networks among good practice institutions with well-performing education

systems where EE is integrated into initial teacher training, might inspire more institutions to follow.

Policy proposals

Identify good practice, promote, and support why and how EE should be included in initial teacher training:

- *Ensure EE is included in initial teacher training (including the „WHY?“ and „HOW?“).*
- *Promote EE inclusion in initial teacher training (including the „WHY?“ and „HOW?“).*

Only about 5% of the participants in the EE workshops agreed that “in their initial professional training, new teachers are well educated in tools and methods for teaching entrepreneurship”. The literature research confirms these findings. There is a persistent lack of EE in pre-service teacher or initial teacher education (ITE) programmes.

Teacher training often lacks strategy or system-development plans, and institutions are often underfunded (OECD et al., 2019). However, in contrast to research on other EE topics, literature on teacher training is scarce and fragmented (mostly from UK and Finland) and based on inductive research (Seikkula-Leino et al., 2019; Penaluna et al., 2015; Seikkula-Leino et al., 2012; Redford, 2016).

Developing a positive attitude toward entrepreneurship and encouraging teachers to make their teaching practices more entrepreneurial requires a cultural change. A common understanding of entrepreneurship education and entrepreneurial learning as well as a clear commitment from the school management is key to achieve this goal (e.g. entrepreneurship education part of the plans of the school, strong support from the head of the school, etc.). Building such attitude and introducing entrepreneurial methods should be covered in the initial teacher training. Learning by doing experiences and practical examples of methods and tools need to be introduced to the coming teachers.

Initial Teacher training is particularly important to fulfil the intentions for entrepreneurship in primary, lower, and upper secondary education. Being an entrepreneurial teacher will require significant changes in the way teachers themselves are educated. Core skills and values linked to entrepreneurship have to be a priority in initial teacher education programmes. As a student in initial teacher training, they should all learn about entrepreneurship the entrepreneurial way: Try it and experience the behaviours that they should cultivate with students.

Based on input from the two EE workshops, research, and the literature review, we would suggest to focus the work on following policy ideas in the area of “Initial Teacher Training”, referring to actors:

- **National governments** should find ways to provide for and stimulate EE in initial teacher training.
- **Teacher training institutions** should be encouraged to share best practice, seek out and develop user-friendly tools, materials, methods, and programmes at all levels for teachers and students.

- **NGOs** can play an important role as practitioner responsible for implementation and support of EE towards initial teacher training.
- Encourage the **business** sector to continue building partnerships towards initial teacher training based on existing good practise.
- The **EU** should coordinate best practice sharing among European countries and set up recognitions and support schemes for good practise of EE in initial teacher training.

Specific new actions / policy recommendations within Initial Teacher Training

National/ regional public authorities	Educational institutions	NGOs	Private sector	European level
<i>Identify good practice, promote, and support why and how EE should be included in initial teacher training</i>				
Ensure EE is included in initial teacher training (including the „WHY?“ and „HOW?“)				
NEW ACTION: Governments should share good practice on how EE can be included in Initial Teacher Training institutions	NEW ACTION: Enhance building up cross border networks of students, teachers and EE experts connected to initial teacher training.	NEW ACTION: Encourage students in initial teacher training to test tools and methods in entrepreneurial learning and expose them to entrepreneurship education programmes (mini-company programs, etc.).	NEW ACTION: Establish partnerships and Implement in-company internships for teachers and students in initial teacher training.	NEW ACTION: Identify frontrunners in European countries, create networks among good practice institutions within entrepreneurial learning in initial teacher training, and disseminate their achievements.
Promote EE inclusion in initial teacher training (including the „WHY?“ and „HOW?“)				
NEW ACTION: Recognise training in entrepreneurship education within the European Credit Transfer and Accumulation System (ECTS).	NEW ACTION: Encourage teachers to implement entrepreneurship education not only as a course content but also as a teaching method. Evaluate students' performance and learning outcomes.	NEW ACTION: Seek out and promote existing partnership and good practise between Initial Teacher Training institutions and NGOs	NEW ACTION: Seek out and promote existing partnership and good practise between Initial Teacher Training institutions and NGOs	NEW ACTION: European-level promotion of EE in initial teacher training, by creating initiatives and platforms to share knowledge and experiences while raising awareness.

References

- Teacher Education in Europe: An ETUCE Policy Paper
- Advanced survey among and input from WS participants
- ICEE research

- Deveci, İ., & Cepni, S. (2017). The effect of entrepreneurship education modules integrated with science education on the entrepreneurial characteristics of pre-service science teachers. *Social Work*, 15(2), 56-85.
- Deveci, İ., & Seikkula-Lein, J. (2016). Finnish Science Teacher Educators' Opinions about the Implementation Process Related to Entrepreneurship Education. *Electronic Journal of Science Education*, 20(4), 1-20.
- Deveci, I., & Seikkula-Leino, J. (2018). A Review of Entrepreneurship Education in Teacher Education. *Malaysian Journal of Learning and Instruction*, 15(1), 105-148.
- Deveci, İ. (2016). Science-based entrepreneur project development process for pre-service science teachers. *Research In Teacher Education*, 6(1), 30-35.

3. Continuous professional development for teachers

Policy ideas and background

The teaching workforce in Europe is ageing. A considerable number of countries already have an old teaching workforce, with close to 50% of teachers in upper secondary education aged 50. Recruitment to the occupation is also a problem. A shift in national curricula combined with the digital revolution and the demand for new skills and competences in the workforce require intensive updating of the teachers.

In a survey done by the EE Monitor⁴ asking 400 teachers all over Europe, 90% scored continuous professional development (CPD) in EE as the most important way to increase uptake of EE in schools. At the same time, only about 25% of the participants in the EE workshops agree that CPD for teachers in EE is sufficiently available.

The quantitative part of the ICEE research found that the main obstacles for increasing EE in Europe seem to be connected to competence among teachers and lack of good-quality teacher training and support: *"Most teachers have inadequate competence in entrepreneurship education and that there is a lack of good-quality teacher training."*⁵

Good-quality teacher training in entrepreneurship education should embrace several subjects. Teachers need to understand how national priorities and plans can fit local curricula and subject plans and how to build a progression through the different age groups. They need to experience and get training in tools and methods which can support learning goals, and they need to decide on assessment tools and how to measure progress. In addition, they need to understand how to inform and include parents.

The ICEE research also showed interesting connections between the volume of EE in a school and attitudes among teachers. The schools in the ICEE policy experiment project had to commit to reaching 50% penetration among their students. Reaching a 50% penetration rate had a substantial impact on the schools' organisation and changed teachers' attitudes in a positive direction to EE.

Research from Finland presented in the second EE workshop showed that implementation of entrepreneurship education in schools and access to CPD seem to be independent of principal's gender, business experience, and work experience, but it is more affected by

⁴ See <http://www.ee-hub.eu/monitor/>.

⁵ See <http://www.icee-eu.eu/component/attachments/?task=download&id=624:ICEE-Summary-of-findings-web>

the principal's training in entrepreneurship education. This indicates that **entrepreneurial practices can be implemented through training principals** rather than waiting for younger generations to take over.

The Finnish research is supported with findings in the qualitative part of ICEE: The head teacher plays a very important role and has the capacity to influence or suppress EE in his or her school. The head teacher's role in creating enthusiasm with the teaching staff is invaluable. The head teacher also has a decisional role regarding a school's curriculum.

Policy proposals

More ambitious efforts in training of educators are necessary to foster more entrepreneurial competences among Europeans:

- *Involve all educators and stakeholders in CPD at national and international level.*
- *Leverage the EntreComp Framework in CPD for teachers.*
- *Increased focus on the role of headteachers and principals in driving EE.*
- *Tools for sharing of knowledge and raising awareness of EE amongst teachers.*

While academia, practitioners and policy makers alike generally acknowledge the benefits of providing entrepreneurship education at all levels of the education system, infusing entrepreneurship into education and mainstreaming entrepreneurship education in school and university systems pose significant challenges.

As the literature review indicates, lack of teacher training is one major obstacle. There is a persistent lack of a) EE in pre-service teacher or initial teacher education (ITE) programmes and b) facilities at the university level in many EU economies to address entrepreneurship educators' need for unified contents, teaching methods and to development pedagogical competences and methodologies. Teacher training often lacks strategy or system-development plans, and institutions are often underfunded (OECD et al., 2019).

Developing the competences of school leaders and teaching staff – including aspiring new teachers and those who have been in the profession for a long time – must be a priority. High quality programmes for the continuing professional development of existing teachers are needed to support entrepreneurial teachers, and to make sure that those who did not have the chance to experience entrepreneurship education during their initial training can catch up with the latest developments.

Based on input from multiple sources we would suggest to focus the work on the following policy ideas in the area of "Continuous Professional Development / Teacher Training":

- **Governments** need to **provide for EE in continuous professional development** for teachers.
- **Educational institutions** need to have a **stronger focus in their trainings of teachers on developing competences and skills**, raise awareness of EE and show connections between subject learning and key competences.
- **NGO's** can have an important role in teacher training as **provider of content, knowledge and sharing of good practice** of collaboration between schools and the local community.

- **Businesses** should **establish partnerships with schools**, invite educators to seminars and internal trainings at companies and be invited to support teachers
- At the **European level** there is a **need to encourage peer-learning between countries regarding CPD opportunities for teachers in EE** and stimulate regional cooperation and exchange of good practice.

Specific new actions / policy recommendations regarding Continuous Professional Development for Educators

National/regional public authorities	Educational institutions	NGOs	Private sector	European level
<i>More ambitious efforts in training of educators are necessary to foster more entrepreneurial competences among Europeans</i>				
Involve all educators and stakeholders in CPD at national and international level				
NEW ACTION: National budget earmarked for entrepreneurship education in CPD and funding streams to schools. Establish train-the-trainer programmes – training the trainers is a largely underdeveloped field in general and in EE in particular.	NEW ACTION: Include in strategic plans to ensure access to training for all educators in order to increase the entrepreneurial competences among themselves and their students.	NEW ACTION: NGOs can also train teachers in both EE methodology and pedagogy. They can also offer extra-curricular activities and open doors to stakeholders in the community.	NEW ACTION: Actions for initiating sustainable cooperation between education and business on a systemic basis to accelerate the change.	NEW ACTION: Initiate international mentor networks among teachers to be resources at the national level.
Leverage the EntreComp Framework in CPD for teachers				
NEW ACTION: Raise awareness of the EntreComp framework and ensure it is reflected in national EE plans and strategies. Promote the combination of entrepreneurship with other skills such as digital and STEM.	NEW ACTION: Raise awareness of the EntreComp framework in teacher training. Integrate tools and methods that strengthen entrepreneurial competences across different subjects so that it is a natural part of the curriculum.	NEW ACTION: Organize tools, programs and methods according to progression models and EntreComp framework to make them easier to use for schools.	NEW ACTION: Support out of school work experiences for teachers, including job shadowing - not only following but doing actual tasks.	NEW ACTION: Create European exchange/sharing platform for EE tools and methods for teachers, policy-makers, etc, connected to EntreComp + online engagement of stakeholders through e.g. webinars to present successful tools and methods.
Increased focus on the role of headteachers and principals in driving EE				
NEW ACTION: Encourage and support networks among principals in the different types	NEW ACTION: Principals to actively support teachers' CPD in entrepreneurial learning by	NEW ACTION: Facilitate the organisation of a network at national level among school	NEW ACTION: Support out of school work experiences for principals and headteachers,	NEW ACTION: Set up European networks and trainings for frontrunners among school

of education institutions.	including EE in plans and budget	leaders and principals.	including Job shadowing - not only following but doing actual tasks.	leaders and principals.
Tools for sharing of knowledge and raising awareness of EE amongst teachers				
	NEW ACTION: Overview and access to tools and methods, in a progression model connected to EntreComp and type of implementation		NEW ACTION: Identify and disseminate good practice about business-school partnerships in EE to the teachers.	NEW ACTION: Provide funding for pan-European teacher training courses for EE, and consider formal certification.

References:

- ICEE research
- Research from Elena Ruskovaara et al
- Input from workshops among European Entrepreneurial School educators
- Ruskovaara, E., & Pihkala, T. (2013). Teachers implementing entrepreneurship education: classroom practices. *Education+ training*, 55(2), 204-216.
- Penaluna, K., Penaluna, A., Usei, C., & Griffiths, D. (2015). Enterprise education needs enterprising educators: A case study on teacher training provision. *Education+ Training*, 57(8/9), 948-963.
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- Seikkula-Leino, J., Ruskovaara, E., Ikavalko, M., Mattila, J., & Rytkola, T. (2010). Promoting entrepreneurship education: the role of the teacher? *Education+ training*, 52(2), 117-127.

4. Cooperation and networking

Policy ideas and background

The policy item "cooperation and networking" may potentially be included under "leadership and strategy".

In the Entrepreneurship 2020 Action Plan there is a commitment to bringing together existing European and national expertise, and to help strengthening co-operation among countries. Output from the first two EE workshops indicates that such networking and cooperation should embrace several areas in order to successfully implement EE, to increase the exchange of information and good practice and to improve synergies between the many initiatives taken in Europe.

One focus should be on policy making, and on how to implement effective strategies at national and regional level, a second focus on cooperation among educators. Many teachers in the qualitative interviews in the ICEE research call for more cooperation and

knowledge sharing between teachers. Such organized knowledge-sharing can enhance teachers' awareness about why students succeed or are challenged.

The digital dimension also plays a key role in entrepreneurship education. The use of blended learning (combining face-to-face and online) can help to increase student motivation, learning's efficacy and help to simulate real-life situations where learners improve their skills and their problem-solving abilities. A space where teachers can access new tools and programmes, share their experience, and learn from their peers from across Europe is highly recommended.

Policy proposals

Accelerate and scale-up the sharing of good practice between countries:

- Ensure peer-learning between countries establish know-how and support for policymakers to advance entrepreneurship education.
- Collect, develop, and disseminate tools and methods to be used in the classroom to be recognized as European Best Practise.

In the pre-surveys among participants in the peer- learning workshops, the statement "European cooperation and support is important in our work with entrepreneurship education", had the highest positive score. The comments from the participants point to websites with teaching resources, to provide train-the-teachers events, networking, organize training and events.

The participants indicated that peer-learning among countries will advance entrepreneurship education but need to be organised. Expertise and guiding frameworks, recognitions and awards are all initiatives that can benefits of entrepreneurship and entrepreneurship education.

Increased knowledge about success stories can trigger similar developments in other countries and increase the quality of EE across Europe. Regional cooperation among countries can be a good base for sharing.

Based on input from multiple sources we would suggest to focus the work on following policy ideas in the area of "Cooperation and Networking".

- **Governments, educational institutions and NGOs:** Share success stories between countries, institutions and organisations and participate in peer-learning activities.
- **Businesses:** Share partnership models and implementation practice.
- At **European** level, organise peer-learning, recognise, and reward national efforts and raise awareness at European level on national good practices.

Specific policy recommendations regarding Cooperation & Networking

National/regional public authorities	Educational institutions	NGOs	Private sector	European level
<i>Ensure peer learning between countries, establish know-how and support for policymakers to advance entrepreneurship education</i>				
NEW ACTION: Take part in mentoring activities	NEW ACTION:	NEW ACTION:	NEW ACTION: Share partnership	NEW ACTION:

with relevant countries.	Share good implementation practice	Share partnership models and implementation practice	models and implementation practice	Organise peer-learning between countries to advance EE. Recognise and reward national efforts and initiatives at European level. Raise awareness at European level on national good practices.
<i>Collect, develop, and disseminate tools and methods to be used in the classroom to be recognized as European Best Practise</i>				
<u>NEW ACTION:</u> Nominate good practise from the national level to be recognised as European Best Practise including activities in Centres of Vocational Excellence.	<u>NEW ACTION:</u> Describe and share good practice	<u>NEW ACTION:</u> Through their national and international networks, describe and share good practice Establish matching platforms for educators to exchange experience.	<u>NEW ACTION:</u> Identify and disseminate good practice about pan-European business-school partnerships in EE, e.g. by multinational companies.	<u>NEW ACTION:</u> Establish criteria for "European Best Practise" and set up platforms for sharing. Set up exchange and sharing platform and tools for countries to exchange good practice. <u>NEW ACTION:</u> Provide European-level expertise and guiding frameworks for teachers, and facilitate the sharing of existing materials for teachers between countries.

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5. Awareness and visibility

Policy ideas and background

While academia, practitioners and policy makers alike generally acknowledge the benefits of providing entrepreneurship education at all levels of the education system, infusing entrepreneurship into education and mainstreaming entrepreneurship education in school and university systems pose significant challenges. From the EE literature review we

understand that one key issue related to integrating EE into curricula is **negative connotations of entrepreneurship (capitalism or commercialism)**. This includes reservations of key agents such as teachers, headmasters, professors, and students. Literature also finds that teachers raise the fear about negative effects of EE on students' performance in other subjects and reactions from parents.

Participants in our first two EE workshops have indicated that these challenges remain a major hindrance even if we can see there is plenty knowledge on the positive impact of EE as well as on tools, methods, and impact assessment that can help provide guidance and clarity for teachers and students to accept and embrace change.

Provided that more is done in the area of awareness-raising and visibility towards targeted stakeholders, teachers wishing to assess education impacts will also find frameworks such as the EntreComp Framework that can be used for the definition of parameters to assess learners' entrepreneurial competences of classroom EE interventions for teachers.

The ICEE research also showed that **awareness and visibility had a substantial impact on the schools**. When the schools substantially increased penetration (got up to 50%), most teachers at the test schools (both involved teachers and non-involved teachers) had a significantly more positive attitude towards EE. Teachers at the control schools scored much lower.

Policy proposals

Step up communication about the benefits of EE and increase its visibility:

- *Raise awareness through a powerful narrative.*
- *Systematic EE awareness raising campaigns involving all stakeholders in all countries acting as one voice.*
- *Rewards and labels.*

Entrepreneurship education is often understood and interpreted in relation to ongoing discussions about modern versus traditional pedagogy. This frame of reference is employed in addressing issues of curriculum, teaching method and assessment methods.

Several countries in the peer-learning workshops are in the process of implementing comprehensive educational reforms, in practice turning away from subject oriented learning and adopting a more competence-oriented approach. This way of learning is close to the learning-by-doing approach which lies at the heart of EE. Educational reforms based on a more competence-oriented way of learning and a national EE strategy can be major drivers at the national level of increasing the uptake of EE.

Awareness-raising will support the national EE actions **ensuring that EE is properly understood as teaching competences for creating value in general**, not only for starting a business. Frontrunners among schools, teachers, and principals should be recognised not only at the national level, but also at the European level through events and summits. EU must make sure to give such recognition high priority and in presence of high rank politicians and policymakers. Awareness-raising is also a way to reach parents, local communities, and businesses and to visualise the learning process and the pedagogical platform.

Based on input from multiple sources we would suggest to focus the work on the following policy ideas in the area of "Awareness and Visibility". The following ideas address various actors:

- At the national level, ensure that EE is properly understood as teaching competences for creating value in general, not only for starting a business.
- Raise awareness through campaigns at European, national, and local level.
- Initiate awards and recognitions European, national, and local level.

Specific policy recommendations / new activities regarding AWARENESS & VISIBILITY

National/regional public authorities	Educational institutions	NGOs	Private sector	European level
Raise awareness through a powerful narrative				
<p>NEW ACTION: Inform parents, students, and the general public about EE as a tool to train skills and competences needed in the labour force</p> <p>NEW ACTION: Initiate campaigns to underline that EE in schools can lead to both social, cultural and financial value in addition to reaching curricula goals.</p> <p>Work with media to raise awareness about entrepreneurship and EE.</p> <p>Promotion and media coverage (entrepreneurship weeks, projects, competitions).</p>	<p>NEW ACTION: Education institutions should make entrepreneurship education part of the plans of the school and communicate those plans to teachers, students, parents and the local community.</p> <p>NEW ACTION: Use media to create visibility for activities, achievements and 'success stories'. Organise seminars or conferences in which entrepreneurs share their experience with students in order to inspire and motivate them.</p>	<p>NEW ACTION: Seek out and promote valuable EE initiatives in the Vocational excellence network</p> <p>NEW ACTION: Supporting the national EE needs and actions in the areas of research, awareness raising, and developing cross-border initiatives to foster networks and communities of practice.</p>	<p>NEW ACTION: The Business Community and their intermediary organisations should co-operate with relevant public authorities, NGOs and education institutions to raise awareness of the benefits of EE in the future job market.</p> <p>NEW ACTION: Contribute to the narrative on EE, highlighting that "skills are the new currency" in the labour market.</p>	<p>NEW ACTION: Develop powerful narratives at European level for promoting EE as an important way to reach the objectives in the "New Skills Agenda"</p> <p>NEW ACTION: Support the national level in developing campaigns to underline that EE in schools can lead to both social, cultural and financial value in addition to reaching curricula goals.</p> <p>NEW ACTION: Raise awareness, recognize and reward efforts and initiatives that support entrepreneurship education at European level, such as:</p> <ul style="list-style-type: none"> - European summits for Entrepreneurship Education.
Rewards and labels				

<p>Raise awareness, recognize and reward efforts and initiatives that support entrepreneurship education at national level, such as:</p> <ul style="list-style-type: none"> - Summits for Entrepreneurship Education - Entrepreneurial School Awards 		<p>Promoting and strengthening the cross-border and global dimension of EE.</p> <p>European events for students.</p>		<p>NEW ACTION:</p> <p>Narrow down a criterion for getting a label for "Entrepreneurial Schools".</p> <ul style="list-style-type: none"> - European Entrepreneurial School Awards.
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6. Research and knowledge transfer

Policy ideas and background

Pan-European research is crucial to understanding the impact of EE, and has clear added value to national research. The pre-surveys to the two EE workshops clearly indicated a need for research about both the short-term impact of entrepreneurship education and its long-term impact e.g. on job creation and employability including dissemination of such research.

Teachers also need assessment tools and ways of evaluating students' performance and learning outcomes. Schools and teachers need tools to monitor their own progress. In the discussions in the workshops, it became clear that assessment is not widely used or accessible, in the form of methods or tools that educators use to evaluate, measure and document the learning progress and skills performance among their students participating in EE activities.

Entrepreneurship education is given a significant role in supporting the main goals of the European New Skills agenda and it is important to gather knowledge and evidence from across Europe and elsewhere that shows whether and how impact is achieved. The European EntreComp framework would benefit from complementary assessment and measurement tools for visualising effort and achievement.

Policy proposals

Support and promote pan-European EE impact measurement (including research, evaluation, and assessment) on short and long-term outcomes of EE

- *Research on impact & short and long-term outcomes of EE*

- *Establish an academic research stream for EE teacher training*
- *EE evaluation and assessment*

Based on input from multiple sources we would suggest to focus the work on following policy ideas in the area of "Research and Knowledge Transfer".

- **National governments and European level:** Support should be given to research activities to look into the short and long-term outcomes on skills and competences gained by participating in EE. Furthermore, fund research that increases the understanding about how to increase EE in initial teacher training.
- **European level:** Develop assessment tools for use among students and tools to help teachers to measure learning of skills and competences need to be developed.

Policy recommendations / new activities within RESEARCH & KNOWLEDGE TRANSFER

National/regional public authorities	Education institutions	NGOs	Private sector	European level
Research on impact & short and long-term outcomes of EE				
<p><u>NEW ACTION:</u> Initiate national research activities based on the competence framework (EntreComp)</p>	<p><u>NEW ACTION:</u> Promote and Initiate research on EE among master and PhD students</p>	<p><u>NEW ACTION:</u> Map research efforts in Europe and disseminate results.</p>	<p><u>NEW ACTION:</u> Disseminate research on the impact of EE in business conferences and in networks.</p>	<p><u>NEW ACTION:</u> European-level action to initiate and promote cross-country research on short and long-term outcomes of entrepreneurship education. <u>NEW ACTION:</u> Evaluate the effectiveness of national policies through pan-European research and sharing of good practice. priority actions.</p>
Establish an academic research stream for EE teacher training				
<p><u>NEW ACTION:</u> Establish special research areas for teacher training as it is a largely underdeveloped field</p>	<p><u>NEW ACTION:</u> Promote academic research about teacher training in EE in order to provide a solid decision base for Ministries</p>			<p><u>NEW ACTION:</u> Support pan-European academic research on teacher training</p>
EE evaluation and assessment				
<p><u>NEW ACTION:</u> Recognize and support the European effort to create a certificate of EE skills, that would involve</p>	<p><u>NEW ACTION:</u> Include assessment tools for students, teachers, and</p>	<p><u>NEW ACTION:</u> Support the work developing a common</p>		<p><u>NEW ACTION:</u> Coordinate the development of a common validation and certification system for</p>

and would be recognized by business and universities.	schools in their work with entrepreneurial learning.	validation and certification system for entrepreneurship education		entrepreneurship education for teachers and students, as well as European competence-based assessment tools.
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