

ENTREPRENEURIAL SCHOOLS

PART 1 - SELECTED INSTITUTIONAL
GUIDANCE AND QUALITY
MANAGEMENT APPROACHES

ENTREPRENEURSHIP360 THEMATIC PAPER

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THEMATIC PAPER ON ENTREPRENEURIAL SCHOOLS

PART 1

SELECTED INSTITUTIONAL GUIDANCE AND QUALITY
MANAGEMENT APPROACHES



TABLE OF CONTENTS

INTRODUCTION.....	6
Multi-layered governance around entrepreneurship education in schools.....	7
Challenges and opportunities for institutional guidance and quality management	9
Education systems are different	10
Aims and objectives of entrepreneurship education vary by stakeholders	10
Group discussions are a possible starting point for institutional guidance and quality management	10
A REVIEW OF EXISTING INSTITUTIONAL GUIDANCE AND QUALITY MANAGEMENT SYSTEMS.....	12
A brief presentation of selected institutional guidance and quality management tools	13
Measurement Tool for Entrepreneurship Education (Finland)	13
National Standard for Enterprise Education (England).....	15
Assessment Tools and Indicators for Entrepreneurship Education, ASTEE	17
The Entrepreneurial Skills Pass (ESP)	18
LAATURI (Finland)	19
Impact Evaluation Framework (England)	20
The Entrepreneurial School project (TES).....	20
ECEC, the Conscious Entrepreneurial Community School (Canada)	21
Comparative analysis of the selected institutional guidance and quality management tools	21
REFERENCES.....	25

Tables

Table 1.	Key questions and possible responses in developing school-based evaluation systems ..	11
Table 2.	Overview of selected institutional guidance and quality management systems	12
Table 3.	Question areas for learners in primary, secondary and tertiary education (ASTEE)	17
Table 4	Intended ESP learning outcomes	18
Table 5.	Comparison of the selected institutional guidance and quality management tools	22

Figures

Figure 1.	Entrepreneurship education as a multi-layered system	7
Figure 2.	Areas covered by the Measurement Tool for Entrepreneurship Education.....	14

INTRODUCTION

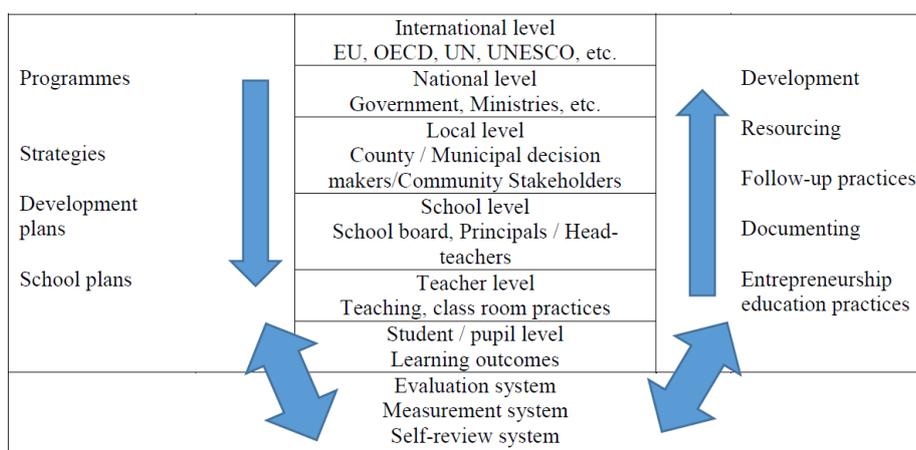
1. Policy-makers, together with practitioners and educators, have set great expectations for the benefits of entrepreneurship education, but its effectiveness has not been truly empirically grounded (Falkäng & Alberti, 2000; Kirby, 2004; Haase & Lautenschläger, 2011; Birdthistle et al., 2007; Hannon, 2007; Fayolle & Gailly, 2008). Because of the high expectations set at both EU and national levels, there is a great need for models of successful entrepreneurship education. The focus is on teaching practices that aim to create and enhance students' abilities to act responsibly, to be active, creative, and able to seize opportunities, to assess and take controlled risks, and to plan and manage projects of suitable sizes. The aim is also to help students observe society from the viewpoint of different players.
2. In line with this, institutional guidance and quality management frameworks are important to encourage the creation of the "entrepreneurial school" in which the culture of entrepreneurship is embedded in the fabric of the student experience. Both the formal and the "hidden" curriculum need to reflect the "can do" attitude that education aims to encourage. Teachers and school managers are the gate-keepers for this experience, which should be reflected in the learning outcomes. Institutional guidance and quality management systems for entrepreneurship education should be based on a four-fold approach that measures student learning, the preparedness of teachers and school managers, the institutional culture inside the school, and its external environment (e.g., key partners, types of partnerships).
3. Institutional guidance and quality management frameworks also enable making full use of innovations, benefits, and experiences reaped from successful development measures in the field. In addition, it is – or should be – in the interests of school management to identify different opportunities and gaps that exist in how to promote entrepreneurship as a key competence. Teachers have been found to have difficulties in identifying contents and means by which to respond to the challenges posed by entrepreneurship education (Seikkula-Leino 2006; 2007; Fiet 2001a; 2001b), and it seems that the concept of entrepreneurship education is, at least partially, an undefined and unexplored field (Ruskovaara, 2014). Therefore, a concrete, easy to use, and practical tool for guiding teachers' actions would be of great value. There are some examples of tools that, at the same time, evaluate teachers' practices, but also give concrete feedback on how to continue and develop further. Teachers have been reporting on the usefulness of such tools, and they highlight the importance of the feedback loop that is connected to self-evaluation (Seikkula-Leino et al., 2010).
4. There are a number of tools and methods that aim to capture different elements of the "entrepreneurial school". Those tools and methods vary to a great extent, as they have been developed to fit different contexts and purposes. We present in this paper a selection of tools and methods. We gathered feedback and comments from users, experts and other stakeholders concerned with entrepreneurship education and report in this paper their feedback on benefits and possible limitations of these tools and methods.
5. This paper is organised in two parts. First, we present our views on the multi-layered governance framework for introducing entrepreneurship education in primary, secondary schools and vocational education and training institutions. This provides the framework for the discussion of selected institutional guidance and quality management tools, which we briefly present and compare against each other in the second part of this paper.

Multi-layered governance around entrepreneurship education in schools

6. Many practically-oriented projects have been carried out to introduce entrepreneurship education as part of courses, single subjects and as cross-curricular activities in schools, at municipal or national levels. At the same time, it is also in the international and national interest that entrepreneurship education is developed in a more expansive and comprehensive direction, so that it can be steered, monitored, and facilitated more systematically than at present.

7. Introducing entrepreneurship education into different levels of formal education involves a large number of actors at different levels. Understanding the diverse and multi-layered nature of education is important with regard to the operation of the system. Figure 1 depicts the field of entrepreneurship education as a multi-layered system in which students that are expected to engage in entrepreneurial projects and business enterprise establishment. This consists of two different stages: firstly, from the goal-setting in the education system, starting from EU strategies and national curricula, to the altered daily teaching work of all teachers, and, secondly, from the teaching to the altered behaviour of the students in the years to come. Therefore, teachers are at a crossroads of several transformation processes embedded in entrepreneurial education. Teachers make the journey from the general aims of entrepreneurship education to their actual outcome, meaning increasing entrepreneurial activities in society, as they transform the aims of entrepreneurship education into teaching activities and into learning outcomes.

Figure 1. Entrepreneurship education as a multi-layered system



Source: Draws from Pihkala et al., (2009)

The role of international organisations

8. In the centre of Figure 1 different stakeholders which are involved to varying degrees in the definition of learning outcomes of entrepreneurship education are listed. This includes actors at different administrative levels (international, national, regional, local, institute/school), research and development organisations, and individual teachers.

9. At the highest level are the international organisations that devise guidelines, targets, and policies. They include the European Union, the OECD, the United Nations, and UNESCO. The impact of these actors mainly manifests itself as a need to modify national steering, also with regard to

standardised competence frameworks.¹ In addition, these actors collect information on good practices, such as for example the Educators Guide, published by the European Commission in 2014 in 20 languages.² To convey reference material for international comparison and to disseminate information on best practices, the communication of up-to-date information at national level is highly valued.

The role of national and local policy-makers

10. Actors at the national level include governments, ministries, and national decision-makers in the field of education. Together, individually and in collaboration with their partners, these actors define targets, strategies, and programmes to promote entrepreneurship education. However, the practical implementation of these measures at regional level is difficult. The regional and provincial levels of steering remain largely undefined. Depending on the region or country, provincial plans take a stand on the promotion of entrepreneurship in the area, and regional administration contributes to the funding of entrepreneurship education projects. However, policies differ a great deal between countries and regions.

11. Locally, goals and policies set at the national and regional levels are further defined to meet the practical needs of municipalities and federations of municipalities. Thus, entrepreneurship education can contribute, for example, to municipal industry and innovation strategies. In contrast, resource allocation for entrepreneurship education mainly takes place within the municipal performance guidance process.

The role of teachers

12. Not only do teachers have a “hands on” approach to entrepreneurship education, but they are also in the best position to evaluate the aims, actions, and outcomes of entrepreneurship education. In a classroom setting, teachers can, if they want to, receive the most recent and accurate feedback about entrepreneurship education actions from their students. They could also self-review their actions continuously. As setting targets for entrepreneurship education contains the idea of guiding the education in the desired direction, learning from previous actions is crucial in that process.

13. Therefore, we propose that teachers have a central role in operationalising entrepreneurship education, and more specifically, in finding the best practices. In order to develop and embed the theme in education systems, it will be crucial to further include entrepreneurship education in teachers’ initial and in-service training (European Commission, 2012; Ruskovaara & Pihkala, 2014).

14. The possibility of teachers and schools to implement new methods of entrepreneurship education that exert an influence in the area largely depends on municipal budgeting. In the case that entrepreneurship education does not receive external resources, its execution depends on the internal resources of the school, and on how active the teachers are. Lacking additional resources, entrepreneurship education will then be implemented in the form of separately funded projects.

¹ In the European Union, competence frameworks have already been established for transversal skills, such as for example, digital skills and language skills. A competence framework for entrepreneurship skills is under development.

² See <http://ec.europa.eu/DocsRoom/documents/7465>.

International guidelines, institutional guidance and quality management

15. Objectives and guidelines set by international actors, such as the EU, have influenced national entrepreneurship education strategies (European Union, 2004; European Commission, 2004; 2012; 2013a; 2013b; Commission of the European Communities, 2003; 2006; see also World Economic Forum, 2014). According to Eurydice (2012), most European countries have either a national strategy for entrepreneurship education, or countries mention the sense of initiative together with entrepreneurship as a key competence in their life-long learning strategies.

16. The bottom part of Figure 1 shows the role of a follow-up system through monitoring, evaluation and self-assessment. The absence of such a follow-up system would lead to a situation where the right and left parts are not connected. If instead a follow-up system is in place, documentation, resources and networking, as shown in the right column in Figure 1, are resulting activities, which can ensure an effective steering and an efficient utilisation of resources.

17. This also generates knowledge which is an important lever to expand the practice of entrepreneurship education within a school, a local economy, a country or within a wider context. Such knowledge includes individual entrepreneurship education tasks (quantity, quality, influence, duration, etc.), targets set by teachers for their own activity, successes and failures, resources used (project funding, etc.), students' learning outcomes, educational culture in schools that supports entrepreneurship, and cooperation with entrepreneurs.

Challenges and opportunities for institutional guidance and quality management

18. Countries have different backgrounds and histories in entrepreneurship education, where one country has been developing the theme for more than 20 years and another country is just aiming to start understanding what it is all about. Also among countries, there are different viewpoints on guiding entrepreneurship education. In one country, the theme has been actively developed for years, but there are no institutional or national guidelines; and in another country, the national core curricula set the aims for entrepreneurship education, and the curricula start from primary education and continue all the way to tertiary level. European countries are at different points in the sense of how entrepreneurship education is embedded – or whether it is embedded in national guidance frameworks or education systems. There can be guidance traditions when it comes to institutions, but no guidance, for example, connected to student, teacher, or management level. (For further reference, see, for example, Eurydice, 2012.)

19. Institutional guidance can be divided, at least, into two: operative-level support and management-level support. Operative-level support is targeted at different level teachers, and their students and/or pupils. Management-level support, on the other hand, is about guiding school managers or heads of education in education boards. In line with this, there are many viewpoints from existing guiding levels, like EU, country, municipality, regional, school/college, teacher, and pupil levels.

20. Different characteristics and needs for different school levels, countries, and cultures affect what and how guidance is useful. Similarly, different aims set for entrepreneurship education and expected outcomes are the characteristics that set the guidelines for what it is useful to guide, follow, and measure. Next, some main challenges and opportunities are discussed in more detail.

Education systems are different

21. School and education systems vary a lot, but there are some repeating elements. Internationally, education systems are, more or less, based on a learning concept in which learning is considered to be a result of the learner's active and focused actions, aiming to process and interpret received information in interaction with others, and is based on students' existing knowledge structures. When comparing different education systems, for example, the level of teachers' autonomy, the content of curricula, and how entrepreneurship is articulated (voluntary, mandatory, cross-curricula theme), vary a great deal. In addition, the education system and its specific characteristics can have different emphases, depending on whether it has been seen from the students', teachers', managers', or institutions' point of view. The pedagogy of entrepreneurship education is based on socio-constructivism, where students' active roles, and their engagement in learning, knowledge construction, and team collaboration, are of great importance (Finnish National Board of Education, 2003; 2004; Higgins & Elliott, 2011; Garnett, 2012).

Aims and objectives of entrepreneurship education vary by stakeholders

22. In the field of entrepreneurship education, there are many stakeholders: learners representing different generations, different school-level teachers, different level schools and training institutes, principals and other administrators, and local, national, and international decision-makers. They all seem to have different perspectives on entrepreneurship education. Primary and upper secondary-level teachers, school administrators, and other stakeholder groups have reported having a lot of practices and aims for entrepreneurship education, but also that they have difficulties identifying learning outcomes and achievements. Similar findings were made for teachers' aims, practices, and results (Seikkula-Leino et al., 2010). These seem to mix and overlap, and education practitioners were found to be uncertain of their aims. Therefore, a guidance framework would be of great help: it could partly enhance professionals' reflection skills; guide their learning in the field of entrepreneurship education; help them reflect their entrepreneurship education practices and aims; and help evaluate their actions as entrepreneurship education policy-makers and deliverers.

23. Although there are different aims for students, teachers, managers, and institutions, and they need to be concretised for different audiences, similar aims also need to be articulated differently for the different aforementioned stakeholders. It seems that the aims and goals of entrepreneurship education have been stated by decision-makers who may have only a slight connection with everyday school and teacher practices. Hytti and O'Gorman (2004, 12) argue that "policy makers and educators need a thorough understanding of the diverse and alternative aims and objectives of enterprise education interventions, of the alternative forms such interventions can take, and of the need to 'train the trainers'". In their study, Dreisler et al. (2003) present how policy-makers have used the number of start-ups as an index of entrepreneurial spirit. However, they argue that the number of start-ups has been fairly constant, despite different entrepreneurship policies, and therefore the policies and their effects need to be measured and clarified. It seems that policy-makers would benefit from knowing what kind of strategy would best ensure the required results, whether the aims are to have as many start-ups as possible, the creation of a more entrepreneurial culture, or ways to embed entrepreneurship education in schools, to name just a few.

Group discussions are a possible starting point for institutional guidance and quality management

24. Group discussions can be a promising route to establish a system of institutional guidance and quality management. Discussions can open new views of the phenomenon, and therefore they can be of great value in the sense of learning. Group discussions can play a crucial role when assessing the current situation, and, at the same time, can be used as a development tool. In that sense, group

discussion is more like an intervention and, therefore, participants might become really motivated and involved through discussions.

25. Although group discussion seems powerful, there are some obvious drawbacks. In group discussions, it is crucial to acknowledge the fact that the participants greatly influence how the discussion continues and what is discussed. For example, when the principal/head of education participates, most of the members highlight the themes that they presume the head wants them to bring into the discussion. Depending on the group dynamics, certain participants can also have a stronger influence on the results. Quite often, in such processes, not all the organisation's members participate and, therefore, the process as intervention is not so effective. Nevertheless, from the perspective of institutional-level guidance, that kind of process is of high value and can lead to the creation of development plans and further, concrete actions. When aiming to create new practices or develop existing practices, group discussion is one of the best ways to achieve this.

26. Table 1 presents a list of starter-questions and possible answers to kick-off a process of group discussions related to the establishment of an institutional guidance and quality management system.

Table 1. Key questions and possible responses in developing school-based evaluation systems

Key questions	Possible responses
Who are target groups?	<ul style="list-style-type: none"> • Students, teachers, principals, parents, partners • School's entrepreneurship education coordinator vs. 'average' teacher
What to guide, monitor and evaluate?	<ul style="list-style-type: none"> • Subject/course/activity level vs. school/institute level • Teaching practice, learning • Learning environments • Knowledge, attitudes, skills • Soft skills vs. hard skills • Intentions, behaviours • Teacher training • Planning, implementation, evaluation of education activities
When to apply the system?	<ul style="list-style-type: none"> • Before/during/(years) after educational initiative • Framework as part of an ongoing process, or used once
Integrated or completely new framework?	<ul style="list-style-type: none"> • Possibilities • Barriers • Expected results
How to enhance the use of the system?	<ul style="list-style-type: none"> • Internal and external resources (partnerships) • Voluntary vs. obligatory use • Selection of users (samples of users vs all users) • Options for reward and incentives for good performance, penalisation for negative performance
What are (intended) advantages of the system?	<ul style="list-style-type: none"> • Beneficiaries • Time frame of benefits • Part of overall development process • Forms and effects of feedback
Are there any disadvantages of the system?	<ul style="list-style-type: none"> • Costs • Reputation

Source: Authors.

A REVIEW OF EXISTING INSTITUTIONAL GUIDANCE AND QUALITY MANAGEMENT SYSTEMS

27. Mapping the landscape of entrepreneurship education activities in formal education leads one to realise the multiplicity of support and guidance available to teachers and school managers. In Europe, there are several international networks. For example, JA-YE Europe operates practically in 39 countries across Europe. JA-YE aims to inspire and prepare young people to succeed in a global economy. Within an even larger geographical context, the Network for Teaching Entrepreneurship (NFTE), originally from the US, operates globally and provides programmes that support young people, often from low-income communities, to stay in school and to plan for a successful future. The South East European Centre for Entrepreneurial Learning initiative (SEECLE) aims to foster an entrepreneur-friendly environment and strengthen the mind-set for building entrepreneurially literate societies that lead to sustainable economic growth and development in the south-eastern parts of Europe. All three initiatives work with teachers and school managers through long-term training and networks.

28. In addition, at the nation-state level, many countries are working towards strategies for the promotion of entrepreneurship education. There is still a somewhat greater emphasis on tertiary-level education but there is growing interest from lower education levels. Although different stakeholders seem to have a positive attitude towards the promotion of entrepreneurship in education, not all stakeholders seem to find a role of their own in that process. In other words, entrepreneurship is valued, but its promotion is, in many respects, outsourced to other players. "Entrepreneurship is important and interesting, but not for me, it is not my task..." are common remarks of teachers and school managers.

29. Also, there are different understandings of what is meant by entrepreneurship in education. The concept seems to be often understood in a narrow sense and with an emphasis on new venture creation, which probably is quite far from the basic education stakeholders' point of view. As an example of broad and narrow understanding, two basic education teachers from the same school with the same background, language and subject responded quite differently about how entrepreneurship education could be embedded into their teaching: one said "it has nothing to do with my teaching and entrepreneurship education is far from the pupils I teach", whereas the other teacher stated: "an entrepreneurial way of teaching and learning is easy to embed in all my classes, I love to see how pupils participate, engage with their learning, and challenge themselves".

30. Institutional guidance and quality management has at least three dimensions, that is, the learner or student perspective, the teacher perspective, and the school perspective, represented by the school manager. To date there are only few examples of institutional guidance and quality management systems that take all of these three dimensions equally into account. More common are approaches that focus on single dimensions, for example the learner's experience with entrepreneurship education, the teacher's preparedness, and the school's support in terms of resources, regulations and learning environments. In the following, eight examples of institutional guidance and quality management systems are presented. Table 2 provides an overview of the dimensions covered by these examples.

Table 2. Overview of selected institutional guidance and quality management systems

Name <i>Geographic coverage</i>	Teacher	School management	Learner

Measurement Tool for Entrepreneurship Education (MTEE) <i>National: Finland; International in pilot testing</i>			
National Standard for Enterprise Education (NSEE) <i>National: England</i>			
Assessment Tools and Indicators for Entrepreneurship Education, ASTEE <i>International</i>			
Entrepreneurial Skills Pass (ESP) <i>International</i>			
LAATURI <i>National: Finland</i>			
Impact Evaluation Framework <i>National: England</i>			
The Entrepreneurial School project (TES) <i>International</i>			
ECEC, the Conscious Entrepreneurial Community School <i>National: Netherlands</i>			

Source: Authors.

A brief presentation of selected institutional guidance and quality management tools

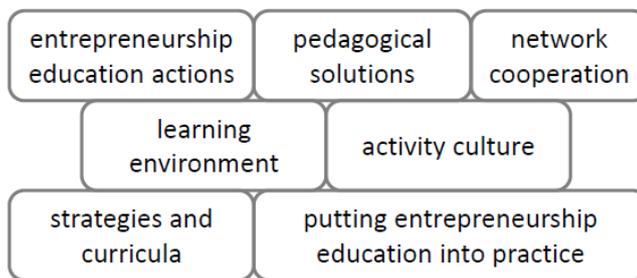
Measurement Tool for Entrepreneurship Education (Finland)

31. The Measurement Tool for Entrepreneurship Education is an online tool that contains approximately 140 questions constructed around concepts drawn from a theoretical framework. The tool is used by teachers as a self-evaluation system. The Measurement Tool for Entrepreneurship Education was developed in multiple stages between 2008 and 2012 by the Lappeenranta University of Technology and the Development Centre Opinkirjo, a third sector organisation active in teaching and education. Additionally, a group of basic and secondary-level teachers were recruited for the project, and they were involved in the construction process from the beginning. The initial project was completed in autumn 2012, but efforts have been continued thereafter in other national and international projects. The Measurement Tool was shaped by participatory action research and a case study; the collaboration and shared expertise of the users (teachers) and the designers (researchers) were central to this project.³

32. At the end of 2011, the Measurement Tool for Entrepreneurship Education was launched nationally for Finnish basic and upper-secondary school teachers. The tool gives detailed, personalised feedback to teachers concerning their current entrepreneurship education practices, and it gives ideas on how to develop as an entrepreneurship educator. It covers seven areas from the design of entrepreneurship education activities, pedagogical solutions and networks to the implementation of single education activities and complete courses (Figure 2).

³ A detailed description of the project and creation process can be found in Ruskovaara et al. (forthcoming).

Figure 2. Areas covered by the Measurement Tool for Entrepreneurship Education



Source: Authors.

33. The Measurement Tool for Entrepreneurship Education uses a database that automatically saves all the responses. The structure of the tool is built in such a way that the cumulative data can be downloaded at any time from the database and saved for analysis. The purpose of the Measurement Tool is to give the user an instant assessment of the responses. The feedback contains not only text, but also numerical results and comparisons with other teachers presenting the same education level. The tool also works as a data-gathering system for research purposes. The researchers have unlimited access to the data source.

34. The Measurement Tool for Entrepreneurship Education is widely used in Finnish basic and upper secondary-level schools, and pilot testing started in more than twenty European countries as part of the Entrepreneurial School project (TES), which will be introduced further down in this paper.

35. We interviewed several teachers, principals, and policy-makers about their experience and with and expectations from the tool. All reported that it is useful to enhance teachers' reflection skills and, by doing that, to guide their learning in the field of entrepreneurship education practices. A self-evaluation system with instant reporting and data saving seems to be a practical tool.

36. Teachers have reported that a self-evaluation system helps them to understand the phenomena of entrepreneurship education. Further, the tool encourages them to develop as entrepreneurship educators. In that process, the automatic feedback loop is valuable, and the possibility to compare one's answers at different stages is reported as being very useful.

"Self-evaluation is part of a teacher's expertise and a prerequisite for its development. Teachers often work alone in a classroom. Therefore, they must be able to examine their own work in order to identify targets for development. The Measurement Tool for Entrepreneurship Education gives teachers the chance to gain systematic feedback on their work." Teacher, Upper secondary school

"The Measurement Tool for Entrepreneurship Education provides instant feedback that enables using it in the actual development work. I personally intend to use this tool in leading the school. The tool produces a checklist that I go through every six months. I gain information from the management point of view and on what kinds of inputs are suitable for each group. The self-evaluations from the teachers also provide beneficial background information for development discussions." Principal, Lower secondary school

37. As negative aspects, teachers mentioned mainly two things. First, the concept of entrepreneurship education is not always understood broadly. When understood narrowly, the concept

has been connected to business creation, which is obviously quite far from the work of a primary school teacher. This has been reported as one reason why lower school-level teachers are not too keen on getting familiar with the tool. The second challenge is connected with time. It takes about 15 minutes to answer the tool's questions. Although it doesn't sound that long time, some teachers say that they would prefer something that can be utilised in 5 minutes. These challenges have been addressed in the Entrepreneurial School project (see below), where the Finnish tool has a new name and a condensed questionnaire that can be completed in half of the originally required time.

National Standard for Enterprise Education (England)

38. The National Standard for Enterprise Education (NSEE) was introduced by the Centre for Education and Industry (CEI) at the University of Warwick in 2010, to support schools implementing enterprise education. The Standard helps schools to determine their own vision of entrepreneurship education and, through mentoring, to realise it in a way that suits their students and ethos. It is an audit tool that enables schools to review their existing provision and 'label' enterprising activities. The Framework also aims to assist school managers with action planning, providing preform as to support the identification of gaps in provision, and developing strategies to address the perceived deficiencies.

39. School managers using the NSEE consider it to be a supportive approach that aims to celebrate existing provision and identify opportunities for further development. Too often, frameworks seem to start from the critical stance of identifying problematic/inadequate provision. Instead, NSEE requires a team approach with inputs from a range of staff, including senior managers. Community involvement is also a core requirement, with a realistic approach to the demands placed on schools when they aim to engage and involve employers in the process. It moreover provides for pupil voice and engagement, with students participating in the evidence gathering and analytical processes.

40. The NSEE framework consists of 35 questions with supporting criteria (the CEI 35) and a "lite" version of 10 essential requirements for effective enterprise education, the so-called CEI 10. The review process includes a comprehensive audit of the learning activities provided across the curriculum, with a focus on four themes:

- Vision of enterprise education – concept and communication
- Planning and management of enterprise education
- Delivering an enterprise education curriculum
- Assessing and evaluating enterprise education

41. The final step requires the provision of a case study of one specific example of good practice in enterprise education, involving pupils in activities covering the four main stages in an enterprise process: identifying a need or tackling a problem, planning, implementation, and evaluation.

42. Some schools choose to use the documentation for self-review purposes only. Those who decide to submit for formal assessment are asked to put together a portfolio of evidence that confirms that key policies or activities are in place, which support:

1. An understanding of and commitment to the concept and communication of enterprise education in the school
2. Carrying out an audit of enterprise activities in the school or college

3. Planning and managing enterprise work
4. Enterprise learning in a number of different ways in the school
5. The evaluation and assessment of student development as a result of enterprise activity.

43. Schools in England are able to access the National Standard for Enterprise Education free of charge from the Enterprise Village web site. The NSEE is also available as a free-access resource through the Entrepreneurial School project. For example, the NSEE has been trialled in two schools in Finland. Interestingly, the schools, one primary sector and one secondary school, both subsequently celebrated their success with the award and communicated this to a broad national audience.

44. NSEE is a framework that works as well for schools at an early stage of development as for those at a more mature stage, and a diagnostic approach that supports schools when applying for additional funding/resources.

45. In summarising the various user satisfaction surveys that have been undertaken, the following frequently mentioned aspects include:

- A broad approach to enterprise education that encompasses a range of enterprising activities way beyond company start-up
- Adoption of a whole-school approach that assumes enterprise education can and does occur across the full range of subjects, as a cross-curricular theme and as an extracurricular experience
- Recognition of the powerful impact of the 'hidden curriculum' and the need for students to take on responsibility for their own learning
- A strong focus on pedagogy, with an assumption that 'how' students experience their enterprise education is in itself a vital and necessary component of achieving successful learning outcomes
- Ease of use in terms of Plain English, avoidance of jargon and quick completion
- A design by developers with a real understanding of student learning and the school experience
- Addressing of context for teaching as well as content of learning

46. The NSEE requires a certain level of dedication from schools to engage in the process. To be taken into consideration are for example the workload implications for teachers who are already fully committed to other activities and agendas, and the need to engage and justify the involvement of a broad range of school staff, some of whom may fail to understand the relevance of enterprise education to their subject area. The auditing that may identify gaps in provision and raise unrealistic expectations about the provision of additional resources in a time of austerity.

47. The NSEE provides a response to the common "where next" question, particularly for schools that identify and subsequently wish to celebrate their excellence in enterprise education. English schools have access to an enterprise education award scheme as an integral part of the NSEE,

which supports schools in building a portfolio of evidence that can be submitted for assessment and validation.

Assessment Tools and Indicators for Entrepreneurship Education, ASTEE

48. ASTEE, which is the abbreviation for assessment tools and indicators for entrepreneurship education, is the result of a project co-funded in the period 2012-2014 by the European Community and the Competitiveness and Innovation Framework Programme (CIP). ASTEE is led by the Danish Foundation for Entrepreneurship - Young Enterprise Denmark.

49. ASTEE developed a set of common European tools for measuring the impact of entrepreneurship education (EE) on students’ entrepreneurial competencies across all educational levels. In a preparatory research phase key learning outcomes were identified and tested at the primary, secondary, and tertiary levels in several EU countries.

50. Different questionnaires were developed for learners in primary (10-11 years), secondary (16-17 years) and tertiary education (20+ years). The questionnaires cover the areas entrepreneurial knowledge, skills and mind-set, connectedness to education, and to future career (Table 3). The questionnaires are freely available in ten European languages at <http://asteeproject.eu>.⁴ A large-scale test of the questionnaires was implemented in 2014 in 13 countries, resulting in 4 900 responses. The data was subsequently analysed using a number of statistical tests.

Question areas for learners in primary, secondary and tertiary education (ASTEE)Table 3.

Dimensions	What is measured?
Entrepreneurial knowledge	Entrepreneurial knowledge is measured by a single construct, which focuses on the respondent’s perceived knowledge about entrepreneurship.
Entrepreneurial skills	Entrepreneurial skills cover both cognitive and non-cognitive skills required in the different phases of an entrepreneurial venture. A number of constructs are used to capture these skills: Creativity, Planning, Financial literacy, Marshalling of resources, Managing ambiguity, and Teamwork.
Entrepreneurial mindset	Entrepreneurial mind-set is measured by the validated Core Self Evaluation measure, which in three constructs captures the individual’s core sense of being able to perform challenging tasks: General self-efficacy, Locus of control, and Self-esteem.
Connectedness to education	Connectedness to education focuses on the student-teacher relationship and is measured by a single construct.
Connectedness to future career	Entrepreneurial intentions and behaviour are measured with questions about the student’s connectedness to future career. This includes questions to their enterprising activities, work experience, preference for intrapreneurial work assignments as well as intentions to start up a company.

Source: ASTEE; <http://asteeproject.eu/results>

51. Teachers, who wish to evaluate their influence of their educational design, that is, their pedagogy, learning environment and teaching content, can use ASTEE for this. Questionnaires can be downloaded from the Internet and administered for pencil and paper completion. An electronic survey and data analysis service is currently been developed by the Danish Foundation for Entrepreneurship.

⁴ The questionnaires for the three age groups are available online in Croatian, English, French, German, Italian, Polish, Portuguese, Romanian, Spanish and Swedish.

A booklet, which explains how the effect of different educational designs can be evaluated is also available on the website.

The Entrepreneurial Skills Pass (ESP)

52. The Entrepreneurial Skills Pass (ESP) is an international certificate that is issued by CSR Europe, EUROCHAMBRES, JA-YE Europe and its member organisations. It certifies that students, aged between 15-19 years, have gained a real entrepreneurship experience and learned entrepreneurial knowledge, competencies and skills. ESP includes a full year of in-school mini-company experience, a self-assessment and an online examination of business, economic, and financial knowledge.

53. ESP ran as a pilot programme during the school year 2013-2014, with almost 2 000 students from 16 countries participating. Since then national Coordinators have been appointed in Austria, Czech Republic, Denmark, Estonia, Greece, Italy, Malta, Romania, Slovakia, and Switzerland to help school managers and teachers with the one-year mini company programme and additional education activities, which they may choose to offer. Additional learning materials will also be available for both teachers and students in the near future.

54. The self-assessment includes three tests. Questionnaires are available in Czech, Danish German, Estonian, Greek, Italian, Maltese, Romanian, and Slovak languages. Students undertake the first test prior to the one-year mini-company experience, the second one during, and the third one at the end of the year. JA-YE Europe created an online platform to gather and to compare the survey data. It is expected that in above mentioned countries 250 000 students will participate per year.

55. The final step of ESP is the online examination, which students can take on the online platform (<https://exam.entrepreneurialskillspass.eu/esp/>). Teachers use the platform to administer the exam, answer questions, and to deliver the final certificate.

56. Table 4 gives an overview of the intended learning outcomes covered by the Entrepreneurial Skills Pass programme.

Table 4. Intended ESP learning outcomes

Mini-Company Programme experience in school	Self-Assessment of competences	Final exam of knowledge and skills
<p>Company structure and roles: <i>I know how companies are structured</i></p> <p>Idea generation and business opportunity: <i>I know how to evaluate an idea and how to turn it into a business opportunity</i></p> <p>Customer/User Focus: <i>I understand why customer/user focus is so important for an entrepreneur</i></p> <p>Marketing Strategies: <i>I can explain the concept of marketing and I know there are various marketing tactics techniques and resources</i></p>	<p>Creativity: <i>I have ideas and I am creative</i></p> <p>Self-confidence: <i>I feel confident about myself</i></p> <p>Taking initiative: <i>I am able to take initiative</i></p> <p>Teamwork: <i>I can work in a team</i></p> <p>Resourcefulness: <i>I have the resources to deal with the influence of external factors and I can take an action accordingly</i></p> <p>Perseverance: <i>Despite difficulties, I am able to persevere towards the achievement of my goals</i></p>	<p>General understanding of organizations: <i>Entrepreneurship; vision, mission and ethics; structure; leadership, competence in a team; value of ICT, personal development</i></p> <p>Main steps and legal requirements: <i>Business life cycle, starting up, operating, liquidation, Intellectual Property Rights (IPR)</i></p> <p>From the idea generation to the market: <i>Idea generation, business opportunity, kinds of innovation, market research, selling strategies, marketing strategies, internationalization, business plan</i></p> <p>Financial Resources & Budgeting: <i>Funding opportunities, costing and</i></p>

Business Plan:

I am able to create a business plan

Design and Production:

I am able to coordinate the production of a product or the implementation of a service

Sales strategies:

I am able to identify effective sales strategies

Financial literacy:

I understand the financial aspects of entrepreneurship and how a business generates profit

Presentation techniques and communication skills:

I know how to present my idea to possible stakeholders

Taking responsibility:

I am conscious of my actions and take responsibility for them

pricing, budget and financial analyses, key terminology

Source: ESP; <http://entrepreneurialskillspass.eu/components>

57. Students who participated in all three ESP elements and correctly answered 70% of the questions in the online examination will get a final internationally issued certificate. The final certificate has a QR code which students can use to download multiple certificates and to embed it in their LinkedIn profile. Human resource managers of private firms and public organisations can use the QR code to check the validity of the certificate.⁵

58. Giving students a standardised form of recognition of their entrepreneurial skills and competencies provides them with a competitive advantage in entering the job market, and employers recognising ESP benefit from a uniform and certified standard that meets their requirements for qualified and committed staff with basic business skills. This is greatly welcomed by private sector employers as these testimonials confirm: *“ESP has a great potential and in the long run it can become a strategic tool and a CV booster for those students who are looking to get their first job.”* Barclays *“We need as future employers to be able to evaluate the level of the soft skills and to be sure that when we decide to take somebody on board he/she will have the minimum set of skills expected. The certification process is something which is really important.”* SAP.

LAATURI (Finland)

59. Laaturi is an assessment tool for students, aged 12-16 years, which was developed by the Oulu University Teacher Training School in Finland and can be used individually by students and assisted by their teacher. The latter allows teachers to evaluate the. Questionnaires for students and teachers are freely available in the Finish language on www.yvi.fi/itsearviointi.

60. The goal is to encourage pupils to work independently and in the spirit of entrepreneurship, and to help other pupils and the whole group to achieve their objectives. By providing feedback to teachers about the quality of their teaching, Laaturi aims to measure the quality of teamwork and how the actions of individual students affect the learning of other students and of the whole group.

⁵ See <http://entrepreneurialskillspass.eu/components/online-exam/final-certificate>.

Impact Evaluation Framework (England)

61. The Impact Evaluation Framework is a new tool, which is currently being developed by Ready Unlimited, in partnership with the Centre for Education and Industry at the University of Warwick and the Centre for Education and Training at Lappeenranta University of Technology. Ready Unlimited was launched in 2005 by the Rotherham Metropolitan Borough Council as a school improvement programme for young people 4-19 years, to develop skills, attitudes and behaviours through enterprising and entrepreneurial learning. Today, it is an independent social enterprise which has trained approximately 1 800 teachers. The Centre for Education and Industry at the University of Warwick and the Centre for Education and Training at Lappeenranta University of Technology are the leading organisations of the above mentioned NSEE and the Measurement Tool for Entrepreneurship Education. The project team is working closely with practitioners (teachers and school managers), whose feedback was very valuable for the development of the framework.

62. The Impact Evaluation Framework captures current achievements and activities related to entrepreneurship education to triangulate the data and information gathered from school management, teachers and learners in order to get a holistic view of what is happening within a school. It is based on what actors at these three levels are actually doing (rather than self-reporting what they think they are doing/their attitudes etc.). This provides a baseline and a measurement for future progress and development with regard to (i) learning outcomes at student level, (ii) education activities (teachers), and (iii) resources, regulations and learning environments (school management).

63. The framework covers the following areas: Ideas, Planning, Activity, and Capability. Each survey question is focused on an action or activity; for example, a question for head teachers asks whether they have an enterprise education policy, a question for teachers asks if they take local and regional industry strategies into account when they plan entrepreneurial learning for students, and a question for students asks whether they meet local business people and entrepreneurs. It not only enables those completing the surveys to measure what is and isn't there, but each question is a concrete and easily understandable action that can be undertaken by respondents.

64. Survey data is presented to respondents in the form of pie charts. Teachers say that the presentation of the data in pie charts gives a reassurance that they are already doing some of the actions required to create entrepreneurial learning, and then directs action towards the pie charts that indicate gaps in practice and provision. This means the effort and resources are spent thinking about how to develop what is not happening, rather than 're-inventing the wheel'. Even schools that felt they were far along their enterprise education journey reported that they found new areas of development by scrutinising their provision in this level of detail.

65. The Impact Evaluation Framework is currently available only to a group of pilot schools. Early-stage feedback from users suggests that the tool has great potentials because it aims for the triangulation of evidence sources. For example, teachers who have tested the tool commonly reported that capturing student views is "gold dust", which has enabled them to sense-check their own perceptions and reflect on who may and may not be benefitting from their entrepreneurship education activities and adjust their practice accordingly.

The Entrepreneurial School project (TES)

66. The Entrepreneurial School project (www.theentrepreneurialschool.eu) and its Virtual Guide for Entrepreneurial Learning (www.tesguide.eu) is supported by a consortium of 15 partners and funded by the EU's Competitiveness and Innovation Programme. TES hosts a community of practice for teachers from 18 countries, which is expected to grow to approximately 4 000 teachers in the next

couple of years. School managers and teachers can access the above mentioned self-assessment tools (i.e., Measurement Tool for Entrepreneurship Education and National Standard for Enterprise Education), and search a database of more 100 tools and methods of how to organise entrepreneurship education.

67. Teachers report that using the search facility of TES allows them to easily find what they are looking for in terms of syllabi, teaching material and contacts to peers. Also, the international dimension of TES is highly valued. Many schools today have a "global agenda" and are thus looking for platforms, such as TES, to find twinning partners for teacher and student exchanges.

68. TES also offers teachers the opportunity to share their own materials with other practitioners across Europe. Mapping the development and take-up of this aspect of the project will give a good indicator of the potential for offering teachers this sort of "swap-shop".

ECEC, the Conscious Entrepreneurial Community School (Canada)

69. ECEC is an international network, with headquarters in Québec, Canada, that supports schools in the development of a conscious entrepreneurship culture that encompasses responsibility, ethical and just prosperity, greater social justice and aims to enhance students to contribute to the creation of sustainable economies. Throughout the province of Québec, ECEC supports a network of elementary and secondary schools⁶ and maintains effective partnerships with the unions and teacher organisations.

70. ECEC works closely with the school managers of the individual schools and also with the inter-school network of school managers and teachers. It uses for this an evaluation scheme with seven 7 strategic axis and 21 components. The strategic axes are: (1) structural base; (2) pedagogy; (3) quality learning; (4) global health of the child; (5) school-family-community partnership; (6) recognition and appreciation; and (7) shared mobilising leadership and progress monitoring. Schools are accompanied for a period of 12-24 months in making progress in all or several of the strategic axes. After this period, the schools participate as peer-schools providing assistance to other schools in the network.

71. ECEC regularly assesses the impact of their activities on students and learning environments. 97.5% of teachers observe an improvement of motivation in students, and 66% of students claim to be more interested to come to learn in school. The same proportion of students says that ECEC specific activities help them to improve their academic results. Both groups report that the classroom atmosphere has improved, and educational staff's motivation, mobilisation, and enthusiasm have grown. Teachers and school managers express their happiness to come to work in their school, and also parents and external stakeholders provide positive feedback on the ECEC engagement of the school.

Comparative analysis of the selected institutional guidance and quality management tools

72. Next, the above presented eight institutional guidance and quality management tools are compared with regard to the following questions:

- Who are the users?

⁶ See as examples of the ECEC Québec network the elementary school Beau-Séjour <http://www.ecolecsmb.com/beausejour/>, and the Félix-Leclerc secondary school <http://www.ecolecsmb.com/felixleclerc/>.

- What does the tool guide/measure?
- Nature of the tool and evaluation approach?
- Purpose of the tool - evaluation, development, certification of own skills etc.?

Table 5. Comparison of the selected institutional guidance and quality management tools

Tool	Users	What	Evaluation approach	Purpose
Measurement Tool for Entrepreneurship Education (MTEE)	Teachers	<ul style="list-style-type: none"> • Education design • Teaching style 	Web-based self-assessment with automated report	Provide feedback, measure progress over time
National Standard for Enterprise Education (NSEE)	School managers, Teachers	<ul style="list-style-type: none"> • Embedding of entrepreneurship education in education • Learning environments 	Expert-assessment, printable auditing documents (used by external auditor) Online self-assessment tool	Support schools in implementing entrepreneurship education
ASTEER	Students (10-11 years, 16-17 years, 20+ years), Teachers	<ul style="list-style-type: none"> • Students: Entrepreneurial intentions, skills, knowledge • Teachers: effect of education design on students (see above) 	Web-based and printable versions	Measures impact of entrepreneurship education on students' entrepreneurial intentions, skills, knowledge
Entrepreneurial Skills Pass (ESP)	Students (15-19 years)	<ul style="list-style-type: none"> • Entrepreneurial intentions, skills, knowledge 	Online tests and final exam	International certificate of entrepreneurial experience and associated learning outcomes
LAATURI	Students (12-16 years) Teachers	<ul style="list-style-type: none"> • Students: Learning outcome achievement, learning in teams • Teachers: effect of education design on students 	Printable questionnaires	Measures impact of entrepreneurship education on students' entrepreneurial intentions, skills, knowledge
Impact Evaluation Framework	School managers, Teachers, Students	<ul style="list-style-type: none"> • Education design • Teaching style • Students: Entrepreneurial intentions, skills, knowledge 	Printable questionnaires	Triangulation of education design, teaching style, and students' reactions
Entrepreneurial School (TES)	School managers, Teachers,	<ul style="list-style-type: none"> • Education design 	Web-based and printable versions	Support schools in implementing

	Students	<ul style="list-style-type: none"> • Teaching style • Students: Entrepreneurial intentions, skills, knowledge 		entrepreneurship education
Conscious Entrepreneurial Community School (ECEC)	School managers, Teachers, Students	<ul style="list-style-type: none"> • Education design • Teaching style • Students: Entrepreneurial intentions, skills, knowledge 	Expert-assessment	Support schools in implementing entrepreneurship education

Source: Authors.

73. The tools evaluated have been developed for very different aims, even if they share the same interest in developing entrepreneurship education. However, the tools differ from their approach to the field, and in that sense, they provide a very different approach to being "fit for purpose". Two distinct strategies can be identified. The first builds on the normative expectations set at the policy level and operationalising them to be followed in practice. The second approach builds on the practice-based understanding of the field in real-life learning contexts, and allows for input from a range of stakeholders. Frameworks that are unwieldy, time consuming, and/or unnecessarily wordy will deter practitioners from giving a full account.

74. The guidance instruments mostly build on the data collected from the users themselves. Because of this, the approach of the tools in making an impact is dominantly in the form of a questionnaire (MTEE, NSEE, ASTEE, Impact evaluation framework, TES), some of which are web-based and some printable. The rest of the tools rather appear as a set of deliverables, such as a system, module or scheme (ESP, ECEC, CEM). These approaches all seem rather scalable, although the challenge of localising and contextualising the instruments for each national context leads to narrowing down the potential diffusion of the tool. From this perspective, at least MTEE, NSEE, ASTEE, TES, and ESP have international applications and experiences in modifying the tool for the local circumstances.

75. The overview of the state of the art of institutional guidance for enterprise education shows advances especially in holistic, systemic, and international characteristics. In general, the tools seek to develop the teaching, learning, institutional, and local cultures to encourage the creation of the 'entrepreneurial school'. The concept of the entrepreneurial school refers to institutions in which the culture of entrepreneurship is embedded in the fabric of the student experience. Both the formal and the "hidden" curriculum need to reflect the "can do" attitude that the school is aiming to encourage. Teachers and principals are the gate-keepers for this experience, which in turn should be reflected in the learning outcomes. All of the above suggests a tripartite approach to guidance instruments in entrepreneurship education, which gauge student learning, teacher/principal preparedness, and the institutional culture and environment. Some of the tools detailed in this paper focus on only one or two of these areas, while others attempt to cover all three.

76. Most of the tools evaluated are very systemic and holistic in their character. That is, they agree that practitioners/users should be able to identify the full extent of their provision, including not only the prescribed curriculum, but also the informal culture and environment in which the learning is located. It is evident that in the forthcoming guidance tools, there is also a need to support users in identifying their vision for entrepreneurship education, and how this vision informs and steers the planning, delivery, and evaluation of the entrepreneurship education experience. In addition to an

account of WHAT it is hoped will be learnt, there should be supporting evidence relating to WHY these approaches were adopted, and HOW they are delivered and assessed.

77. Some of the tools are based on diagnostic elements – that is, they provide users with access to appropriate criteria by which to judge their provision. While an audit may serve to highlight gaps in provision, it should also offer the opportunity to celebrate success. One approach might be to identify a minimum standard required of an ‘Entrepreneurial School’, backed up with a set of criteria against which to judge the institution. This could allow for both ‘self-review’ or external assessment procedures.

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