
THE STARTUP PROJECT – A NEW OER GATEWAY TO ENTREPRENEURSHIP IN EUROPE

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Introduction

A partnership made of seven different institutions from five countries is working together, during the period January 2013 – August 2016, on StartUP, a 32 month project co-funded with support by the European Commission (Lifelong Learning – Development of Innovative ICT-based Content, Services, Pedagogies and Practice for Lifelong Learning – Key Activity 3).

The partners of this innovative project come from all over Europe: Italy, United Kingdom, Austria, Spain and Malta and their different background and expertise is just one of the many added values of this project.

More specifically, the coordinator of this project is Associazione Sophia R&I (SOPHIA), established in 2009 in Rome, Italy. Its main objective is to provide consulting and management services in the public and private sectors. SOPHIA's team of experts has conveyed passion, energy and strong know-how in order to provide a high-standard in consulting and management services, ICT solutions, education and training, research and development. StartUP also benefits from a partnership with extensive international expertise in different areas, including:

- The Austrian vocational qualification institute BEST, Institut für berufsbezogene Weiterbildung und Personaltraining GmbH, whose main activities comprise of adult education delivery, provision of vocational qualifications, guidance for unemployed people and training for key qualifications for re-integration into the labour market. This institute offers training facilities for up to 12,000 students per year. The training methods for different target groups include pedagogic and didactic methods, especially for integration and motivation, as well as e-Learning based training which are constantly being updated. As one of the first training institutes in Austria, BEST has become a certified Eco-C-centre (European Communication Certificate) and provides respective training and tests.
- Academic institutions are also represented in this project, thanks to the participation of Universidad Politécnica de Madrid (UPM), one of the main universities as well as the oldest and largest technical university in Spain. The UPM has an institutional policy of open access through which it promotes open access to knowledge. So UPM has several open digital platforms with different objectives and characteristics including its involvement in Open Course Ware (OCW). In fact, UPM is at present, a recognized leader in the Open Course Ware community and has been the first Spanish university to join such an initiative. Another Spanish organisation is in the partnership: the Spanish Confederation of Education and Training Centres (CECE), a non-profit employers' and professional organization founded in 1977. It represents a wide educational sector in Spain from nursery school to university level.
- Since the role of women entrepreneurs in Europe is becoming more and more important and it becomes increasingly essential to provide targeted training to support women to overcome the specific barriers to entrepreneurship which they face, the partnership also includes two private organisations supporting women in business and non-traditional fields. The Foundation for Women Entrepreneurs, a Maltese non-profit organisation, which has been set up for the promotion of opportunities, awareness building, training and research in the field of Women Entrepreneurs and

other gender issues and Inova Consultancy, based in Sheffield (UK), specialised in providing consultancy services and project work in the field of gender and non-traditional fields and entrepreneurship. Inova has specialist experience in running workshops, training courses and mentoring programmes aimed at women starting up or developing their business. Inova has also developed personal development/soft skills development workshops, including the innovative Mentoring Circles™ methodology for women entrepreneurs in the UK, which combines action learning with mentoring and coaching techniques.

- Part of the StartUP team is also Profesia, an Italian SME with significant experience in industrial project development and involvement in the ICT FP6 and FP7 work program for a total of 3 IPs and 3 STREPs mostly in the role of Architect, software coordinator and technical developer with a key role in the management board.

The rationale behind this project, and the reason the consortium was developed, was based on the fact that only a minimum amount of Open Educational Resources (OER) and tools available online are currently used in the lifelong learning sector and vocational education training. The Internet is a huge repository of free materials, openly available to help people develop skills in areas as diverse as art and crafts, science, language learning and many, many more! This of course, also includes a huge range of training tools aimed at supporting enterprise skills and it is this which the StartUP project is focussed on.

Open Educational Resources (OER) are defined as “teaching and learning, and research resources that reside in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others. Open educational resources include full courses, course materials, modules, textbooks, streaming videos, tests, software, and any other tools, materials, or techniques used to support access to knowledge” (Atkins et al., 2007).

The potential for people to use such resources to learn and increase their skills can not be underestimated. As the Internet becomes ever easier, quicker and more widely available across all corners of the world, OERs can be a powerful tool to allow people of all ages, genders and backgrounds to access high quality training materials for free. However, although it has been around 15 years since the first OERs were released¹, there are still very few people and organisations that actually take advantage of the huge potential of this material.

So, the main aim of StartUP is to allow educators, students and self-learners to acquire competences for employability by developing and analysing an innovative approach based on these new and unexplored tools. We have been working to develop a new platform which will act as a gateway to OER tools on the subject of employability and enterprise skills, allowing learners to assess their current skills and receive a personalised ‘training path’ which will point them to a range of OER materials that can help them develop the skills they need to build.

This paper outlines further the rationale and methodology behind the StartUP platform, introducing the OER concept further and exploring how the platform could be used to support and inspire the next generation of business people and entrepreneurs.

Why is the project necessary?

So why is this project necessary in order to enhance and reinforce entrepreneurial spirit in Europe?

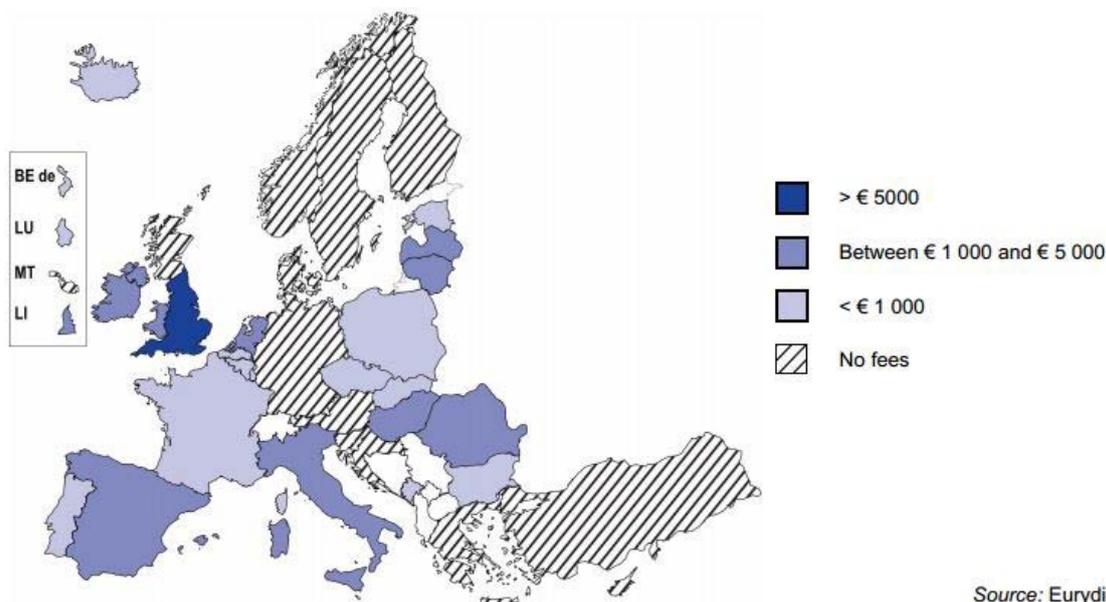
Competences related to entrepreneurship are considered a key factor to put in place in this period of economic recession. The Communication from the Commission to the Council, the

¹ The MIT OpenCourseWare project announced in 2001 that it was going to put MIT's entire course catalog online and launching this project in 2002.

European Parliament, the European Economic and Social committee and the Committee of the Regions – “Implementing the Community Lisbon Programme: Fostering entrepreneurial mind-sets through education and learning”, COM(2006) 33 final (COM, 2006) declares that entrepreneurship is a key competence for growth, employment and personal fulfilment and that the education systems can greatly contribute to successfully addressing the entrepreneurial challenge within the EU. So lifelong learning is a concept that has to be introduced in the entrepreneurship development discussion. The unemployment crisis that this project is addressing are well-known: “the impact of the crisis on employment and the social situation increased as the unemployment rate rose from less than 7% in 2008 to 10.8% in 2013, putting 9 million more people out of work. The effects were unevenly spread across the EU however, with unemployment rates in 2013 still only around 5% in Austria and Germany against over 25% in Greece and Spain” (EC, 2015a).

The skills that the European Union identified as crucial for the new job market may be summarised in the following points: flexibility/adaptability; effective communications skills; problem solving; creativity; interpersonal skills; teamwork (Brewer, 2014). OER can potentially be a powerful tool in order to develop these new skills.

We also need to consider the fact that, across Europe, many more people will struggle to access higher education in the future as tuition fees are raised and current unemployment levels have an effect on our ability to afford traditional education. As shown by Eurydice in Figure 1 (EC, 2015b), the fees system in Europe is very different from country to country. For example the fees paid in the Czech Republic are less than EUR 50 per year and are charged as a contribution towards administrative costs. The highest fees are paid in England, following a radical reform of fees by the government in 2012. Here, fees are set by higher education institutions and at a maximum of GBP 9,000 (EUR 11,377) per year (Ibidem, p.5).



Explanatory note

The national statistics available cover full-time students and all kinds of fees including tuition fees, administrative fees and additional fees for students who exceed a regular length of study.

Figure 1.

Internet use however, is on the rise across Europe. Connections are becoming more easily available, are quicker and many can even gain free access through libraries and other local institutions. Even access in remote and rural areas is becoming easier as technology develops, so OERs represent a powerful tool that have the potential to bring higher equality to the education system. In the future, the OER concept will democratize access to knowledge and establish a brand new way of teaching and learning through new

communication technologies. Through OERs people have access to a wide range of learning materials that are freely available online; allowing anyone to access teaching materials, regardless of age, gender, geographical location or financial means. Materials are available from some of the highest regarded institutions in the world, including MIT and Harvard, free of charge, for the first time in history. As a result, the impact which OERs can have on education within Europe will continue to rise.

So we see that OERs have a great potential for people who want to acquire more skills and competences. However, as we all know, it isn't always so easy to find the materials we need in the vast space of the Internet. In StartUP, we believe that there is a need to introduce a 'one-stop shop', collecting together a range of OER resources for building enterprise skills in one place and therefore making it easier and more efficient for teachers and individual learners to discover what is available and begin using those resources which will be most effective in increasing their skills for employability and business.

The StartUP project has worked towards a solution to this by designing and creating a new, online environment which provides users with a customized training path, based on their own specific needs, allowing them to quickly see the OER materials which would be useful to them and access them easily through a single gateway. Therefore, StartUP will represent a significant step forward in the use of OERs for entrepreneurial skills by making them easier to access and allowing users to select the tools they use in accordance with their specific learning needs.

The outcomes of StartUP will have a strong potential impact on some of the most sensitive issues which Europe is dealing with on a daily basis, including some of the highest youth unemployment figures seen in recent years.

More about OERs

The term OER was adopted at a UNESCO meeting in 2002 to refer to the open provision of educational resources enabled by information and communication technologies, for consultation, use and adaptation by a community of users for non-commercial purposes (D'Antoni, 2008). In recent years the role of OERs has increased and gained a global dimension thanks to initiatives like Open Course Ware, academic course lessons published for free via platforms on the web, like coursera.org or open2study.com.

Today a massive number of multilingual OER collections are available online. The growth of the OER movement over the past decade has meant that it has become more and more difficult to have an overview of OER initiatives globally, and even locally. One of the main objectives of StartUP therefore, is to help users to use them more effectively, by bringing a huge range of resources, focussing on enterprise skills, together in one platform that will provide a structured procedure to access sources from around the world.

How does the StartUP platform work?

The methodology that the partnership decided to adopt and which is currently being implemented is concise and effective: in the initial phase research was completed to ascertain the training needs of users (which includes teachers, entrepreneurs and individuals wishing to build their enterprise/employment skills) and the existing OER resources available with a focus on entrepreneurship. This was conducted in 2013 by all the partners involved in the project, under the supervision of UPM.

The StartUP team used the LOCWD model, a vocabulary devoted to linking OERs, open licenses, OER/OCW repositories, and other academic information using the Web. The LOCWD vocabulary is available in <http://purl.org/locwd/schema/> and was defined by the UPM. Following the LOCWD model and completing them with metadata directly related to the objectives of the project, i.e. data about clusters of competences, we use a list of metadata which will describe univocally each OER selected / localized / remixed / developed

both by partners and StartUP platform users. Due to the StartUP metadata assuming the LOCWD vocabulary, the system will automatically extract many of the metadata recommended by the system, but the user will always be able to check (and possibly correct) the metadata automatically set. In case users would like to link to an already available OER, the metadata that should be automatically extracted by the system are: Title, Alternative title, Abstract, Language, Tags, Author name, Author organization, Date created, OER provider, URL source, License, Encoding format and Duration.

One of the key elements of this project is the 'Training Paths' which are sets of OER materials on enterprise skills that correspond to a particular user profile. The elaboration of these Training Paths is based on the description for each OER of a set of features or metadata that will make possible its discovery and automatic management by the StartUP project.

The initial work done by the expert partners in searching and cataloguing, by hand, OER that could be part of the training paths evidenced the difficulty and effort required for individuals to find resources on their own. There are many resources available but finding good quality materials on specific subjects at the right level for you is very difficult. Added to this is the fact that much of the available material is in English and it can be difficult to find materials in other languages. The partnership has therefore worked to support learners to find suitable materials through the StartUP platform, extracting automatically the metadata defined and recommending OERs that fit to specific competences and also at different levels (Basic, Intermediate, Advanced). The platform can also obtain OERs automatically from several sources such as social media networks like Twitter, or DBpedia.

According to the findings of the research the StartUP team drafted an "Entrepreneurial Competence Matrix" (<http://www.startupproject.eu/?q=node/149>) structured by the following three levels: competence area, competence and learning outcome. This Matrix has been used to implement a Virtual Expert tool (introduced below) which provides users with their individual training path.

The 'Virtual Expert' is one of the main tools developed by the partnership and is used by individuals when first accessing the platform. Following a questionnaire on their current skills, the Expert assesses the individuals training needs and then recommends a tailored OER training path based around four clusters; Communication Skills, Management Skills, Self-Development Skills and Business Skills. The training path provided by the Expert, then provides links to a range of OER materials which cover competencies such as Business Planning, Sales & Marketing, Leadership, Project Management, Communication etc. By following the links, the user can access the training resources on an external website and complete the training provided. This could be watching a TED talk or completing an online training tool available through business schools such as MIT.

There are options for users to then rate the OER materials they have accessed. This allows platform administrators to gain feedback on the appropriateness of the materials (in terms of content, accessibility and language) and will also help other users assess its usefulness. Members are also offered the option to upload links to their own OER resources to allow the platform to continue to grow and develop.

The research and development phases of the project have been followed by a period of system integration and testing. The partners developed guidelines and worked on the recruitment of testers for the website and the platform in order to release an efficient and solid tool to a wider audience.

The European dimension of the partnership is one of the main characteristics of this project and can also be identified in the multilingual dimension of the website and the OER resources available. Working as a partnership between countries, has brought an added value to this project by ensuring that a range of cultural backgrounds and different expertise

has been used to develop the system. Research and feedback has been gained from all partner countries, helping to ensure that the platform will meet the needs of a multi-cultural society and will be accessible to users from around the world. Currently, the platform is available in English, Italian, Spanish and German which greatly increases its market.

Another aspect that the StartUP partnership wants to support is the importance of equality and transparency, offered by the possibility of interaction and participation as well as the accessibility of a web 2.0 environment. So, the OER resources, that are the basis of this project, are tools that allow everyone to have access to the most up-to-date information and knowledge, allowing everyone to increase their professional and personal development on an equal level.

The implementation of this project has been carried out through a constant and wide involvement of the target groups, in order to maximize the benefits of a bottom-up approach. As an example of the methodology implemented by the project, it is worth explaining here how the online platform practically works:

The OER Gateway has a login section where the users can create their own profile. Once logged into their account, the users will interact with page shown in Figure 2.

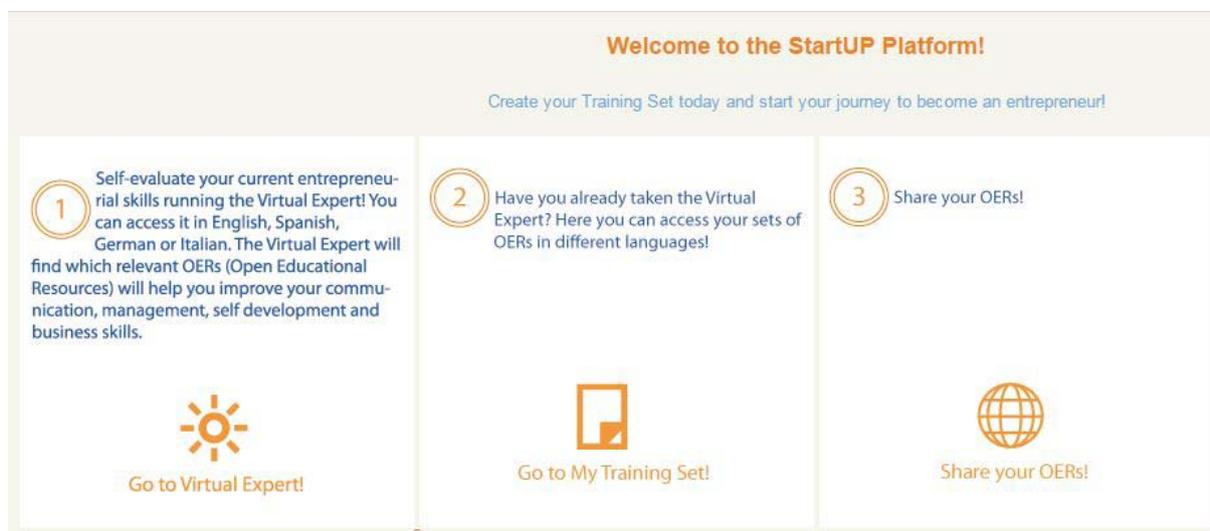


Figure 2.

Through the “Virtual Expert” (1), (a tool that has also been translated into Italian, Spanish and German) the users can self-evaluate their entrepreneurial skills. After having completed a self-assessment questionnaire the users will be able to access the OERs relevant to them (2), according to their profiles. These will be resources which will help them to improve their communication, management, self-development and business skills.

According to the cluster of competencies chosen, the training set will be structured with different sources, taken from a wide online database created by the StartUP partners who originally assessed these competences within an entrepreneurial training needs analysis and based on their previous expertise in running enterprise training within Europe.

As an example, the cluster “self-development” will allow users to access materials on motivation, emotional intelligence, assertiveness, self-belief, creativity etc. The cluster “management skills” will provide users with a customized training path that includes more leadership skills, such as project management, technologies, risk management, action planning and goal setting etc. The cluster “business skills” includes more hard-skills oriented materials, such as business and financial planning, legal aspects, sales and marketing techniques etc. and the cluster “communication skills” provides materials such as public speaking, non-verbal communication, interpersonal skills, empathy etc.

Another unique opportunity that the StartUP platform offers is the possibility to share your own OERs (3). This tool supports the transparency and openness of the process implemented by the StartUP team by allowing users to also contribute resources by uploading links to other OERS and even develop their own OER from scratch, adapt an existing OER (both in term of contents and format) or translate an existing OER into their own language to make it available to others.

The StartUP online platform also offers a discussion forum where participants can discuss and share opinions on the course topics and entrepreneurship in general.

To allow users to access a deeper learning experience, the partnership decided to put into practice a blended learning methodology (Figure 3) which would combine and integrate different learning environments or delivery modes in the training and learning activities of the project. Therefore, the project is also delivering a series of live webinars, promoted to participants of the platform as well as other stakeholders. These are also recorded and published online to be shared with a wider audience. The users will then have access to recorded materials which they can consult at any time.



Figure 3.

Inspiring the next generation: Our aims and objectives

The StartUP project is pursuing the objective set in the EU2020 agenda by the European Commission. As previously stated, lifelong learning is going to be more and more important in order to develop updated and innovative entrepreneurial skills. The Europe 2020 strategy and in particular the 'Agenda for new skills and jobs' (EC, 2012) will support the new quality jobs of tomorrow. This initiative is how the Commission will help the EU reach its employment target for 2020: 75% of the working-age population (20-64 years) in work.

The project aims to reflect the employment and training needs that Europe is lacking, especially after the beginning of the economic crisis. More specifically, the Leonardo da Vinci programme objectives have been taken into account in the development of the original project idea: the participants are provided with tailored training activities that lead to the acquisition and the use of knowledge, skills and qualifications to facilitate personal development, employability and participation in the European labour market.

The specific objectives of the project are to:

- Set up an innovative method for evaluating individual users learning needs in the entrepreneurial sector;
- Provide effective OER corresponding to the individuals specific learning needs;
- Set up a peer review and sharing community to ensure the quality of the materials and learning paths provided.

StartUP is piloting entrepreneurship training using OERs, as a potential option for students in a range of settings; not just individual adult learners but also for teachers/lecturers to incorporate online resources into their curriculum.

The project aims to address the needs identified previously, such as filling the gap for open and flexible entrepreneurial training opportunities with innovative ICT tools and combined institutional approaches. In this way, StartUP intends to increase the development of entrepreneurial competence in the EU by increasing the use of OER. Once OERs are easier to find and to use, we can expect the number of users will much increase in comparison with current user rates, thus enhancing the community and allowing the creation of a virtuous learning circle. As a further result, a growing community could lead to an increased number of learning resources which can be assessed further enrich the range of OERs available. Furthermore, as at present the majority of OER are in English, we can even assume that among the community the most effective learning resources could be translated by trainers in other countries, to be used in their own language. As a result, the number of OERs available in different languages will also increase, thus allowing more users to access them.

The project's deliverables, outputs and products are being promoted by the partnership through a structured dissemination plan that includes a website through which the platform is accessed; two promotional videos are available at the following links: video 1 (<https://youtu.be/uxcxztxwCxQ>) , video 2 (<https://youtu.be/TTToMbsfZTiY>); local events in all partner countries are being delivered to promote the project and the platform; a multilingual project brochure is available (http://www.startupproject.info/sites/default/files/28_Project_Brochure_EN_web_0.pdf) and a multilingual newsletter is produced regularly (past editions can be accessed via the website).

The impact of the StartUP project results will be assured beyond its lifetime through specific actions aimed to promote the platform to the target groups as well as wider policy makers. This approach will assure more targeted project actions, structure and method according to the specific target group's needs and an easier sustainability of the project after its end. Following the funding phase the results will be sustained through a range of activities as follows:

- StartUPs main products will be published on partners' websites, in future projects and joint ventures;
- Cross-cooperation with projects working in similar domains will allow for the enlargement of the StartUP partnership, involving other networks, schools and professional associations;
- Users that have benefited from the StartUP products will continue to be able to use them and new trainers will have the chance to use the StartUP system. All the participants will be involved in updating the virtual community to keep it active and up to date. Trainers and trainees will promote and use/re-use, in their daily activity the OER contents;
- Exploitation strategies will involve educational stakeholders and key actors in local national events to encourage them to apply and transfer the StartUP results in the future;
- Quality assurance activities and ad hoc focus groups will gather target groups' suggestions and feedback to assure the project's impact, sustainability and transferability in other relevant contexts.

Besides the above, partners will continue to disseminate and exploit the project results, spreading promotional materials, inviting other organizations to join the community, sending newsletters, writing articles and using their web 2.0 tools for sharing information.

Conclusions

The StartUP team will continue working on this innovative and useful tool, with funding from the Lifelong Learning Programme until August 2015. It is hoped that the results of the project can potentially have a huge impact on the way entrepreneurship and innovation is taught. The relevance of this theme is also confirmed by the first European Call for papers for eLearning issue 41: "Innovation, entrepreneurship and education" published in February 2015.

The platform already has users that are currently testing its suitability and effectiveness, providing feedback for improvements before the platform is launched to the general public. The overall feedback on the benefits and support that the platform and the project in general could give to aspiring and existing entrepreneurs is very positive and the partnership is really looking forward to further assessing how their work will influence the future of European entrepreneurs and their lifelong learning process. To be part of the testing phase, interested individuals can sign up at: <http://www.startupproject.eu/?q=oer-academy>.

The StartUP team also assure a strong future sustainability of this project, secured by five pillars: the system validated development, consisting of a continuous process of development and validation; platforms development and institutional capacity building, empowerment of teachers' skills by giving them the confidence and skills to successfully customize and incorporate this tool so it best fits their teaching needs; cross-cooperation with other EU projects and financial sustainability. Moreover, the constant involvement and cooperation of the target group, stakeholders and policy groups is a guarantee on the successful management of the project also after the final date.

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