

Piia Kolho & Pauliina Silvennoinen (Eds.)



Entrepreneurship education Guide and Recommendations

Developing an Inclusive and Innovative
Entrepreneurship education in Europe 2017–2020

Entrepreneurship education Guide and Recommendations

PUBLICATIONS OF JAMK UNIVERSITY OF APPLIED SCIENCES 280

PIIA KOLHO & PAULIINA SILVENNOINEN (EDS.)

Entrepreneurship education Guide and Recommendations

DEVELOPING AN INCLUSIVE AND INNOVATIVE ENTREPRENEURSHIP
EDUCATION IN EUROPE 2017–2020

jamk.fi

Jyväskylän ammattikorkeakoulu

PUBLICATIONS OF JAMK UNIVERSITY OF APPLIED SCIENCES -SERIES

© 2020

Authors & JAMK University of Applied Sciences

Piia Kolho & Pauliina Silvennoinen (Eds.)

ENTREPRENEURSHIP EDUCATION GUIDE AND RECOMMENDATIONS
Developing an Inclusive and Innovative Entrepreneurship education
in Europe 2017–2020

Cover Photo • Spukkato – Freepik.com
Outlook • JAMK / Pekka Salminen
Layout and printing • Punamusta Oy • 2020

ISBN 978-951-830-564-7 (PDF)
ISSN 1456-2332

DISTRIBUTION

JAMK University of Applied Sciences Library
P.O. Box 207, FI-40101 Jyväskylä
Rajakatu 35, FI-40200 Jyväskylä
Tel. +358 040 552 6541
Email: julkaisut@jamk.fi
www.jamk.fi/publications

CONTENTS

| | |
|--|----|
| ABSTRACT | 6 |
| FOREWORD | 7 |
| 1 STRUCTURE AND OUTPUTS OF THE PROJECT | 9 |
| 2 START IN THEORETICAL AND METHODOLOGICAL FRAMEWORK | 11 |
| 3 EUROPEAN EQF-BASED CURRICULUM ON INCLUSIVE AND INNOVATIVE ENTREPRENEURSHIP EDUCATION..... | 12 |
| 4 START IN ELEARNING PLATFORM, UNITS AND CONTENT | 14 |
| 4.1 Unit 1: Inclusive and Innovative Entrepreneurship at School in Europe | 17 |
| 4.2 Unit 2: Project management and financial planning for innovative and inclusive entrepreneurship | 18 |
| 4.3 Unit 3: Making inclusive entrepreneurship programmes real | 19 |
| 5 START IN MOBILE APPLICATION | 20 |
| 6 CONCLUSIONS OF THE START IN ELEARNING PLATFORM AND MOBILE APPLICATION PILOTS | 22 |
| 6.1 Pilot 1. eLearning platform materials and Mobile application | 22 |
| 6.2 Pilot 2. Entrepreneurship education materials into practice | 24 |
| 7 RECOMMENDATIONS FOR POLICY MAKERS AND TEACHERS..... | 26 |
| 8 WE DID IT TOGETHER, START IN PARTNERS | 29 |
| 8.1 Authors..... | 30 |
| 9 REFERENCES | 34 |

ABSTRACT

Piia Kolho & Pauliina Silvennoinen (Eds.)

Entrepreneurship education Guide and recommendations.

Developing an inclusive and innovative entrepreneurship education in Europe.

(Publications of JAMK University of Applied Sciences, 280)

This guidebook introduces the Start In entrepreneurship education outcomes produced during the project 2017–2020. The guidebook presents the Theoretical principles, the Curriculum content, eLearning Platform and Mobile Application. Participants of the Start In project are experts in the topics of entrepreneurship education, digital learning and teacher education.

The guidebook was one of the outputs of the Erasmus+ Programme of the European Union -project (1.9.2017–31.8.2020). The Start In materials has been developed through a multidisciplinary collaboration. The project was a collaboration between representatives from Cork Institute of Technology Ireland, Coventry University England, Danmar Computers LLC Poland, Chania Directorate of Secondary Education Greece, School of Professional Teacher Education at Jyväskylä University of Applied Sciences Finland, Manisa Provincial Directorate of National Education Turkey, Valladolid Instituto para el fomento del desarrollo y la formación S.L Spain, and Zabala Innovation Consulting S.A Spain.

Keywords: entrepreneurship education, curriculum, entrepreneurship framework, digital learning, eLearning, teacher training

FOREWORD

The aim of the Start In project (2017–2020) was to stimulate the "entrepreneurial mindset", develop capacities and abilities, laying the foundations for young entrepreneurs to transform ideas into action in different social, cultural or economic contexts in European countries.

The aim of the project was to design and develop a pedagogical advanced environment to boost innovation and entrepreneurial skills in young people within the education framework. This was implemented by didactic materials, ICT-based and an on-line platform through a co-creation process between educators, students and stakeholders. The project worked on the development of an inclusive educational entrepreneurial ecosystem.

This Guide is meant for Policy and decision makers, educational institutions and schools, and social partners who want to support teachers to implement Entrepreneurship Education in Schools.

The guide consists of seven paragraphs.

- 1 In the first section, the Start In project and it's outputs are briefly introduced.
- 2 In the second section the Theoretical framework and Methodological framework of the Start In project are described and the main concepts are defined.
- 3 The third section introduces the European EQF-based Start In curriculum on Inclusive and Innovative Entrepreneurship Education.
- 4 The fourth section introduces the eLearning Platform, the three learning units and content of each briefly. The weblink to the open access platform is given as well.
- 5 The fifth section describes the Start In Mobile Application and provides a link to upload it.

- 6 The sixth section describes the conclusions of the Start In eLearning Platform and Mobile Application pilots, where the test users applied the tools and materials in their teaching and subsequently gave feedback.
- 7 Finally, the seventh section gives recommendations for policy makers and teachers in how to boost entrepreneurship education.

We intend that the guide will provide you with new ideas and insights in how entrepreneurship education can be supported and promoted in teaching settings, across different school levels.

Jyväskylä, Finland April 30. 2020
Start In project partners and authors

1 STRUCTURE AND OUTPUTS OF THE PROJECT

The goal of the Start In project outputs has been to develop innovative and new perspectives and tools to support the implementation of entrepreneurship education. Outputs have been produced together with the project partners and pilot participants during 2017–2020.

The results are OER Resources available under the Creative Commons licence so attributable to the EU, but free for use, distribution and development, eg CC BY 4.0 <https://creativecommons.org/licenses/by/4.0/> as made clear under the EU open licence guidance https://ec.europa.eu/programmes/erasmus-plus/programme-guide/part-c/important-contractual-provisions/open-licence-intellectual-property-rights_en.

OUTPUT 1: EUROPEAN EQF-BASED CURRICULUM ON INCLUSIVE AND INNOVATIVE ENTREPRENEURSHIP EDUCATION BASED ON THEORETICAL FRAMEWORK

The theoretical framework of entrepreneurship education brings together the common experience and understanding of project partners, on what entrepreneurship education means, and what entrepreneurship education aims to achieve. The theoretical framework therefore served as the basis for the curriculum development.

OUTPUT 2: TRAINING MODULES ON INCLUSIVE AND INNOVATIVE ENTREPRENEURSHIP EDUCATION

The aim of the training modules, created together with the project partners, is to develop different aspects of entrepreneurship education.

OUTPUT 3: MOBILE INSTRUCTIONAL LEARNING APP

The mobile application has been developed to further support learning. It can be used to create questionnaires that can be used to either test learning or to utilise questioning alongside other teaching. The application can be used by both teachers and students.

OUTPUT 4: MULTILINGUAL eLEARNING PLATFORM

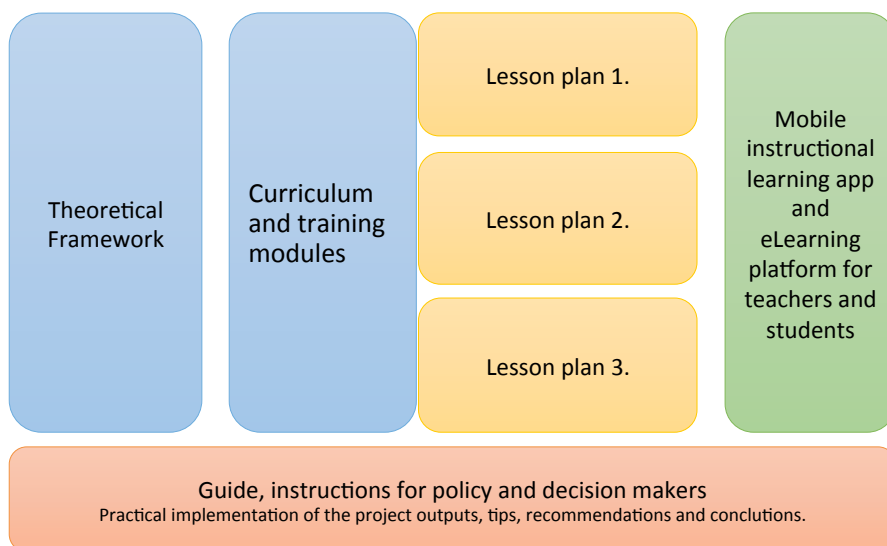
The eLearning platform is a 24/7 open learning environment translated into six languages. The content areas built into the Learning Units are intended for the development of teachers' own skills. Teachers at different school levels can utilise the content in their own teaching, as well as adapting and extending the content to suit students of different ages, interests or learning styles

OUTPUT 5: SET OF TAILOR-MADE MOBILE APPS

The educational institutions and teachers involved in the project pilots across the six partner countries experimented with the various digital tools and the Start In Mobile application in their support of entrepreneurship education.

OUTPUT 6: GUIDE FOR DEVELOPING AN INCLUSIVE AND INNOVATIVE ENTREPRENEURSHIP EDUCATION ECOSYSTEM IN EUROPE

The purpose of this guide is to bring together the material produced in the Start In project and the experiences gained from creating it, to promote and develop entrepreneurship education in Europe.



Picture 1. Start in Structure

2 START IN THEORETICAL AND METHODOLOGICAL FRAMEWORK

The theoretical framework is a study that preceded the development of the contents of Start In curriculum, which in turn is the knowledge, skills and competencies that primary and secondary school teachers and educators need for the development of inclusive and innovative entrepreneurship education. The goal was to design a curriculum that facilitates the recognition of competences and the development of school teachers and educators across Europe.

The theoretical framework summarises the results of research to identify the current state of Entrepreneurship Education at primary and secondary education levels in Europe, including educational policies, curricula and guidelines.

In addition it presents updated information in the form of national reports elaborated by all partner countries of the Start In project: England, Finland, Greece, Ireland, Poland, Spain, and Turkey, including a collection of good practices of Entrepreneurship Education programs, activities and initiatives on Innovative and Inclusive Entrepreneurship Education.

As a result, the theoretical framework introduces key concepts for the development of entrepreneurship and entrepreneurship education, such as the definition of the entrepreneurship competence, the learning outcomes of entrepreneurship education, and the associated teaching, learning and assessment methods, in order to facilitate the recognition of the competences and credit transfer across different countries.

Please read more <https://startin.erasmus.site/products/>

3 EUROPEAN EQF-BASED CURRICULUM ON INCLUSIVE AND INNOVATIVE ENTREPRENEURSHIP EDUCATION

The Start In curriculum is designed according to the specifications of the European Qualification Framework (EQF) and is compatible with both the European Credit System for Vocational Education and Training (ECVET) and the European Credit Transfer and Accumulation System (ECTS) credit systems. It is designed in order to enable the exploitation of the START IN curriculum in the context of Higher Education, using the ECTS credit system, in the context of Vocational Education, using ECVET system or in the context of Continuing Professional Development or Lifelong Learning, using either ECTS or ECVET credit systems.

Basic concepts and the methodology for developing an EQF based curriculum are presented. It includes the definition of the EQF level, and the description of the learning units. On each learning unit, the learning outcomes, the planned learning activities, the assessment methods and criteria, and the workload are described and specified.

A template for describing the contents of the learning unit is defined to ensure that all the data required for compatibility with the EQF, ECTS and ECVET systems is provided.

Please read more <https://startin.erasmus.site/products/>

Purpose – An entrepreneurial culture strengthens the entrepreneurial activities of learners. Entrepreneurship is about taking initiative and turning ideas into action. Entrepreneurship education (EE) seeks to engage students in practice and reflection on the concept of entrepreneurship and is drawn from the widest definition of entrepreneurship which sees it as an activity that creates value.

Why – Entrepreneurship education can promote the learning and development of professional knowledge and contributes to understanding innovation, entrepreneurial spirit, thus enhancing entrepreneurial and professional skills

What – A potential 15 ECTS programme, curriculum is based on three broad learning units, all of which have various lesson plans.

How – Through practice-based learning, entrepreneurship is composed of a portfolio of practices. Each of the 15 ECTS requires 27 hours (approx. 400 hours in total). This includes contact with online resources, assignments and independent research.

To whom – Qualified primary and secondary teachers and educators.

Keywords: learning units; lesson plans; tasks; learning questions; resources

4 START IN ELEARNING PLATFORM, UNITS AND CONTENT

Training the teachers is a critical aspect for promoting entrepreneurship education, as the approach involves innovative teaching methods and material, and can be a challenge for teachers and schools. The Start in curriculum addresses the needs of primary and secondary education teachers and defines the competences that they should develop in order to be able to design and implement educational programs and activities that promote innovative and inclusive entrepreneurship at school. It can be used by various organisations across Europe for the purpose of implementing teacher training programs in the context of Higher Education, Vocational Education, Teacher Continuing Professional Development and Lifelong Learning. The curriculum is an Open Educational Resource (OER) available in English and the languages of the partnership and is accessible through the project site.

The Start In curriculum is compatible with the European Qualifications Framework for lifelong learning (EQF), and corresponds to EQF level 7, which reflects the complexity, range and level of learning expected to be achieved by primary and secondary school teachers and is compatible with both ECTS and ECVET credit systems.

The total workload of the START IN curriculum is 405 hours of learning, which corresponds to 15 ECTS credits or 15 ECVET points. The START IN curriculum consists of 3 Learning Units, each corresponding to 135 hours of learning. For each unit the following items are specified:

- the learning outcomes
- the planned learning activities
- the teaching methods
- the assessment methods
- the assessment criteria
- the workload
- corresponding credits

The Start in eLearning Platform has been built and produced together with project partners in seven countries. On the eLearning platform you will find the materials and tasks described in page 14, which you will find in six languages (including English, Finnish, Greek, Polish, Spanish, Turkish). Teachers have tested the materials of the eLearning platform in pilot phases, where they utilised them in their teaching.

The eLearning platform is divided into three parts, the content of which we describe below.

Please see more <https://startin.erasmus.site/products/>

| | | |
|---|---|---|
| <p>UNIT 1. Inclusive and Innovative Entrepreneurship at School in Europe 5 cr</p> | <p>UNIT 2. Project management and financial planning for innovative and inclusive entrepreneurship 5 cr</p> | <p>UNIT 3. Making inclusive entrepreneurship programmes real 5 cr</p> |
|  |  |  |
| <ul style="list-style-type: none"> • Entrepreneurship education at school • Innovation, social and sustainability entrepreneurship • Inclusive entrepreneurship • Creativity in entrepreneurship • Digital skills and technologies applied to entrepreneurship education | <ul style="list-style-type: none"> • Idea generation • Feasibility study • Financing issues • Prototyping and the cultural and social impact of the project | <ul style="list-style-type: none"> • The future work life skills • Co-operation with stakeholders • Entrepreneurial spirit in the school community |

Picture 2. eLearning Platform Units

1. Inclusive and Innovative Entrepreneurship at School in Europe

An introduction to the Start In approach for Inclusive and Innovative Entrepreneurship Education at European Schools, with a presentation and analysis of the latest developments in the field, alongside critical awareness and application at school levels. Includes the following topics: Entrepreneurship education, Innovation and Social Entrepreneurship, Social Innovation, Sustainability and Circular Economy, Inclusive Entrepreneurship, Creativity in Entrepreneurship, and Digital skills and technologies as applied to entrepreneurship education.

2. Social entrepreneurship project management and financial planning

Here students will learn the key stages of new business and social entrepreneurship development. Focusing on idea generation, resources required, financial sustainability and the cultural and social impact of the project, this unit allows learners to explore many valuable methods to teach their students the essential steps to social innovation and business development. This unit utilises such tools as design thinking, idea generation techniques, prototyping, marketing, and the business model canvas. This unit also involves the capacity to plan, put in place and evaluate financial decisions related to social entrepreneurship.

3. Making inclusive entrepreneurship programmes real

Embedding entrepreneurship and its pedagogical approaches by learning through experience, and by taking the initiative and working with others. Developing entrepreneurial attitudes such as self-awareness and self-efficacy, ethical and sustainable thinking, developing visions for the future school environment and encouraging innovation ways to tackle problems and learning from possible failures. Combining the theoretical background and practical tools for implementing and planning entrepreneurship education modules in schools.

4.1 UNIT 1: INCLUSIVE AND INNOVATIVE ENTREPRENEURSHIP AT SCHOOL IN EUROPE

Purpose – The objective of this Learning unit is to get familiar with the definitions of entrepreneurship education, innovation and inclusivity, as well as what is meant by creativity and digital skills and technologies as applied to entrepreneurship education.

Why – Entrepreneurship is one of the eight key competencies in lifelong learning.

What – Main concepts of the subject and digital skills and technologies as applied to innovative and inclusive entrepreneurship. Learning unit 1 (5 ECTS)

How – This Learning unit has five Lesson Plans, all using the practice-based approach to learning, which is learning by doing.

To whom – Qualified primary and secondary teachers and educators.

Keywords: entrepreneurship education; innovation; inclusive; creativity; digital skills; lifelong learning



Picture 3. Unit 1.

4.2 UNIT 2: PROJECT MANAGEMENT AND FINANCIAL PLANNING FOR INNOVATIVE AND INCLUSIVE ENTREPRENEURSHIP

Purpose – The objective of this Learning Unit is to increase entrepreneurial spirit, culture and attitudes, and to develop a way of thinking about new possibilities/ideas in order to address/solve a problem/issue of concern in society.

Why – Entrepreneurship is the capacity to recognise and pursue opportunities in any environment. Social entrepreneurship can tackle hypothetical, unseen or often less-researched issues, such as overpopulation, unsustainable energy sources, food shortages.

What – Project management and financial planning for innovative and inclusive entrepreneurship. Learning unit 2 (5 ECTS)

How – This Learning unit has four Lesson Plans, all using the practice-based approach to learning, which is learning by doing.

To whom – Qualified primary and secondary teachers and educators.

Keywords: idea generation; feasibility study; finance; social impact



Picture 4. Unit 2.

4.3 UNIT 3: MAKING INCLUSIVE ENTREPRENEURSHIP PROGRAMMES REAL

Purpose – The objective of this Learning unit is to understand the main scenarios of the future work skills and entrepreneurial attitudes, and to develop cooperation and innovate ways to tackle problems in the schools and with stakeholders.

Why – Entrepreneurial attitudes such as taking initiative, creativity, cooperating, entrepreneurial mindset, working dynamically with others, learning from failures and problem solving are important skills in future work life.

What – Future work life skills, cooperation and co-creation with stakeholders and other students for innovative and inclusive entrepreneurship. Learning unit 3 (5 ECTS)

How – This Learning unit has three Modules, all using the practice-based approach to learning, which is learning by doing.

To whom – Qualified primary and secondary teachers and educators.

Keywords: future work; cooperation; stakeholder; co-creation

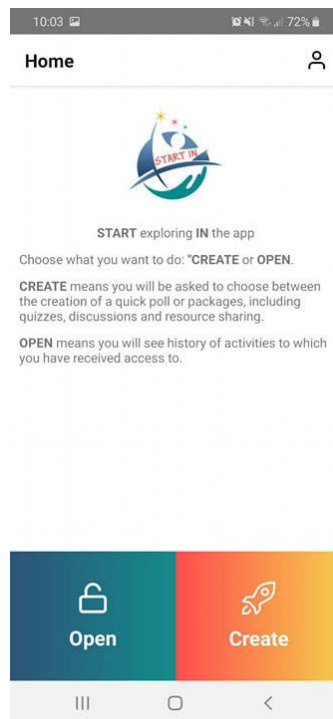


Picture 5. Unit 3.

5 START IN MOBILE APPLICATION

This mobile application has been developed in order to further support the learning-teaching process of individuals, especially for the purpose of entrepreneurship education. It provides school teachers and educators with an innovative Information and Communications Technology (ICT) based useful tool, which leads to the development of new customised ICT-based educational tools on inclusive and innovative entrepreneurship education.

The objectives for the development of this Mobile Application tool were the following: the possibility to apply a design model and design thinking in the learning design process, the ability to incorporate research on learning in own design practice, including concepts such as motivation, self-regulation, and feedback; and the skill to co-design a tailor-made concept for a learning app with learning designers and learners.



Picture 6. Mobile application start page to opening screen after logging in

Purpose – Introduce innovative ICT-based solutions, leading to the development of new customised ICT-based educational tools on inclusive and innovative entrepreneurship education. Users of such solutions are developing their skills within the areas of conceptualization, designing, as well as using digital resources.

Why – ICT-based tools facilitate the possibility to apply design thinking in the teaching/learning design process and boost learners' motivation. A mobile app can serve as a tool for supporting the process, especially for the purpose of entrepreneurship education.

What – START IN mobile instructional learning application to co-create mobile learning apps, tailored to the needs of the target group or curriculum requirements.

Management & financial planning for innovative and inclusive entrepreneurship. Learning unit 2 (5 ECTS)

How – START IN mobile app is available for download to a mobile device from Google store <https://play.google.com/store/apps/details?id=eu.dcnnet.startin&hl=en-GB> and Apple store <https://apps.apple.com/us/app/start-in/id1451809897?ls=1>. After logging in, with the use of this mobile app, users are able to create their own training activities and share them with others.

To whom – school teachers, educators and facilitators of the learning process, but also any individual interested in creating their own digital activities by means of the Start In Mobile App, due to its transversal characteristics.

Keywords: instructional learning; customized ICT-based educational tools; mobile application; mobile app; resources

6 CONCLUSIONS OF THE START IN ELEARNING PLATFORM AND MOBILE APPLICATION PILOTS

In six Start In participant's countries thirty teachers participated across two pilot phases by testing and implementing the eLearning Platform materials and Mobile Application in their daily teaching of entrepreneurship education with their students. They selected the suitable tools and practices to fit their daily teaching and group of students. Afterwards they gave feedback of the materials and tools used, based on their experiences. Feedback was collected via online questionnaires during the Start In project during the years 2019–2020. In the following chapters you can find the conclusions of that.

6.1 PILOT 1. ELEARNING PLATFORM MATERIALS AND MOBILE APPLICATION

At the first Pilot, done in the year 2019, the feedback was been collected from twenty-eight persons across six European countries. In Pilot 1. teachers became familiar with the Start In eLearning platform's entrepreneurship pedagogy and learning materials, and they applied the Start In Mobile Application with their students. Feedback answers were collected from primary and secondary teachers as well as some educational policy makers.

"As the Start In project is aimed at educational practitioners rather than pupils, the amount and level of information is very good. It seems to cover every aspect that is needed in regard to developing inclusive and innovative entrepreneurship and gave good examples that clearly supported what was being said in the text."

The content, usability and the pedagogy of the eLearning Platform received very good feedback from the test users. The material was versatile and included incorporated and suggested reading, videos and links to additional material.

"This pedagogy is much more student centered, student friendly and it encourages the student to do and think."

"The document "EntreComp The Entrepreneurship Competence Framework" was particularly thorough and contained a lot of valuable information. It's a document that I can imagine myself referring to in class."

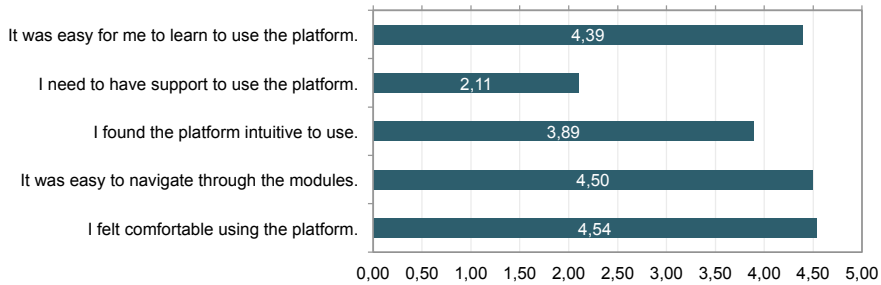


Figure 1. eLearning Platform´s usability

The Mobile Application´s usefulness - also received good feedback from the test users, although, some of the users observed the Mobile App was not usable in their school based on the country regulations.

"The mobile app was very straightforward to use, and I believe has good potential to use with students for quizzes to consolidate and assess learning/make team project decisions."

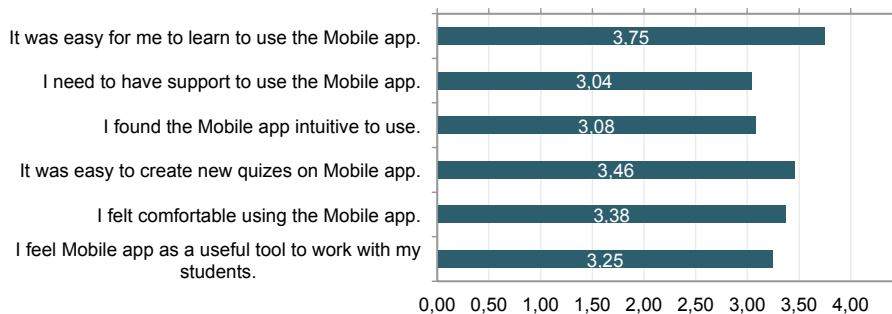


Figure 2. Mobile App usefulness

For more detail information of the test users experiences please have a look at https://issuu.com/piiakolho/docs/start_in_pilot_1_feedback_results

6.2 PILOT 2. ENTREPRENEURSHIP EDUCATION MATERIALS INTO PRACTICE

At the second Pilot, conducted during 2019–2020, thirty teachers across six European countries have implemented entrepreneurship education practices with the students from the primary to secondary school levels. Teachers and educators implemented the Start In eLearning platform’s entrepreneurship pedagogy and used the eLearning materials in their teaching.

All Start In units and lessons at the platform were tested and implemented in daily teaching practices. Test users gave feedback after implementation. Twenty-two feedback answers were collected from primary to higher level teachers and some policy makers. According to the feedback the eLearning platform mainly worked very well, and the feedback was very good. Most useful materials on the platform were videos, slides, tools and practical examples. The Start In program got excellent feedback from the test users (scale 1–5). Please see Figure 3.

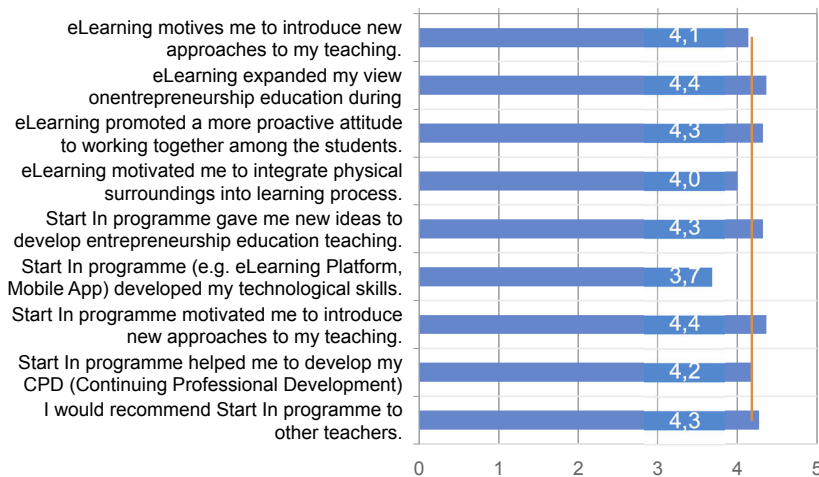


Figure 3. Feedback from the Pilot 2 users of the Start In eLearning Platform and Mobile App

Some, 55 %, of the test users also tried the Start In Mobile Application in their teaching. According to the feedback the Mobile Application was quite or very easy to use. Application users also intended to use it in their teaching in the

future. The rest of the participants, 45 %, during the second pilot phase used some other digital platform (e.g. Google Forms, Kahoot) or instruments (video camera and video editors) alongside entrepreneurship education teaching.

Based on the test users' feedback the five most useful subsections in the eLearning platform were 2.1 Idea generation, 3.1 Future work life skills, 1.1 Inclusive and innovative Entrepreneurship at School in Europe, 1.2 Innovation and Social Entrepreneurship and 2.2 Feasibility Study. Please see Figure 4.

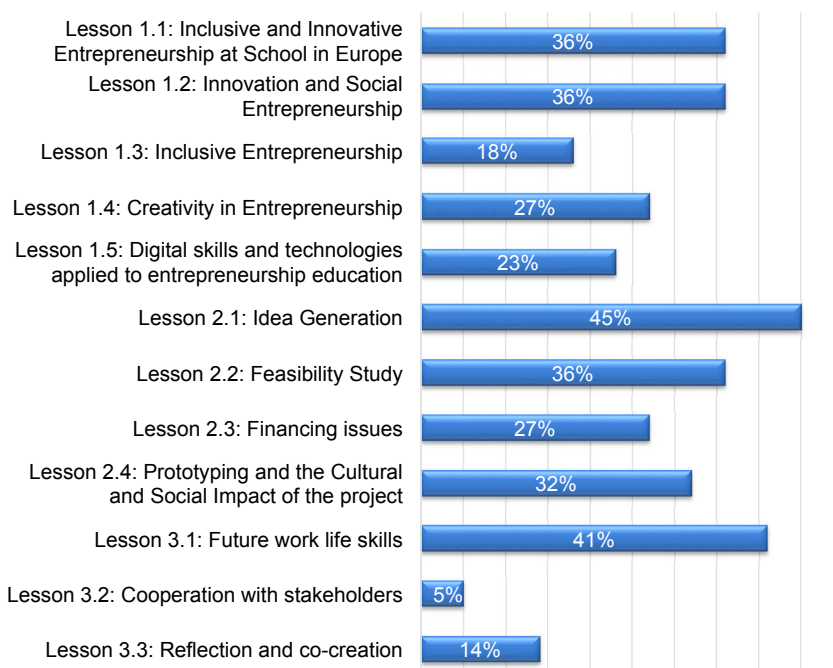


Figure 4. Most useful subsections in the eLearning Platform

According to the survey done in this project, one challenge for teachers is that they don't have enough time or skills to utilise the available materials into their teaching. The wish was that competence development of entrepreneurship education, pedagogy and practices should be resourced somehow beside the implementation of daily teaching practice.

7 RECOMMENDATIONS FOR POLICY MAKERS AND TEACHERS

Key points of the Start In project for entrepreneurship education:

1. Wide competences for all through
2. Cooperation with stakeholders in practice
3. Learner-centred pedagogy engaging entrepreneurial innovation and creation
4. and Social impact in a sustainable way with digitalisation.

Entrepreneurship has significant meaning in European economy, as it is the backbone of the European society. In the EU 99 % of businesses are small and medium-sized enterprises, and 67 % of those are in the private sector. (Supporting the Internationalization of SMEs 2014.) According to previous studies (e.g. Lindh & Thorgren 2016) entrepreneurship education can be the facilitator of economic development. Entrepreneurship education is a question of learning *for* entrepreneurship, learning *about* entrepreneurship, and learning *through* entrepreneurship (Gibb 1999; Hytti & O’Gorman 2004). So defined, entrepreneurship education is understood in a broad sense—as teaching and learning entrepreneurial attitudes, skills and knowledge (Gibb 2002, 2005; Kyrö 2006; Mwasalwiba 2010; Sarasvathy & Venkataraman 2011; Blenker, Korsgaard, Neergaard & Thrane 2011; Bridge 2015; Henry & Lewis 2018), as well, it has been understood also in Start In project. We wish that entrepreneurship education is seen as a wide competence of future work life skills.

Entrepreneurship education is a question of learning for, about and through entrepreneurship.

According to the feedback of test users the Start In eLearning materials and practices gave good examples of what entrepreneurship education is and how it can be implemented in different school levels in various, innovative ways. Entrepreneurship education is best learnt in practical cooperation at work and learning by doing (Fiet 2000a, b; Gibb 2011; Arasti, Falavarjani & Imanipour 2012; Järvi 2013; Diegoli, Gutiérrez & de los Salmenes Sánchez 2018). However, in this project, as we can see from the results (see Figure 4.), teachers should be encouraged to involve organisations and social surroundings of their school to cooperate and participate with and alongside the educational actions. We encourage teachers to step out of the school environment and utilise more stakeholders and companies to their teaching.

Entrepreneurship education is best learnt in practical cooperation at work and learning by doing.

According to previous researches the most used teaching methods in entrepreneurship education are still teacher-centered, and learning is predominately done in a classroom environment (Bennett 2006; Solomon 2007; Mwasalwiba 2010; Ruskovaara & Pihkala 2013, 2014). The case examples of the Start In project strengthen the idea that the learner-centered approach in the pedagogy is needed to inspire and motivate the students in their entrepreneurial competences and attitudes. Learner-centred approach in entrepreneurship education helps students to grasp elements of entrepreneurial activity (Gibb 2002; Jones & Iredale 2010; Balan & Metcalfe 2012). Experimental learning, with possibility to solve problems and create something new when working with others are the key factors to grow the entrepreneurial mindset (Liang, Howard, Dunn & Khananayev 2016). We wish that teachers would be supported to review and revise their role as a teacher and enable their students innovate and plan learning, based on their own ideas.

Learner-centred pedagogy engages students to grasp new ideas and innovations.

Entrepreneurship education teaching materials, and the instructions for adopting it, are available in all the Start In partners countries for teachers. The EU has focused on supporting teachers' skills through the development of guides and materials (e.g. Bacigalupo, Kampylis, Punie & Van den Brande 2016; McCallum et.al. 2018) and has funded a number of development projects for entrepreneurship education across diverse school levels. (Gustafsson-Pesonen & Kiuru 2012). Although, according to project surveys done across the seven countries (2018–2019), the suitable materials for inclusivity, social entrepreneurship, circular and sustainable economy, and digital teaching materials for entrepreneurship education are in the minority. In the Start in project we sought strengthen and develop these areas by the eLearning platform and practice in the second pilot. The learning materials and case descriptions developed in this project are now available for everyone to use. We intend that the principles of inclusivity, social entrepreneurship, the circular economy and digitalisation of learning materials in entrepreneurship education will be developed in a sustainable way in teaching practices, academic research approach and international development projects in the future.

Real teaching pilots undertaken in this project have been collected to the Start In eLearning Platform for other users as an inspiration how to use the given teaching materials on Start In eLearning Platform.

Please see more <https://startin.erasmus.site/products/>

8 WE DID IT TOGETHER, START IN PARTNERS

A warm thank you to all the schools, teachers and students involved in the project in England, Finland, Greece, Ireland, Poland, Spain, and Turkey. With your help, we gained valuable experience and opinions to develop and implement the project ideals.

Thanks also to the experts who worked in the project steering groups in England, Finland, Greece, Ireland, Poland, Spain, and Turkey. We received support and insights from you in planning our operations.

There is strength in cooperation, and we are now ready to meet the challenge of European entrepreneurship by training skilled teachers and enterprising young people.

PROJECT MANAGEMENT

MPDNE, Manisa Provincial Directorate of National Education; MANİSA, Turkey

PROJECT PARTICIPANTS ORGANISATION

CIT, Cork Institute of Technology; CORK, Ireland

COVUNI, Coventry University; COVENTRY, England

DANMAR, Danmar Computers LLC; RZESZOW, Poland

DSEC, Directorate of Secondary Education, CHANIA, Greece

INFODEF, Instituto para el fomento del desarrollo y la formación S.L;

VALLADOLID, Spain

JAMK, Jyväskylä University of Applied Sciences, School of Professional Teacher Education; JYVÄSKYLÄ, Finland

ZABALA, Zabala Innovation Consulting, S.A.; MUTILVA ALTA NAVARRA, Spain

8.1 AUTHORS

Ms. Joanna Bac

DANMAR, Danmar Computers LLC; RZESZOW, Poland

Mr. Jesús Boyano

INFODEF, Instituto para el fomento del desarrollo y la formación S.L;
VALLADOLID, Spain

Ms. Kübra Çelebi

MPDNE, Manisa Provincial Directorate of National Education; MANİSA, Turkey

Ms. Sinem Erdem

MPDNE, Manisa Provincial Directorate of National Education; MANİSA, Turkey

Ms. Pii Kolho

JAMK, Jyväskylä University of Applied Sciences, School of Professional
Teacher Education; JYVÄSKYLÄ, Finland

Ms. Leire Martiarena

ZABALA, Zabala Innovation Consulting, S.A.; MUTILVA ALTA NAVARRA, Spain

Ms. Helen McGuirk

CIT, Cork Institute of Technology; CORK, Ireland

Ms. Pauliina Silvennoinen

JAMK, Jyväskylä University of Applied Sciences, School of Professional
Teacher Education; JYVÄSKYLÄ, Finland

Ms. Cathryn Thompson-Goodwin

COVUNI, Coventry University; COVENTRY, England

Ms. Chara Xanthaki

DSEC, Directorate of Secondary Education, CHANIA, Greece



INSTITUTO
PARA EL FOMENTO
DEL DESARROLLO
Y LA FORMACIÓN



HINCKS CENTRE



Co-funded by the
Erasmus+ Programme
of the European Union



jamk.fi

JAMK University of Applied Sciences

REFERENCES

9 REFERENCES

Arasti, Z., Falavarjani, M.K. & Imanipour, N. 2012. A Study of Teaching Methods in Entrepreneurship Education for Graduate Students. *Higher Education Studies*, 2, 1, 2–10.

Bacigalupo, M., Kampylis, P., Punie, Y. & Van den Brande, G. 2016. *EntreComp: The Entrepreneurship Competence Framework*. Luxembourg: Publication Office of the European Union. Referred 18.4.2020. <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfna27939enn.pdf>.

Balan, P. & Metcalfe, M. 2012. Identifying teaching methods that engage entrepreneurship students. *Education + Training*, 54, 5, 368–384.

Bennett, R. 2006. Business lecturers' perceptions of the nature of entrepreneurship. *International Journal of Entrepreneurial Behavior & Research*, 12, 3, 165–188.

Blenker, P., Korsgaard, S., Neergaard, H. & Thrane, C. 2011. The questions we care about: paradigms and progression in entrepreneurship education. *Industry & Higher Education*, 25, 6, 417–427.

Bridge, S. 2015. Is enterprise education relevant to social enterprise?. *Education + Training*, 57, 8/9, 1009–1019.

Diegoli, B.R., Gutiérrez, H.S.M. & de los Salmones Sánchez, M.D.M. 2018. Teachers as entrepreneurial role models: The impact of a teacher's entrepreneurial experience and student learning styles in entrepreneurial intentions. *Journal of Entrepreneurship Education*, 21, 1.

Fiet, J.O. 2000a. The theoretical side of teaching entrepreneurship. *Journal of Business Venturing*, 16, 1, 1–24.

Fiet, J.O. 2000b. The pedagogical side of entrepreneurship theory. *Journal of Business Venturing*, 16, 1, 101–17.

Gibb, A. 1999. Creating an entrepreneurial culture in support of SMEs. *Small Enterprise Development*, 10, 4, 27–38.

Gibb, A. 2002. Creating conducive environments for learning and entrepreneurship: living with, dealing with, creating and enjoying uncertainty and complexity. *Industry and Higher Education*, 16, 3, 135–148.

Gibb, A. 2005. The future of entrepreneurship education – Determining the basis for coherent policy and practice. In *The dynamics of learning entrepreneurship in a cross-cultural university context*. Eds. P. Kyrö & C. Carrier. *Entrepreneurship Education Series 2/2005*, 44–67. Hämeenlinna: University of Tampere, Research Centre for Vocational and Professional Education.

Gibb, A. 2011. Concepts into practice: meeting the challenge of development of entrepreneurship educators around an innovative paradigm: The case of the International Entrepreneurship Educators' Programme (IEEP). *International Journal of Entrepreneurial Behavior & Research*, 17, 2, 146–165.

Gustafsson-Pesonen, A. & Kiuru, P. 2012. Ideoita ja oivalluksia yrittäjyyskasvatukseen YKOONTI. [Ideas and Insights for Entrepreneurship Education YKOONTI]. Helsinki: Aalto-yliopiston julkaisusarja KAUPPA + TALOUS 4/2012. Referred 18.4.2020 <http://urn.fi/URN:ISBN:978-952-60-4800-0>.

Henry, C. & Lewis, K. 2018. A review of entrepreneurship education research: Exploring the contribution of the Education Training special issues. *Education + Training*, 60, 3, 263–286.

Hytti, U. & O’Gorman, C. 2004. What is ‘enterprise education’? An analysis of the objectives and methods of enterprise education programmes in four European countries. *Education + Training*, 46, 1, 11–23.

Jones, B. & Iredale, N. 2010. Enterprise education as pedagogy. *Education + Training*, 52, 1, 7–19.

Järvi, T. 2013. Yrittäjyyden oppiminen ammatillisella toisella asteella. [Entrepreneurial learning at VET]. Doctoral dissertation. University of Lapland.

Kyrö, P. 2006. Entrepreneurship Education and Finnish Society. In Working Papers in Economics, no 152. School of Economics and Business Administration, Tallinn University of Technology (TUTWPE), 63–80. Referred 18.4.2020. <https://EconPapers.repec.org/RePEc:ttu:wpaper:152>.

Liang, K., Howard, A., Dunn, P. & Khananayev, S. 2016. Students' assessment of experiential learning in an entrepreneurship curriculum: Expectations versus outcomes. *Journal of Business & Entrepreneurship*, 28,1, 125–144.

Lindh, I. & Thorgren, S. 2016. Entrepreneurship education: the role of local business. *Entrepreneurship & Regional Development*, 28, 5–6, 313–336.

McCallum, E., Weicht, R., McMullan, L., Price, A., Bacigalupo, M. & O'Keeffe, W. 2018. *EntreComp into Action*. Referred 18.4.2020. <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/entrecomp-action-get-inspired-make-it-happen-user-guide-european-entrepreneurship-competence>

Mwasalwiba, E. 2010. Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education + Training*, 52, 1, 20–47.

Ruskovaara, E. & Pihkala, T. 2013. Teachers implementing entrepreneurship education: classroom practices. *Education + Training*, 55, 2, 204–216.

Ruskovaara, E. & Pihkala, T. 2014. Entrepreneurship Education in Schools: Empirical Evidence on the Teacher's Role. *The Journal of Educational Research*, 108, 3, 1–14.

Sarasvathy, S. D. & Venkataraman, S. 2011. Entrepreneurship as Method: Open Questions for an Entrepreneurial Future. *Entrepreneurship Theory and Practice*, 35, 1, 113–135.

Solomon, G. 2007. An examination of entrepreneurship education in the United States. *Journal of Small Business and Enterprise Development*, 14, 2, 168–182.

Supporting the Internationalisation of SMEs. 2014. Belgium: European Union. Referred 18.4.2020. <https://op.europa.eu/en/publication-detail/-/publication/dd69f968-fea2-4034-90d5-7a648574618f>.

JAMK UNIVERSITY OF APPLIED SCIENCES

Publications



SALES AND DISTRIBUTION
JAMK University of Applied Sciences Library
P.O. Box 207, FI-40101 Jyväskylä
Rajakatu 35, FI-40200 Jyväskylä
Tel. +358 040 552 6541
julkaisut@jamk.fi
www.jamk.fi/julkaisut

ONLINE SHOP
www.tahtijulkaisut.net

jamk.fi

jamk.fi

JAMK UNIVERSITY OF APPLIED SCIENCES
P.O. Box 207, FI-40101 Jyväskylä, Finland
Rajakatu 35, FI-40200 Jyväskylä, Finland
Tel. +358 20 743 8100
Fax +358 14 449 9694
www.jamk.fi

SCHOOL OF BUSINESS

SCHOOL OF HEALTH AND SOCIAL STUDIES

SCHOOL OF TECHNOLOGY

SCHOOL OF PROFESSIONAL TEACHER EDUCATION



Developing an Inclusive and Innovative Entrepreneurship Education in Europe (Start In Project) was the Erasmus+ Programme of the European Union -project (1.9.2017–31.8.2020) run by eight European partners in England, Finland, Greece, Ireland, Poland, Spain, and Turkey.

This guidebook introduces the Start In entrepreneurship education outcomes produced during the project. It is meant for policy and decision makers, educational institutions and schools, and social partners who want to support teachers to implement entrepreneurship education. The guidebook presents the Theoretical principles, the Curriculum content, eLearning Platform and Mobile Application. The Start In materials has been developed through a multidisciplinary collaboration. Participants of the Start In project are experts in the topics of entrepreneurship education, digital learning, and teacher education. The guidebook was one of the outputs of the project.

ISBN 978-951-830-564-7