

Appendix 1: Andøy, Norway

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 a 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 on Andøy 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 on Andøy.

In order to map the status of entrepreneurship education on Andøy, 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 the islands/countries
- 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 on Andøy are shortly discussed in the first chapter.³⁹

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.⁴⁰

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 on the macro level. The model identifies four different stages in the development of a strategy for entrepreneurship education:

³⁹ <http://www.nordregio.se/> Nordregio is a leading Nordic research institute within the broad fields of regional development and urban planning.

⁴⁰ See 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 based 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 on Andøy 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 institutional 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 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 at 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,⁴¹ 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 on Andøy to the management of educational institutions on the upper secondary level and the tertiary level on Andøy.

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 directed at the teachers. The two different types of teaching have been 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 participated in education or in activities leading to increased competence levels in innovation and/or entrepreneurship in the school year 2015/2016.

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

It also examines the teachers' evaluation of the teaching in entrepreneurship education, but the methods vary in the questionnaires for upper secondary education

⁴¹ <https://heinnovate.eu/>

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.⁴²

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, the Danish model “Stjernemodellen” 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 also to diploma and bachelor educations and has been 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.

⁴² <http://eng.ffe-ye.dk/media/555477/taksonomi-eng-2.pdf>

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 island after receiving a Micro Grant.

The project manager on Andøy has also provided information about the innovation ecosystem on the island 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. 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 in the data may, however, occur in relation 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 based on different strategic knowledge. The data given about each island/country are therefore not always equivalent, because it depends 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 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 (Annex 1) 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 on Andøy in the recent period. This will serve as background for the mapping of the situation on Andøy 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, Andøy has experienced a slight decrease (by 0.8%) in the total population, where the population aged 0–24 has decreased by 2% and the population aged 25+ has decreased by 0.4%. This is much lower than Norway as a whole (the population, which grows more than all countries and islands in this mapping). Otherwise, there is nothing remarkable about these population changes when we compare with the other islands. What is worth noting, however, is the fast

decreasing (by 12.7%) youth dependency rate and the fast *increasing* (by 14.1%) old age dependency rate. It is also worth noting that in the period 2009–2013, the old age dependency rates (from 33.2% to 37.9%) are much higher than the youth dependency rates (from 29% to 25.3%).

Labour market

In the period 2009–2013, the overall employment rate in Andøy fell from 75.6% to 72.8%, which is a bit lower than the mean of 75.4% of all the islands' rates, going from 63.3% in Greenland to 90.8% in the Faroe Islands. In the same period, Andøy experienced a rise in the overall unemployment rate from 2.8% to 4.8%, which is very drastic increase (71.4%), however, this percentage has to be seen in relation with the fact that Andøy has a very small population. Compared with the other islands, where the 2013 unemployment rates go from 3.9% in the Faroe Islands to 9.7% in Greenland, the unemployment rate in Andøy is – despite the drastic rise – still relatively good. Compared to Norway as a whole, the Andøy employment and unemployment rates are more negative. The same goes for the youth unemployment rate of 12.7%. Most youth unemployment rates are only available for 2013; therefore the development of this rate cannot be deduced. In comparison, the other islands' youth unemployment rates go from 9.9% in the Faroe Islands to 19.7% on Bornholm (there are no available data for Gotland, but youth unemployment in Sweden as a whole is 23.7%).

Education level

Approx. every fourth citizen in Andøy (26.6%) has attained a tertiary education level. In comparison, the other islands have rates going from 14.4% in Greenland to 43.2% in Pargas.

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 on Andøy. 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

Norway has had a national strategy for entrepreneurship education for many years. There is a cross-ministerial collaboration and many other stakeholders involved at the national level. Among others the Brønnøysund Register Centre (which simplifies reporting duties for business and industry in dealing with the public administration), Union of Education Norway, Finance Norway (FNO), Union of principals, Confederation of Norwegian enterprise (NHO), Virke – the Enterprise Federation of Norway, Organisation for Norwegian municipalities (KS), and Norwegian Confederation of Trade Unions (LO). Moreover, private organisations are involved to a high degree at the national level, a.o. Visma, Ferd and Nordea.

The national budget for entrepreneurship education in Norway is approx. 3 million EUR, but no direct support to educational institutions.

Entrepreneurship education is mapped through JA Norway (in this report referred to as Ungt Entreprenørskab), and the Eastern Norway Research Institute (ENRI) evaluated the latest national strategy, including assessment of the impact of entrepreneurship education in the education system.

The role of local and regional authorities

There are 17 Ungt Entreprenørskab (UE) regions, which are funded through both public and private means; one of them is in the region of Nordland of which Andøy is part. Still, a strategic partnership exists between UE and the local upper secondary school on the island. However, there is very limited involvement of UE in the local primary and lower secondary schools.

The private sector of Andøy is to a small degree involved in the entrepreneurship education strategy. Fabrikken Næringshage, a regional innovation centre for Lofoten and Vesterålen Islands functions as the main support of young entrepreneurs in the municipality of Andøy. SIVA, a public enterprise owned by the Norwegian Ministry of Trade and Fisheries, finances Fabrikken Næringshage, among others.

Implementing entrepreneurship education

At the national level, entrepreneurship education is implemented at all education levels, but formally approved learning objectives only exist for the lower secondary level (NQF 3–4). There are programmes about youth companies in primary school and VET (NQF levels 2, 3, 5 and 6). Entrepreneurship education is taught primarily as a method at the primary education level, and as both a method and a subject at the lower secondary, upper secondary, VET and tertiary level of education.

Teacher education and training

Entrepreneurship education is part of initial teacher training, but mostly, or only, under Ungt Entreprenørskab management. The mapping done by Ungt Entreprenørskab and through independent research has shown that there are few courses in entrepreneurship in pedagogical subjects and teacher education. Moreover, there has been a substantial decline in initial teacher training in entrepreneurship education in recent years in spite of the national strategy's, or action plan's, goal to strengthen courses in teacher education. Other resources for teacher training are guidelines, programmes and websites with entrepreneurship education teaching materials⁴³.

Engaging with businesses and private associations and organisations

The primary focus area of the private sector in Andøy is the recruitment of future employees.

Regional strategy

Norway operates with regional strategies, one of them in Nordland, the region to which Andøy belongs. The following text contains information taken from this regional strategy, "Et nyskapende Nordland. Innovasjonsstrategi for Nordland 2014–2020".

The economy of Nordland is built on the exploitation of natural resources. The three main industries are seafood, processing industry, and tourism. The region has a relatively large amount of small and medium-sized companies compared to other Norwegian regions, but also a few big industrial companies. The dominant companies

⁴³ Some of the information about Norway's strategy for entrepreneurship education is procured through the ICEE project, <http://icee-eu.eu/>

on the three areas, however, have their main offices outside the region, which is a challenge to regional development.

Compared to other Norwegian regions, there are too few new companies starting up and too few new jobs being created within existing companies in Nordland. At the same time, companies have difficulties finding qualified labour. Within the three main industry areas there are of course different challenges, but limited access to qualified labour is one that they share.

What adds to this challenge is that the percentage of 20–40 year-olds in the Nordland region is lower, and decreases more, than in other Norwegian regions. During the last 20 years, Nordland has been the region with the highest number of people moving away. On top of that, the region has a high use of temporary labour, which adds to the problems.

In spite of this, there is great potential within the three main industries. When oil and gas are not taken into account, the economy of the region is more competitive than Norway as a whole. In order to stay competitive and prevent recession, however, it is necessary to have a continuous focus on innovation and development.

The regional strategy distinguishes between “experience-based” and “research and development-based” innovation processes. In Nordland, most innovation is experience-based and takes place in daily work. Too few new companies are established as a result of research results. There is generally a lack of research and development in the region. So, the regional strategy describes measures that must be taken in order to reinforce innovation capacity at the University Nord in Bodø (which is, however, several hundreds of kilometres away from Andøy).

The regional strategy emphasises the need for a more robust and regionally anchored business and industry sector. Development of industry and education sector as well as more collaboration between the two sectors is therefore top priorities of the strategy.

After an analysis of the innovation potential of the region, the strategy has thus set up three overall focus areas:

- To increase competitiveness of the business/industry sector by strengthening the innovative capacity of companies (targeted the region’s many small and medium-sized companies).
- To have more employees in the service industry and more innovative contractors.
- To have an innovation system in Nordland with good interaction, learning and collaboration between key actors from the business sector, labour market, education and research and different parts of the public sector.

Among the priorities is also to develop the range of training and education possibilities, which is offered by further education institutions, and to strengthen the innovative competences of students.

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 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 of the islands and make the link between strategy and practice, a survey was sent to the school management of the institutions on Andøy. 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.

There is only one educational institution on Andøy – Andøy videregående skole (vocational/VET). The management of the school participated in the survey, and according to their response, there is no strategy for entrepreneurship education on the school. This means that there are also no plans and goals for the development of entrepreneurship education.

No strategy but entrepreneurship education activities

According to the response from the school management, entrepreneurship teaching activities are nevertheless taking place at the school. Among these activities are: 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

On a scale from 1 to 5⁴⁴ the school states that they agree (4) to the statement "It is important that my educational institution formulates a strategy for education in innovation & entrepreneurship". To the statement "It is relevant for all students at my educational institution to be taught innovation and entrepreneurship" they agree to a lesser extent (3).

Importance of goals for entrepreneurship teaching

The institution agrees 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
- decrease the student drop-out rate
- strengthen the cooperation between the educational institution and the local society
- strengthen the profiling and promotion of my educational institution.

However, the institution does not agree that goals should be set to:

- upgrade teachers' skills within entrepreneurship teaching
- live up to new national/regional policy on the area of entrepreneurship education
- boost the development of the local area, for instance by contributing to new businesses through the skill development of young people.

⁴⁴ 1 = very much disagree, 2 = disagree, 3 = neither or, 4 = agree, 5 = very much agree.

External network

The school also provides the students with the possibility for making contact with the school's external network through:

- guest lectures given by local business people, entrepreneurs, or others
- workshops in cooperation with external partners
- visits to companies, organised by the educational institution.

They do, however, not provide them with this possibility through:

- exchange/trainee service in local businesses/organisations
- subject-/project weeks or -days in cooperation with external partners
- competitions at the educational institution, where external contacts function as judges.

Involvement from school governing body and local businesses

On a scale from 1 to 5⁴⁵ the school has no significant involvement from its governing body (3), and the school has to some extent (4) involvement from the local business 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

Andøy videregående skole has earmarked time and other resources such as staff with knowledge and expertise on the area. The school has also appointed a coordinator for entrepreneurship teaching who is part of the management and has the full backing and practical support from the management. However, the school has not earmarked financial resources to the area.

Like most of the educational institutions in the survey (82% of all educational institutions on the seven islands), entrepreneurship teaching is a part of the timetables and of the annual teaching plans. Moreover, in the annual teaching plans, time is allocated to entrepreneurial teaching courses of a longer duration, for instance project weeks, optional subjects, etc.

⁴⁵ 1 = not at all, 2 = to a small extent, 3 = neither or, 4 = to some extent, 5 = to a high extent.

However, school management has not communicated their expectations to the teachers concerning where, when and how entrepreneurship teaching should be integrated at the school. Also, management does not require from the teachers that they describe in their annual plans how they integrate entrepreneurship in other subjects. Furthermore, management does not require from the teachers that they include entrepreneurial learning objectives in their daily teaching and in the activities that they set up with their students. Neither does the school use a feedback system to ensure that the teachers follow up on the pedagogical goals and objectives. Nor is there a structure to support dialogue and corporation between teachers from different disciplines.

Competence

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

Plan for teacher competence development

The school has a plan for competence development and knowledge sharing within entrepreneurship education through the continuing education of teachers in entrepreneurship teaching and through knowledge sharing about entrepreneurship teaching and special networks. There is, however, no plan for competence development through a cross-curricular cooperation between teachers within the subject of entrepreneurship.

Experimenting with teaching forms

Andøy videregående skole allows their teachers to experiment with teaching forms through cooperation with businesses and through project work / feature weeks or days. However, the school does not provide the possibility for teachers to experiment with teaching forms through cross-curricular feature periods.

Cooperation with surrounding society

The school is involved in cooperation and knowledge sharing with the surrounding society/local area, for instance established business/industry and institutions within the public sector. They are, however, not involved in cooperation with newly started businesses /entrepreneurs or other knowledge organisations.

Extra-curricular activities

Andøy videregående skole offers some extra-curricular activities that strengthen the entrepreneurial competences and mind-set of students. The school offers both students incubator activities (to help them with start-up activities) and other forms of

advice and guidance for student start-ups. It also offers extra-curricular activities through student societies' organisational support in relation with innovation and entrepreneurship and by organising networks between students and business industry. There are, however, no extra-curricular activities such as entrepreneurship education given by entrepreneurs or business plan competitions.

Practice

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

The teachers on Andøy videregående skole have access to materials and teachers' aids to support their teaching in innovation and entrepreneurship. The school also has experience with actual teaching forms and programmes within entrepreneurship. These forms and programmes are for example project work, role-playing, and Company Programme (JA programme).

However, the school does not continuously validate and revise the learning objectives for entrepreneurship teaching. Furthermore, there are no structures for measuring the impact of the entrepreneurship teaching before, during and after the course/teaching. Furthermore, there are no measures for developing the curriculum in cooperation with external stakeholders in order to obtain input concerning useful competences in future.

Micro level

The micro level concerns the implementation level, that is, the actual teaching, which takes 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 often 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 has a clear focus on and agenda for working in this field.

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

The share of pupils and students who have received entrepreneurship education is calculated on the basis of the total number of pupils and students on the island. 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.

Vocational/VET

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

The questionnaire is divided into four main categories.

Basic information is comprised of two questions. They ask whether the teachers experience that their school has clear policies on innovation and entrepreneurship in education, respectively. The scores for these questions thus reflect to what degree this is the case.

Teaching, which focuses on the degree to which the teachers experience that the students have participated in innovation and entrepreneurship education in class instruction and courses, as clear subjects in their practical training and internships as well as clear subjects in their apprenticeship tests.

Entrepreneurship and setting things in motion is the foundation for entrepreneurship education. The teachers were asked whether the pupils have participated in feature weeks, camps, projects or the like focusing on innovation and entrepreneurship, respectively. In addition, the teachers were asked whether the pupils had participated in other innovation or entrepreneurship projects. If the answer is yes to any one of these questions, the pupils are included in the total number of pupils and students, who receive entrepreneurship education. As such, there are three different questions, which all play a part in determining whether the pupils have received entrepreneurship education.

Entrepreneurship education thus indicates the number of pupils who, based on the abovementioned questions, receive entrepreneurship education. The share of pupils

and students who have received entrepreneurship education is based on the total number of pupils and students on the respective islands/areas. As mentioned above, reservations are taken about the accuracy of this share.

In Table 1, the overall results for vocational/VET 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.

The participating school scores 25 and 17 out of 100, respectively; on the question whether they as teachers perceive that the school has a clear policy on innovation and entrepreneurship as part of the standard education. The scores for both questions are below the mean of 33 and 32, respectively, counting the total number of answers from all islands.

When it comes to the teaching, the students meet innovation as a clear topic only during the practical training or apprenticeship, while they meet entrepreneurship both in the subjects/courses and as a clear topic during the practical training or apprenticeship. However, the teachers perceive that it is to a very low degree, because the score is only 8 out of 100.

Table 1: The results for vocational/VET

Subject	Variable	Andøy
Basic information	Policy on innovation	25
	Policy on entrepreneurship	17
Teaching	Innovation in subject/course	0
	Innovation as a clear topic in practical training/apprenticeship	8
	Innovation as a clear topic in apprenticeship test	-
	Entrepreneurship in subject/course	8
	Entrepreneurship as a clear topic in practical training/apprenticeship	8
	Entrepreneurship as a clear topic in apprenticeship test	-
Entrepreneurship	Innovation, percentage	-
	Start-up of business / Entrepreneurship, percentage	50
	Other, percentage	-
Entrepreneurship education	Number of students receiving entrepreneurship education	15

Note: The results comprise answers from 2 teachers with a total of 2 classes and 25 students.

According to the respondents (teachers), none of the classes have participated in project week, camp, project or similar activities with a focus on innovation, while half of them have participated in similar activities with a focus on the start-up of a business/entrepreneurship. None of the classes have, according to the teachers, participated in other innovations or entrepreneurship related programmes.

The result is comprised of answers from two teachers with a total of 25 pupils. Overall, 15 pupils at vocational/VET on Andøy have encountered entrepreneurship

education in the 2015/2016 school year. That is the equivalent of 10% of the 150 pupils in vocational/VET level on Andøy.

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 participate in entrepreneurship education^[1]. 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.⁴⁶ Only 4–12 months after receiving a Micro Grant, 50 grant recipients created the equivalent of 79 full-time jobs in Denmark. Put in another way: For every million invested more than 40 full-time jobs 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.

On Andøy, there is one upper secondary educational institution. The total number of students for the school year 2015/2016 is 150. At present, there are no funds

^[1] <http://www.ffe-ye.dk/media/783586/samlet-notat-omkring-kortlaegningstal-2014-15.pdf>

⁴⁶ <http://www.ffe-ye.dk/media/699249/effektmaaling-mikrolegater-oktober-2015.pdf>

earmarked for student start-ups on the island, but the pupils can apply for financial support from the local businesses. However, this has not been systematised.

During the project trial granting micro grants of DKK 25,000 on Andøy, five applications from student start-ups were received. Normally, a student start-up is comprised of 2 to 6 pupils or students. All applicants have received entrepreneurship education to some degree.

The Micro Grant was marketed through the principal and teachers at the school and through the school's website. The teachers also launched an innovation camp with the local "Ungt Entreprenørskab" regional office in Nordland in order to facilitate the idea development process etc. In general, the support from the regional office "Ungt Entreprenørskab" has a large influence on the students being taught entrepreneurship in close collaboration with the teachers. Local businesses are also involved in the instruction.

Effects

For the student start-ups, the Micro Grant has had a significant effect. The project manager says: "It has given the pupils the opportunity to think a little bigger and has resulted in a project with a longer span than just the one school year usually encouraged through entrepreneurship education in school."

The Micro Grants have enabled access to mentors and potential loans. Further, the grant itself has given the pupils more inspiration and belief in their idea and in its potential for realisation. The grant has been spent on start-up expenses; equipment, cooperation agreements as well as development, marketing and market research.

On Andøy, they also believe in the derivative effects for the island and local community as a consequence of the idea: "Both ideas have the potential to grow and become real businesses in the local community on the island after this school year since they both create jobs and do something for the social life on the island – they have very different foci – but as a whole, the ideas will contribute to growth for both tourism and the local community. This is important for a small community like Andøy," says May-Britt Johansen (Manager of Andøy Næringsforening).

Needs and possibilities

Ungt Entreprenørskab, Region Nordland, is the primary support for student start-ups on the island, but more as a facilitator of entrepreneurship education than as a concrete help for any one start-up. However, they draw on partners and offer courses in accounting, taxes and marketing and advertising, among others.

Micro Grant recipients

Due to the age of the pupils as well as the size of the grant, the grant was split in two. One team received a third and the other received two thirds of the grant.

Startup: Get'em points UB

A volunteer app which encourages the residents on the island to contribute through voluntary work:

“As young people ourselves, we think that there are too few cultural events on the island, and we believe that our innovative product will have a positive effect on the cultural life on Andøya. In order to create cultural events and arrangements, you are dependent on enthusiastic people who want to create a community among the inhabitants on the island. Therefore, we believe that the “volunteer clock” will be a good and innovative way to have more enthusiastic volunteers to put together events for inhabitants of all ages. We want to produce our product and sell it to different companies. To begin, we want to contact a variety of clubs to see whether it is an inter-esting idea. If the clock is received positively, we want to sell it to multiple organisations. Our product is also a great solution to a social problem, which is continually discussed in the media; for many, it can be difficult to take part in social events be-cause of costs. By realising the “volunteer clock”, we can help include more people in cultural events and the like. It will be possible to collect app ‘points’, which can be used to collect benefits from other cultural arrangements.”

Startup: Vi kjøper med det UB (UB=ungdomsbedrift)

A service that provides supplies and services to small boats and at the same time buys the fish catch of the day.

“We want to be a service that delivers supplies and services to small boats. It can go the other way around as well, so that we buy fish from the boats. This will make it easier for the local population to get fresh fish. The procedure is like this; the fishermen take contact to our company, either by phone, facebook, or through our website. Then they place an order on the supplies and goods they need from us. In return, we want to buy fish from the fishermen so that the local population can buy fish from us.”

Future entrepreneurial potential

Andøy suffers from an increasing old age dependency and a high youth unemployment rate. Nordland, of which Andøy is a part, is moreover the Norwegian region with the highest number of people moving away. Among the reasons for the depopulation is the

lack of job opportunities in the region. At the same time, companies are having problems in finding qualified labour, so it seems to be a vicious circle. This calls for entrepreneurs and innovative employees.

Based on the objective of creating solutions that will entail positive effects for Andøy, the first objective for this pilot project has been to ensure a mapping of entrepreneurship education on the island. There is no or only limited prior data available for mapping entrepreneurship in the educational sector on Andøy. Knowing the present situation on the island the second objective has been to define the potential for entrepreneurship education and Micro Grants on Andøy 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 ambition in the long term 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 on Andøy 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 islands' market position internationally and contributing to a sustainable development, growth and jobs.

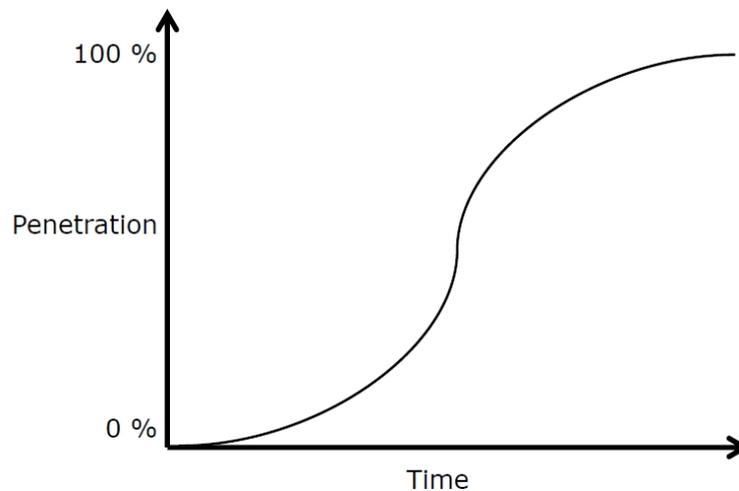
Forecasting entrepreneurship education and Micro Grants for Andøy

This pilot project is the first step in securing a solid foundation for implementing and anchoring future initiatives on Andøy. 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). Andøy is still in the initial stage. However, the number of students is relatively low which can influence the speed of the penetration rate positively.

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 Andøy.
- The maturity level on the island 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.).

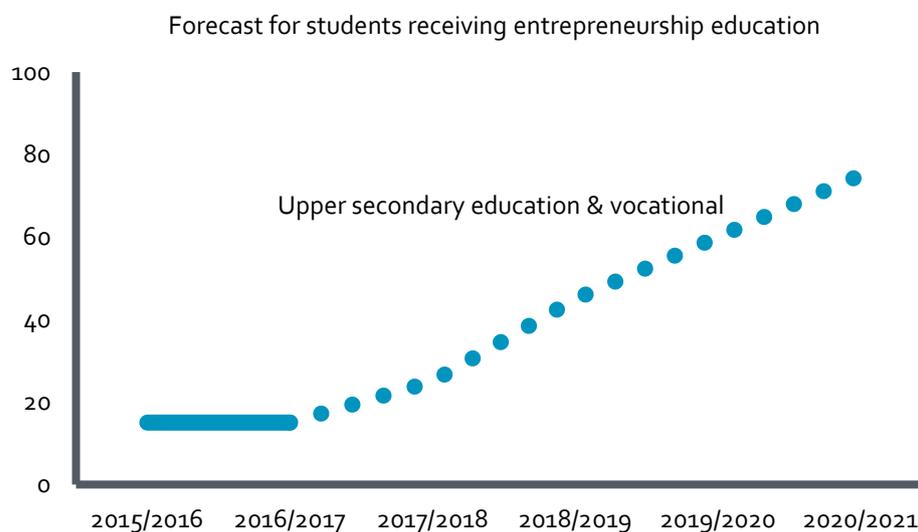
And the forecast is based on the assumptions that:

- 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).

Table 2: Forecast for Andøy

Forecast for entrepreneurship and micro grants until the school year 2020/2021						
Andøy, Norway						
	2015/2016	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Upper secondary education & vocational/ VET						
Students in total	150	150	150	150	150	150
Students receiving entrepreneurship education, forecast	15	15	25	45	60	75
Share of students receiving entrepreneurship education, percentage	10,0%	10,0%	16,7%	30,0%	40,0%	50,0%
Applicants receiving a grant	-	-	-	-	-	-
Accepted applicants	2	2	2	2	3	4
Average annual costs (4 years) in DKK	DKK 700.000–900.000					

Figure 2: Forecast for Andøy



Recommendations for Andøy

- A dedicated budget for development and activities is necessary. There are no or only limited resources for entrepreneurship education and no or limited resources for student entrepreneurs on Andøy. Financial resources should be allocated at local level and this should be a collaborative effort between public and private sector.
- Strong stakeholder relations are essential. Private sector, public sector and the educational institutions should cooperate when implementing a regional strategy for entrepreneurship education. This could take form as a cross sector board in a regional organisation. The Nordland region has already decided on several initiatives to address the challenges of the region and reverse the current development. A regional strategy for Nordland is in place and the educational sector is a part of that strategy. The intent is to have an innovation system in Nordland with a good interaction, learning and collaboration between key actors from the business sector, labour market, education and research and different parts of the public sector. However, the mapping of Andøy shows that the private sector of Andøy is only involved to a small degree in the entrepreneurship education on the island.
- 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 at the different levels of education and must be provided to pupils as early as possible during their education.⁴⁷ At the conference held in November it was suggested by the Andøy delegation that Ungt Entreprenørskab should become involved in local primary schools and use their pedagogical programmes aimed at different age groups. For further inspiration on teaching entrepreneurship on different levels please see "Taxonomy i Entreprenørskabsuddannelse" published by the Danish Foundation for Entrepreneurship.⁴⁸
- 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

⁴⁷ <http://www.ffe-ye.dk/fonden/nyheder/nyheder/kan-man-maale-udviklingen-af-elevers-og-studerendes-entreprenorielle-kompetencer>

⁴⁸ <http://www.ffe-ye.dk/media/555474/taksonomi201020entrepren3b8rskabsuddannelse20220udgave20onlineversion.pdf>

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 didactic exercise, it is also a managerial and organisational practice. This involvement could ensure that financial resources are earmarked to this area. The private sector experiences the need for qualified labour, which should motivate them to become involved.

- Communicating the educational institutions entrepreneurship strategy to all stakeholders both internally (teachers and students) and externally to cooperating 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 is needed from the beginning. The strategic emphasis on and financial support to entrepreneurship education should among other things focus on upgrading teachers' skills within entrepreneurship teaching. Today entrepreneurship education is part of initial teacher training, but mostly, or only, under the management of Ungt Entreprenørskab. A mapping done by Ungt Entreprenørskab and through independent research has shown that there are few courses in entrepreneurship in pedagogical subjects and teacher education. Moreover, there has been a substantial decline in initial teacher training in entrepreneurship education in recent years in spite of the national strategy's, or action plan's, goal to strengthen courses in teacher education. Other resources for teacher training are guidelines, programmes and websites with entrepreneurship education teaching materials.⁴⁹ The Andøy delegation at the "Nordic Entrepreneurship Island conference in November 2016" suggests that teacher training should be supplemented with networks across borders and they emphasise the importance of the teachers' skills and knowledge when implementing a strategy for entrepreneurship education.
- 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.
- 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 the entrepreneurship teaching and help create new start-ups on the island. However, it takes time before the students have become accustomed to applying for this grant.
- Whenever possible synergies across the Nordic islands should be utilised.

⁴⁹ Some of the information about Norway's strategy for entrepreneurship education is procured through the ICEE project.

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Appendix A. A Progression Model for Entrepreneurship Education Ecosystems in Europe⁵⁰

Table 3: A Progression Model for Entrepreneurship Education Ecosystems 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 ⁵¹ 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.

⁵⁰ *Towards Greater Cooperation and Coherence in Entrepreneurship Education*, European Commission, 2010.

⁵¹ 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 ⁵²	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.

⁵² The role of regional and local authorities depends on the distribution of responsibilities between tiers of government.

Figure 3: Ten young students presenting their ideas on stage at the Edison competition



Photo: Rasmus Degnbol.

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.⁵³

⁵³ <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.