

Guidelines for entrepreneurship education

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Preface

Entrepreneurship education is a much broader concept than entrepreneurship as a practice of trade. As a concept, it also encompasses training for entrepreneurship. Its components are an active individual with initiative, an entrepreneurial learning environment, education and training, and active and enterprise-promoting policy in society. Entrepreneurship education generates entrepreneurship at all levels of society and strengthens and creates business.

Entrepreneurship education is part of lifelong learning; in it, entrepreneurial skills are developed and supplemented at different points in life. It is a question of life management, interaction, self-guided action, a capacity for innovation and an ability to encounter change. Education and training help entrepreneurship evolve into a mode of operation, in which attitude, will and a desire to take action combine with knowledge and advanced competence.

In general education, the emphasis is on positive attitudes, basic entrepreneurial knowledge and skills and an entrepreneurial mode of operation. At the secondary level and in higher education, the knowledge and skills are developed further, including competencies relating to entrepreneurship. An entrepreneurial culture and procedures are best realised in cooperation with the operational environment according to the objectives set for entrepreneurship education at each level of education.

These guidelines for entrepreneurship education stress networking amongst different forms of education, business and industry, organisations, administrative and political decision-makers and pupils/students' families. These networks develop the objectives and content of education, learning environments and

an action culture which enhance the learner's entrepreneurial skills and life management. In this fashion, learners develop their knowledge, skills and attitudes and mode of operation, enabling them to act in an entrepreneurial manner in their own lives together with others. All this facilitates the learner's future operation in the labour market, either as an entrepreneur or in the employ of others.

The guidelines were prepared in broad-based cooperation with different operators in the entrepreneurial community. The partners included the Ministry of Employment and the Economy, the Ministry of Agriculture and Forestry, the National Board of Education, the State Provincial Office of Southern Finland, the Central Chamber of Commerce, Confederation of Finnish Industries (EK), Federation of Finnish Enterprises, Confederation of Agricultural Producers (MTK), Association of Finnish Local and Regional Authorities, Trade Union of Education in Finland (OAJ), Economic Information Office, Finnish 4H Federation, Centre for School Clubs, Junior Achievement – Young Enterprise Finland, Finnish Enterprise Agency, Junior Chambers of Commerce, University of Oulu/Kajaani Department of Teacher Education, University of Turku/ teacher training school and Lappeenranta University of Technology. The guidelines in hand are intended as recommendations for the web of development depicted in Figure 1.

Henna Virkkunen

Minister of Education and Science

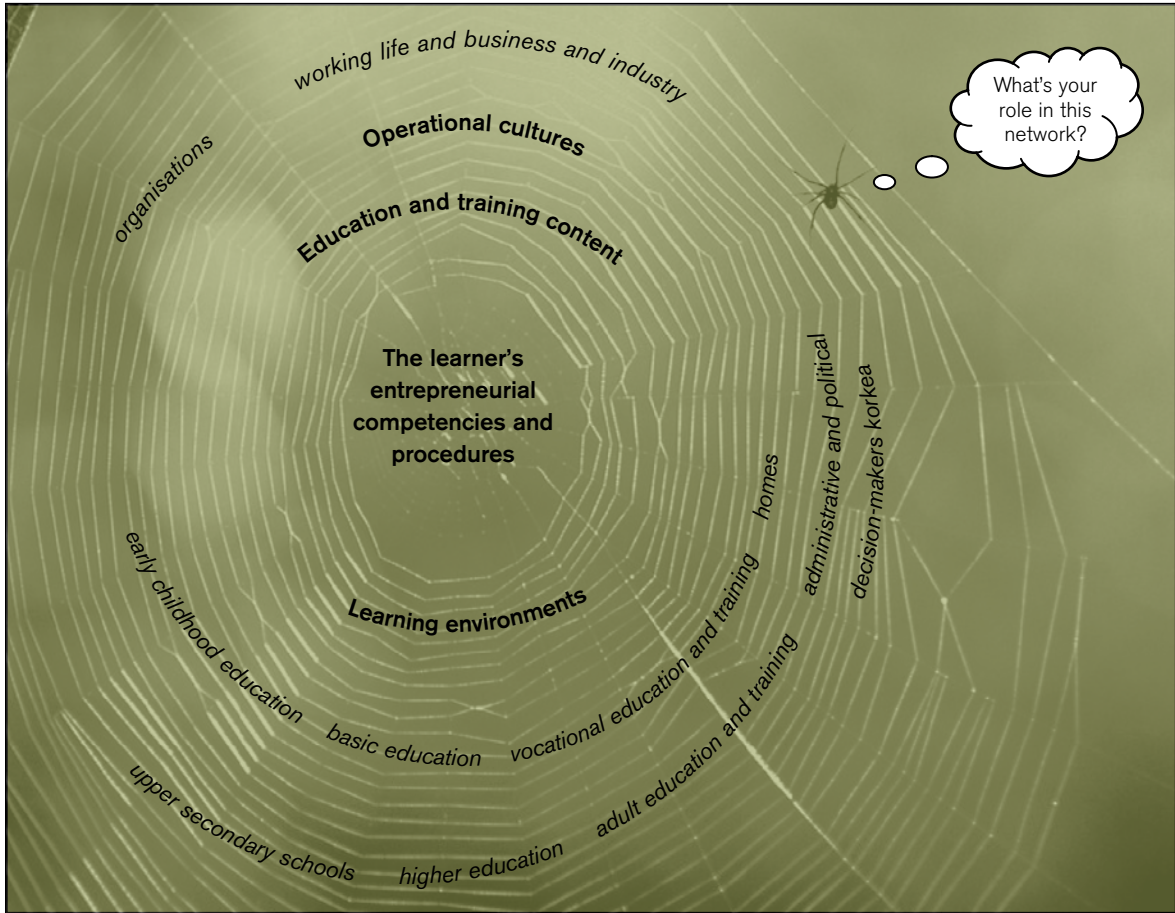


Figure 1. Web of development in entrepreneurship education

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Entrepreneurship is the individual's ability to translate ideas into action. It encompasses creativity, innovativeness and risk-taking, as well as an ability to plan and direct action towards the achievement of goals. These qualities support everyday life in education, at work, in leisure activities and in other societal activities. These qualities are needed in entrepreneurship, but they also enhance workers' awareness of their work and help them seize opportunities.

Entrepreneurship education mainly refers to wide-ranging work done within the educational administration with a view to enhancing entrepreneurship. Entrepreneurship education is also provided and supported by many labour market parties and organisations. Practical measures are geared to inculcate positive attitudes and develop knowledge and skills relating to entrepreneurship, create new business, upgrade entrepreneurs' and their personnels' competencies and bring about an entrepreneurial mode of operation at the workplace and in all other activities. Entrepreneurship education is rooted in lifelong learning and a networked mode of operation.

See also the definition given to entrepreneurship by the European Parliament and Commission (Appendix 2)

1 Entrepreneurial operation needed in Finland

An advancing society is founded on entrepreneurial activity. Psychological, physical and social welfare is underpinned by individuals' own activity, their responsibility for their own action and care for their fellow beings. Economic welfare entails strong and competitive entrepreneurship. Companies account for a substantial part of production and services. The jobs they offer and the taxes they pay help maintain and develop our welfare society.

Finns' attitudes towards entrepreneurship have turned more positive. This trend is due to the rapid change in society and positive economic trends, which spur business development. Another important factor has been the long-term systematic action taken to enhance entrepreneurship education and associated teacher training. A substantial

part of innovations are created within business, and innovations are often commercialised and distributed through business. People buy more products and services than before. This has boosted service-sector entrepreneurship in particular.

There is demand for young people in business. Young people often have the kind of knowledge, ideas and capacity for identifying with other young people that should be put to better use in the development of new services and products.

Business often starts with a small enterprise. Over 60% of businesses are one-person enterprises. With a good business idea and growth-orientation, businesses can take off towards significant global growth. In Finland, this kind of business is especially found in the technology sector. In the service sector,

too, there are expectations of major international success. We need internationally successful business for our national economy to work.

At the end of 2007, Finland had more entrepreneurs than ever before; the 258,000 businesses and 228,300 business-owners represent 9% of the employed.

The baby-boom generation now about to retire includes tens of thousands of ageing entrepreneurs who are considering a transfer of their business to the next generation. Success in this transition is vital for the entrepreneurs themselves and for society at large. These businesses have a great deal of know-how and jobs in danger of being lost unless somebody is found to carry on. Taking over an existing business often gives the new entrepreneur a “flying start” and involves fewer risks than a start-up business. However, in Finland business owners aged under 35 are relatively rare, making up only 18% of all entrepreneurs. The mean age of business owners is higher than that of salaried employees. Over 40% of entrepreneurs are aged 50 or older (14% over 60). This is why intensified measures are needed to encourage young people to embark on a business career.

The demands of working life and business are growing as regards knowledge and skills. This

is why the education system is gaining more importance in the creation of new business. The level of education is growing within business at the same rate as in society overall. Entrepreneurs often have a vocational or professional education. Over 30% have a vocational qualification and an ever growing number of them have a university or polytechnic degree. This is because business is diversifying and internationalising and higher education graduates are better informed about and have more positive attitudes towards entrepreneurship. Whereas around three per cent of all business owners have a polytechnic degree, the figure is higher among young entrepreneurs. One reason for this is that the polytechnics were established only 12 years ago. While around nine per cent of all business owners have an academic education, one in five new business owners has a higher education degree. In the future, Finnish entrepreneurship must be based more solidly on both vocational and professional qualifications.

2 Projected state of affairs in 2015

The next steps

The aim of the Ministry of Education is to enhance an entrepreneurial spirit among Finns and make entrepreneurship a more attractive career choice.

The measures for enhancing entrepreneurship permeate the whole education system. In the Ministry of Education sector the aims of entrepreneurship education relate to

- 1 developing a participatory, active citizenship, enhancing creativity and innovation in education and training, in leisure activities and in working life
- 2 creating a positive entrepreneurial culture and attitude climate both nationally and regionally
- 3 promoting business start-up, developing entrepreneurs' prerequisites and businesses and supporting transfer of business to the next generation

By 2015

- Networking between different parties involved in entrepreneurship education has intensified at the international, national, regional and local levels.
- Measures to develop entrepreneurship education primarily originate in the regional and local levels.
- The regional resource centres have established their position and cover the whole country.
- Entrepreneurship education has entrenched itself as a solid part of the evolving core curricula and as a stronger component of school-specific curricula.
- Entrepreneurship education has been integrated more robustly into local school and business strategies and development plans.

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- The entrepreneurship studies included in the vocational core curricula and the requirements of competence-based qualifications have increased entrepreneurship among qualification holders and encouraged entrepreneurial activity in the service of others.
 - Higher education institutions have incorporated entrepreneurship in their overall strategies. In keeping with their strategies, the institutions have adopted a mode of operation that encourages students to embark on a career in business and provides the necessary knowledge and skills, generates innovations and creates conditions conducive to the growth of business.
 - Research relating to entrepreneurial learning environments and entrepreneurship pedagogy has been stepped up and it is of a more cross-disciplinary nature.
 - Entrepreneurship education is an inherent part of the initial training of teachers responsible for entrepreneurship education.
 - A model has been created for widening teachers' access to continuing professional education and to secondments relating to entrepreneurship education.
 - Learning environments that promote networking are in place in teachers' initial and continuing education, using, for example, the possibilities of virtual environments

3 Future action cultures and learning environments

Society, jobs and working life are constantly changing. They will increasingly stress knowledge, skills and intellectual processes. This is why people must have a broad education. The vocational/professional competencies required in jobs entail flexible knowledge and skills, creativity, anticipatory learning, and communicative skills. A broad education makes for better mobility in society and in a working life of changing occupations and work tasks.

This means that action cultures must also change. Each education institution has a culture of its own, which is reflected in its members' action, thinking, habits and decision-making and influences the way the institution operates on the whole. In the future school, the operational culture needs to be flexible, creative and innovative and have capacity for risk-taking, cooperation and planning.

An entrepreneurial or entrepreneurship-oriented operational culture will be a success factor for educational institutions. It is a question of activation in regard of all learners. Especially in general education, an entrepreneurial mode of operation is part of growth towards influence, participation and democracy.

One of the important elements in entrepreneurship education and entrepreneurial culture is a future-oriented approach. This means that the learners define a social mission as a joint process, sketch an image as a goal for the future (a vision) and determine the values according to which they work towards the vision. The entrepreneurial operational culture educates learners to take responsibility for themselves, encourages them to take action even though it could involve

failure, and to develop competencies and means of participating in and influencing social activity.

The challenges have to do with the development of learning environments. A learning environment means the physical, psychological and social setting for learning. The challenge in developing learning environments to support entrepreneurship education is using pedagogical solutions – teaching methods – that guide learners towards entrepreneurship and entrepreneurial operation and to see the potential in them. In a learning environment that supports entrepreneurship

- the focus is on the learner's own activity
- learning also takes place in a simulated or real-world setting
- learners can directly interact with entrepreneurship
- instruction is based on problem-solving and interaction
- the learner has the support of various expert organisations
- the teacher's role evolves from a disseminator of information to an organiser, guide and learning environment planner

The learning environment in entrepreneurship education gives responsibility to learners, encourages them to do things themselves, guides them towards recognising opportunities and seizing them, bolsters insightful and inventive learning, reinforces learners'

confidence in their own capabilities, gives scope for risk-taking and guides towards goal-oriented collaboration with others.

The development of learning environments for entrepreneurship education is included in the overall objectives and content of education and in school subjects. Different levels of education have different priorities regarding entrepreneurship education. The learning environment has to fit the level. Different stakeholders, including learners, are called upon to take part in its planning.

In vocational and higher education, the personal study plan can help create a basis for entrepreneurial competencies, for instance by linking theses and on-the-job practice to concrete business projects. Measures will be taken to strengthen work-based learning environments and to link learning situations more closely with entrepreneurship.

The entrepreneurship learning environment should be seen to comprise the whole web of components involved in the development of entrepreneurship education. Apart from educational institutions, suitable learning environments include school clubs, visits to workplaces and businesses, and simulations. In addition, youth work, school-home cooperation and organisational activities offer environments for learning entrepreneurship.

4 Development priorities by types of education

Early childhood education

The point of departure in entrepreneurship education is a diverse, action-based and child-centred culture which encourages learners to practise their initiative and realise themselves with the support of the community. A multicultural environment that generates different ways of doing things is conducive to creativity and innovativeness. Activities based on learning by doing make for a positive self-image, are conducive to practising one's own skills and specific qualities, taking responsibility, gaining courage to act and developing interpersonal skills through personal experience. A diverse learning environment and a recourse to pupils' families and the immediate community in the day-care

centre and pre-primary school kick off lifelong learning in entrepreneurship education.

Priorities

- to develop action-based learning environments
- to develop early childhood and pre-primary curricula to support entrepreneurship education
- to produce materials
- to provide teachers' continuing professional education.

General education

The basic education core curriculum was revised between 2004 and 2006 and the upper-secondary core curriculum has been gradually revised since 2005. The national core curriculum for basic education includes a cross-curricular thematic entity called “participatory citizenship and entrepreneurship”. A thematic cross-curricular entity called “active citizenship and entrepreneurship” was added to the upper secondary core curriculum in 2003 and to the core curricula of adults’ basic and upper secondary education in 2004. These themes are discussed in all subjects in a manner characteristic of them and according to the learners’ age, in the school’s learning and action culture and in joint events and functions. The core curriculum gives leeway for local and school-specific profilisation. Local authorities and educational institutions have drawn up and adopted their own curricula based on the core curriculum.

Entrepreneurship education has different manifestations at different levels of general education. In basic education, the focus is on the development of attitudes, entrepreneurial qualities and procedures and on understanding entrepreneurship in terms of the operation of society. Learners must be given scope for

taking responsibility in the school community and in their immediate community and guided towards taking initiative, solving problems and forming their own opinions of common issues. Learners must become familiar with the world of work and entrepreneurship, gain basic knowledge of the operation and the respective functions of the school community, the public sector, business and industry and organisations and of entrepreneurship as a profession.

In basic education, entrepreneurship education must utilise the potential inherent not only in school-home cooperation but also in school clubs and morning and afternoon activities arranged for schoolchildren. The practices and methods of these activities are well suited for developing thinking and problem-solving skills and entrepreneurial skills. The forms of cooperation between schools, businesses and associations are diverse: study visits, visits by business-owners and company representatives to schools, joint events, projects, class twinning. Periods of work experience must be planned to be goal-oriented, so that the pupil has a defined task to do, is well equipped to observe working life in practice and has a duty to report to other pupils about the period in a genuine exchange of experiences.

In the upper secondary school, the aim of entrepreneurship education is to further develop the knowledge and skills students’ need to participate

in and influence political, economic and social activities and cultural life in different sectors of society. Participation has four different levels: local, national, European and global. In student associations, it is possible to arrange peer activities that develop entrepreneurial qualities. In the upper secondary school, entrepreneurship education must focus on hands-on practice and on personal experience of participation and influence.

At this level, students must espouse initiative and entrepreneurship as their mode of operation, gain a broad insight into the different forms and operational principles of entrepreneurship and the opportunities it offers, gain an understanding of the importance of work and feel that they themselves want to participate in the activities of the immediate community, their home town and society and in work for the common good of their living environment.

Priorities

- to develop learning environments that activate pupils/students
- to develop curricula to support entrepreneurship education
- to provide continuing education for teachers
- to enhance teachers' links with the world of work
- to promote mock enterprise activity
- to build a stronger entrepreneurship component into guidance counselling and periods of work experience
- to inform entrepreneurs about cooperation with schools
- to produce materials for the above.

Vocational education and training

Vocational education and training offers a practically oriented channel to entrepreneurship. The core curricula in initial vocational education and training and in training for competence-based qualifications will be revised to include at least five credits (weeks of study) of entrepreneurship and business studies. All students gain basic knowledge about entrepreneurship and skills to work in an entrepreneurial manner in the employ of others. The entrepreneurship component is assessed like all other competence included in the vocational qualification.

Apart from gaining knowledge about entrepreneurship, vocational students also develop entrepreneurial skills in practice at a workplace. All vocational qualifications include at least 20 credits of on-the-job learning at a genuine workplace. Vocational skills demonstrations are given and assessed at the workplace, with the participation of the employer's representatives.

Teachers' knowledge of working life will be upgraded by means of in-service training and especially secondments, during which teachers can see entrepreneurship in practice. The learning environments will be developed jointly with businesses to give more support to entrepreneurship education by means of learning in mock enterprises and in

entrepreneurship networks. Students can also draw up business plans with a view to setting up businesses of their own.

Priorities

- to develop on-the-job instructors' training
- to develop on-the-job learning and vocational teachers' contacts with working life
- to develop guidance counselling to promote entrepreneurship and business
- to develop curricula and learning environments to support entrepreneurship and business
- to use the support programme for on-the-job learning to enhance entrepreneurship
- to develop on-the-job learning to promote entrepreneurship and business
- to develop conditions conducive to the creation of social businesses
- to produce materials in support of entrepreneurship.

Adult vocational education and training

In adult vocational education and training, adults study for competence-based vocational, further vocational and specialist vocational qualifications. In these, the required knowledge and skills are mainly demonstrated in genuine work situations. The core curricula include entrepreneurship either as a compulsory or elective component. This means that the candidates also acquire more entrepreneurial knowledge and skills in training preparing for the examination.

In adult education and training, it is also possible to study for specialised entrepreneur qualifications. The Further Qualification for Entrepreneurs is intended for people who are starting their career in business or planning to set up a business. They demonstrate their knowledge and skills in the course of their studies and in test situations get an experienced entrepreneur's assessment of their entrepreneurial skills. The Specialist Qualification in Management in turn is geared to experienced entrepreneurs who want to further develop their business strategy, a given operation in their business or their own managerial skills. During the training,

experienced mentors and fellow students give valuable support and feedback both to start-up business owners and to old hands.

In connection with adult vocational education and training, small businesses in particular are offered knowledge development services. Providers of further training can apply for subsidies for a development and service task specified in their licence and for other development projects.

The development and service projects will create new cooperation models and development partnerships between training providers and the world of work. Project subsidies will be used to support customer-driven development of work skills. A special priority is to develop regional or thematic cooperation networks. This will enhance cooperation with the world of work and increases the regional or thematic impact of the projects.

Priorities

- to utilise and develop the specialist qualification system (Further Qualification for Entrepreneurs, Specialist Qualification in Management, Specialist Qualification for Entrepreneurship Advisers)
- to develop continuing vocational training for the purposes of competence building in entrepreneurship
- to develop apprenticeship training (apprenticeship in entrepreneurship and allocation of entrant places with a view to facilitating transfer of business to the next generation)
- to direct the institutional development and service task to promote entrepreneurship and to enhance SME personnel's competencies
- to use training of the apprenticeship type in continuing education and competence building geared to higher education graduates
- to promote regional cooperation between different stakeholders.

Higher education

The role of higher education in promoting entrepreneurship relates to inculcating entrepreneurial attitudes, generating embryonic innovations, nourishing entrepreneurship instigated by knowledge gained and innovations developed during studies, and promoting growth-oriented business. This is why teachers in higher education institutions must be competent in entrepreneurship education: to teach and promote entrepreneurship. Providing postgraduate students with entrepreneurial knowledge and skills will open up new career prospects for them. In addition, this will strengthen the role of higher education institutions in supporting growth-oriented business and the internationalisation of business and in transferring academic knowledge and innovations.

Students' personal study plans and guidance given during degree studies help students sketch out their work careers during their studies. Work practice and theses can be planned to encourage a career in business. In higher education, entrepreneurship education will be increasingly offered as an elective course available to all students, and in the institution studies will be linked more closely to research and development. In working life, in-service training will cater for graduate employees' training needs.

Priorities

In higher education overall

- to promote graduate entrepreneurship
- to carry out recommendations, with focus on motivating entrepreneurship, elaborating innovations into business and supporting growth business
- to develop business know-how
- to promote the utilisation of research findings
- to develop cooperation of the science park/ technology park/business incubator type
- to constantly develop forms of cooperation between higher education institutions and the world of work
- to diversify the provision of continuing professional education intended for entrepreneurs and other employed persons
- to develop teachers' pedagogical competencies relating to entrepreneurship (teacher training institutes and vocational teacher colleges)

Polytechnics

- to enhance R&D and to focus it especially to support and upgrade SME
- to support transfer of business to the next generation
- to establish a polytechnic master's programme in SME business

Universities

- to enhance entrepreneurial training given to postgraduate students
- to promote the mobility of researchers and sharing of knowledge between universities, research institutes and business

On the history of entrepreneurship education in Finland

The first stage in the promotion of entrepreneurship in Finland can be said to be a period of economic education in the 1950s and 1960s, the second phase entrepreneurial training in the 1980s and the third the era of entrepreneurship education in the 1990s, when the concepts of entrepreneurship education and entrepreneur training began to gain ground. The first Finnish reference to entrepreneur training on the internet is from 1993 and to entrepreneurship education from 1997.

During the economic recession in the early 1990s the content of entrepreneurship education gained a labour and industrial policy connotation, primarily owing to the difficult employment situation at the time. It was seen that the role of the school was to educate young people to consider self-employment at least at some stage in their lives instead of always seeking employment in the service of others. It was seen that society must offer education and training to help people earn their living independently or improve their employability. This is the stage in entrepreneurship education we now find ourselves in.

The present form of entrepreneurship education is considered to have started in the mid 1990s. In

1992 the National Board of Education appointed a committee to define the concept of entrepreneurship and to propose and apply different development paradigms based on a review of the then situation. This set off strong networking between different stakeholders. The curricular development launched by the committee resulted in a more systematic inclusion of entrepreneurship in the basic education, upper secondary and vocational core curricula of 1994–1995. In addition, plans were made for teachers' in-service training relating to entrepreneurship, a further qualification for entrepreneurs, and materials suitable for different forms of education. Pilot projects in entrepreneurship education were launched in many comprehensive schools in different parts of the country.

The initiative for a Decade of Entrepreneurship 1995–2005 came from the Ministry of Trade and Industry, the Ministry of Labour, the Ministry of Education, the National Board of Education and the Federation of Finnish Employers (present Confederation of Finnish Industries EK). The decade had three themes: entrepreneurship in society, entrepreneurship in securing and developing jobs, and

the development and promotion of entrepreneurship. The aim was to create 100,000 new jobs. The form of the project changed slightly at the threshold to the new millennium when, on the initiative of the Ministry of Trade and Industry, the Government recorded an entrepreneurship project in its Programme, in which one focus was entrepreneurship education.

The current basic education core curriculum was adopted gradually from 2003 to 2006, the upper secondary core curriculum in 2005. In them, entrepreneurship is linked to participatory, active citizenship and constitutes one of the seven cross-curricular themes in basic education and one of the six themes in upper secondary schools. Permeating all subjects and geared to integrate teaching, these themes are considered to be key priorities in education and training, a value-based response to the challenges of the day.

Some universities have drawn up entrepreneurship strategies of their own. The polytechnics adopted a joint strategy in 2006. It includes an aim that in 2010 one in seven polytechnic graduates will have embarked on a career in business within ten years of their graduation. The Finnish entrepreneurship qualifications are unique in international terms: nearly 8,800 qualifications and degrees have been awarded in ten years, as indicated in Appendix 4. In 2002 the Ministry of Education appointed an entrepreneurship

steering group; the present, third, group has a mandate ending with the current Government term. The Ministry has also appointed a national training committee for entrepreneurship for a term up to January 2010. In addition, the National Board of Education has appointed a qualification committee for entrepreneurship up to July 2010. A higher education cooperation group on entrepreneurship issued its recommendations at the end of 2008. Regional action models (YES entrepreneurship education centres), the Junior Achievement – Young Enterprise Finland concept and mock enterprise activities are expanding.

The entrepreneurship education strategy can be crystallised as having nine dimensions: a policy outlined in the Government Programme; normative and information steering by the central government; teachers' initial and in-service training; development of entrepreneurs' competencies; development projects; and research and evaluation.

Entrepreneurship is much to the fore at the European level. The European Commission initiated a project called "Best" to review the situation in each country by collecting indicator data concerning entrepreneurship education. Another Commission project evaluated mini enterprise activities in secondary education. Very interesting in entrepreneurship terms is the Commission's recommendation for future key competencies which every citizen must have. One of them is initiative and entrepreneurship.

European Parliament and Commission's definition of entrepreneurship

Definition:

Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day to day life at home and in society, employees in being aware of the context of their work and being able to seize opportunities, and is a foundation for more specific skills and knowledge needed by entrepreneurs establishing social or commercial activity.

Essential knowledge, skills and attitudes related to the competence

Necessary knowledge includes available opportunities for personal, professional and/or business activities, including 'bigger picture' issues that provide the context in which people live and work, such as a broad understanding of the workings of the economy,

and the opportunities and challenges facing an employer or organisation. Individuals should also be aware of the ethical position of enterprises, and how they can be a force for good for example through fair trade or through social enterprise.

Skills relate to proactive project management (involving skills such as planning, organising, managing, leadership and delegation, analysing, communicating, de-briefing and evaluating and recording), and the ability to work both as an individual and collaboratively in teams. The judgement to identify one's strengths and weaknesses, and to assess and take risks as and when warranted is essential.

An entrepreneurial **attitude** is characterised by initiative, pro-activity, independence and innovation in personal and social life, as much as at work. It also includes motivation and determination to meet objectives, whether personal goals or aims held in common with others, and/or at work.

Source: COMMISSION OF THE EUROPEAN COMMUNITIES. Brussels, 10.11.2005. COM(2005)548 final. 2005/0221 (COD). Proposal for a RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on key competences for lifelong learning.

Current situation in teacher education

A great deal of effort has been put into including entrepreneurship education in teachers' initial training. At present it is compulsory in three and elective in several teacher education institutes. In vocational teacher colleges entrepreneurship education is offered as an elective subject; in one college it is possible to study for teaching qualification with specialisation in entrepreneurship education. Measures have been taken to recruit more persons with a background in entrepreneurship and with personal experience of entrepreneurship to teacher training. In recent years, experience of entrepreneurship has been considered a special merit that can bring extra points for the applicant in admission.

In open university instruction it is possible to study entrepreneurship, entrepreneurship education and business know-how (e.g. in the University of Joensuu and University of Jyväskylä). These courses are of basic and intermediate level. The courses can also be taken as multiform studies.

All universities providing teacher education offer entrepreneurship education as elective studies for

teacher trainees. These are generally on offer in faculties of economics and administrative sciences and the focus is on entrepreneurship and business know-how. Based on 2006–2007 data, some 60 students opted for these courses.

Faculties of education offer studies in entrepreneurship education of varying extent. They are a compulsory component in the Kajaani Department of Teacher Education of the University of Oulu and in crafts teachers' programmes in the Rauma Department of Teacher Education of the University of Turku and the Vaasa Department of Åbo Akademi University.

The guided teaching practice included in initial teacher education does not include guidance in entrepreneurship consistently, even though it is a cross-curricular theme in both the basic and general upper secondary curricula. It should be pointed out that most teacher trainees get no introduction to entrepreneurship education at any point of their studies unless they take it as an elective course.

Entrepreneurship in teacher education

University	Compulsory in class teacher/ subject teacher programmes	Elective courses	
		Faculty of education	Other faculty
University of Helsinki	-	-	* several courses
University of Turku	-	3 ESCT points	* several courses
Rauma campus	3 ESCT points (crafts)	3 ESCT points	-
University of Vaasa	5 ESCT points (crafts) Swedish-language education		* several courses
University of Tampere	-	-	* several courses
Hämeenlinna campus	-	-	-
University of Jyväskylä	-	3 ESCT points	* several courses
University of Oulu	-	-	* several courses
Kajaani campus	5 ESCT points	25 ESCT points	-
University of Joensuu	-	25 ESCT points	* several courses
Savonlinna campus	-	-	-
University of Lapland	-	-	* several courses

* several courses → generally courses in business and economics

The table does not include virtual courses.

A network of the 13 teacher training schools attached to teacher education units includes an entrepreneurship education group; its members work actively to get the theme included in teacher education.

The various development measures they have taken so far have stepped up cooperation between the teacher training schools. The current challenge is to find a person to take responsibility for entrepreneurship education in all of them. The network has focused on providing better supportive services for guided teaching practice and for teacher education, with special emphasis on support material for curricular work. These network and consultation services also reach local education authorities and educational institutions.

Vocational teacher training

The training for vocational teacher qualification is 60 ESCT points and includes basic studies in education science and in vocational pedagogy, teaching practice and other studies. The aim is to provide knowledge and skills needed to teach different learners and to develop subject teaching in response to developments in working life and occupations. Entrepreneurship education can be

studied as an elective subject in vocational teacher training. At the Vocational Teacher Education College of Häme Polytechnic it is possible to gain teacher qualification with entrepreneurship education as a specialty. The study component relating to the planning and implementation of teaching and guidance focuses on the development of learning environments and pedagogic models that support entrepreneurship education. Teacher trainees are equipped with knowledge and skills they need to guide students' growth into entrepreneurship.

Efforts are increasingly made to recruit more persons with a background in entrepreneurship and with personal experience of entrepreneurship to teacher training. In recent years, experience of entrepreneurship has been conspired a special merit that can bring extra points for the applicant in admission.

Although, thanks to government funding, in-service training relating to entrepreneurship education is provided free of charge for students, the problem has been a low participation rate. From 2003 to 2007, only about 1,500 of the planned 3,600 study places provided by the National Board of Education with 2.25 million euros of government funding were filled. The situation is similar in training provided by provincial state offices, which attracted only 1,300 participants.

Examples of entrepreneurship education

In the 2000s, there have been a number of projects developing or supporting entrepreneurship education. These and the core curricula reform have produced good practices, which are described (mostly in Finnish) on the following sites, among others:

Centre for School Clubs

www.kerhokeskus.fi

Central Chamber of Commerce

http://www.keskuskauppakamari.fi/kkk/edunvalvonta/Elinkeinopolitiikka/fi_FI/Yrittajys/

Youth Academy www.nuortenakatemia.fi

Junior Achievement – Young Enterprise Finland

www.nuoriyrittajys.fi

Teacher education

www.enorssi.fi/hankkeet/yrittajyyskasvatus/

National Board of Education

www.edu.fi/yrittajys

Structural Fund period 2007–2013

www.rakennerahastot.fi

Finnish entrepreneur day 5.9.

www.yrittajanpaiva.fi

Federation of Finnish Enterprises

www.yrittajat.fi/fi-FI/yristystoiminnanabc/koulutus/satamalla/

Finnish 4H Federation

www.4h.fi/top www.4h.fi/yritys

Economic Information Office (TAT)

www.tat.fi/tat/fi/
www.yritykset/hyvat_kaytannot/

YES centres www.yes-keskus.fi

EnterpriseFinland www.yrityssuomi.fi



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