

# Appendix 2: Pargas, Finland

## Introduction

Entrepreneurship and innovation have increasingly become part of the education discourse, also in a Nordic context. This is due to the globalisation and pervasive societal changes (Moberg 2014). In the Nordic countries there is, in general, a great focus on implementing innovation and entrepreneurship in the education system to ensure that pupils and students acquire entrepreneurial competences. And with good reason!

Entrepreneurship education is an important factor in changing and developing society. Focusing on and aiming at obtaining more entrepreneurship education throughout the entire education system is based, among other things, on the economic belief that the Nordic countries need more entrepreneurs and innovative employees in order to increase job creation, new business ventures, and productivity. This is particularly urgent for outlying geographical areas and islands in the North.

Today the Nordic countries experience different socio-economic challenges, and the outlying geographical areas are especially marked by challenges such as lack of education possibilities and jobs, depopulation, and economic stagnation. This requires focus and a special effort.

This is particularly so in some Nordic islands who also experience a loss of high skilled labour as young people with high career ambitions leave the area and move to urban areas due to job shortage. Moreover, new companies and working places do not replace the ones that have disappeared and thus new jobs are not generated. One of the reasons is that there is a lack of entrepreneurs and innovative employees.

Teaching children and young people the entrepreneurial skills during their education in local schools and educational institutions and supporting the local development of new business can help redress such challenges and stimulate economic growth in the local area.

The one-year pilot project, *Nordic Entrepreneurship Islands*, launched in November 2015, especially addresses the educational and new business venture challenges on seven selected islands. The project also addresses the opportunities and potentials arising from an increased focus on entrepreneurship education and start-up capital for student start-ups on the islands.

In order to define the opportunities and to forecast the potential development of entrepreneurship education and future potential candidates for receiving a student start-up Micro Grant, a mapping of the existing spread of entrepreneurship education at the upper secondary and tertiary education levels has been carried out on the seven islands. The entrepreneurial potential of each island is assessed on the basis of these results as well as on other research.

Indicators of the full entrepreneurial potential are the number of young people partaking in entrepreneurship education and the expected amount of new companies/jobs created as an outcome of implementing different initiatives. The objectives of enhancing pupils and students with entrepreneurial competences and start-up capital are based on the rationale of increasing societal creativity and ideation. The ambition is that, in the long term, new companies will emerge as a result of these initiatives and more students will obtain skills and competences that will enable them to create and establish new companies.

The quantitative objective is to ensure that young people at different educational levels will engage in entrepreneurship education at least once during their education. As a whole, the project is about enhancing the islands' market position internationally and contributing to a sustainable development, growth and jobs through young people who remain in the local area and start up new businesses.

## Methodology and Structure of the report

This report maps the present situation in Pargas with regard to aspects concerning entrepreneurship education on three levels: the macro, the meso and the micro level. Moreover, a Micro Grant was awarded to a promising student start-up in Pargas.

In order to map the status of entrepreneurship education in Pargas, data were collected by means of surveys in the form of questionnaires to respondents on three levels of the "entrepreneurship education ecosystem".

The three levels are:

- Macro level: The national strategy for entrepreneurship education in Finland and in the region of Southwest Finland.
- Meso level: The strategy for entrepreneurship & innovation of educational institutions.
- Micro level: The number of pupils and students participating in entrepreneurship education at upper secondary and tertiary level.

The report is divided into chapters according to the three levels and the Micro Grant. As a background for the mapping, demographic data provided by Nordregio concerning population changes and employment situation in Pargas are shortly discussed.<sup>54</sup>

### *Definitions of entrepreneurship and entrepreneurship education*

In the autumn of 2010, the Danish Foundation for Entrepreneurship formulated a definition of entrepreneurship with the aim of applying and incorporating it in a variety of educational contexts and of accommodating both a commercial entrepreneurial approach and an educational and competence-based approach. In 2013, a definition of entrepreneurship education was formulated.<sup>55</sup>

Entrepreneurship is defined in the following way: "Entrepreneurship is when actions take place on the basis of opportunities and good ideas, and these are translated into value for others. The value thus created can be of an economic, social or cultural nature." (FFE, 2011). This definition shows that the creation of value can take different forms and may thus include intrapreneurship, social enterprise, cultural innovation, etc.

Entrepreneurship education is defined as: "Content, methods and activities that support the development of motivation, competence and experience that make it possible to implement, manage and participate in value-added processes." (FFE, 2013)

Both definitions are used as a frame to define the questionnaires and course descriptions on the meso and micro levels and thus set the frame for the mapping of entrepreneurship education on the seven Nordic islands.

### *Macro level*

The Progression Model for Entrepreneurship Education Ecosystems in Europe from the European Commission (see Appendix A for further details) has served as inspiration for framing the data collection at the macro level. The model identifies four different stages in the development of a strategy for entrepreneurship education:

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<sup>54</sup> <http://www.nordregio.se/> Nordregio is a leading Nordic research institute within the broad fields of regional development and urban planning.

<sup>55</sup> See [www.ffe-ye.dk](http://www.ffe-ye.dk) A Taxonomy of Entrepreneurship Education: Perspectives on goals, teaching and evaluation, 2015 for a detailed discussion of this.

- Pre-strategy (based on individual initiative).
- Initial Strategy Development.
- Strategy Implementation, Consolidation & Development of Practice.
- Mainstreaming.

The model also identifies five key areas in which a development of practice takes place during the development and implementation of a national strategy for entrepreneurship education. The questionnaire for the macro level is built on these five key areas:

- Developing the national strategy framework.
- The role of local and regional authorities.
- Implementing entrepreneurship education.
- Teacher education and training.
- Engaging with businesses and private associations and organisations.

The project manager in Pargas completed the questionnaire in the course of 2016. Wherever necessary, the project manager received expert knowledge from relevant government officials and people with knowledge in the area.

### *Meso level*

To map the meso level, which constitutes the link between the national strategy level and the implementation level, that is the actual teacher practice, a questionnaire targeted the management of educational institutions was designed. The questionnaire examines the strategy of entrepreneurship education at educational institutions at the upper secondary and tertiary education levels on four main areas:

- School strategy & form.
- Organisation.
- Competence.
- Practice.

The purpose of this survey at the meso level is to provide an overview of the existing measures related to a strategy for entrepreneurship education in the educational institutions as well as their experiences with activities related to entrepreneurship education.

The Danish Foundation for Entrepreneurship has not previously conducted a mapping at the meso level. As a continuation of the Progression Model for Entrepreneurship Education Ecosystems in Europe, the Danish Foundation for Entrepreneurship therefore developed the questionnaire specifically for the mapping of the meso level in this project. "A Quality Standard for Enterprise Education", developed by Centre for Education and Industry, University of Warwick, and "HEInnovate", a self-assessment tool for entrepreneurial higher education institutions, initiated by the European Commission, DG Education and Culture and the OECD LEED forum,<sup>56</sup> both served as inspiration for elaborating the questionnaire for the Nordic Entrepreneurship Islands project. The questionnaire is also framed by the definitions of entrepreneurship and entrepreneurship education, which were formulated by the Danish Foundation for Entrepreneurship.

The questionnaire was sent through the project manager in Pargas to the management of educational institutions at the upper secondary level and the tertiary level in Pargas.

### *Micro level*

The micro level concerns the actual practice of teachers in educational institutions at the upper secondary level and vocational/VET and the content of the course descriptions at the tertiary level.

At upper secondary level and vocational/VET, the data were collected by means of a questionnaire aimed at the teachers. The two different types of teaching were taken into consideration when designing the questionnaires. One questionnaire is used for the upper secondary level and another for vocational/VET.

The purpose of the survey is to map the number of pupils in upper secondary education and vocational/VET who in the school year 2015/2016 participated in education or in activities leading to increased competence levels in innovation and/or entrepreneurship.

The two questionnaires examine basic information about the teachers' evaluation of their school's policy on innovation and entrepreneurship education.

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<sup>56</sup> <https://heinnovate.eu/>

It also examines the teachers' evaluation of the teaching in entrepreneurship education, but the methods vary in the questionnaires for the upper secondary education and for vocational/VET education. The questionnaire aimed at upper secondary level teachers focuses on four areas or "entrepreneurial dimensions". Please see "A Taxonomy of Entrepreneurship education" for further elaboration on the entrepreneurial dimensions.<sup>57</sup>

The four entrepreneurial dimensions examined are:

- Action.
- Creativity.
- Environment (outward orientation).
- Attitude.

The questionnaire for vocational/VET teachers focuses on the type of teaching, e.g. innovation or entrepreneurship (start-up).

For the purpose of mapping entrepreneurship education at the tertiary education level, data were collected in the form of descriptions of courses within innovation and entrepreneurship and the number of students following these courses during the academic year 2015–16. To examine how and to which extent entrepreneurship and innovation are implemented at the tertiary level, "Stjernemodellen"<sup>58</sup> is used as a tool for the categorisation of courses (see Appendix B for further details).

The Star Model was developed by Øresund Entrepreneurship Academy with the purpose of identifying and quantifying entrepreneurship education courses in Danish universities. It was later updated by the Danish Foundation for Entrepreneurship in order to be applied for diploma and bachelor educations too, and was used by the Danish Foundation for Entrepreneurship during the last 6 years to map entrepreneurship education at the tertiary level in Denmark.

The model and method are used exclusively to identify the extent to which the course/subject focuses on entrepreneurship, it is not an evaluation or assessment of the quality of the course/subject as such.

At both the meso and micro levels, descriptive statistics were used in the treatment of the survey results.

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<sup>57</sup> <http://eng.ffe-ye.dk/media/555477/taksonomi-eng-2.pdf>

<sup>58</sup> Henceforth referred to as the Star Model

### *Micro Grants and the innovation ecosystem on the islands*

All islands in the pilot project have had the opportunity to award a Micro Grant to a promising student start-up. The Micro Grant is a small financial aid of DKK 25,000, which allows the student start-up to take their business further. A small case written about the local start-up and Micro Grant recipient documents the effects, needs, and possibilities for young people on the islands after they receive a Micro Grant.

The project manager in Pargas has also provided information about the innovation ecosystem in the local area in the form of a case.

All data were collected in the summer of 2016 and the preliminary findings were presented at a conference in November 2016 with the participation of different stakeholders from all seven islands.<sup>59</sup> The preliminary findings were discussed, elaborated on and developed to customise and adjust the report and the forecasting about entrepreneurship education and Micro Grants on the seven islands.

### **Limitations of the methodology**

Nordregio has provided the data for the overall demographic mapping of the seven Nordic islands. Nordregio was selected as the single source in order to ensure that the same method was applied to all islands and countries in question. Small variations between data may, however, occur when our data are compared with local statistics or surveying methods.

The desk research regarding the macro level is based on questionnaires, which have been answered by the responsible project manager on the island. Whenever answers were missing or elaboration was needed, a few additional questions have been sent per email to the responsible project manager on the island. A few data were collected from other sources as well. The way in which the questionnaire was answered differs from island to island. Some have answered in more detail than others and also with different strategic knowledge behind the answers. The data given about each island/country are therefore not always equivalent, because they depend on the sources and on which information was available.

When it comes to the meso and micro levels, the percentages of participating institutions and participating teachers also vary from island to island. This mapping is based on the responses received. The mapping may therefore give an inaccurate picture of the actual circumstances on the islands, because it is not possible to know whether entrepreneurship education exists on educational institutions that did not

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<sup>59</sup> Pargas is not an island like the other six geographical areas examined in this report. However, for the sake of simplicity, when we speak of them as a group, we refer to them as "the seven islands."

participate in the survey. The actual situation on the individual islands when it comes to the existence of entrepreneurship education may therefore be different than what is communicated in this report.

As entrepreneurship education is a complex subject matter involving many levels of society and many stakeholders, it is not possible to give the full picture of the situation on each island regarding the strategies for entrepreneurship education by means of questionnaires distributed to a few key persons.

This report does not provide any conclusion about the maturity level of the individual islands/countries regarding a national strategy for entrepreneurship education. The Progression Model for Entrepreneurship Education Ecosystems in Europe (Appendix A) offers descriptions of a development of practice on each key area and thus allows the islands to evaluate the maturity stage of their own entrepreneurship education ecosystem, and at the same time the model suggests possible ways to further develop this ecosystem.

This report maps aspects of entrepreneurship education activity on different levels of society and thus depicts the different aspects of the entrepreneurship education ecosystem on each individual island. This makes it possible to draw conclusions about the potential of each island and define the key actors useful in the future development of the specific island.

The juxtaposition of seven such different islands caused some problems from a methodological perspective as differences in area size, population size, and constitution are so pervasive and had to be taken into account whenever possible. Still, it was of course not possible to account for all differences between the islands.

## Demographics

This chapter describes the main demographic development in Pargas in the recent period. This will serve as background for the mapping of the situation in Pargas and for the suggested measures to stimulate growth. See Appendix C for tables on population and age structure as well as labour market for the seven islands participating in the Nordic Entrepreneurship Islands project.

### *Population and age structure*

In the period 2009–2015, Pargas has experienced almost status quo of the total population; a slight increase of 0.5%. The change in the population aged 0–24 is a decrease of 2.3%, while the change in the population aged 25+ is an increase of 1.7%.

The youth dependency rate has slightly increased in the period, from 27.1% to 27.8%, while the much higher old age dependency rate has increased very much, from 30.9% to 40%. Thus, the old part of the population is increasing very fast, although still not to the same degree as Bornholm, which has experienced the highest increase of all the islands in the period.

### *Labour market*

The overall employment rate in Pargas decreased slightly (by 1.7%) in the period 2009–2013, going from 74.5% to 73.2%, which is, however, a higher rate than in Finland as a whole, and close to the mean value (75.4%) of all seven islands' rates. The unemployment rate, which has decreased from 4.9% to 4.6% in the same period, is also better than in Finland as a whole, and is the second most positive rate of all seven islands (rates going from 3.7% in the Faroe Islands to 9.7% in Greenland). Concerning the youth unemployment rate, data are only available from 2013 where the rate was 14.3%, which is rather high compared to the other islands (rates going from 9.9% in the Faroe Islands to 19.7% in Greenland). So, all things considered, although the overall employment and unemployment rates are not as negative compared to the other islands, the youth unemployment rate is still a big challenge in Pargas.

### *Education level*

Of all seven islands, considering the data which was available for this mapping, Pargas has the highest share of persons with a tertiary education level – 43% of the total population aged 25+ has attained a tertiary education level.

### **Macro level**

Entrepreneurship education requires efforts on several levels to be successfully implemented in a country's education system and to have a societal impact. Measures need to be taken at both the policy level and at the implementation level with the involvement of, and collaboration with, key actors from all aspects of society. The immediate responsible actors for entrepreneurship education are actors at the macro level (policy makers), who provide the framework for working in the area, actors at the meso level (school management), who decide how to implement entrepreneurship education in their respective educational institution, and actors at the micro level (teachers), who provide the entrepreneurship education in practice.

The private sector, e.g. private companies and organisations, is also essential, because they represent the labour market. The collaboration between educational institutions and the private sector helps shape efforts in the area and, again, influences policy makers to provide policies that will sustain these efforts.

As entrepreneurship is recognised as an important factor in a changing and developing society, the last decade has witnessed an increasing focus on developing strategies for entrepreneurship education in the European countries. Some of the Nordic countries are among the frontrunners and have well-established structures at national level. Still, it takes a lot of time and patience to reach educational institutions in every region of a country.

This chapter will look at existing initiatives and measures at the macro level in Pargas. The desk research is based on information obtained from the island by means of a questionnaire.

The questionnaire provides data on five main areas, which correspond to the five key components of the entrepreneurship education ecosystem. Ideally, a national strategy for entrepreneurship education has a focus on developing action on these five key areas, according to the European Commission:

- Developing the national strategy framework.
- The role of local and regional authorities.
- Implementing entrepreneurship education.
- Teacher education and training.
- Engaging with businesses and private associations and organisations.

As action and measures are developed in these five key areas, the entrepreneurship education ecosystem goes from one maturity stage to the next. The Model identifies four maturity stages in the development and implementation of a national strategy for entrepreneurship education:

- Pre-strategy (based on individual initiative).
- Initial Strategy Development.
- Strategy Implementation, Consolidation & Development of Practice.
- Mainstreaming.

The Progression Model for Entrepreneurship Education Ecosystems in Europe from the European Commission can be viewed in detail in Appendix A.

### *Developing the national strategy framework*

Finland has had a national strategy for entrepreneurship education for many years with clear objectives for the education at all educational levels. There is a cross-ministerial collaboration, and many key actors from different levels of society are involved in the strategic work at the national level, e.g. municipalities, cities, regional education organisations and regional development organisations, banks, insurance companies, business chambers, business associations and others.

The strategy seeks to support a more entrepreneurial culture, active citizenship and business start-ups, while the 19 regional EE resource centres of the YES network emphasise networking, support and training for and with teachers.

JA Finland is collecting data to map their own activities. Assessment of the impact of entrepreneurship education is for instance taking place through the MTEE tool, developed by Lappeenranta University of Technology in 2015. MTEE is a tool that allows teachers to assess their own teaching practice and provides decision makers with macro level data, which they can use in their work with national and regional policies on the area.

So far Finland has 8 regional strategies for entrepreneurship education, one of them in Southwest Finland, the region to which Pargas belongs.

The strategy is called “An entrepreneurial and prosperous Southwest Finland” and the involved actors are representatives for local municipalities and cities, regional providers of education and training and regional development organisations. The Southwestern Finland’s vision for 2020 is that entrepreneurship education should be the foundation and basis for well-being and entrepreneurship.<sup>60</sup>

### *The role of local and regional authorities*

There are 19 YES (JA) centres, but no actual centre working exclusively with entrepreneurship education. In the Pargas area, there are a few organisations such as business chambers and employers’ associations that arrange entrepreneurship courses.

There are strategic partnerships between businesses and schools as well as other forms of partnerships. Private businesses are, however, only involved to a small degree in the area of Pargas. There are no ecosystem initiatives.

### **Implementing entrepreneurship education**

Entrepreneurship education is optional at all levels except in primary school. At ISCED 1–2 it is a cross-curricular theme in both core and optional subjects. At ISCED 3 the

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<sup>60</sup> Ett företagsamt och välmående egentliga Finland – Strategi 2020 för fostran till företagande.

national core curriculum features “Social studies”, which includes entrepreneurship education elements. In school based IVET at ISCED 3, there is a compulsory module about entrepreneurship.

At the primary level, entrepreneurship education is taught as a method, at the upper secondary and tertiary levels, entrepreneurship education is taught as both a method and a subject.

The national curriculum was reformed recently and the new curriculum, which was introduced in August 2016, emphasises the importance of entrepreneurship education to a much higher degree than previously.

The consequences of having implemented entrepreneurship education at the compulsory level and in higher education for several years now are that entrepreneurship education has become much more accepted by actors on all levels.

### **Teacher education and training**

Teachers are trained at university in Finland, and especially universities enjoy a wide freedom in deciding teaching methods. However, entrepreneurship education has become a compulsory element in teacher training in three institutions and an elective element in several other institutions.

Finland attaches great importance to the fact that teachers should be knowledgeable about work life. Therefore, teachers are taught about work life and skills in their further education. Moreover, in-service teacher training is provided by the YES centres as well as through school-business cooperation.<sup>61</sup>

### **Engaging with businesses and private associations and organisations**

The private sector in Pargas is involved in and provides funding for entrepreneurship education projects. The focus areas of the private sectors are, both nationally and in Pargas specifically, the recruitment of future employees and publicity/CSR.

## **Meso level**

It requires a strategic and organisational overview of the school management to include entrepreneurship education in the normal education of the school or educational institution. School management (meso level), however, provides the very important link between a national/regional strategy (macro level) and teachers (micro level), who teach entrepreneurial skills to students. The meso level has often been overlooked, or

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<sup>61</sup> Some of the information on this page has been procured through the ICEE project, <http://icee-eu.eu>

given less attention, in a country's combined efforts to develop and implement entrepreneurship education. But contributing to a (new) ideal of education where students learn to act in an entrepreneurial and innovative way is not only a pedagogical and didactic exercise, it is also a managerial and organisational practice.

In order to map the meso level in the geographical area and make the link between strategy and practice, a survey was sent to the school management of schools and institutions in Pargas. The survey examines four main areas: School strategy & form, Organisation, Competence and Practice. The purpose of the survey is to provide an overview of the existing measures concerning a strategy for education in Innovation & Entrepreneurship in educational institutions, or the experience with activities related to innovation and entrepreneurship education in schools and institutions.

### ***Strategy & Form***

This area relates to background, motivation, challenges, objectives, common understanding, communication, and evaluation.

Two out of three educational institutions on secondary level and vocational/VET in Pargas have participated in the survey and one of these schools has a strategy for entrepreneurship. The two institutions are:

- Pargas svenska gymnasium (strategy).
- Axxell Utbildning Ab (no strategy).

### **The schools' plan and goals for development of entrepreneurship education**

The institution with a strategy has a precise plan for the implementation of the entrepreneurship strategy and the plan has been communicated clearly across the educational institution (to teachers, students and other stakeholders such as cooperating partners outside the institution). The institution also has a plan for following up and revising the entrepreneurship strategy on a continuous basis and has created a common frame of understanding of entrepreneurship education and how to practise it.

The management on the institution with a strategy has also set concrete targets and goals for development of entrepreneurship education.

- The establishment of project weeks in innovation & entrepreneurship.
- Cooperation between teachers and local businesses, public institutions and organisations in relation with entrepreneurship education.
- Teaching in entrepreneurship (learning objectives).

However, the institution has not set targets and goals for the following areas:

- How innovation and entrepreneurship shall be part of the teaching (e.g. as special courses and/or integrated in every-day teaching).
- The development of curriculum so that it contains learning objectives and competences for innovation and entrepreneurship.
- Continuing education of teachers in teaching innovation & entrepreneurship.

### **No strategy but entrepreneurship activities**

Even though one of the participating institutions in Pargas does not have an entrepreneurship education strategy, there are nevertheless entrepreneurship teaching and/or activities related to entrepreneurship taking place at the institution, for instance teaching in innovation (students are being taught how to start a business, or they are being taught in new and innovative ways), cooperation with the local business industry concerning students' education and further working life/career, and students working with projects that bring them in contact with the surrounding society.

### **Importance of strategy and education in entrepreneurship**

There is a difference between the two institutions when it comes to their opinion about the importance of formulating a strategy for education in entrepreneurship. On a scale from 1 to 5<sup>62</sup> the institutions state that they very much agree to the statement "It is important that my educational institution formulates a strategy for education in innovation & entrepreneurship". The institution without a strategy has answered "neither/or" to the same statement. However, both institutions have stated that they "very much agree" to the statement "It is relevant for all students at my educational institution to be taught innovation and entrepreneurship".

### **Importance of goals for entrepreneurship teaching**

Both institutions agree that goals for education in entrepreneurship should be set to:

- strengthen students' interest in their further education and career
- strengthen students' interest in becoming an entrepreneur/starting a new business
- prepare students better for working life
- strengthen the cooperation between the educational institution and the local society

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<sup>62</sup> 1 = very much disagree, 2 = disagree, 3 = neither or, 4 = agree, 5 = very much agree

- boost the development of the local area, for instance by contributing to new businesses through the skill development of young people.

The institution with a strategy in addition agrees that goals should be set to:

- comply with new national/regional policy on the area of entrepreneurship education.

On the other hand, the institution without a strategy agrees that goals should be set to:

- decrease the student drop-out rate
- upgrade teachers' skills within entrepreneurship teaching.

#### **External network**

Both institutions in the survey provide their students with the possibility for making contact with the institution's external network and both provide the same possibilities:

- Guest lectures given by local business people, entrepreneurs, or others.
- Visits to companies, organised by the educational institution.
- Competitions at the educational institution, where external contacts function as judges.

None of the institutions give their students the possibility for making contact with the institutions external network through:

- Exchange/trainee service in local businesses/organisations.
- Workshops in cooperation with external partners.
- Subject-/project weeks or -days in cooperation with external partners.

#### **Involvement from school governing body and local businesses**

There is only a small difference between the two institutions when it comes to the degree of involvement from the governing body of the institution in entrepreneurship education. On a scale from 1 to 5<sup>63</sup> the institution with a strategy states that there is no significant involvement from the governing body, and the institution without a strategy states that there is to some extent involvement from the governing body. Both

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<sup>63</sup> 1 = not at all, 2 = to a small extent, 3 = neither or, 4 = to some extent, 5 = to a high extent.

institutions state that there is to some extent involvement from the local business sector as a resource in the work with entrepreneurship education.

### **Organisation**

This area is related to topics such as resources, structures and expectations.

#### **Resources, structure and expectations**

Both institutions have earmarked financial resources to entrepreneurship education. None of them have earmarked time or other resources such as staff with knowledge and expertise on the area. However, the institution with a strategy states that they have a coordinator for entrepreneurship teaching, who has the full backing and practical support from management and who is part of management. The institution without a strategy does not have this.

Like most of the institutions in the survey (82% of participating institutions on all islands), entrepreneurship teaching is part of the timetables and the annual teaching plans at both institutions in Pargas. At both institutions it is also required that the teachers describe in their annual plans how they integrate entrepreneurship in other subjects. However, in the annual teaching plans, time has not been allocated to entrepreneurial teaching courses of a longer duration, for instance project weeks, optional subjects, etc.

At the institution without a strategy, management has communicated their expectations to the teachers concerning where, when and how entrepreneurship teaching should be integrated. The institution also requires that the teachers include entrepreneurial learning objectives in their daily teaching and in the activities they set up with their students. There is a feedback system to ensure that the teachers follow up on the pedagogical goals and objectives. The institution also supports dialogue and cooperation between teachers from different disciplines through common facilities across the departments of the institution. None of this is present at the institution with an entrepreneurship strategy.

At none of the institutions has management developed a particular system for supporting dialogue and cooperation between teachers from different disciplines through cross-curricular teaching and/or interdisciplinary project groups, or through dialogue and co-decision between teachers and students.

### **Competence**

This area is about topics related to qualification, knowledge sharing, and pedagogics and cooperative relations.

#### **Plan for teacher competence development**

The institution with a strategy has no plan for competence development and knowledge sharing within entrepreneurship education. The institution without a strategy has a plan for continuing education of teachers in entrepreneurship teaching but no plan for knowledge sharing about entrepreneurship teaching or through special networks. Furthermore, it does not have a plan for cross-curricular cooperation between teachers within the subject of entrepreneurship.

#### **Experimenting with teaching forms**

Both institutions in Pargas allow their teachers to experiment with teaching forms through cooperation with businesses and through cross-curricular feature periods. However, only the institution with a strategy provides the teachers with the possibility to experiment with teaching forms through project work / feature weeks or days.

#### **Cooperation with the surrounding society**

Both institutions are involved in cooperation and knowledge sharing with the surrounding society/local area such as established business/industry and other knowledge organisations. In addition, the institution with a strategy is also involved with newly started businesses / entrepreneurs. None of the institutions are involved with institutions within the public sector.

#### **Extra-curricular activities**

Both educational institutions in Pargas offer some extra-curricular activities that strengthen the entrepreneurial competences and mind-set of students. The institution with a strategy offers students both incubator activities (to help them with start-up activities), entrepreneurship education given by entrepreneurs and business plan competitions. The institution without a strategy only offers this through other forms of advice and guidance for student start-ups. None of the two institutions offer extra-curricular activities through student societies, organisational support in relation with innovation and entrepreneurship or networking possibilities between students and entrepreneurs/business industry.

### *Practice*

This area is about topics that concern actual teaching forms and programmes, feedback, materials and teachers' aids.

At both institutions, teachers have access to materials and teacher's aids to support their teaching in innovation and entrepreneurship. The institution with a strategy also has experience with actual teaching forms and programmes within entrepreneurship and continuously validates and revises the learning objectives for entrepreneurship teaching with a view to updating the teaching programmes. None of the institutions measures the impact of the entrepreneurship teaching before, during and after the course/teaching. However, the institutions develop their curriculum in cooperation with external stakeholders in order to get input concerning useful competences in future.

### **Micro level**

The micro level concerns the implementation level, that is, the actual teaching taking place in educational institutions and the spread of this form of education, that is, how many students participate in this form of education on the island.

In the early phases of the development of a national strategy for entrepreneurship education, this level often relies strongly on individual teachers' enthusiasm. Teacher training is limited with no or little in-service training. But as the island or country develops their activity on the area of entrepreneurship education, measures on the micro level become more systematised, the teachers' central role is increasingly recognised, good practice examples are identified, and teaching materials are being elaborated. In the more advanced stages, teachers are making increased use of national/regional or local support mechanisms such as training or exchange platforms. More teachers follow the good examples and are engaging with the entrepreneurship education agenda. This development is of course faster and easier when management of the national education institutions have a clear focus on and agenda for working in this field.

This chapter maps entrepreneurship education from the perspective of teachers in upper secondary education on different parameters. Vocational/VET is not a part of the survey due to insufficient answers and there are no tertiary level educational institutions in Pargas.

The share of pupils and students who have received entrepreneurship education is calculated on the basis of the total number of pupils and students in Pargas. It must be emphasised that this share may be inaccurate, as it is based on the responses received.

There may be other pupils and students who participate in entrepreneurship education but whose teachers did not participate in the survey for this mapping.

### *Upper secondary education*

At the upper secondary level, data have been collected by means of a questionnaire for the teachers. The purpose of the survey is to map the number of pupils in upper secondary education who participated in education or activities leading to increased competence levels in innovation and/or entrepreneurship in the school year 2015/2016.

The questionnaire is divided into four main categories.

*Basic information* consists of two questions about whether the teachers perceive that the school has a clear policy of integration of innovation and entrepreneurship in the education. The responses to these questions thus indicate a score that reflects the extent to which this is the case.

*Taxonomy*<sup>64</sup> contains the following four dimensions: *action, creativity, environment* and *attitude*. These terms refer to entrepreneurial competences, which are not necessarily a subject or subject knowledge in themselves but are competences to set initiatives in motion and create opportunities. As such, a high score in the teachers' perceptions of the fulfilment of these four indicators is desirable. The score in the four dimensions of the pupils and students who have received entrepreneurship education is compared to the scores of the pupils and students who have not received entrepreneurship education.

*Entrepreneurship* and setting things in motion is the foundation of entrepreneurship education. The total number of pupils and students having received entrepreneurship education in any given area is comprised of all teachers who have answered the questions regarding whether the pupil or student has received instruction in starting a business and/or tried starting up and gained experience starting a business affirmatively.

*Entrepreneurship education*, which is the percentage of pupils and students who have received entrepreneurship education, is calculated from the total number of pupils and students on the respective island/area. As mentioned above, reservations are taken about the accuracy of this share.

In Table 1 below, the overall results for the upper secondary level are presented. The scale from 1–7, which was used in the survey, has been converted to a new scale, which spans from 1–100. This ensures that all answers in the survey can be compared.

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<sup>64</sup> Please see "A Taxonomy of Entrepreneurship education" for further elaboration on the entrepreneurial dimensions. <http://eng.ffe-ye.dk/media/555477/taksonomi-eng-2.pdf>

The teachers experience a clear policy on entrepreneurship with a score of 55 compared to the average 27. This score is also above the average of all islands/areas. The relatively high score is also evident in the number of classes who have been taught business start-up and also have realistic experience with business start-up. The percentages are 54% and 46%, respectively. This is the equivalent of 89 students having received entrepreneurship education.

**Table 1: The results from Pargas, Finland**

Subject	Variable	Pargas, Finland
Basic information	Policy on innovation	28
	Policy on entrepreneurship	55
Taxonomy	Action	36
	Creativity	38
	Environment	29
	Attitude	42
Entrepreneurship	Teaching in start-up percentage	54
	Realistic experience with start-up, percentage	46
Entrepreneurship education	Number of students receiving entrepreneurship education	89
Score for students receiving entrepreneurship education	Action	49
	Creativity	45
	Environment	45
	Attitude	41
Score for students <i>not</i> receiving entrepreneurship education	Action	26
	Creativity	33
	Environment	10
	Attitude	44

Note: The results are comprised of answers from 9 teachers with a total of 13 classes and 171 students.

Comparing the entrepreneurial parameter scores of the students who have and students who have not received entrepreneurship education, the results are, for the first time, different from those of the other islands. The parameter *attitude* shows a higher score for students who have *not* received entrepreneurship education. However, the score for students who have received entrepreneurship education is higher when it comes to the other three parameters. The differences are markedly lower than the average, however, which means that, according to the teachers, the students, who have received entrepreneurship education, have not necessarily achieved better entrepreneurial competences.

The result is comprised of answers from 9 teachers with a total of 171 pupils. Overall, 89 pupils at upper secondary level in Pargas have encountered

entrepreneurship education in the 2015/2016 school year. That is the equivalent of 20.6% of the 528 pupils in upper secondary level in Pargas. In comparison, a mapping in the 2014/15 school year shows that 36.9% of pupils in upper secondary education and vocational/VET in Denmark participated in entrepreneurship education.<sup>65</sup> However, this percentage includes pupils and students receiving teaching materials published by the Danish Foundation for Entrepreneurship (hand-outs as well as downloads) in Company Programme as well as in particular educational activities such as regional projects, supported projects, competitions etc.

## Micro Grant

Since 2011, the Danish Foundation for Entrepreneurship has awarded Micro Grants to students at upper secondary and tertiary level with entrepreneurial ambitions. Initially the Micro Grants initiative was a pilot project but, since 2014, the Micro Grant initiative has taken the form of a larger programme. The Micro Grant should be viewed as an extra-curricular initiative and thus as a continuation of entrepreneurial education and the competences which the students obtain through their education. The objectives of the Micro Grant Initiative are to enhance growth and employment. By supporting student start-ups, the long-term objective is to create growth companies that can contribute with more jobs, export incomes and societal growth. On a yearly basis, approx. 250 applications are submitted (corresponding to approx. 1,000 students) in Denmark, and approx. 65% of them have participated in entrepreneurship education. 70 grants (DKK 2.5 million) are handed out on a yearly basis.

Analysis shows that the Micro Grant Initiative has a catalytic effect and contributes to enhancing employment in Denmark.<sup>66</sup> Only 4–12 months after receiving a Micro Grant 50 grant recipients created the equivalent of 79 full-time positions in Denmark. Put in another way: For every million invested more than 40 full-time positions have been created in the period. Micro Grant recipients also actively seek new capital after receiving a grant. Two out of three grant recipients have had contact with private investors after receiving the Micro Grant. Nine grant recipients have achieved growth capital (up to DKK 2.3 million) within 4–12 months. None of the control group achieved further growth capital in the period.

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<sup>65</sup> <http://www.ffe-ye.dk/media/783586/samlet-notat-omkring-kortlaegningstal-2014-15.pdf>

<sup>66</sup> <http://www.ffe-ye.dk/media/699249/effektmaaling-mikrolegater-oktober-2015.pdf>

In Pargas, there are three upper secondary educational institutions. The total number of students in the school year 2015–16 is 528. At present, no funds are earmarked for student start-ups in Pargas.

During the project trial granting Micro Grants of DKK 25,000 in Pargas, three applications from student start-ups were received. Normally, a student start-up is comprised of 2 to 6 pupils or students. Three out of four members of the team that received the grant have participated in entrepreneurship education developed by “Ungt företagande” Finland. The Micro grant was marketed directly to students at the three schools with an interest in entrepreneurship.

### *Effects*

For the student start-up, the Micro Grant has had a range of effects. The project manager, Magnus Sundman says: “They feel valuable since they are treated as adult entrepreneurs. In addition, the Micro Grant has made key people in the business available, and with the grant as starting capital they have been able to create a professional website, among other things.” However, the project manager in Pargas also voices some scepticism about whether the Micro grant will have a real, long-term effect since it is aimed at students at the upper secondary level. At the same time, it is clear that the grant has been kind of a motivator and has ensured that the young people from the three schools consider entrepreneurship a valid career. “They build a useful network with their future in mind”. In Pargas, they have become aware of the potential that the young people will look for more growth capital after receiving a grant.

In Pargas, they also believe in the derivative effects for the area and local community as a consequence of the idea: “For the region's islands, the company's idea is new and fresh. It brings together various geographic areas of a scattered archipelagic landscape. The idea unites different actors, especially the suppliers of raw materials, consumers of bio waste, the relevant environmental and permit authorities, as well as surrounding partner companies. Entrepreneurship promotes sustainable and natural development in the archipelago in both the short and long term”, says Magnus Sundman, coordinator of the courses in entrepreneurship in Pargas. He continues, “The impact of their business is not yet visible on the islands of Pargas; it will take more time to determine its effect on the local environment. As mentioned, the doors have only now been opened. Business activities and entrepreneurship of this type contribute to how Pargas is perceived in terms of its business climate and environment for young entrepreneurs and their ideas. Small and medium-sized businesses run by young entrepreneurs are especially essential for the welfare and development of Pargas.”

### *Needs and possibilities*

During the process, the student start-up has been counselled in making a business plan, budgets, accounting, marketing, etc. Furthermore, they have been offered office facilities and benefited from sharing experiences and knowledge with other entrepreneurs. However, they ask for more help in developing the product and in establishing contact with more specialists in fertiliser production. In addition, they need professional and financial support in order to move the project further.

### *Micro Grant recipient*

#### **BioLink**

The business concept is largely based on the idea of a cleaner archipelago.

“The company is creating a tool that enables collaboration between agricultural/fish farmers and businesses that refine biogas. The tool is a contact forum in the form of a web portal. The portal serves as a link between the waste producers and the refiners of biogas, and facilitates contact between them. The website includes a discussion forum, facts about biogas, payment policies, tables for inputting necessary information, and contact information of the parties involved.”

### **Future entrepreneurial potential**

Pargas is an area characterised by an increasing old age dependency and a relatively high youth unemployment rate. Furthermore, it is primarily a rural area with a few industries in the primary sector. There is a high rate of people with a tertiary education in the area although there are no higher education institutions in Pargas. Considering the comparatively low rate of start-ups among people under 35 and the rather high youth unemployment rate in Finland as a whole (19% in 2013), it is very relevant to focus on entrepreneurship education in schools and to focus on improving the conditions for new start-ups.

Based on the objective of creating solutions that will entail positive effects for Pargas, the first objective for this pilot project has been to ensure a mapping of entrepreneurship education in the area. There is no or only limited prior data available for mapping entrepreneurship in the educational sector in Pargas. Knowing the present situation in the area, the second objective has been to define the potential for entrepreneurship education and Micro Grants in Pargas from 2016/2017 to 2020/2021.

This forecast includes economic measures and is based on six years of experience and development rates from the Danish Foundation for Entrepreneurship.

The long-term ambition is that new companies will follow from initiatives implemented and more students will obtain skills and competences that will enable them to create and establish new companies. Thus, the aim is that young people in Pargas learn how to act on opportunities and good ideas and how to convert these ideas into economic, social and/or cultural value for others. As a whole, the continuation of this pilot project is about enhancing the market position of Pargas internationally and contributing to a sustainable development, growth and jobs.

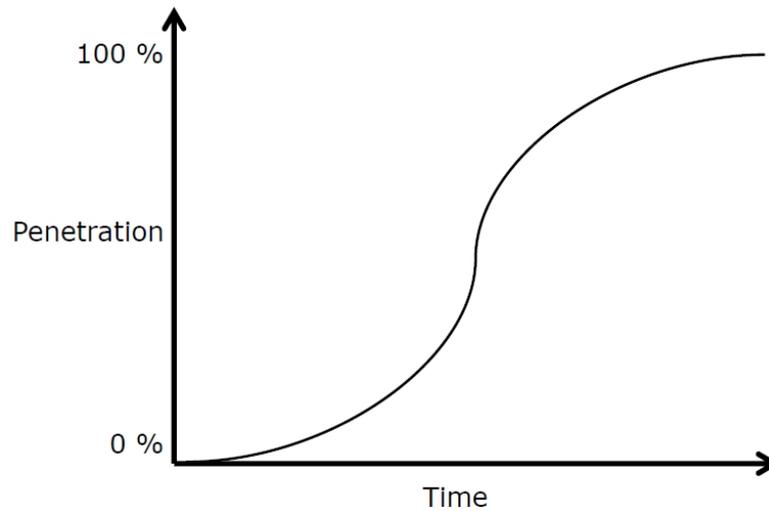
### *Forecasting entrepreneurship education and Micro Grants for Pargas*

This pilot project is the first step in securing a solid foundation for implementing and anchoring future initiatives in Pargas. The quantitative objective is to ensure that young people at different educational levels will engage in entrepreneurship education at least once during their education and that resources for student start-ups are available.

Vital for this development is an informed forecast in terms of the possible percentage increase in students receiving entrepreneurship education, student start-ups receiving a Micro Grant and the annual costs to obtain this increase over a period from 2015/2016 to 2020/2021.

When looking at the penetration rate for entrepreneurship education it develops according to an S-curve (Figure 1). Pargas is in the stage where the curve is steep and initiatives and strategies will have a relative high effect on the penetration rate.

Figure 1: S-curve for entrepreneurship education penetration rate



The forecast is presented in Table 2 and Figure 2 below.

The forecast is based on:

- The data collection and findings in this report.
- Stakeholder insights and comments from Pargas.
- The maturity level in Pargas with regard to entrepreneurship in education (the "s-curve").
- Development rates from Denmark and Bornholm (2010–2016).
- The average of total costs per student during the last three years in Denmark (including development, Micro Grants and administration/operation costs e.g. salary, travel expenses, communication etc.).

And the forecast is based on the assumptions that:

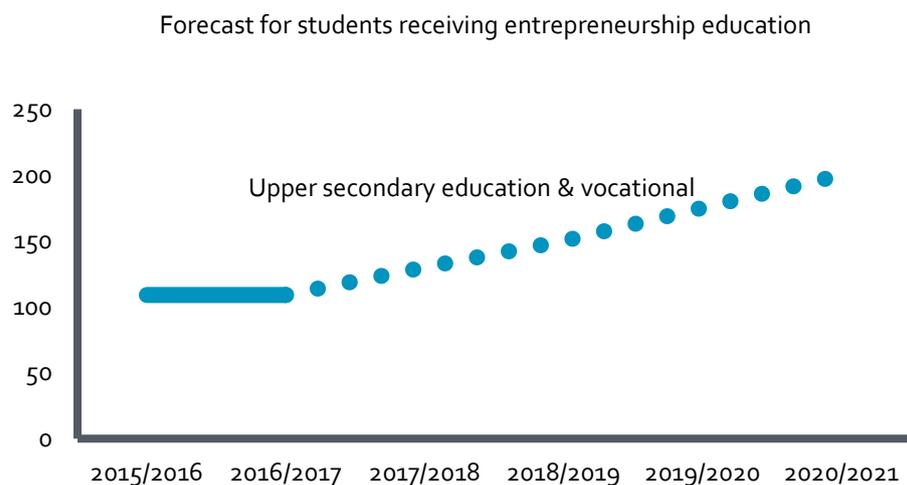
- There are no changes from school year 2015/2016 to 2016/2017.
- The number of students is constant.
- A percentage increase in the number of students receiving entrepreneurship education which corresponds to the historic percentage increase in Denmark.
- Annual costs per student corresponding to the annual costs per student in Denmark (based on the average of total costs during the last three years).

It is important to bear in mind that the forecasts cannot be made with 100% accuracy, but are estimates.

**Table 2: Forecast for Pargas**

Forecast for entrepreneurship and micro grants until the school year 2020/2021. Pargas, Finland						
	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
<b>Upper secondary education &amp; vocational/VET</b>						
Students in total	528	528	528	528	528	528
Students receiving entrepreneurship education, forecast	109	109	130	150	175	200
Share of students receiving entrepreneurship education, percentage	20.6%	20.6%	24.6%	28.4%	33.1%	37.9%
Applicants receiving a grant	-	-	-	-	-	-
Accepted applicants	1	1	1	2	2	3
Average annual costs (4 years) in DKK	DKK 750,000–950,000					

**Figure 2: Forecast for Pargas**



### *Recommendations for Pargas*

- A national operator/ responsible organisation is important to secure implementation and make the link between political level and the educational sector. Experiences with the past strategies for entrepreneurship education have taught the Finnish policy makers to inform about entrepreneurship education on a broad scale nationally, and especially regionally. Finland is a large and sparsely populated country. Measures to reach the regions are for instance through the 17 regional YES centres. In Finland the regional viewpoint is important, because the regions are very different and at different stages when it comes to implementing entrepreneurship education. However, the National Educational Programme (Köreplan 2016) has not yet been implemented at local level in Pargas.
- A specifically dedicated budget for development and activities is necessary. There are no or only limited resources for entrepreneurship education and student entrepreneurs in Pargas. Financial resources should be allocated both at national and local level. This should be a collaborative effort between the public and private sectors.
- Strong stakeholder relations are essential. The private sector, the public sector and the educational institutions should cooperate when implementing the national and regional strategies. This could take form as a cross-sector board in a national/regional organisation.
- Support and collaboration with schools and educational institutions on all levels. There is evidence to support that an effort to enhance entrepreneurship education has a great effect on young people's entrepreneurial competences. In the short term, it increases their desire to become entrepreneurs, and in the long term, it creates more entrepreneurs and more student start-ups. The entrepreneurship education can advantageously be differentiated according to the level of education. Danish research shows that in order to achieve the greatest effects entrepreneurship education must be differentiated on different levels of education and must be provided to pupils as early as possible during their education.<sup>67</sup> At the conference held in November, the Pargas delegation pointed out that there is a gap between primary and lower secondary school levels in relation to entrepreneurship education. There seems to be a lack of knowledge about models and best practices to be implemented by the teachers at this level. For further inspiration on teaching entrepreneurship on different levels please see

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<sup>67</sup> <http://www.ffe-ye.dk/fonden/nyheder/nyheder/kan-man-maale-udviklingen-af-elevers-og-studerendes-entreprenoerielle-kompetencer>

“Taxonomy i Entreprenørskabsuddannelse” published by the Danish Foundation for Entrepreneurship.<sup>68</sup>

- Promote entrepreneurship education. It is important to inform about and promote entrepreneurship, because the narrow view of entrepreneurship (only related with business) still prevails in some areas. One way could be to highlight and promote schools and teachers who have done a good job about implementing entrepreneurship education. And use the example of young people who have experiences with entrepreneurship education or with starting their own company.
- Collecting data to secure knowledge on the development of penetration of entrepreneurship education should not be underestimated. Mapping entrepreneurship education and later on making impact studies is vital for the support from ministries and private sector.
- Involvement from school management and building strategies at education institution level is essential. School management provides the very important link between a national/regional strategy level and implementation level in the form of teachers who teach entrepreneurial skills to pupils and students. Contributing to a (new) ideal of education where students learn to act in an entrepreneurial and innovative way is not only a pedagogical and didactical exercise, it is also a managerial and organisational practice.
- Communicating the educational institutions entrepreneurship strategy to all stakeholders both internally (teachers and students) and externally to collaborating partners outside the institution is essential for the strategy to have an impact on the penetration rate for entrepreneurship education on the island.
- A plan and resources for providing and ensuring the teachers the necessary competences in the area are necessary elements from the beginning. There are no or limited resources for entrepreneurship teachers competence development. The strategic emphasis on and financial support to entrepreneurship education should among other thing focus on upgrading teachers’ skills within entrepreneurship teaching. The Pargas delegation at the Nordic Entrepreneurship Island conference in November 2016 emphasised the importance of the teachers’ skills and knowledge and they suggested that teacher training should be supplemented with networks both within Finland and across borders to motivate teachers.
- Extra-curricular entrepreneurship activities such as; incubators, business plan competitions and advice and guidance for student start-ups could be a supplement to the curricular teaching and thus function as a job creator.

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<sup>68</sup> <http://www.ffe-ye.dk/media/555474/taksonomi2oiz0entrepren3b8rskabsuddannelse2o22o2oudgave2oonlineversion.pdf>

- A small financial aid (Micro Grant) to student start-ups in the initial phases of the start-up process has proved (in Denmark) to have a catalytic effect and contributes to enhancing employment. The recipients of the grant also actively seek growth capital after receiving a grant. This could supplement entrepreneurship teaching and help create new start-ups in Pargas. However, it takes time before the students have become accustomed to applying for this grant.
- Whenever possible, synergies across the Nordic islands in the project should be utilised.

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- HEInnovate, <https://heinnovate.eu/>

## Appendix A. A Progression Model for Entrepreneurship Education Ecosystems in Europe<sup>69</sup>

**Table 3: A Progression Model for Entrepreneurship Education Ecosystem in Europe**

Stage	Pre-Strategy (based on individual initiative)	Initial Strategy Development	Strategy Implementation and Consolidation & Development of Practice	Mainstreaming
Indicative timeframe	Starting position	0–2 years	c. 2–5 years	c. 5 years +
National <sup>70</sup> strategy, frameworks	No formal strategy in place. Entrepreneurship education covered – if at all – in disparate policy documents. Little or no effective inter-ministerial cooperation. No or rudimentary platforms for dialogue with relevant social partners.	Development and promulgation of strategy, with identification and agreement of entrepreneurship education objectives and of competences, roles and responsibilities of key players. Mechanisms being established for cooperation between key ministries. Platforms being established to include wider stakeholders. Vision (and intended outcomes) in process of being determined, which may involve reconciling competing agendas within government and between public and private sectors etc. Mapping and analysis of entrepreneurship education. Good practice examples being identified. Collection of effective teaching methods and materials. Launching of communications campaigns to stimulate interest of business community. Awareness raising with teachers.	Specification of learning outcomes, objectives, indicators and targets. Methods being developed for assessing learning outcomes; and development of appropriate qualifications. Regular cooperation mechanisms being embedded at various levels of system, with relative roles and responsibilities of different stakeholders clearly defined and accepted. Development of funding streams: allocation of dedicated resources. Implementation support mechanisms being put in place. Resource banks of teaching materials available. Dissemination and broad-based application of the effective teaching methods identified. Research base being developed.	On-going monitoring and regular evaluation of entrepreneurship education in terms of quality of activity and learning outcomes being achieved. Implementation support mechanisms part of everyday teacher and school development; entrepreneurship education fully integrated into initial teacher training for every teacher. Continuous application and refinement of effective teaching methods. Robust funding mechanisms established.

<sup>69</sup> *Towards Greater Cooperation and Coherence in Entrepreneurship Education*, European Commission, 2010.

<sup>70</sup> Or regional strategy and frameworks depending on governance structures.

Stage	Pre-Strategy (based on individual initiative)	Initial Strategy Development	Strategy Implementation and Consolidation & Development of Practice	Mainstreaming
Indicative timeframe	Starting position	0–2 years	c. 2–5 years	c. 5 years +
Schools	Penetration of entrepreneurship education highly variable; much ad hoc activity. Tends to be an “add-on” to the mainstream curriculum with emphasis on “entrepreneurship” as running a business. Tends to be focused in secondary education and in specific subjects. No or sporadic formal assessment of learning outcomes. Use of (unaccredited) prizes and awards to recognize achievement.	Role of schools articulated in strategy – recognition of central role. Entrepreneurship education starting to be developed across the curriculum as an embedded set of competences, not just as a separate subject. Development of entrepreneurship education beyond secondary level especially, e.g. at primary level: and school clustering.	Entrepreneurship education being made available in every school, embedded within the curriculum as part of the overall teaching concept and also as a separate subject. Progressive establishment of partnerships with businesses in all schools (e.g. through pilots).	High quality entrepreneurship education being made available to every student in every phase/type of education. Clear linkages established between different phases/types of education. Progressive development of wider linkages as part of development of local entrepreneurship ecosystem. Learning outcomes assessed.
Teachers	Strong reliance on individual teacher’s enthusiasm. Entrepreneurship education often delivered outside core school hours as extra-curricular activity. Teacher training very limited. No or little in-service training.	Role of teachers articulated in strategy – recognition of central role. Good practice examples being identified of: teacher training; teaching materials.	Teachers making increasing use of national/regional and local support mechanisms (e.g. training or exchange platforms). Use of pilots to spread good practice and increase numbers of teachers engaging with entrepreneurship education agenda. Initial or in-service training on entrepreneurship made available to all interested teachers.	All teachers receiving entrepreneurship education as an integral part of their initial and their continuous in-service teacher training. All teachers teaching entrepreneurship education as integral part of the curriculum.
Regional and local authorities <sup>71</sup>	Patchy involvement: some authorities involved in development of local partnerships; others not involved at all.	(Potential) role of local authorities considered in strategy development process. Development of good practice examples of school clusters and education-business partnerships at local level.	Local authorities playing an increasingly important role in school cluster development and education-business links.	Full participation of local authorities in organising entrepreneurship education. Possible establishment of statutory requirement for organisation of partnerships based on municipality geography.
Businesses, private associations and organisations	Involvement of businesses tends to be patchy, unstructured, and often reliant on individual initiative by parents. Use of programmes developed by private organisations (e.g. JA) tends to be ad hoc on individual school basis .... but plays vital role in providing essential experiential and “hands-on” learning.	Key role of businesses and private organisations articulated in strategy. Businesses (increasingly) involved through social partner organisations in policy development and in delivery of entrepreneurship education in schools.	Consideration of potential to upscale the role played by businesses and private organisations in entrepreneurship education: extension and deepening of that role. Businesses being more systematically engaged at local level – movement away from ad hoc approaches to establishment of mechanisms for brokerage and establishment of long-term, sustainable relationships with schools.	Full participation of businesses in entrepreneurship education in all schools/universities. Businesses support for entrepreneurship education at all levels increasingly delivered through structured channels, e.g. education-business partnerships, organised brokerage.

<sup>71</sup> The role of regional and local authorities depends on the distribution of responsibilities between tiers of government.

## Appendix B. “The Star Model” – a method for identifying entrepreneurship education

“The Star Model” was developed by Øresund Entrepreneurship Academy with the purpose to identify and quantify entrepreneurship education courses in Danish universities. It was later updated by the Danish Foundation for Entrepreneurship to use for short and medium-length tertiary educations also.

Courses and subjects are categorised and given 1–3 stars according to how much focus they put in the individual categories of the model. Apart from identifying a course or subject as entrepreneurship education, the model can be used to get an image of how much emphasis is put on entrepreneurship in the form of content or teaching methodology in a course/subject. The model and method is used exclusively to identify the extent to which the course/subject focuses on entrepreneurship, it is not an evaluation or assessment of the quality of the course/subject as such.

Figure 1 below illustrates the overall structure of “the Star Model” which consists of two dimensions 1) Teaching design and 2) Phases in the entrepreneurial life cycle. The categories under Teaching design on the horizontal axis are divided into two main categories each of which describes the subject content and teaching approaches and methods, which together form a unifying concept for the pedagogics, didactics and methods which characterise the teaching or education. The categories on the vertical axis describe the phases in the entrepreneurial life cycle. To read more about the Star Model, see the report about examination forms, *Eksamensformer*, on the website of the Danish Foundation for Entrepreneurship.<sup>72</sup>

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<sup>72</sup> <http://www.ffe-ye.dk/videncenter/entreprenorskabs-undervisning/eksamensformer>

**Table 4: The Star Model**

Teaching design								
Subject-related content					Teaching approaches and methods			
Phases/ Categories	Intrapre- neurship	Entrepre- neurship	Finance/ VC	Law	Practical dimensions	Student participation	Interdisci- plinary	International dimensions
Idea								
Beginning								
Growth								
Running								

## Appendix C. Demographic data on the seven islands

Table 5: Population changes (increase and decrease) in % between 2009 and 2015

Unit	Changes in total population	Changes in population aged 0–24	Changes in population aged 25+	Changes female ratio	Youth dependency changes*			Old age dependency changes**		
	2009–2015	2009–2015	2009–2015	2009–2015	2009	2015	Change	2009	2015	Change
Norway	7,6	6,0	8,4	-1,6	28,7	27,4	-4,4	22,1	24,5	10,9
Andøy	-0,8	-2,0	-0,4	-2,3	29,0	25,3	-12,7	33,2	37,9	14,1
Finland	2,7	-0,7	4,2	-0,6	25,2	25,7	2,2	25,2	31,3	24,2
Pargas	0,5	-2,3	1,7	-0,5	27,1	27,8	2,6	30,9	40,0	29,5
Denmark	2,7	2,6	2,8	-0,4	27,8	26,4	-5,0	24,1	28,8	19,5
Bornholm	-6,4	-14,3	-3,6	-0,7	25,5	23,0	-9,6	33,2	44,6	34,5
Faroe Isl	-0,9	-4,3	0,9	1,4	34,4	34,5	0,4	22,2	26,9	20,9
Greenland	-0,3	-7,9	4,6	1,0	32,9	29,8	-9,4	9,3	10,7	15,2
Sweden	5,3	4,8	5,5	-1,0	25,4	27,3	7,4	27,1	31,1	14,8
Gotland	0,4	-4,8	2,6	-0,7	22,9	24,6	7,3	31,0	39,2	26,5
Iceland	4,1	0,9	4,2	2,2	30,9	30,8	-0,3	17,2	20,5	19,2

Note: \* population aged 0–14 as a share of population aged 15–64.

\*\*population aged 65+ as a share of population aged 15–64.

Source: Data sources: National statistical institutes and Eurostat.

**Table 6: Increase and decrease in employment and education rates of the population 2009–2013**

Unit	Employment rate*			Unemployment rate**			Youth unemployment rate***			Tertiary education****
	2009	2013	Change	2009	2013	Change	2009	2013	Change	2014
Norway	76,6	75,6	-1,3	3,2	3,5	9,4	9,2	8,6	-6,5	
Andøy	75,6	72,8	-3,7	2,8	4,8	71,4		12,7		26,6
Finland	68,4	68,4	0	8,4	8,4	0	21,5	19	-11,6	
Pargas	74,5	73,2	-1,7	4,9	4,6	-6,1		14,3		43,2
Denmark	75,1	72,3	-3,7	6,1	7,2	18,0	11,8	14,1	19,5	
Bornholm	68,8	69,3	0,7	8,9	8,9	0		19,7		23,7
Faroe Isl	88,1	90,8	3,1	4,8	3,9	-18,8		9,9		35,9
Greenland	64,9	63,3	-2,5	7,5 (2010)	9,7	29,3		17		14,4
Sweden	72,4	74,5	2,9	8,5	8,3	-2,4	25	23,7	-5,2	
Gotland	74	77,4	4,6	8	6	-25				31,1
Iceland	78,3	81,1	3,6	7,2	5,4	-25	16	13,6	-15	

Note: \*number of employed persons as a share of the population aged 15–64.

\*\*total number of unemployed persons as a share of the labour force (labour force is made up by the total number of persons employed or looking for a job).

\*\*\*unemployed persons aged 15–24 as a share of the labour force aged 15–24.

\*\*\*\*persons with a tertiary education as a share of the population aged 25+.

Source: Data sources: National statistical institutes and Eurostat.