

THE OUTWARD LOOKING SCHOOL AND ITS ECOSYSTEM

ENTREPRENEURSHIP360 THEMATIC PAPER

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INTRODUCTION

1. It is evident: entrepreneurship education is a rapidly growing field. Across the European Union its growth is mirrored in the quantity of publicly supported offers – in higher education (European Commission, 2008), in primary and secondary schools (European Commission, 2013), and a multitude of initiatives and governmental support to build entrepreneurial skills through new and creative ways of teaching and learning (European Commission, 2010).

2. To help build these skills, actors of entrepreneurship education need to take a closer look at key issues and questions to design and implement entrepreneurial learning environments. Those *are dealt with in the four thematic papers*. As part of these key issues, we need to look at how entrepreneurial learning is anchored *inside* the school and its various resources; we need to explore *how* education proceeds to build an entrepreneurial mindset; and how motivation, competences and skills are built to grow and start entrepreneurial ventures. And finally, we need to look from the inside out and see the embeddedness of education into the surrounding environment and its rich variety of actors - which is tempted by this paper.

3. Today, schools are expanding their connections to the outside world and there is some steering from public policy behind this. For example, in Europe it is the European Commission who demands for all young people to "benefit from at least one practical entrepreneurial experience before leaving compulsory education" (European Commission, 2012). Being an outward looking school is essential in this, since any entrepreneurship activity is located in a real life context and education needs to understand the systemic nature of interactions and connections beyond the physical borders of the classroom.

4. In this paper, we are looking at entrepreneurial education as it takes a broader perspective on learning and involves a wide spectrum of actors from inside and outside the school. And more importantly, all stakeholders of education are consciously or unconsciously involved in a collaborative learning process: they are part of an educational ecosystem. In this paper we look at ecosystems of entrepreneurial education with the overall objective to stimulate entrepreneurial learning processes. We will consistently use the term "entrepreneurship education ecosystem" to address an environment of entrepreneurial learning – regardless the discipline of the school and the age of learners.

5. Now, why are we looking at ecosystems to develop the outward looking school? Let us make a conceptual analogy: in ecology ecosystems consist of a systemic community of living organisms which interact with the non-living elements in their environment. These biotic and abiotic components are regarded as linked together through nutrient cycles and energy flows. Ecosystems are defined by the network of interactions among organisms, and between organisms and their environment. They can be of any size but usually encompass specific, limited spaces (Chapin and al., 2000). In the world of education, ecosystems may be defined as the full variety of actors (i.e., living species) and all non-living elements in use for education through teaching and learning. The full variety of actors involves the population inside school (mainly teachers, principals, students, other staff) as well as the population outside school (entrepreneurs, associations, institutions, parents, families, friends and private persons etc.). The non-living (abiotic) elements inside this milieu are defined by all available material means (buildings, classrooms, external locations, tools, IT resources, etc.) and they influence the nature of interaction of populations. All these populations are connected through networks. They form together a meta-population and inhabit the same milieu. In the entrepreneurial school, the nature of this milieu is characterised by a shared entrepreneurial context.

6. Why is this important? As actors involved in entrepreneurial education, we need to ask ourselves how well do we know the living environment in which the education takes place? And do we really know how and why this environment has emerged? In this paper, we will provide answers to some key questions of teachers and principals across all levels of education:

- What are the key components to understand the ecosystem?
- What does the ecosystem of my school look like?
- How can I change/transform the current dynamics of the system?

7. To respond to these questions we use the concept of ecosystems as a metaphor to model the dynamics of an entrepreneurial learning environment. We provide concrete tools and a framework for reflection to practitioners which allows them to create and/or transform their respective learning environments in a self-directed process. We depict the single components and actors involved in these ecosystems and explore the potential dynamics of their interactions. The objective is to enable head teachers, entrepreneurship educators and policy makers to design and reflect on a learning environment that fits best with their individual context and aspirations. We start by looking at the scientific roots of ecosystems and their importance to understanding the functioning of complex environments. We then take the biological origins of the term to an entrepreneurial learning environment and apply scientific reflections to a real-life context.

8. This paper offers guidance for reflection and analysis of your own schools' ecosystem – which is unique and different from any other. The aim is to link research and action by helping educators and decision makers to build and better manage entrepreneurship education ecosystems.

ECOSYSTEMS AND PARALLELS TO ENTREPRENEURSHIP EDUCATION

What are we talking about when we talk about ecosystems?

9. The notion of ecosystems was first mentioned in 1930 by the British botanist Arthur Roy Clapham (Willis, 1994). In 1935, the term found greater resonance through a publication of another botanist, Arthur Tansley (Trudgill, 2007), who more specifically looked at the exchanges between living organisms and their environment inside the ecosystem. Ever since, the concept of ecosystems has been studied from multiples perspectives – for example through analysing the goods and services provided to human beings (Daily et al., 2009), or the management of resources to promote sustainable ecosystems (Chapin et al., 2000). Due to a couple of intellectuals such as Edgar Morin (Morin and Hulot, 2007), the concept of ecosystems gained paradigm status covering the complex interactions between its living and non-living components. This new dimension of the term lends itself to exploring the metaphoric potential of biological ecosystems for other disciplines. Amongst others, the field of entrepreneurship adopted the concept.

10. It is important to mention the work of Aldrich et al. (2008) on the introduction of Darwin's evolution theory into the field of entrepreneurship. Both are closely connected since they demonstrate the under-researched potential of work from natural science to understand action processes within their

emerging context. More recently, Nambisan and Baron (2013) studies how entrepreneurs, in an ecosystem, activate cognitive strategies and develop processes of self-regulation to adapt to their environment. For example, when a business owner needs additional financing and turns towards a bank for this, he/she will have to take into account the demands of the bank and eventually adapt their business model. This is a self-regulated process where the individual takes into account responses from the environment and reacts upon them. These reactions deeply connect the entrepreneur with the community he/she co-evolves with.

11. Isenberg (2011) was the first to have mentioned the notion of ecosystem in entrepreneurship. Regele and Neck (2012) suggested that entrepreneurship education can be considered as a sub-ecosystem of entrepreneurship. In another context, the American sociologist Clark (2001) looks at the capacity of some universities to instigate an entrepreneurial spirit inside their system. He refers to these organisations as entrepreneurial universities, who distinguish themselves through their capacity to connect to their environment (especially private sector actors) and successfully negotiate their position in established or forming networks.

12. The entrepreneurial university was explored through numerous case studies, which revealed as a common finding that there are as many models as there are universities to study. This is despite common practices, and maybe explained to some extent by increasing degrees of complexity and change in the environments of organisations (e.g., autonomy of schools, financial bottlenecks, competition for students, teachers and researchers) (Clark, 2003). This is representative for all levels of education and mirrors the complexity of educational environments today.

13. When we apply this to the conceptual framework of an entrepreneurial school, we can think of an organisation whose borders perish towards the outside world and open up for the construction of closer collaborations (Tuunainen, 2005). Step by step, the growing number and variety of these connections encourages a number of possible collaborations between the different internal and external stakeholders of a school.

Towards a dynamic approach

14. Ecosystems are situated in complex contexts. Actors interact in a particular geographical area and their behaviours, responses and actions are influenced by a set of social, political, cultural and economic conditions. This process progressively builds the ecosystem of an organisation – in our case of a school. Hence, in understanding the constituting elements of an entrepreneurial school, we need to understand their environment. This implies at least two subsequent levels of understanding, of which the first level requires the preparation of an inventory of its elements. On a second level of understanding we then need to look at how these components are linked and interact with each other.

15. We find a dynamic vision of an ecosystem in the work of Arthur Tansley (1871-1955), who became a main reference amongst biologists. His contribution to science is essential: he introduced a systemic perspective on ecosystems by not only depicting the single components of an ecosystem but also their dynamics and interactions. His work was further developed by Lindeman (1942) who introduced the notion of an ecosystem as functional organisation which coordinates and develops itself thus evolving over time based on the energetic flows passing through the system.

16. Taking the dynamic approach to the educational context, we can say that it is not enough to be aware of the number of living components (internal and external actors, learners etc.), as well as the material means (classroom capacities, learning materials), but that it is essential to look at the dynamics between both actors and means. In that case, a school would have to look at 'why' and 'how' relationships are created – for example between lecturers and students (e.g., co-operation versus

authority), between students and external actors (e.g., company visits, testimonials, extended learning environments), or how learning material, digital infrastructure and aids are used to support learning (e.g. use of IT, prototyping).

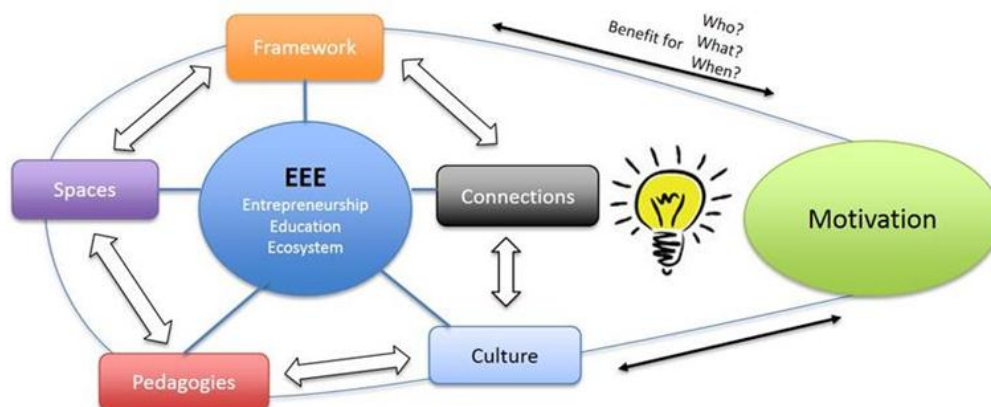
17. Today, the notion of ecosystem is taken up in numerous professional, academic and scientific fields. And even though the term is frequently used, its definition is often "taken for granted". Indeed, the ecosystem often appears as a "support function" that allows to address the link between an observed social phenomenon and its environment. And, because the term is often used without care its conceptual richness remains under-exploited.

A MODEL OF THE ENTREPRENEURSHIP EDUCATION ECOSYSTEM

18. Metaphors are used for their symbolic power to simplify and schematise reflections on an issue. However, metaphors need to be distinguished from the actual issue they paraphrase. A gentle reminder is conveyed here to the reader that metaphors need to be used with care for not to over-identify with the issue by anticipating (false) parallels and expectations. Aldrich et al., (2008) also emphasise this when using the evolution theory of Darwin to explore the evolution of entrepreneurship. The importance is not to apply a biological approach to a given issue but to use it as a metaphor in order to produce an applicable model that functions as a figurative framework of reflection not as an abstract identification with the subject. In that sense, we propose to take the entrepreneurship education environment into account via a model that is derived from reflections on ecosystems.

19. To fully understand learning environments inside and outside of a school, we need to gain an in depth understanding of how they function within their respective contexts. Having looked into the conceptual development path of "ecosystems", allows us to build a structured framework to explore education environments (Figure 1). We can distinguish five dimensions: (i) framework, (ii) connections, (iii) culture, (iv) pedagogy, and (v) spaces. While each dimension will be discussed separately in the following, it is vital to see the dynamics between mutual influence on each other. Each of these angles will connect you with specific actors and means. But only when considering and connecting *all* of the angles you may create a complete, living picture of the environment – allowing you to zoom in and out according to your needs.

20. Figure 1. The Entrepreneurship Education Ecosystem (EEE)



Source: Toutain and Mueller in this paper.

21. Every school ecosystem is different as it involves different actors in different contexts. At this stage, we invite you to take a conceptual picture of your schools' current ecosystem and its connections to the environment by reflecting upon the five questions presented in Table 1.

Table 1. What does my outward looking school look like? Five questions to ask

Questions	Reflections
What is the learning framework of our education?	This refers to the curriculum related information such as the number and nature of programmes, their learning objectives and how they are assessed.
Which networks and connections are encouraged by our education?	Reflect upon how actors and elements are connected inside your school and how your school creates connections with external actors.
What kind of entrepreneurial culture is produced by your ecosystem?	The entrepreneurial culture is based on values, symbols and shared languages. These are influenced by, and in turn, also influence the ecosystem.
Which pedagogical solutions are privileged to stimulate learning?	Think of stimulators and inhibitors of learning and preferred pedagogical solutions,
In what sort of learning space is the education embedded?	Think of the physical and virtual spaces which are available to learners at your school and eventual access barriers. Consider also their design, the designer and choices of design.

Source: Toutain and Mueller in this paper.

Motivations are crucial

22. The entire entrepreneurship education ecosystem is stimulated and driven by the *motivation* of its actors, which can be both intrinsic and extrinsic. *Intrinsic motivation* comes from the inside and does not need external stimulation. The individual explore the expected benefits from a certain behaviour, let's say contributing to entrepreneurial education, and acts accordingly. For example a teacher with personal interest in arts, who will establish a class in arts & entrepreneurship together with local artists, will feel intrinsically motivated and benefit from the pleasure of working with his passion. The *extrinsic motivation* of an individual is the result of actions that were constructed and

guided by other individuals or framework conditions, which the motivated individual has complied with. For example, if the local school board has created an award for innovative entrepreneurship pedagogies, participating in the process of implementing the award becomes a social recognition for all the members of the local education community, that is, for the teachers and the awarded schools, the students and their families, the school board and all other stakeholders.

23. Extrinsic and intrinsic motivation influence each other. The social recognition from an award may incite teachers to create more entrepreneurial initiatives. The intrinsic motivation of teachers and resulting outstanding initiatives may inspire colleagues (i.e., they create intrinsic motivation) or other schools and public policy organisations to develop similar activities (i.e., creating extrinsic motivation). The essential questions to ask are what are the *benefits* and consequences for the different actors in the system, and of what nature are these benefits.

24. In understanding the constituents of the entrepreneurship education ecosystem of your school, you will need to investigate the motivations of the actors in your ecosystem. Primarily, this motivation is held by the educators who may spread it to learners. Since motivation is based on perceived benefits, a school needs to investigate primarily the benefits desired and perceived by teachers. These may be of monetary nature, but they can also be related to societal, philosophical and personal values. Combinations of these are very common. This point can be very sensitive to address, since it can uncover essential dissatisfactions. At the same time, it is also key to stimulating and accelerating motivation – the driving force of a performing ecosystem. In case of underlying conflicts, a school may choose to work with a mediator or education coach to investigate this point and negotiate solutions.

How to undertake the self-reflection exercises?

25. For each part of the model, we will invite you to undertake a self-reflection exercise. We suggest you take the key issues listed in the paper as a starting point and consider for each of them three aspects – Who, How, and What could be changed? To facilitate your brainstorming, we provided you with examples for each of these aspects. These shall, however, not limit your creativity.

- **WHO is doing WHAT?** First, we suggest you to identify the "Who?" and/or the "What?" associated with a key issue, that is, the "Who is active?" and/or "What is done?". Please remember that it is not enough to prepare an inventory of actors and existing elements but to consider also their interactions which may enable or inhibit entrepreneurial education as a whole.
- **HOW is it done?** In a second step, consider questions related to the "How?" and try to identify key success factors, opportunities as well as what did not work well.
- **What could be changed?** Finally, we invite you to be innovative and think of what could be changed. Concentrate on "How this could be done?" and "Who should be active?".

THE OUTWARD LOOKING SCHOOL IN EXAMPLES

26. Let's put theory into practice! We will now apply the above-presented model of an entrepreneurship education ecosystem (EEE) with its five dimensions to the contexts of entrepreneurial schools in Europe. The objective is to help you understand how the five different angles can help you analysing your own ecosystem and undertake concrete measures for developing it. This chapter will present solutions for the outward looking school through real life examples from schools all over Europe and across all learning levels of education. We will proceed by looking at each of the five angles – framework; connections; learning spaces; pedagogies and entrepreneurial culture – and suggest solutions and concrete examples for how an outward looking school may look like.

Learning framework for entrepreneurial education

27. There are two major levels that define the learning framework: the "teacher level" – Does the school facilitate new ways of learning for its teachers?, and the "learner level" – What learning objectives are given in class? On both levels, the learning objectives can be twofold, that is, activities can focus on the *development of a business idea* and the creation of economic and social value; and/or the development of an *entrepreneurial mindset*.



Picture 1: "ETHAZI project by TKNIKA

28. A good example of how to develop the entrepreneurial competences of teachers is the ETHAZI project by TKNIKA in the Basque region in Spain. TKNIKA promotes innovation in VET – in how schools are organised and in how technology is incorporated into the learning. The aim is to introduce new technologies and innovations, emerging from universities, research centres and companies into the technical and vocational training colleges. ETHAZI prepares teachers for active and collaborative pedagogies. It is composed by eight modules: (i) Use of new technologies, (ii) creativity techniques, (iii) collaborative learning, (iv) simulations, (v) case studies, (vi) analysis, (vii) problem-based learning, and (viii) assessment of competences.

29. Activities that are directed towards the development of a business idea the focus is on the creation of social and economic values. In some cases, these activities do not exceed the organisational framework of the classroom. For example, in a creativity class the innovative ideas that are generated by the students are presented in front of the class. In other cases, the idea development and value creation connects students and teachers to other actors inside and outside school. The latter approach connects a class and its entire school much more with its local environment and creates the intensity of relationship that is needed for an outward looking school. The case of the French "Mini-enterprise" programme for secondary level schools illustrates this. In a "learning-by-doing" approach, the objective is to sell a product – as a team – based on an own idea. The process is tutored and accompanied by project-related entrepreneurs and aims at developing a full business.



Picture 2: "Mini-entreprises" (France)

Participants aged between 13-22 years are encouraged to expose and test their products in the local environment to receive feedback on its perceived economic value.

30. Activities that focus on developing the entrepreneurial mindset, are directed at the personal development of individual learners and teams of learners. Even though this can happen through a project or start-up initiative, the primary focus here is on the development of an authentic entrepreneurial personality. These activities stimulate cognitive and meta-cognitive learning that enables the learner to activate their own learning capacities and thus to self-regulate their learning process. This means that the individual is encouraged to reflect on its own endeavours and learns how to take action to make those come true. For the outward looking school, this is particularly important, since it will encourage students – and their teachers – to actively seek and use means outside the school environment – according to the learning needs and requirements.

31. An extraordinary example can be found in Germany with the national initiative "*Schule im Aufbruch* – Schools in change". Amongst the many innovations the initiative has brought to hundreds of schools, a strong focus is put on the individual learning interests of students. In a compulsory three-week project which learners have to realise outside school, the young learners are encouraged to reflect on and design their own project and undertake actions to implement it. For example, a 13-year old student realised his dream to spend three weeks on an animal farm in Eastern Europe. He autonomously took all necessary steps to prepare his visit and with the agreement of the schools director could realise this project.



Picture 3: "Schule im Aufbruch" (Germany)

32. To sum up, in the outward looking school partners are involved in the various steps of education and learners are supported in creating value based on the needs the society and/or the local community. In this way, collaborative processes emerge in the school's entrepreneurship education ecosystem. We invite you to undertake a self-reflection exercise on the learning framework for entrepreneurial education at your school. We suggest you take the three key issues listed in Table 2 and consider for each of them three aspects – "Who?", "How?", and "What could be changed?".

33. Table 2. Self-reflection exercise on "Framework"

Key issues	Who	How	What could be changed
– Partners are involved in the design of education activities	<i>e.g., Teacher Principal Students Parents Partners</i>	<i>e.g., Personal contacts Partnership agreement at school level etc.</i>	<i>e.g., Contacts of students and parents could be utilised more</i>
– Partners are involved in the delivery of education activities			
– Learners are supported in creating value based on the needs of the society and/or local community			

Networks and Connections

34. Now, we are relating to the nature and intensity of relationships that a school is creating and maintaining with external actors of all kinds (e.g., associations, entrepreneurs, private persons, experts) as well as on all levels (punctual interventions, long-term projects, involvement in assessment, paid contracts).

35. When looking at actors involved in the education we clearly observe two forms of networking to access staff resources. For some schools, relations and networks are created solely inside the limitations of the school environment (between school associations, lecturers across disciplines, or schools inside the same network). Some schools however, have created a strong and broad network beyond the organisational borders of the school, spanning local, regional, national and international levels.



Picture 4 Red Emprendedora" (Spain)

36. For example, some regions have organised themselves in a way that allows them to connect schools with business, non-profit organisations and institutions. This is the case for **RED Emprendedora** in Spain who addresses learners from primary to VET level. The initiative was created by Valnalon, a public organisation that provides a physical and social space to bring schools and socio-economic actors together with the objective to facilitate employability through developing entrepreneurial mindsets, knowledge and skills.

37. Particularly for VET schools, who offer education activities for would-be-entrepreneurs, it is important to build also institutional contacts with local business support organisations. Personal contacts can certainly facilitate this, but they cannot replace institutionalised links which are needed to share resources and to build up a common ecosystem. Building these links can be facilitated by organisations, such as the above mentioned example of TKNIKA in the Basque region of Spain.

38. The examples illustrate that education in the outward looking school is not bound to its physical boundaries and that the distinction between "inside" and "outside" of the school almost disappears. We invite you to undertake a self-reflection exercise on this using the key issues listed in Table 3 and "Who?", "How?", and "What could be changed?" as guiding questions.

39. Table 3. Self-reflection exercise on "Connections"

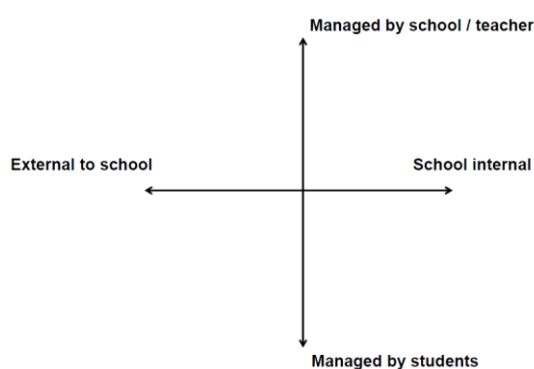
Key issues	Who	How	What could be changed
<ul style="list-style-type: none"> – Teachers are actively involved in local partnerships and integrate this in their classes – Learners are encouraged and supported to create education relevant relationships outside the school 	<i>e.g., Teacher Principal Students Parents Partners</i>	<i>e.g., out-of school assignments;</i>	<i>e.g., Contacts of students and parents could be utilised more</i>
<ul style="list-style-type: none"> – Collaborations exist with a variety of partners (e.g., entrepreneurs, managers, employees, NGOs, government organisations) 			

Learning spaces

40. The entrepreneurial learning spaces of a school can be located on two axes (Fig. 2). The horizontal axis depicts the localisation of learning spaces, which at their extremes can be either fully integrated in the school or fully externalised, that is, exclusively located outside the school premises. The vertical axis depicts the management of these learning spaces, which can either be fully managed and created by the school or on the other extreme be entirely managed by learners.

41. We invite you to mentally place your school in below diagram (Fig.2). You may also use two colours to indicate the current position of your school, and the position you wish to achieve.

Figure 2. Dimensions of learning space



Source: Toutain and Mueller in this paper.

42. We invite you to consider the current situation at your school as well as opportunities to develop open and flexible learning spaces. Use the Checklist in Table 2 to identify areas for possible change.

Table 4. Checklist: Learning space characteristics

Learning space characteristics	In place	Possible
Learners and teachers co-create learning material		
Space for learners to take ownership of the physical space		
Flexibility and modular furniture to adapt space to learning needs		
Balance between learning spaces inside and outside school		
Diversity of learners (especially interdisciplinary learners, coaches, external actors)		
Collaborative learning spaces to facilitate exchange across this diversity		

Source: Toutain and Mueller in this paper.

43. From the research for this paper, we observed that in many school environments spaces that are fully internalised and managed by the school. Often we see strictly separated classrooms, with traditional equipment of tables and chairs, in some cases those are fixed in the ground and do not

allow for any rearrangement of the table or sitting order. Furthermore, schools have established rules for how these classrooms should be designed and maintained. Whereas such an approach can be very practical and easy to maintain from an administrative perspective, it hardly encourages neither internal connections between teachers and learners and nor external connections.

44. At the same time, we also find schools that have partly externalised spaces or a high degree of internal transparency. This approach provides for flexibility and openness, which spill overs to teachers and learners. In this group of schools, we observed highly modular and transparent forms of learning spaces that allow for interaction and exchange on all social levels. Ideally, this removes traditional roles of students and authorities. External actors can more easily enter and collaborate on the same level than students. Furthermore, some school allow students to 'own' the learning space through a self-organised design process.



45. An example for this second type of learning space design and management is *Knowmads*, an "alternative" business school in Amsterdam. The school is in a former primary school about 15 minutes from the city centre. The strategy for occupying this space is entirely *learner-driven*. The first cohort of learners initially chose the location. Each new cohort of participants has the task to redesign the learning space according to their wishes. The objective is to encourage ownership of the learning space and empower learners to take action.

Picture 5 Knowmads (Netherlands)

46. The learning space at Knowmads is an inspiring example of a low-budget approach, which can be easily implemented by schools at all levels. It forms a large rectangular open space area with a stage on one side and a number of modular working corners. Walls are decorated and a number of fancy, unusual objects are installed here and there, such as a swing hanging from the ceiling. Next-door, in another open space format is an incubator area where young entrepreneurs develop their business ideas and are thus available for exchange and collaboration with students on a daily basis.

47. It is not a must that there is a dedicated and separated learning space for entrepreneurial learning, but entrepreneurial learning can be organised in diverse places and configurations of spaces within and outside a school. This is the case for *InnoOmnia* in Finland where diversity of learning spaces is emphasised. Innoomnia is a conglomerate of schools at secondary to VET level. They established most diverse learning spaces in different places in order to bring together entrepreneurs, students and teachers from all levels of education, InnoOmnia in open spaces, breaking thus boundaries between the worlds of learning and work. In InnoOmnia "Everybody is a learner and a teacher".¹



Picture 6 Innoomnia (Finland)

48. To develop the outward looking school, a school need to open up towards both its internal and external actors – physically and mentally! Symbolically, together with the physical walls, the

¹ <http://www.innoomnia.fi/english>

barriers between individuals may perish as well. We invite you to undertake a self-reflection exercise on the learning spaces in your school using the key issues listed in Table 5 and "Who?", "How?", and "What could be changed?" as guiding questions.

49. Table 5. Self-reflection exercise on Learning spaces

Key issues	Who	How	What could be changed
– Learners have access to specific spaces dedicated to action learning and learning communities			
– Learning spaces enhance cross-disciplinary, and cross-class collaboration			
– Learning spaces can be flexibly adapted to education needs	<i>e.g., Teacher Principal Students Parents Partners</i>	<i>e.g., Movable furniture, flexible lightning</i>	<i>e.g., Ask learners for their needs</i>
– Learning spaces outside the school are regularly used for education (e.g., firms, NGOs, public organisations, public spaces)			

An entrepreneurial school culture

50. Generally, cultures are created and defined on a group level and maintained through a number of shared values and meanings. We define the entrepreneurial culture in an entrepreneurship education ecosystem as the capacity of schools and external actors to interact and create, share and develop a common "language". Language is understood here in a wider sense and touches on shared meanings and behaviours and a common vision for society. The entrepreneurial culture will impact on how learners – during and after their education – will connect with the world outside classroom.

51. When the aim is to establish a common entrepreneurial culture of a school it is important to take into account the overall learning objectives and the school's vision statement to identify most appropriate actions to establish an entrepreneurial culture. Each school establishes a different entrepreneurial culture, by focusing on different values and activities. Some schools develop entrepreneurial behaviour by emphasising one or several of the following:

- Construction of an individual world view and the awareness of personal resources to transform the world (e.g. artistic expression of entrepreneurial ideas as in Scherdin and Zander, 2011)
- Focus on the creation of social and/or societal value. Projects of learners will then be oriented towards social rather than economic issues (project collaboration with a non-profit organisation)
- Promotion of an entrepreneurial culture that is defined by action, decision taking and performance – usually with a focus on tangible outputs, such as the number of objects sold, number of created networks, implemented ideas etc.

52. A good example for how an entrepreneurial culture can be created and spread, is given by the example of *Ready Unlimited*, a UK organisation that offers trainings and educations for educators.

Their objective is to help teachers and schools stimulate entrepreneurial behaviour in young people. Ready Unlimited is a community-based approach to Entrepreneurship Education, where all relevant stakeholders at school level gather to co-design and co-produce a relevant entrepreneurship education strategy. "Learning Hub" is one of their programmes, which helps schools to bring together the various actors and elements of their ecosystems. The aim is to make better use of existing resources, like business links or parent volunteers. Through many different actions, pedagogical innovations, innovative learning philosophies, the organisations helps teachers and schools to gradually install an entrepreneurial culture. For example, to innovate geography education for secondary school children when it came to learning about street sellers in developing countries, pupils created their own products and self-organised a street market to sell book markers, hand massages and other products and service, which they identified and produced.

53. To sum up, the entrepreneurial culture of a school can be understood as capacity of schools and external actors to interact and create, share and develop a common "language", whereby language includes shared meanings and behaviours and a common vision for society. We invite you to undertake a self-reflection exercise on the entrepreneurial culture at your school. We suggest you take the three key issues listed in Table 7 and consider for each of them three aspects – "Who?", "How?", and "What could be changed?".

Table 6. Self-reflection exercise on Culture

Key issues	Who	How	What could be changed
<ul style="list-style-type: none"> – The school knows the actors of its local environment, their respective roles, interactions and potentials for collaboration – The school considers local partnerships as valuable contributions to education – Education deals with issues of societal / local relevance 	<i>e.g.,</i> <i>Teacher</i> <i>Principal</i> <i>Students</i> <i>Parents</i> <i>Partners</i>	<i>e.g.,</i> The closure of a local factory plant and its consequences are discussed in class	<i>e.g.,</i> Ask learners to identify issues of societal / local relevance they wish to discuss

Support is offered to learners for their entrepreneurial activities

Pedagogical solutions

54. We will focus in this section on pedagogical solutions, which enhance the outward looking school. These are: experiential learning methods, which are used as a bridge between external partners, teachers and learners, activities that encourage learners to take actions based on their individual interests, values and ideas, the collaboration with external partners in the definition of learning outcomes and assessment approaches, and rewards by the school for positive impacts on the local community / society resulting from learners' personal activities and commitments.

55. Regarding the pedagogical solutions of an outward looking school, we identified some major commonalities. A strong commonality of the schools we reviewed is their systematic use of *collaborative approaches*. In the learning process, collaboration is encouraged amongst learners and teachers, and, most importantly, learners are encouraged to actively seek information and exchange outside the classroom. This can range from a one-time company visit to a full integration of a chosen

external actor into the assessment process. Both can either be initiated by the teacher or by the students themselves.



Picture 7 Entreprenasium (Netherlands)

56. Another recurrent issue is the *anchoring of learning in real-world situations*, that is, confronting participants with the socio-economic reality outside classroom. From a pedagogical point of view – selling a product outside the protecting walls of a school building can be a highly stimulating learning experience that can decrease a fear of social connections and of failing in "the real world". An example of this is the *Entreprenasium* foundation in the Netherlands, which secondary level supports schools to innovate in education. One stream of work is about demonstrating how pedagogical approaches can open up new connections with the local community. Not always are teachers immediately following their principals in an overall change process as the example of one school shows. The principal decided to ask the teachers how they would like to implement

the changes and the teachers wrote a proposal that they committed to. In the beginning not all teachers were positive about the changes made in the school. But seeing highly motivated students was a real reward for all teachers and also convinced parents.

57. The overall aim of Entreprenasium is to transform secondary education into a highly learner-centred format where students are encouraged to take control of their curriculum and negotiate changes with their educators. Projects are student-led and external actors are chosen, contacted and involved in the education by students. Most importantly, students are encouraged to "fail" and interact with the world outside classroom through actively experiencing what it means to produce and sell their product. This provides them with greater confidence and independence for their interactions with the world outside school.

58. And, finally, we also observed that the outward looking school will very much depend on how leadership is enacted. One way is to enact individual leadership, whereby either the teacher or the principal is leading the implementation of a single activity of an entire strategy to establish an entrepreneurial culture in the school's ecosystem. All persons interviewed for this paper appeared as *leaders* in their way with a different and innovative perspective on education. They use this perspective to develop and push forward new approaches and ways to stimulate entrepreneurial learning. The other way, which could well build on individually embodied leadership, is *collaborative leadership*. Here, all internal and external stakeholders are engaged in the co-design and co-implementation of single activities or the entrepreneurial culture strategy of a school. Leadership actions of the outward looking school reach beyond the borders of the school. They involve a variety of actors, and they do not always conform with a schools' existing organisational boundaries and framework. In some cases, activities lead to the construction of a new school or initiatives outside the school. In other cases, collaborative leadership results in new highly value-adding forms of education inside the school environment.

59. Collaborative approaches and anchoring of learning in real-world situations were key common features of pedagogical solutions of an outward looking school. We invite you to undertake a self-reflection exercise of whether and how these are present in in your classroom/school using the key issues listed in Table 5 and "Who?", "How?", and "What could be changed?" as guiding questions.

Table 7. Self-reflection exercise on Pedagogies"

	Who	How	What could be changed
Partners are involved in the definition of learning outcomes and assessment approaches			
Experiential learning is used as a bridge between external partners, teachers and learners			
Learners are encouraged and supported to undertake actions based on their individual interests, values and ideas			
Positive impacts of learners personal activities and commitments on society / local community are rewarded	<i>e.g., Teacher Principal</i>	<i>e.g., The participation of a student in a theatre performance in an elderly care facility is discussed and rewarded in class.</i>	<i>e.g., Ask learners to tell about their personal activities and commitments and discuss possible impacts (negative and positive)</i>

CONCLUSION

60. Schools are living environments that allow for interactions between learners, educators and the community of people surrounding the environment. The nature of these interactions is crucial to stimulate creativity, trust and the freedom to evolve and transform. The more internal and external stakeholders engage in the maintenance and development of the entrepreneurship education ecosystem, the more dynamic and attractive education will become. To say it with the words of Taddei (2009), "the environment is considered to be the "third teacher" (after the parents and the human teachers) which should be designed so as to foster new experiences, exploration, initiative, and creativity".

61. Acting in an ecosystem thus demands us to (i) be aware of its existence; (ii) be aware of all actors involved – inside and outside school – that may potentially impact on entrepreneurial learning; (iii) build a collaborative project – with and between all these actors - in which lecturers will play a facilitating and/or accelerating role; and collectively and regularly evaluate the results of these collaborative actions – regarding both learning outcomes and the development of an entrepreneurial culture at the school.

62. Hence, ecosystem cannot be created or developed entirely in a top-down approach. Of course, there is a clear facilitator role for public policy, but it is the interaction of all internal and external actors that will be a key success factor for effective entrepreneurship education ecosystem.

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