



O3.1 INTERNSHIP MODEL FOR THE ACQUISITION OF ENTREPRENEURIAL MIND-SET AND COMPETENCES

WP3. LEADER_IDEC SA, GREECE





Internship model for the acquisition of entrepreneurial mind-set and competences

Author:

Nefeli Dimopoulou – IDEC SA, Greece

Coauthors:

Yorgos Goletsis, Efi Geronymaki, Nikiforos Papachristos, University of Ioannina, Greece

Nataša Urbančíková – Technical University of Kosice, Slovakia

Zsófia Bulla – TREBAG, Hungary

Randolph Preisinger-Kleine, P&W Praxis u. Wissenschaft Projekt GmbH, Germany

Iris Bos, Nynke de Jager - Inqubator Leeuwarden, Netherlands

Francesca Uras - European Universities Continuing Education Network (EUCEN), Belgium

Natassa Kazantzidou, Xenia Chronopoulou, IDEC SA, Greece

Eugenio D'Angelo, Ida Caruccio, Costantino Formica, Università Telematica Pegaso

This publication was composed within the framework of the EnterMode project.

[Project N°: 601125-EPP-1-2018-1-SK-EPPKA2-KA]

<http://entermode.eu/>

Published by Technical University of Košice, 2019

ISBN: 978-80-553-3463-9



CC BY-NC-SA: This license allows reusers to distribute, remix, adapt, and build upon the material in any medium or format for non-commercial purposes only, and only so long as attribution is given to the creator. If you remix, adapt, or build upon the material, you must license the modified material under identical terms.





Contents

| | |
|---|----|
| 1. Introduction..... | 6 |
| 2. Internship Model – Rationale and general overview | 9 |
| Benefits of applying the internship model..... | 10 |
| 3. The EnterMode Internship Model for acquiring entrepreneurial competences | 14 |
| Potential Risks in implementation | 16 |
| 4. Roles | 17 |
| 5. Challenge – based learning phases in the EnterMode model..... | 20 |
| Phase 1: Engagement/preparation phase..... | 20 |
| Phase 2: Investigation | 21 |
| Phase 3: Action..... | 21 |
| 6. Incubation elements during the EnterMode internship | 23 |
| Incubation in general..... | 23 |
| EnterMode internships..... | 24 |
| Element 1: Cooperation | 25 |
| Element 2: Mentoring | 25 |
| Element 3: Knowledge and experience sharing | 26 |
| Element 4: Networking..... | 26 |
| 7. The Entrepreneurship Competence Framework (EntreComp) | 27 |
| The EntreComp framework in the EnterMode internship model | 27 |
| Entrepreneurship as a competence | 27 |
| EntreComp framework..... | 28 |
| EntreComp competences | 29 |
| EntreComp progression model | 32 |
| 8. Learning Outcomes | 34 |
| 9. Gamification and EnterMode serious game..... | 37 |
| The EnterMode serious game | 37 |
| 10. The EnterMode Community of Practice | 40 |
| Roles in EnterMode Community of Practice | 41 |
| EnterMode Community of Practice knowledge flow | 42 |
| 11. Learning Analytics..... | 44 |





| | |
|--|----|
| 12. Implementation of the internship model..... | 48 |
| 13. Sustainability of the EnterMode internship model | 50 |
| References..... | 52 |
| Glossary | 55 |
| ANNEX: EnterMode Virtual Internships Model | 58 |
| Introduction..... | 58 |
| What is a Virtual Internship?..... | 59 |
| Examples of virtual apprenticeships..... | 59 |
| Virtual internship in Entermode internship programme | 61 |
| Characteristics of virtual internships in EnterMode..... | 62 |
| Challenges of virtual internships in EnterMode | 64 |
| Conclusions..... | 65 |

List of Figures

| | |
|---|----|
| Figure 1. Benefits of using the EnterMode internship model | 13 |
| Figure 2: The EnterMode model scheme | 15 |
| Figure 3. Main competence areas based on the Entrepreneurship Competence Framework..... | 28 |
| Figure 4: EnterMode knowledge cycle..... | 42 |
| Figure 5: EnterMode internship processes..... | 48 |

List of Tables

| | |
|--|----|
| Table 1. Risks and mitigation actions | 16 |
| Table 2. Entrepreneurship competences..... | 29 |
| Table 3. EntreComp Progression Model..... | 33 |
| Table 4. EQF descriptors for learning outcomes..... | 34 |
| Table 5. Data which can be collected through CoP learning Analytics..... | 47 |

List of Abbreviations

CoP Community of Practice





| | |
|-----------|---------------------------------------|
| EntreComp | Entrepreneurship Competence Framework |
| HEI | Higher Education Institution |
| HR | Human Resources |
| LMS | Learning Management System |
| MoU | Memorandum of Understanding |
| WBL | Work Based Learning |





1. Introduction

The competitiveness of European economy requires citizens and particularly young people to be innovative, creative, flexible and courageous, in order to face challenges in a dynamic and volatile economy. Globalisation has increased the pressure on economies to compete and innovate. A vibrant base of creative and innovative entrepreneurs is critical to achieve meeting the challenges of globalisation as well as taking advantage of the opportunities that arise from it. Entrepreneurs create employment and prosperity, and thus they play an important role in the economic and social well-being of European citizens (European Commission, 2015). The development of the entrepreneurial capacity of European citizens and organisations is one of the key policy objectives of the EU and its Member States.

Entrepreneurial mind-set and skills are not a given personal characteristic: they can be developed through learning and experience, and they can be achieved within the educational system. Thus, the European Union has set as a strategic objective to enhance creativity and innovation, including entrepreneurship at all levels of education and training (Council of the European Union, 2009).

Initiative and entrepreneurial spirit identified in the Tunning Report (2019) is considered a transversal systemic skill that improves employability in the labour market; it constitutes a skill highly appreciated in paid employment as well. EnterMode project aims at stimulating entrepreneurship and entrepreneurial skills of higher education teaching staff and company staff and at developing an entrepreneurial mind-set and related skills in higher education students. By working together, fourteen institutions from eight EU countries strive to achieve this goal¹.

“The Internship Model For The Acquisition Of Entrepreneurial Mind-Set And Competences” is one of the EnterMode project outputs and is based on the Background Study "Entrepreneurial education in HE in partners' countries, entrepreneurial skills required by HE students, the framework for internships". The Study is the result of a research that has targeted three main groups (students, HEI staff and companies) and has been implemented in five EU countries (Germany, Greece, Hungary, Italy and Slovakia). The aim of the research was to understand the role of internship in entrepreneurship education and to propose recommendations on how to optimise internships so that students gain not only expertise and practice related to their studies but also entrepreneurial skills².

“The Internship Model For The Acquisition Of Entrepreneurial Mind-Set And Competences” is an integrated model of entrepreneurship skills acquisition that includes different levels and modes of learning, comprising the following:

- challenge-based learning through internships in companies.
- hands-on learning of entrepreneurship skills through serious gaming.
- micro-learning with the aid of social media.
- distributed social learning within Communities of Practice.
- organisational learning through the use of learning analytics.

¹ More information is available at <http://entermode.eu/>

² The Study is available at <http://entermode.eu/outputs/>.





- experimental learning across HEIs and companies.

'The Internship Model For The Acquisition Of Entrepreneurial Mind-Set And Competences by higher education students' is focused on the main competence areas of entrepreneurship, using EntreComp, the Entrepreneurship Competence Framework (2016) that was selected during the background study as a key reference document³.

The Model consists of eleven mutually interconnected chapters. First of all, after the Introduction, a general overview of the model (Chapter 2) offers readers comprehensive insights into the Model as a new scheme for the organisation of internships. The more detailed description of the internship model is presented in Chapter 3, which enables readers to visualise the main Model components and their interrelationships. Chapter 4 describes the roles of each actor. Chapters 5 and 6 are devoted to challenge-based learning and incubation. Chapter 7 illustrates the Entrepreneurship Competence Framework and it aims at providing a deeper understanding of the main competence areas of entrepreneurship. Chapter 8 deals with learning outcomes. Chapters 9, 10 and 11 are focused on gamification, learning analytics and community of practice. The practical steps for implementation and sustainability of the Model are part of Chapter 12. Finally, a glossary contains explanations of concepts relevant to an Internship model content. Due to the COVID-19 pandemic, during which internships had to shift from face to face to online (or blended), an ANNEX was added to the EnterMode model, which describes the elements of the model which should be adjusted for internships that are organised virtually.

The model offers the theoretical background for the development of entrepreneurial skills to students during their internships. It describes the theory behind each element that can be applied. The model should be read in conjunction with the mentors' guide⁴, which offers practical guidelines and tools, on how to apply the model in your organisations' context. In the mentors' guide, you can also find case studies that were collected during the piloting of the internship model.

We believe that the Model is general enough to be applied in different contexts and countries in Europe. The diversified profile of the partners' countries enabled us to cover diverse needs and sectors and, at the same time, it offered a 'one size' model with specific suggestions to shape it to different contexts, to ensure its wider transferability.

Nevertheless, **to develop one's own internship model**, which can feed and promote the acquisition of entrepreneurial skills, it is necessary to:

- adopt a common reference framework for entrepreneurial skills and mind-set, integrate the internship programme to the curriculum and adopt entrepreneurial assessment methods.
- develop the internship programme flexibly to respond specifically to students' interests and needs.
- involve companies' mentors and create a friendly incubation environment for students in every company.

³ Available at <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/Ifna27939enn.pdf>

⁴ the mentor's guide is available at <http://entermode.eu/outputs/>.





- consider risks: dynamic enterprises' environments, insufficient involvement of partners, hostile administrative system, the relegation of the students to ordinary tasks, inapplicability to different sectors, lack of interest and motivation, etc.
- respond to challenges: the creation of a friendly incubation learning ecosystem in the company, adoption of innovative teaching methods, offering a supportive 'bridging' structure between universities and society.

'The Internship Model For The Acquisition Of Entrepreneurial Mind-Set And Competences by higher education students' is supplemented by the Mentors' guide for the implementation of the EnterMode Internship Model. The objective of the Mentors' guide is to introduce entrepreneurial education and to train tutors from HEIs and mentors from companies to be able to design, implement and evaluate internships for HEIs students.

The team of authors believes that **'The Internship Model For The Acquisition Of Entrepreneurial Mind-Set And Competences'** provides useful knowledge and guidance for further development of entrepreneurial skills and mind-set of HEIs students and HEIs staff but also for companies and other organisations and individuals interested in these topics. Furthermore, the model presented below can be used as a point of reference, which can act complementarily in all forms of internships, for the development of entrepreneurial skills to students.





2. Internship Model – Rationale and general overview

Entrepreneurial mind-sets and skills are very important to graduates of European higher education institutions, since they are key agents to develop the European knowledge economy, foster innovation and boost economic development. Therefore, they need to be equipped not only with specific knowledge and skills of their area of study, but transversal creativity, innovation and entrepreneurial skills.

Internship in higher education is a work-placement in a company, aiming mainly to acquire professional experience in the specific field of study and soft employment skills. It is therefore a chance for students to incorporate their on-the-job work experience and knowledge into their university education by being in a supervised and planned real-world professional work environment (Renganathan, Abdul Karim and Chong, 2012). But internships are not only that. According to Calloway & Beckstead (1995), the internship experience exposes students to practical skills, improves their social relationships, motivates future learning and enhances their social personality, while it proves useful in finding full-time employment after graduation (Fuller & Schoenberger, 1991). Furthermore, according to Matthews & Zimmerman (1999), internships help students improve problem solving, critical thinking, and theoretical skills, while at the same time they help them putting abstract concepts into context.

Researchers state that in order for internships to be successful and to have valuable effect on students, careful design and programming is required. According to Narayanan and Olk (2010), two of the most important factors for the success of internships, which need to be considered at the planning phase, are mentoring and the sources of students' satisfaction. Having a mentor was found to be critical even if the relationship between the mentor and the student was limited to brief periods of time. Regarding satisfaction, researchers reported that what students find rewarding about an internship is skill and task variety, autonomy, the work itself, and so forth (Rothman, 2003).

Careful design is not the only success factor of an internship. Internships involve three actors: the sending organisation, the receiving organisation and the student. These actors have distinct objectives and hence pursue different outcomes. That is why in Higher Education internships, there is often a lack of coordination between the sending HEI and the hosting company on the specific objectives, activities and expected results of the internship. Thus, aligning those goals can lead to positive outcomes for each party.

The proposed EnterMode internship model's aim is therefore to combine all above mentioned elements in order to promote the acquisition of entrepreneurial skills and competences by students in higher education during their internships, using challenge-based approach with gamification elements.

The EnterMode internship model is based on the following pillars:

1. Challenge based learning, based on constructivist pedagogy and rich learning tools that allow for anticipation and authentic experience of entrepreneurial roles and tasks as well as for developing problem solving strategies towards real world challenges of entrepreneurship.





2. Learning outcomes for the acquisition of entrepreneurial mind-set and skills, based on the EntreComp framework.
3. Gamification technics by using a serious game, especially developed for the EnterMode model, which will motivate students and will act complementary for the acquisition of entrepreneurial skills and competences.
4. Incubation of an entrepreneurial spirit and culture, and the development of knowledge, competences and skills needed to put entrepreneurship into practice.
5. Stimulation of HEI - company partnerships, with a view to ensure the sustainability of the cooperation.
6. Building capacities through the development of a community of practice that supports the development, sharing of and critical reflection on entrepreneurship practice as well as socialising newcomers into the world of business.
7. Learning analytics, that allows us to track learning progress of students' entrepreneurial competences, on personal and collective level, and thus to continuously adapt the EnterMode model to changing personal and organisational needs.

Specifically, the EnterMode internship model's objective is to help students in higher education:

- to develop personal attributes, transversal competences and skills that form the basis of an entrepreneurial mind-set and behaviour, such as creativity, sense of initiative, risk-taking, autonomy, self-confidence, leadership, and team spirit.
- to raise awareness about self-employment and entrepreneurship as possible career options.
- to work on concrete enterprise projects and activities.
- to acquire specific business skills and knowledge of how to start a company and run it successfully.

The EnterMode model is therefore a combination of different elements, practices and methods which will help individuals involved in the organisation of internships to carefully design and plan internships of HEI students in companies. This will produce benefits for all involved actors, namely for the education institution, the receiving organisation and more importantly for the student himself/herself.

The adoption of the EnterMode internship model as a new scheme for the organisation of internships does not require additional financial and human resources. All universities have structures that provide services linking students with companies, arranging internships and transnational mobilities. The EnterMode internship model can be integrated in the services that the career offices, internship offices and international relation offices are already offering to students at no additional cost.

Benefits of applying the internship model

The internship model and the enhancement of entrepreneurial skills of students during their internship, offers many benefits not only to students, but also to Higher Education Institutions and companies, which host the internships.

The benefits for receiving companies and organisations are:





- Faster integration: Through applying challenge-based learning during the internship, which is based on a real problem of the company, students are integrated faster into the company's culture.
- Increased productivity: Through faster integration of the students into the company and through the development of their skills, according to the challenge set by the company, the later can experience a boost in productivity and delivery of work by their interns.
- Fresh ideas/enhanced perspectives: students bring with them fresh ideas, which companies can benefit from. Furthermore, through the model, the students are left free to choose their own path for solving the challenge proposed, which most of the times is different from the one that the company would follow.
- Mentorship opportunities: Company trainers also have the chance to act as mentors to students and develop their own mentoring and pedagogical skills.
- Increased visibility of organisations: companies which will apply the EnterMode model will share their stories, which will be presented as case studies. Furthermore, since the EnterMode model is an innovative tool, companies involved in applying the model will experience an increase of their visibility to students, other companies and HEI institutions, since the results of the piloting will be disseminated at local, national and EU level.
- Networking: Companies applying the EnterMode model will expand their networks with other companies and HEIs using the Community of Practice.
- Close skill gaps: By applying the model to enhance entrepreneurial skills to students, companies will be able to contribute to bridge the skills gap between the world of work and the world of education.
- Easier recruitment of talents: through applying the internship model, companies get in touch with students who are dedicated to enhancing their skills and increasing their competences, thus making the process of finding new competent employees much easier.
- Cost savings: companies can reduce costs related with recruitment processes and also with training new employees.

The benefits for students are:

- Faster integration: by being assigned a real challenge faced in the company, students will be able to integrate faster in the company and learn by doing ~~how it operates~~.
- Support to students: through incubation, students will have access to support from their mentors and access to resources of the company.
- Increase self-esteem and confidence: by being left to work alone and choose their own solutions to solve the challenge, students will experience an increase in their self-esteem and confidence.
- Faster integration into the labour market: Students will gain the necessary skills which will ease their transition into the labour market.
- Refine skills: students will develop their entrepreneurial competences and skills, which are considered by the EU Commission as one of the key competences for lifelong learning and by employers as a most valued asset.





- Relative work experience: by being involved in the EnterMode project, students will gain relative work experience, since they will be introduced into a real problem of the company, they do their internship in.

The benefits for Higher Education Institutions are:

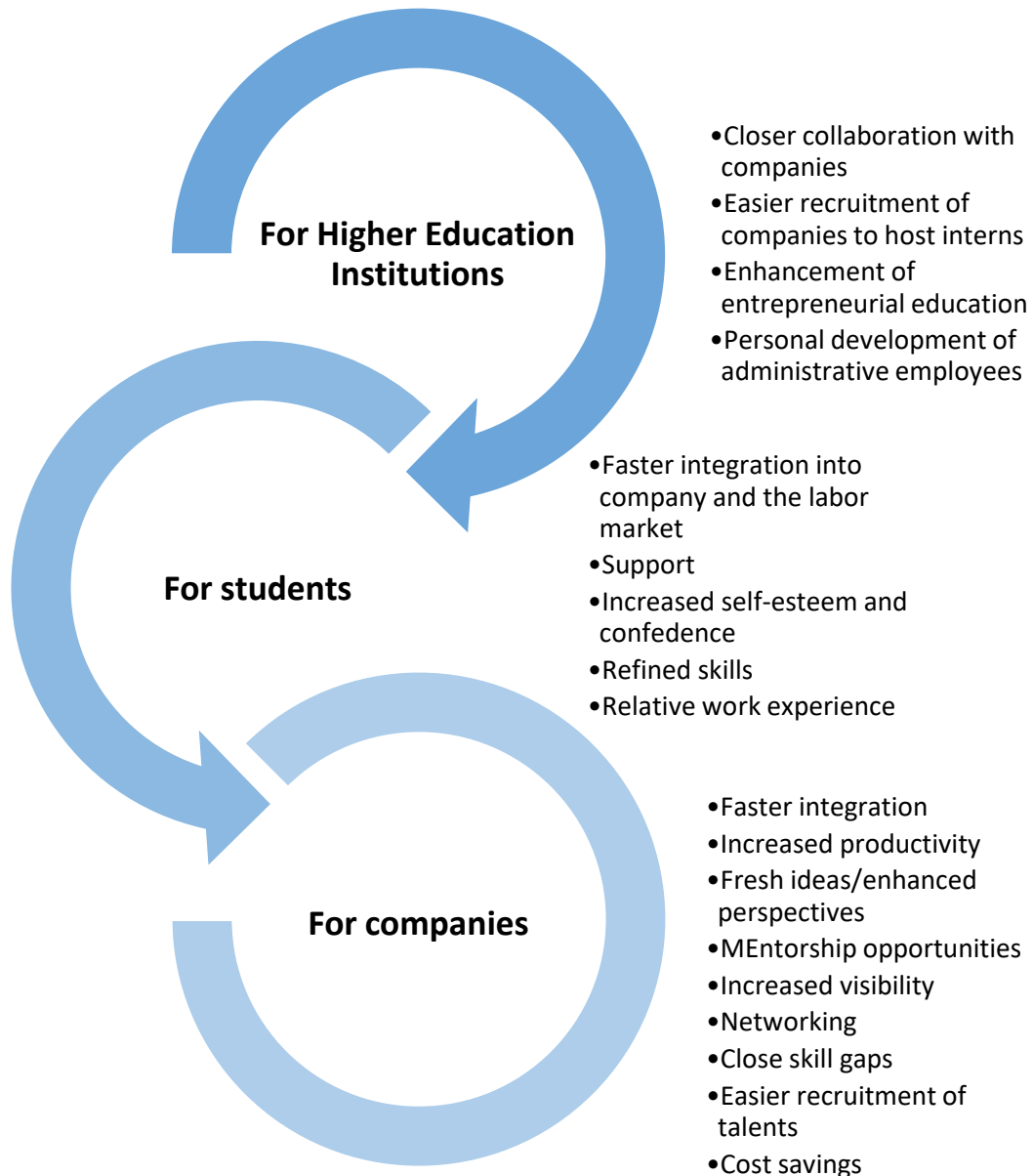
- Closer collaboration with companies. Through the EnterMode internship model, HEIs and companies will strengthen their collaboration, by signing a Memorandum of Understanding and by actively communicating for the design and development of the individual internships.
- Easier recruitment of companies to host internships. Through extensive dissemination activities and through the sustainability of the model, more companies will be interested in participating in the EnterMode internship programme for the development of entrepreneurial skills of students.
- Enhancement of entrepreneurial education. HEI teachers will be introduced to entrepreneurial education, the EntreComp and the potentials of entrepreneurial learning. Thus, they will be inspired and encouraged to enhance their own teaching and develop their student's entrepreneurial competences.
- Personal development of administrative employees. Administrative employees will have the opportunity to have direct contact and acquire experiences and knowledge from the labour market.

Figure 1 shows those benefits in a visual way.





Figure 1. Benefits of using the EnterMode internship model



Source: own elaboration





3. The EnterMode Internship Model for acquiring entrepreneurial competences

As stated above, the aim of the EnterMode internship model is to facilitate the acquisition of entrepreneurial skills and competences by students in higher education, using challenge-based approach with gamification elements.

Internships are usually offered by Higher Education Institutions as an integrated part of the curriculum. We could define internships as a structured work experience related to the student's main study area, where the student has the chance to apply the knowledge and skills learned in the classroom into real business environment. Internships give students a real-life experience of the workplace, which helps them develop not only technical and occupational competences, but also it fosters the development of employability skills.

The objectives of an internship are:

- To familiarise students of Higher Education Institutions with the working environment and the requirements of the professional world
- To acquire work experience relevant to their field of study
- To develop the professional and employability skills of students
- To integrate the graduates into the productive system of the country
- To connect the academic world and knowledge with the workplace
- To create a two-way dissemination and collaboration channel between universities and companies.

The additional objective that is introduced by the EnterMode entrepreneurial internship model for students is to develop the entrepreneurial competences of students and help them acquire the necessary skills that will help them turn their business ideas into concrete actions. Students, as entrepreneurs, will have the opportunity to take control over the details of their internship, by designing their steps and by taking over their educational path.

The EnterMode internship model uses the challenge-based learning methodology, which can be applied in three different phases: engagement phase, investigation phase and action phase. During the engagement phase, there takes place the matching between intern and company and the definition of the challenge by all parties involved. During the investigation phase, the student with the support of the company mentor starts working on the defined challenge, finds the required resources and refines his/her action plan. In the last action phase, the student implements the action plan and finalises his/her project, while at the end of this phase, there is the final assessment. In each phase, students acquire different skills and competences, according to EntreComp framework. The other core elements of the model, serious game and Community of Practice are applied to all three phases of the internship. The overall scheme of the EnterMode model is shown in figure 2.

There are no restrictions regarding the resources that a company must possess in order to apply the internship model. The model is designed in such a way that it can be applied in every context and in different companies, no matter if they are small, medium or large. It is expected that different

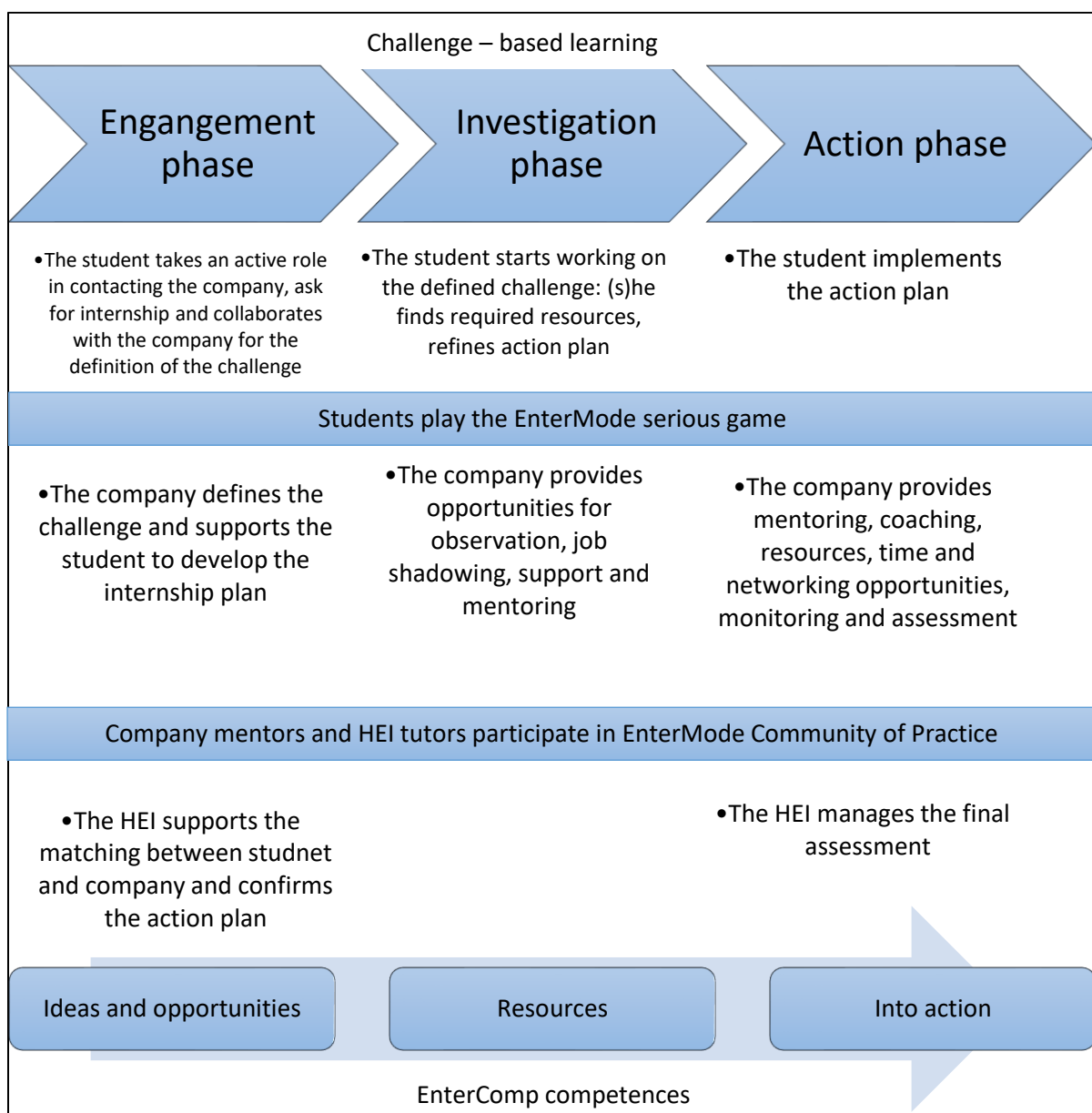




companies will have access to different resources and in some companies the roles of different persons, which are explained in a later chapter, may overlap, but the model proposes a general framework with specific suggestions, which can be shaped and further defined, to ensure its transferability.

Regarding the time to plan the activities for the model, it depends on the availability of the company and the duration of the internship. The EnterMode model has been piloted in more than 25 cases for a minimum duration of 30 days. In any case, the model can also be adjusted into different contexts, where the duration of the implementation may change according to the duration of the internship.

Figure 2: The EnterMode model scheme



Source: own elaboration





Potential Risks in implementation

During the implementation of the internship model, some risks may occur, which may hinder its progression. In table 1, we identify some of those risks and propose some ways to mitigate them.

Table 1: Risks and mitigation actions

| Identified Risk | Mitigation method |
|---|---|
| No interest from companies or students to participate in the model | In this case it is better to draw more attention to and disseminate the benefits that both companies and students will acquire from the implementation of the model. |
| The challenge assigned is irrelevant to the company needs or it does not aim at developing the student's entrepreneurial skills | As proposed by the model, the company is encouraged to propose the challenge and then define the activities together with the students. As for the learning outcomes, the EntreComp framework proposes a complete set, from which the company mentor can choose. At a later stage, the final internship plan is reviewed by the HEI academic, which ensures that it is relevant with the objectives of the model. |
| There are deviations from the plan agreed at the beginning | Regular meetings are going to be implemented between the students and the company mentor. The mentor will also be responsible for the monitoring of the internship, which will ensure the successful completion of the challenge. The mentor can also apply corrective measures if deemed necessary. |
| The company mentor is not engaged in the process | The Community of Practice will engage the participants in developing the EnterMode model and will provide mentors and other stakeholders with the necessary information or answer their inquiries. |
| The preparation phase will last too long and circumstances affecting the implementation of the internship in the company may change | The EnterMode guide explains the processes for the preparation phase in full detail and provides templates and examples, so that the duration of the preparation phase can be reduced |
| Legal obstacles may occur | There is an assumption that the EnterMode model design does not come in contrast with legal frameworks. In any case, the model can be modified by interested parties, according to national settings. |

Source: own elaboration





4. Roles

The implementation of an internship involves different actors, namely the sending and receiving organisations and the student. These actors may involve more than one person, from the stage of pre-planning to the implementation and the finalisation of the internship. All those involved persons have different roles, so the success of the internship depends on the organisation and coordination of all persons involved.

For the EnterMode internship model to be fully applied and adjustable to different contexts, the involved persons must be aware of their roles at the first place. Each party therefore has a distinctive role, with distinctive responsibilities and rights. In some cases, like for example in small and medium organisations, the roles mentioned below may overlap and be taken up by the same person. More specifically, in the EnterMode model the involved parties and their roles are:

Student:

Students are the main beneficiaries of the internship and the direct target group of the EnterMode internship model.

In order to take part in an EnterMode internship, the student has first to apply to the call issued by the responsible office of his/her HEI. After he/she is selected to participate, the student will jointly with the hosting company define/agree the Internship Plan and form the challenge of the internship together. Following the finalisation of the internship plan, he/she will sign the learning agreement with the hosting company and the HEI. The next step is the Implementation of the internship, where he/she will work on the challenge assigned to him/her, while implementing the work plan and at the same time he/she will participate in the serious game. During the internship, the student must also keep a logbook of completed tasks, which will be monitored by the company mentor.

At the end of the internship, the student will take part in the final assessment of the internship and he/she will produce the final report contained in the last logbook. Furthermore, he/she will conduct a self-assessment of entrepreneurial skills he/she has acquired.

HEI Administration officer:

- The HEI Administration officer is responsible for attracting participants from both sides (i.e. students and companies), for preparing all necessary paperwork (Memorandum of Understandings-MoUs, agreements, etc.), for supporting the matching of students with companies and for administratively managing the internship.
- The HEI Administration officer provides an overall advice or training to the mentors (on their role, duties, responsibilities, on how to manage the intern/mentor relationship, etc.).
- The HEI administration additionally provides training to the participating students so that they have a clear understanding on their roles and responsibilities and on intern/mentor relationship and how they can manage it. This training can be done in different ways per HEI (e.g. seminar, face-to-face meeting, etc.).

HEI Academic tutor:





The HEI Academic tutor defines the selection criteria for participants (i.e. students and companies), provides feedback (and approval) to the internship plan and participates in the assessment of each specific internship implemented and the internship programme in total.

Mentor (Company):

The mentor is responsible for supporting the student in all steps of his/her internships, starting from the initial definition of the challenge (to be approved by the HEI Academic tutor) and continuing all subsequent monitoring and advising steps. If needed, the mentor applies corrective measures during the internship and contacts the HEI Administration office or even the HEI Academic tutor for solving internship problems on time. He/she provides an overall assessment of the implemented internship.

More specifically, the Mentor:

Before the internship:

- Co-operates with other departments within the company and mainly with the HR department (if it exists), in order to define the challenge assigned to the student.
- Participates in the special training offered by the HEI on mentorship.
- Makes sure that the relationship with the student is based on trust and co-operation.
- Informs the student about the company, its goals, its resources, and operations so that the student has a clear view of the company.
- Clearly defines the subject of work to the student.
- Informs the student on resources offered by the company.
- Agrees on the work schedule with the student.
- Agrees on the communication and co-operation ways and means with the student.

During the internship, he/she provides mentoring/coaching:

- Monitors the progress of the students.
- Provides advice when needed.
- Motivates the students in his/her tasks, supports the student to overcome potential difficulties and provides advice aiming at ensuring engagement and maximising the impacts of the internship.

Finally, at the end of the internship, he/she

- Provides a final report with an overall assessment of the implemented internship.
- Provides feedback to the HEI related to the implementation of the internship model.

Recent research strongly suggests that mentors need to be trained to understand the framework, in which they have to act and to develop relation building skills in order to create an efficient mentoring relationship with their mentees (i.e. the students). So, the mentor's training is a critical step before the implementation of the internship and the actual collaboration between the mentor and the student. A mentor's trainer (who could be either the HEI Academic tutor, an internship responsible from the HEI or an external trainer) will clearly define the internship framework to the mentors and will define the framework of their relationship with the students by clarifying the roles and responsibilities of each part. In addition, the mentor's trainer will help the mentor to develop the necessary skills for a better





knowledge and experience transfer to the mentee focusing on development of skills such as such as communication, questioning and listening skills, or how to build a trustful relationship.

HR Responsible (Company):

The HR responsible is the liaison person with the HEI. He/she

- offers the position(s) to students.
- defines the company specific selection criteria.
- selects and assigns the company Mentor(s).
- supports the Mentor in challenge definition.
- ensures that all necessary resources are given to the student (incubation).
- administratively manages the internship.

When a specific student is selected, he/she must sign the learning agreement and provide the necessary resources (human, data, infrastructure, etc.) for the implementation of the internship. He/she also prepares all necessary paperwork from the company side.

In smaller companies where a HR responsible is not clearly assigned, this task can be undertaken by other managerial people as per company structure.





5. Challenge – based learning phases in the EnterMode model

Challenge-based learning proposes a collaborative framework, where students while try to discover and solve challenges, gain in-depth knowledge and at the same time develop employability skills and entrepreneurial competences. Challenge-based learning namely uses challenges to frame learning experiences. When faced with a challenge, groups or individuals leverage experience, harness internal and external resources, develop a plan and push forward to find the best solution. Challenges enhance learning environments by adding experiential learning, self-regulated learning, passion, critical thinking and ownership. This student-centred approach allows interns to enact problems usually faced in the workplace and real world, whilst enhancing transferable skills such as teamwork, problem solving, risk assumption, public speaking, confidence, self-motivation, and creativity.

According to Nichols, Cator & Torres (2016), the challenge-based learning framework is divided into three interconnected phases: Engage, Investigate and Act. Each phase includes activities that prepare the students to move on to the next stage. Supporting the entire process is an ongoing process of documenting, reflecting and sharing. In challenge-based learning the mentor's primary role shifts from dispensing information to guiding the construction of knowledge by his or her students around an initially defined problem. Students refine the problem, develop research questions, investigate the topic using a wide variety of primary source material, and work out a variety of possible solutions before identifying the most reasonable one.

Based on the above framework, the EnterMode internship model is divided into the following phases:

Phase 1: Engagement/preparation phase

The engagement phase starts before the internship, where the company is selected, and the challenge is defined and continues during the internship with observation and job shadowing.

Mentors set the challenge together with the interns. For the internship programme to respond specifically to the students' interests and needs, the mentors should describe a broad concept, a big idea, from which the students will move on to a concrete and actionable challenge.

The concept chosen by the mentor should be relevant for the development of entrepreneurial skills and, at the same time, relevant to the students and to the company. The concept should be an open-ended one and represent a real need, a real problem, a project or anything within the interests of the company. The concept should also involve multiple ways, in which it could be explored.

Following the establishment of the main challenge, the students will need to contextualise and personalise the concept, by developing the final concrete challenge, which needs a solution. Based on the final description of the challenge and on the self-assessment of entrepreneurial skills filled by the student, the mentors will define the entrepreneurial competence that will be cultivated, based on the EntreComp framework and, together with the student, they will develop the action plan.





Furthermore, the company will define the resources which will help in the specific implementation of the model. The resources that the company provides stem from the company and include tangible resources e.g. office space, computers, stationery etc., as well as non-material resources e.g. time, knowledge, guidance, support etc.

Phase 2: Investigation

During the second stage students and mentors will build the foundation for solutions and entrepreneurial skills development.

Mentors and students will need to refine the concrete actions, which will lead to the development of the entrepreneurial competences and the completion of the challenge, while students will develop the solution to the challenge. Prioritising and categorising will create an organised learning experience, which provides the method and foundation for the identification of solutions and the skills enhancement.

In parallel, the company will provide opportunities for job shadowing, support and mentoring, so that the student will be able to observe the process followed by other employees and to design with the help of his/her mentor an action plan that will lead to the finalisation of the challenge assigned to him/her.

The student will also identify and mobilise resources which will help him/her complete the challenge proposed. Such resources could be for example time, commitment, own network, research, social media etc.

Phase 3: Action

During this phase students select, develop and implement solutions, which lead to the completion of the challenge. The amount of time and resources available guides the depth and influences the implementation of the solutions. During this phase learning is independent and self-regulated, although mentors should offer guidance and support to the interns.

An essential part of this phase is also the monitoring and evaluation of the progress of students, according to goals set at the previous stages. Continuous monitoring is required in order to ensure that students develop and progress on the originally set entrepreneurial competences and that the challenge will come to an end during the timeframe set. Monitoring could also be used to guide the learning process.

Assessment should also provide feedback on the effectiveness of students' efforts and depth of knowledge and skills they have acquired. Mentors should schedule regular meetings with students, to interpret feedback, clarify goals, process steps and encourage reflection.

Assessment may be implemented by using different means:





- Assessment by trainers, the company mentor and the Higher Education Institution. The assessment will measure the acquisition and development of conceptual, technical and occupational skills as well as of entrepreneurial competences.
- Self-assessment. This type of assessment measures the improvement and progress of entrepreneurial skills and it may have the form of self-reflection. Self-evaluation will help students realise their existing gaps and suggest ways to improve themselves.

Information on how to implement the principles of Challenge Based Learning at each stage and aspects that should be considered, as well as practical information and examples, can be found in the mentor's guide, which accompanies this document.





6. Incubation elements during the EnterMode internship

During the EnterMode internships, companies must provide an environment for the students, in which they will be able to develop their entrepreneurial skills. Companies need to offer the necessary resources and support so that students can accomplish their tasks, while, at the same time, they will monitor and evaluate students' performance and learning. The company environment needs to respond to the student's interests and needs. Since hosting companies differ in size, number of employees, branch and learning environments, it is important to adapt the incubation elements to the companies' preferences, needs and possibilities.

The hosting companies could offer resources, training and educational support to interns, while students could contribute with their own contacts to extend the network of the business. Companies could help interns to complete activities connected to entrepreneurship like spotting opportunities, creativity, mobilising resources, mobilising and working with others, being pro-active as well as planning & management. Most importantly, they can provide vital information to the students, such as financial risks connected with businesses, market potentials, risks, legal implications, insurance options and all other practical business-related factors, which students may be confronted with in their future. The main role of the companies is to enrich students' experience and entrepreneurial skills, to prepare them for future jobs and to acquire skills useful for both starting their own businesses or becoming and intrapreneurs.

Actually, this environment which will be provided for students in companies during the EnterMode internships, has a lot of similarities with the incubation environment within an incubator for starting entrepreneurs. In the next paragraphs incubation will be explained as well as the activities included in a business incubator. This explanation will clarify why incubation is an important part of the internship model of EnterMode, developing entrepreneurial skills. Find concrete examples and practical information on how to apply incubation activities in your company in the mentor's guide.

Incubation in general

The term 'incubator' originally derives from the agricultural sector and describes the process of the artificial hatching of eggs. An incubator is creating optimal circumstances for the eggs and the 'chickens-to-be' to grow. When applying this term in business, it focuses on the elaboration of starters and start-ups, while through guidance and providence of multiple services, young entrepreneurs can grow and contribute to society. A business incubator functions as an organisation providing an incubation environment for start-ups to grow and become independent and successful, while offering them services like working space, workshops, culture, coaching, networking and financial support.

The business incubator is a company which provides physical shared offices or flex-desks for young starters, which can be cost-effective plus it offers access to a network including like-minded starters, alumni, professionals, experts and established collaborations. The business incubator also offers specialised services, access to potential clients, investors, possible stakeholders and advanced





knowledge. Services, in-house knowledge, mentoring and network are key elements of guidance in becoming successful as an entrepreneur or at least gain entrepreneurial knowledge and develop entrepreneurial competences. Incubators offer tools such as available shared offices, providing workshops & masterclasses, one-to-one mentoring, coaching, cooperation with like-minded incubator attendees, peer reviewing, interventions, networking & knowledge sharing with experts and the business model canvas, creating a complete interchanging business model.

An incubator offers entrepreneurs all the tools for optimal development and growth of their companies, while the entrepreneurs themselves learn. Incubators don't preach or tell entrepreneurs exactly what to do. They encourage starting entrepreneurs to research, discover, make mistakes, learn from their mistakes and help them to get back on their feet. After a certain period spent in the incubator, a starting entrepreneur is ready to spread his/her wings and leave the incubator for the next phase.

Since incubation has proven to be an effective way of guiding entrepreneurs in their entrepreneurial development as person, aspects of incubation will be incorporated in the EnterMode internship model. We have identified the elements used in business incubation which are the most relevant for the development of entrepreneurial skills and transferred these to the internship situation. It is essential to address these incubation elements during the internship to provide an optimal climate for the development of entrepreneurial skills. In the next paragraph it will be discussed which elements of an incubator are embedded in the EnterMode internship model.

EnterMode internships

As a first step, it is crucial to identify the differences, between an actual business incubator and the internship company for EnterMode interns, which can set limits the applicability of incubator practices to the EnterMode internships.

The biggest difference between an incubator and an internship company is that guiding young entrepreneurs is the core business of a business incubator, whereas it is the rule for an internship company to have other core activities. These companies are willing to spend some time in the development of a student, but they also need to focus on their main activities. Therefore, we need to be aware that the time of the internship company is limited, and we need to make good use of this precious time.

Another difference is that incubators guide entrepreneurs in their entrepreneurial behaviour with the target of helping them grow their companies in the initial stage. For an internship company, it will be possible to contribute to the development of entrepreneurial behaviour, but they will not go to that next level of a student really becoming an entrepreneur. They will teach him/her entrepreneurial competences which are also being appreciated by employers.

After researching the activities of incubators, considering the differences between incubators and internship employers, four main elements have been identified to be incorporated into the EnterMode internship model. These four elements are cooperation, mentoring, knowledge & experience sharing as well as networking. During the EnterMode internships, these areas will be focus areas, which will be monitored during the entire internship.





Element 1: Cooperation

To provide a friendly incubation learning environment, companies will use multiple resources during the EnterMode internship of the Higher Education students. The location of the job space has to be suitable for providing a learning environment, which stimulates independent growth. At the same time, this place must enable discussion and cooperation with others. For example, it would be optimal if interns have the possibility to collaborate with multiple colleagues. These could be employees of the company, but you can also think of other interns. The advantage of allowing cooperation between interns and colleagues is that it helps to avoid isolation and social exclusion. It will improve cooperation opportunities and foster teamwork activities. Especially during an internship, teamwork is important, and it fosters an effective working- and learning environment for both employees and interns.

One of the first things that need to be discussed during the internship, are the vision and mission of the company. The internship company will share these with the interns and then ask and allow them to participate in company meetings. Here they can join the discussions about all issues being encountered by the company. The intern can execute tasks using a gradual approach, starting with small tasks. These tasks must be realistic, real and motivating, to involve interns in substantial matters of the company. For example, the intern can prepare a workshop for co-workers or other interns about the short- and/or long-term goals of the company. The intern gains knowledge about the company, practices his/her organising skills, learns how to take initiative and mobilise others, and at the same time, the company benefits from new insights, fresh ideas and additional acquaintances.

Element 2: Mentoring

Complementary to the above resources, mentoring is one of the most important services through all phases of the EnterMode internship. Each intern needs a trusted person, who asks provocative questions, offers helpful critiques and provides data to be examined through another lens; this will be the mentor. The mentor keeps track of the learning objectives of the intern, while having the company vision in mind and he/she maintains an intensive relationship with the intern. By matching each intern to a mentor, a foundation will be established for competence and knowledge development. At the same time, a perfect learning environment will be created for self-reflection, feedback and evaluation, which is important for an effective, informative and valuable internship and preparation for future employment. The mentor will be a critical, guiding person, he/she will keep track of the progress in learning objectives, which are set prior to the internship, and will organise regular meetings with the intern to discuss difficulties, progress, lessons learned. He/she will also evaluate and adjust short term goals in favour of both company and intern. The mentor will be always available for the intern and will give advice where necessary. This allows the intern to personally grow, to succeed, meet their objectives and enlarge their awareness, knowledge, and experiences in entrepreneurial competences.

The same mentor can be assigned to multiple interns in the company. However, be careful with assigning too many interns to one mentor. Be very realistic about how much time the mentoring will demand and compare this to the time available by the mentor. Nothing is less effective than having a mentor, which does not have time for the intern. This will be frustrating for both the mentor, the





mentee and also for the Academic tutor. The mentor has close communication with the Academic tutor in the HEI. The collaboration between the mentor and the Academic tutor must be maintained to monitor progression of the intern, so personal adjustments can be made as well as interventions when necessary.

Element 3: Knowledge and experience sharing

The third aspect of incubation practices, which can be applied in higher educational internships, is knowledge and experience sharing. The internship company needs to provide sufficient space and time for enhancing entrepreneurial skills and reflection by organising interventions. This can be done by regular weekly meetings, hosted by a mentor or Academic tutor, where interns have to pitch about best practices, experiences of last week, plans for next week and problems faced. These interventions can be implemented both at the university and the internship company. To achieve as much effectivity as possible, interventions must be organised with multiple interns. This will result in peer assessment and learning through (others') experiences. Subsequently, all weekly activities, lessons learned, and goals achieved are written down by the student in a logbook to keep track of the learning curve and personal growth.

Another way of facilitating knowledge and experience sharing is organising interventions with different groups of people and not only with interns. For example, by including colleagues, you make sure that views from different perspectives are taken into account and knowledge from different areas are all present.

Element 4: Networking

The last, but not the least aspect that will nurture the entrepreneurial spirit to students, is the opportunity they will have to build and expand the network. During their internship, students will be employed in a company of their interest, chosen by them through a list of selection criteria. In this company, they will get to know people with vast experience in the field. Those people will provide information and guidance to the students, additional to the mentor, and help them explore the ups and downs of the sector they choose, as well as opportunities and threats they will encounter in the future. Networking is an essential part of entrepreneurship, which will help students expand their circles of acquaintances, find out about job opportunities, and increase their awareness of news and trends. In this context, students will have the opportunity to develop relationships with people and companies they may do business within the future. Networking plays a substantive role in using the internship benefits for own development and future purposes.





7. The Entrepreneurship Competence Framework (EntreComp)

The EntreComp framework in the EnterMode internship model

The EntreComp framework⁵ is utilised in the EnterMode internship model by providing a set of learning outcomes, on which the internship plan will be based. After spotting the competences, on which the internship will focus, and their level, the company mentor can choose the learning outcomes provided by the EntreComp framework and their progression level. The activities, which will be planned, should lead to the achievement of the learning outcomes chosen.

In the following chapters, we provide more information about the EntreComp framework, Competences and Learning Outcomes.

In the mentors' guide, we provide solutions on how to choose learning outcomes provided by the EnterMode framework as well as a table with specific examples of activities which can be implemented according to the learning outcomes chosen.

Entrepreneurship as a competence

To be able to enhance the entrepreneurial spirit and mind-set of internship students, firstly it is necessary to define what is entrepreneurship as a competence.

Entrepreneurship is viewed as the capacity to recognise and pursue opportunities in any environment (EntreComp, 2016). As such, it has an important role to play in all discipline areas and it can be applied to both commercial and non-profit endeavours. Entrepreneurship education is about enabling the student to develop creativity, innovation and risk-taking skills, as well as his/her ability to plan and manage projects in order to achieve objectives. Essentially, entrepreneurship is about taking initiative and turning ideas into action.

The Entrepreneurship Competence Framework, developed by the Joint Research Centre (JRC) of the European Commission on behalf of the Directorate General for Employment, Social Affairs and Inclusion (DG EMPL), also known as EntreComp, offers a tool to improve the entrepreneurial capacity of European citizens and organisations.

EntreComp defines entrepreneurship as a transversal competence, which applies to all spheres of life: from nurturing personal development, to actively participating in society, to (re)entering the job market as an employee or as a self-employed person, and also to starting up ventures (cultural, social or commercial). It enables citizens to develop personally, to actively contribute to social development, to enter the job market as employee or as self-employed, and to start-up or scale-up ventures, which may have a cultural, social or commercial motive.

⁵ <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfna27939enn.pdf>



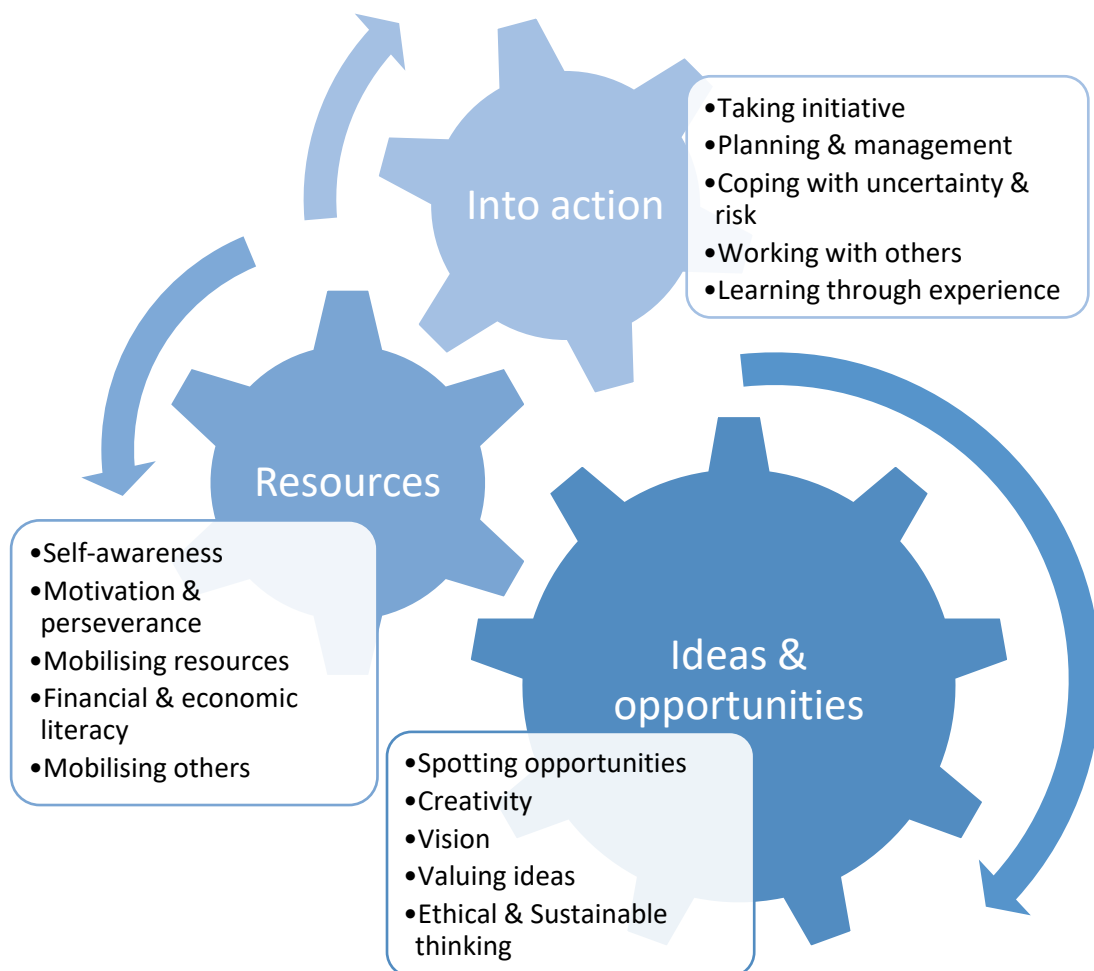


According to the EntreComp framework, entrepreneurship competence is the ability to transform ideas and opportunities into action. Consequently, the word entrepreneurship implies the notion of being enterprising, emphasising the self-entrepreneurial impacts rather than the ability to build a business. The skills related to Entrepreneurship competence are mostly transversal, enabling people to become pro-active, independent and innovative in their personal life as well as in the workplace (Luppi, Bolzani & Terziena, 2019).

EntreComp framework

The EntreComp conceptual model is made up of two main dimensions: the 3 competence areas that directly mirror the definition of entrepreneurship as the ability to turn ideas into action that generate value for someone other than oneself; and the 15 competences that, together, make up the building blocks of the entrepreneurship as a competence for all citizens. The 3 competence areas are tightly intertwined: entrepreneurship as a competence stands above all three of these together. The 15 competences are also interrelated and interconnected and should be treated as parts of a whole, as shown in figure 3.

Figure 3. Main competence areas based on the Entrepreneurship Competence Framework



Source: EntreComp, 2016





EntreComp competences

Table 1 shows the entrepreneurship competences and learning outcomes broken down into their constituent parts. The order, in which competences are presented does not imply a sequence in the acquisition process or hierarchy: none of the element comes first, and none of them is more important than the others.

The student doesn't have to acquire the highest level of proficiency in all 15 competences or develop the same proficiency across all the competences. Depending on the context of take-up, it is reasonable to expect that more emphasis may be put on some of the competences and less on others, or else the competences are streamlined to mirror an entrepreneurial process created to foster learning through entrepreneurship.

This can be seen as a starting point for the interpretation of the entrepreneurship competence, which over time will be further elaborated and refined to address the particular needs of specific target groups.

Table 2. Entrepreneurship competences

| Area | Competence | Hints | Description |
|-------------------------|------------------------|--|---|
| IDEAS AND OPPORTUNITIES | Spotting opportunities | Identify opportunities to create value | <ul style="list-style-type: none"> • Identify and seize opportunities to create value by exploring the social, cultural and economic landscape. • Identify needs and challenges that need to be met. • Establish new connections and bring together scattered elements of the landscape to create opportunities to create value. |
| | Creativity | Develop creative and purposeful ideas | <ul style="list-style-type: none"> • Develop several ideas and opportunities to create value, including better solutions to existing and new challenges. • Explore and experiment with innovative approaches. • Combine knowledge and resources to achieve valuable effects. |
| | Vision | Work towards your vision of future | <ul style="list-style-type: none"> • Imagine the future. • Develop a vision to turn ideas into action. • Visualise future scenarios to help guide effort and action. |





| | | | |
|-----------|----------------------------------|--|---|
| | Valuing ideas | Make the most of ideas and opportunities | <ul style="list-style-type: none"> • Judge what value is in social, cultural and economic terms. • Recognise the potential an idea has for creating value and identify suitable ways of making the most out of it. |
| | Ethical & sustainable thinking | Assess the consequences and impact of ideas, opportunities and actions | <ul style="list-style-type: none"> • Assess the consequences of ideas that bring value and the effect of entrepreneurial action on the target community, the market, society and the environment. • Reflect on how sustainable long-term social, cultural and economic goals are, and the course of action chosen. • Act responsibly. |
| RESOURCES | Self-awareness and self-efficacy | Believe in yourself and keep developing | <ul style="list-style-type: none"> • Reflect on your needs, aspirations and wants in the short, medium and long term • Identify and assess your individual and group strengths and weaknesses. • Believe in your ability to influence the course of events, despite uncertainty, setbacks and temporary failures. |
| | Motivation and perseverance | Stay focused and don't give up | <ul style="list-style-type: none"> • Be determined to turn ideas into action and satisfy your need to achieve. • Be prepared to be patient and keep trying to achieve your long-term individual or group aims. • Be resilient under pressure, adversity, and temporary failure. |
| | Mobilising resources | Gather and manage the resources you need | <ul style="list-style-type: none"> • Get and manage the material, non-material and digital resources needed to turn ideas into action. • Make the most of limited resources. • Get and manage the competences needed at any stage, including technical, legal, tax and digital competences (for example through suitable partnerships, networking, outsourcing and crowdsourcing). |





| | | | |
|-------------|---|---|---|
| | Financial and economic literacy | Develop financial and economic know how | <ul style="list-style-type: none"> • Estimate the cost of turning an idea into a value-creating activity. • Plan, put in place and evaluate financial decisions over time. • Manage financing to make sure your value-creating activity can last over the long term. |
| | Mobilising others | Inspire, enthuse and get others on board | <ul style="list-style-type: none"> • Inspire and enthuse relevant stakeholders. • Get the support needed to achieve valuable outcomes. • Demonstrate effective communication, persuasion, negotiation and leadership. |
| INTO ACTION | Taking the initiative | Go for it | <ul style="list-style-type: none"> • Initiate processes that create value. • Take up challenges. • Act and work independently to achieve goals, stick to intentions and carry out planned tasks. |
| | Planning and management | Prioritise, organise, follow-up | <ul style="list-style-type: none"> • Set long-, medium- and short-term goals. • Define priorities and action plans. • Adapt to unforeseen changes. |
| | Coping with uncertainty, ambiguity and risk | Make decisions dealing with uncertainty, ambiguity and risk | <ul style="list-style-type: none"> • Make decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes. • Within the value-creating process, include structured ways of testing ideas and prototypes from the early stages, to reduce risks of failing. • Handle fast- moving situations promptly and flexibly. |
| | Working with others | Team up, collaborate and network | <ul style="list-style-type: none"> • Work together and co- operate with others to develop ideas and turn them into action. • Network. • Solve conflicts and face up to competition positively when necessary. |





| | | | |
|--|-----------------------------|-------------------|---|
| | Learning through experience | Learning by doing | <ul style="list-style-type: none"> • Use any initiative for value creation as a learning opportunity. • Learn with others, including peers and mentors. • Reflect and learn from both success and failure (your own and other people's). |
|--|-----------------------------|-------------------|---|

Source: EntreComp, 2016

Entrepreneurship as a competence is developed through action by individuals or collective entities to create value for others. Hence, entrepreneurial learning advances in two directions:

1. Developing increasing autonomy and responsibility in acting upon ideas and opportunities to create value.
2. Developing the capacity to generate value from simple and predictable contexts up to complex, constantly changing environments.

EntreComp progression model

There is not a linear sequence of steps that must be taken to become proficiently entrepreneurial. Instead, as it is visible in the progression model, that boundaries of individual and collective entrepreneurial competences can be pushed forward, to achieve greater impact through value creating endeavours. This Progression Model aims to provide a reference for the development of proficiency starting from value creation achieved through external support, up to transformative value creation. It consists of four main levels: Foundation, Intermediate, Advanced and Expert. Each level is in turn split into two sub-levels, as illustrated in Table 2. At Foundation level, entrepreneurial value is created with external support. At Intermediate level, entrepreneurial value is created with increasing autonomy. At Advanced level, responsibility to transform ideas into action is developed. At Expert level, the value created has considerable impact on its reference domain.

These proficiency levels provide a way for the reader to look at the learning outcomes. The Model aims to be comprehensive and to offer a tool that can be adapted to different needs. It is not prescriptive, and it does not suggest that all students should acquire the highest level of proficiency in the competences, or that they should reach the same proficiency across all the competences. If the entrepreneurial learning experience targets the employees of a shoe-making district in a certain region, the programme could focus on an advanced level, for instance, in the development of proficiency in competences like 'spotting opportunities', 'vision', 'mobilising resources', 'mobilising others', 'planning and organising'. At the same time, it would be possible to achieve an intermediate level of proficiency in 'financial economic literacy'. It is essential to choose which skills to prioritise depending on the needs of the students. So, returning to the previous example, we can choose to prioritise the skill to understand the financial viability of their ideas, rather than the development of double-entry bookkeeping skills, which would require an advanced level of proficiency.





Table 3. EntreComp Progression Model

| PROGRESSION MODEL | | | |
|--|--|--|---|
| Foundation | | Intermediate | |
| Relying on support from others | | Building independence | |
| Under direct supervision | With reduced support from others, some autonomy and together with my peers | On my own and together with my peers | Taking and sharing some responsibilities |
| Level 1. Discover | Level 2. Explore | Level 3. Experiment | Level 4. Dare |
| Discover your qualities, potential, interests and wishes. Recognise different types of problems and needs that can be solved creatively. | Explore different approaches to problems, concentrating on diversity and developing social skills and attitudes. | Develop critical thinking and experiment with creating value, for instance through practical entrepreneurial experience. | Turn ideas into action in 'real life' and take responsibility for this. |
| Advanced | | Expert | |
| Taking responsibility | | Driving transformation, innovation and growth | |
| With some guidance and together with others | Taking responsibility for making decisions and working with others | Taking responsibility for contributing to complex developments in a specific field | Contributing substantially to the development a specific field |
| Level 5. Improve | Level 6. Reinforce | Level 7. Expand | Level 8. Transform |
| Improve your skills for turning ideas into action. Take increasing responsibility for creating develop knowledge about entrepreneurship. | Work with others, using the knowledge you have to generate value, dealing with increasingly complex challenges. | Focus on the competences needed to deal with complex challenges, handling a constantly changing environment where the degree of uncertainty is high. | Focus on emerging challenges by developing new knowledge, through research, development and innovation capabilities to achieve excellence and transform the ways things are done. |

Source: EntreComp, 2016





8. Learning Outcomes

According to Cedefop (2017), learning outcomes are statements of what a learner is expected to know, be able to do and understand at the end of a learning sequence and play an increasingly important role in efforts to improve the quality and relevance of education and training in Europe. Learning outcomes statements help to clarify programme and qualifications intentions and make it easier for those involved to work towards these expectations.

Learning outcomes are also used as a common reference point in the European Qualification Framework in order to facilitate comparison and transfer of qualifications between countries, systems and institutions. The European Qualification Frameworks (EQF) is a common European reference framework whose purpose is to make qualifications more readable and understandable across different countries and systems. Covering qualifications at all levels and in all sub-systems of education and training, the EQF provides a comprehensive overview over qualifications. The main purpose of the EQF is to make qualifications more readable and understandable across countries and systems. This is important to support cross-border mobility of learners. The European Qualification Frameworks (EQF) defines eight level of qualifications, from the basic level 1 to the advanced level 8, in order to improve the clearness and transferability of qualifications.

Table 4 shows the EQF descriptors for learning outcomes, at Levels 6-8, which correspond to Higher Education levels.

Table 4: EQF descriptors for learning outcomes

| | Knowledge | Skills | Responsibility and autonomy |
|--------------------------------------|--|---|---|
| EQF level 6 (Bachelor's degree) | Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles | Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study | Manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts; take responsibility for managing professional development of individuals and groups |
| EQF level 7 (Master Level Degree) | Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research | Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields | Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for |





| | | | |
|-----------------------------|---|---|---|
| | Critical awareness of knowledge issues in a field and at the interface between different fields | | reviewing the strategic performance of teams |
| EQF level 8 (PhD Degree) | Knowledge at the most advanced frontier of a field of work or study and at the interface between fields | The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice | Demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research |

Source: Cedefop. 2017

Learning outcomes help to clarify programme and qualifications intentions and make it easier for those involved to work towards these expectations. They bring benefits for the student, since they clarify what he/she is expected to know, understand, and be able to do at the end of a learning sequence or a programme; for the instructor, since they will help him/her to orient the programme, to select methods, and to orient the learning process; for labour market, since they clarify what are the skills needed and to respond to these in a relevant way; for the training institution, since they provide an important reference point for quality and they provide important input to the continuous review and development; and for the assessor, since learning outcomes approach supports assessment by clarifying the criteria for success/failure and performance. Their relevance lies in the transparency they offer, allowing to verify the match between society’s needs and the qualifications offered within education and training. Learning outcomes need to focus always on the student and on what he/she is expected to know, be able to do, and understand in terms of knowledge, skills, and competences (Cedefop, 2017).

According to Cedefop (2012) achieved learning outcomes is what we call competences., which are validated through the ability of the learner autonomously to apply knowledge and skills in practice, in society and at work (Cedefop, 2012). The definition provided by the 2008 recommendation on the EQF can be seen as a compromise pointing towards a shared approach: ‘Competence means the proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development’ (European Parliament and Council of EU, 2008).

During the EnterMode internship and for students to acquire the desired entrepreneurial competences, it is important that learning outcomes are set during the development of the internship





plan. The EntreComp framework provides examples and a list of learning outcomes, for each competence and according to the progression level. Company mentors can select the learning outcomes that the internship will focus on, from the EntreComp framework⁶. More information on how to select and write learning outcomes, can be found in the mentors' guide.

⁶ <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfna27939enn.pdf>





9. Gamification and EnterMode serious game

According to the experts, 'gamification is the use of game design elements in non-game contexts' (Deterding, et al., 2011). Education is a typical non-game context. So, the goal is to make an otherwise not particularly interesting or enjoyable process interesting, exciting, enjoyable. **Gamification can provide instant access to performance feedback.** Gamification is a relatively new learning approach, which helps advance knowledge and engage students in the learning process. Gamification as a learning practice, is used to enhance the motivation and active engagement of students. In particular, gamification is the use of game elements, which serve as tools that you can work with to implement specific activities in the framework of the internship, which will engage students and help them reach their final goal, the acquisition of entrepreneurial competences and skills.

Nowadays, interns usually belong to Gen Z, young people (born between late 1990s through to early 2000s). They are very familiar with the technology and are influenced by videogames. They are used to instant feedback, rewards and other game elements due to the videogames. So, gamification can be a method that can help us to engage and motivate youngsters in learning process.

Enjoyment gained through gamification heightens engagement and retention, where playing and learning are strictly connected. The challenge-based learning methodology is enhanced with gamification elements that will provide the right motivation and engagement and will lead the interns to complete their missions successfully.

The students are invited to work on quests to accomplish a specific goal (challenge) by choosing actions and experimenting along the way. They can earn badges and experience points, when they make certain progress or achievements. The gamification may include i.e. constraints (limited resources, time), rewards (achievement badges, extra resources), ownership (autonomy, choices), and luck (new opportunities and obstacles).

There are various gamification elements that can be applied to the internship and be combined with the challenges set. Some examples of gamification elements are curiosity/mystery, tracking progress/feedback, time pressure, competition, guilds, exploration, customisation, smaller challenges/quests, voting, leader boards, prizes etc.

All these elements can be combined and applied during the implementation of the challenge-based learning. As students work for the completion of their main challenge and the final delivery of the results, mentors can use the above elements to intrigue students' interest and motivate them to reach their final goal. Gamification elements are used in order to motivate students and ensure their active participation in the main challenge.

The EnterMode serious game

As stated before, the EnterMode consortium partners have developed an online serious game to be applied during the internship to support the acquisition of entrepreneurial skills and mind-set. Serious





game and gamification are not the same and it is very important to highlight it. While gamification uses elements of a game, a serious game is a 'real' game with educational purposes.

EntreComp framework includes 15 competences (see above). The EnterMode serious game will develop six entrepreneurial competences out of these 15 competences: Creativity; Vision; Mobilising resources; Spotting opportunities; Coping with uncertainty, ambiguity and risk; Working with others.

The improvement of skills/competences with a serious game is not an easy task and the selection of these six entrepreneurial competences was based on the requirements of a serious game: the complexity and the frame of the game. If all 15 competences were included in the serious game, only 1-1 minigame would be related to 1-1 competence, which would not allow developing competences at different levels. The selected 6 competences are more practical and improvable by minigames than others.

The serious game is offered online, so it is accessible to students undertaking their internships.

The online game is designed in a way that allows it to be parameterised for different contexts and situations, thus it can be applied during different internship programmes. It also incorporates learning analytics mechanisms, which aim at a better understanding and improvement of the learning environment. Learning analytics will allow the selection of data both at individual level and at institutional level, thus allowing both HEIs and companies to effectively match learning offers with the real needs of students.

The serious game combines entertainment with knowledge transfer and its purpose is to support the interns to improve their competences and to understand the notion of entrepreneurship. The serious game combines gamification and technology in a learning context. It introduces a challenge, stirs curiosity, proffers control and triggers imagination. The feeling of control that the serious game offers, makes students guide their progress towards the desired goal based on the feedback received. Moreover, the virtual environment allows the students to increase their experiences and discover skills and knowledge. The research each student undertakes to complete a quest, leads him/her to overcome certain difficulties, which could not be resolved in the real world. Meanwhile, mistakes made by students are not seen as failures, but as opportunities to receive feedback, while players have the ability to track the consequences of their decisions.

One of the biggest challenges in the development of a serious game is to create and maintain the flow process. If the level of the challenge is too high for a given player's level of skills, it can cause anxiety. On the other way, if the game is very easy, boredom can occur.

To eliminate this, there is a framework story and several minigames (quizzes, decision trees, memory games and drag and drops), which have different difficulty levels.

The framework story: The goal of the EnterMode serious game is to complement the internship and to increase engagement, so the player's final goal is to have a successful job interview at the end of the game, but it can be achieved only if he/she completes tasks for high scores and receives badges during the game. The player can choose from three mentors, who guide him/her through the whole game, give feedback and extra information that can be used later during the interview.

The following gamification elements are embedded into the online serious game:





Curiosity/mystery: The serious game proposes challenges and quizzes that foster curiosity and propose research.

Tracking progresses/feedback: It is motivating for the students to see their progress towards acquiring levels of mastery, which are aligned with skills. In this way they are also able to see the knowledge they are developing. Learning analytics are as well used to track and direct learning progress.

Time pressure: The serious game has time constraints on specific challenges and quizzes, which helps students focus more on the activity and make sure that they get the project done in the time period allotted.

Competition: Students' points are displayed on a leader board, so they can compare their results with those of other players.

Avatars: Students can choose their own character and a mentor guiding them through the game.

Quests: The game has a series of quests, which can be completed individually. There are also series of quests, which are interconnected and lead to the acquisition of a specific award/ competence according to the EntreComp framework.

Leader board: Display progress on activities, to encourage students to perform better.

Awards: Students receive badges as rewards for completing specific tasks. Badges are awarded, when a competence according to EntreComp framework, has been acquired.

Choices: Students have different choices and there is more than one way to complete decision trees. Students have also the opportunity to track the consequences of their choices.

Ownership: Students are granted full ownership of their learning progress and are given autonomy to plan their steps: e.g. they can choose, which order of tasks to be completed they will follow.

Losses: Students can lose a challenge due to time constrains or false choices, but losses are an opportunity to receive positive feedback, which will help them on their next try.





10. The EnterMode Community of Practice

According to Wenger “communities of practice are groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger, 2010). They build a common stock of knowledge, accumulate expertise in their domain, and develop their shared practice by interacting around problems, solutions, and insights.

A Community of Practice (CoP) is a learning partnership among people who have learned to do something over time and have developed a shared practice, whereas practice is a historically developed way to do something. That can be professionals who deal with issues and problems they face in the workplace, pupils that are concerned with school matters, or even street gangs sharing a repertoire of survival strategies (Wenger, 2010).

Different to course-based learning, the body of knowledge of a CoP develops over a complex landscape of practice, and results in a ‘regime of competence’. Learning is defined as a process of deepening participation in the CoP, to align what a person is doing with what others are doing.

The CoP model of ‘social learning’ builds on a range of assumptions about modern societies, such as changing modes of knowledge production and circulation, which demand new learning models. In the old paradigm learning starts with something that’s known. It’s then transmitted to someone who doesn’t know it. But in an increasingly complex and dynamic world this simple view doesn’t work anymore, since students are required to ‘improvise, solve problems, strategise, jump on opportunities, and bring others along. Learning that matters today is social, in real time, and inventive. More often than not, what we need to learn is not yet known’ (Wenger & Trayner, 2015).

The EnterMode Community of Practice is defined to support the development, sharing and critical reflection of entrepreneurship practice as well as socialising newcomers into the world of business, and to facilitate the knowledge flow between higher education and enterprises for organisation of internships and skills building. To this purpose the partnership provides a space as well as tools for learning and collaboration between higher education tutors and companies’ mentors that are called to develop entrepreneurial skills to students, adopt the EnterMode model and organise students’ internships.

The EnterMode Community of Practice is hosted in DISCUSS, a European internet platform for virtual Communities of Practice. DISCUSS platform offers a rich variety of tools that CoP members can use to create content, share knowledge and collaborate in accordance with the roles and rules set out for participation. Technology supports the tasks of saving, organising, searching and providing content, coordinating communication and enforcement of community rules.

New members can register for free at: www.discuss-community.eu. When asked for profile type please select “EnterMode Network | Higher Education - Business Network on Entrepreneurship Education”. After registration, new users will receive a notification email including an activation link. By clicking this link the registration process will be completed and the new member has full access to the EnterMode Community of Practice. Alternatively, new members can register for the community with their social network credentials.





CoPs are 'human institutions', which by definition are natural, spontaneous, and self-directed. So, they can hardly be designed along with traditional principles of organisational design. Different to organisations, participation is voluntary and personal and their members become informally bound by the value that they find in learning together; membership does not relate to fixed roles or tasks; activities and knowledge are shared, but do not become part of tasks; CoPs are not driven by deliverables with shared goals, milestones and results.

However, it is also true that Virtual Communities of Practice (VCoPs) do follow organisational principles, without which coordination and collaboration would not be possible. VCoPs employ organisational structures and elements similar to those of real-world organisations, such as roles, rules, members or shared definitions and terms as the common language members refer to when interacting. Member roles ensure the legitimacy of activities and to the community signal the capabilities of the owner, community rules control for the legitimacy of membership, normative adequacy of interactions and help to avoid undesirable or offensive action, member profiles allow for the attribution of activities and contributions to persons, selection of contacts with similar or complementary expertise, and to establish connections with other community members. To sum up, all these elements support structured interaction between the members and delimit the range of potential activities and repercussions to such an extent, that the community can develop trust and collective identity (Preisinger-Kleine, 2013).

Roles in EnterMode Community of Practice

The allocation of roles is key to every virtual community. Generally speaking, each role is an abstraction of a class of community participants and is described in terms of rights and obligations as well as required capabilities as a prerequisite for role performance. As for the inception stage of the EnterMode VCoP basic member roles have been defined: administrator, moderator, facilitator and member. Administrators and moderators constitute the community management. They ensure the functioning of the community as a whole with regard to both technical and organisational aspects.

While management, moderator and facilitator roles are assigned, the member role is automatically given to users, when they sign on to the EnterMode community. It does not give any special right by default, but it can be edited by administrators to add privileges that might be desirable in certain situations.

The administrator role is automatically given to the creator of a community and gives him/her total control over the community management including configuration and content management. Three persons from the project partnership have been appointed as moderators. Their tasks are planning and implementation of community activities, taking care of community progress, scaffolding the development of leadership, signalling emergence of roles and tasks among the members and jointly with the facilitators mediating different interests and potential conflicts between community members.

Facilitators are responsible for a wider range of tasks emerging from the EnterMode knowledge flow cycle (Figure 4).





EnterMode Community of Practice knowledge flow

The EnterMode knowledge flow cycle is defined to work along four dimensions: knowledge resources, knowledge sharing, knowledge management and knowledge transfer. Each stage, in order to function properly, requires a set of complementary moderator / facilitator activities.

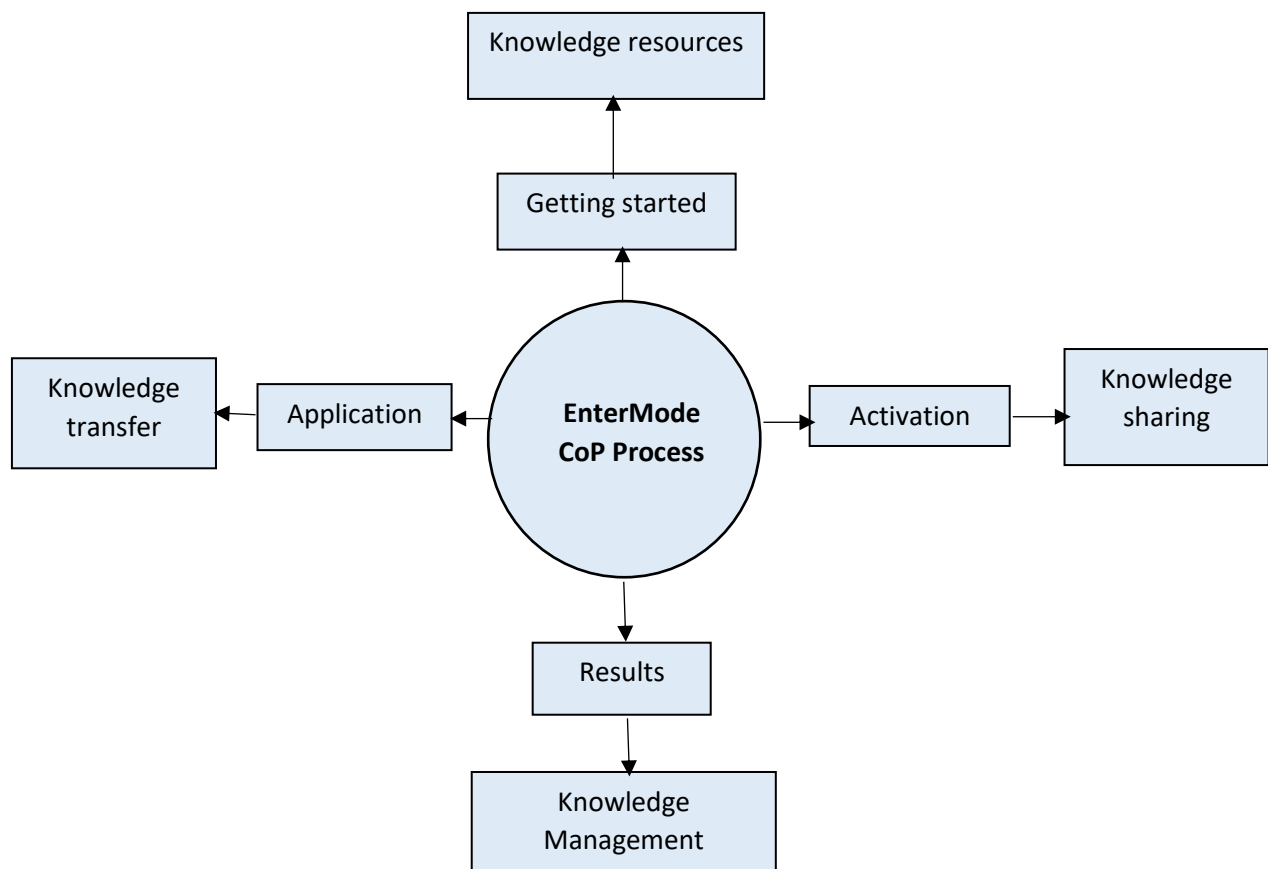
1) Managing knowledge resources

Virtual CoPs combine two types of knowledge resources: People and knowledge objects. The core task of facilitators is to find out about the needs of members, what they can bring into the community, and to identify and build relationships with core members. They, on the other hand, ensure that knowledge objects are properly managed. We refer to objects such as OERs (Open Educational Resources), photos, videos, audio files, text documents, links and embedded web content (presentations, slides, video, articles, blogs and podcasts).

2) Facilitate knowledge sharing

Facilitators stimulate community action. They prompt interventions and reflection by putting questions, foster mutual learning, invite different levels of participation, create value, check for community health, expand the community and jointly with moderators organise events.

Figure 4: EnterMode knowledge cycle



Source: own elaboration





3) Knowledge Management

Facilitators foster productivity and organise results. They ask what works and why, about difficulties faced, success factors and if the good practice is commonly agreed.

4) Knowledge Transfer

Facilitators ensure that the community capitalises on knowledge gained. They stimulate feedback from organisers of internships about lessons learned and recommendations for improvement of internship practice: What should we keep? What should we skip? What should we add?

As for the design, the seven principles for 'cultivating' communities of practice were adopted (Wenger et al, 2002): 1. Design for evolution, 2. Open dialogue between inside and outside perspectives, 3. Inviting different levels of participation, 4. Development of both public and private community spaces, 5. Focus on value, 6. Combination of familiarity and excitement, 7. Creating a rhythm for the community. However, the partnership has adapted these principles to the specific objectives of the EnterMode CoP.





11. Learning Analytics

Learning analytics is an educational application of web analytics aimed at learner profiling, a process of gathering and analysing details of individual student interactions in online learning activities (NMC Horizon report, 2016).

However, research into learning analytics so far is focused on ‘predicting and steering the learning progress of individual learners under the premise that an institutional learning management system (LMS) is deployed. Support is facilitated by recommendations of learning content or learning activities’ (Klamma 2013). As a consequence of this, learning analytics have been primarily adopted in areas of formalised learning, while there is little knowledge about their functioning in informal learning settings such as Communities of Practice, for which neither canonical training materials, nor LMS are available. Klamma points out that ‘the information provided by standard means of learning analytics is completely useless for informal analysis, regardless if it takes place on an individual or a community level, because in informal learning neither the use of a LMS as a learning tool or of any learning content is determined. The learning goals and learning activities as well as their sequencing are not fixed in informal learning processes’ (Klamma, 2013).

Different to learning that takes place in institutional settings, CoPs deepen their knowledge and expertise by interacting on an ongoing basis. Learning goals are short-term and more dynamic than in learning institutions, where goals are fixed in the curricula. As there is no prescribed way to learn, they by nature are informal, autonomous and self-organizing (Sanchez-Cardona et al, 2012). Moreover, learning analytics, in many ways, is ‘big data’ applied to education. The numbers in CoPs however ‘are often too small to draw statistical conclusions or to apply educational data mining algorithms in a standardized way’ (Klamma, 2013).

In small CoPs, community managers may be able to read all of the member-contributed content and discussion and come to know most or all of the participants. Once a CoP reaches a certain scale, however, this coverage becomes impossible. Division of labour is one approach allowing to being responsive to the emerging dynamics of community activity and relationships, but it is also helpful for the community managers to have a systematically generated, holistic picture of what is going on. Learning analytics may help provide that picture, drawing on the considerable volume of ‘data exhaust’ generated by online community activity. Beyond basic Web analytics, these data are largely an untapped resource for practitioners.

During recent years the focus of learning analytics has been widened, now also integrating cases of mutual learning, especially learning in learning communities. In order to analyse learning and knowledge building that takes place in learning communities, three different methodological approaches have been integrated: content-oriented analysis, process-oriented analysis and network analysis (Greller & Hoppe, 2017).

- Content-oriented analysis combines different methods such as semantic analysis of user-generated artefacts and computational techniques of content analysis, with a view to discover a learner’s understanding of a topic or subject.





- Process-oriented analysis is designed to deliver information about temporal action patterns and sequences of self-regulated learning such as use of learning tools. In most cases, it derives from computational analysis of logfiles.
- Social network analysis can aim at both learner-learner and learner-artefact interactions. It is characterized by taking a relational perspective and by viewing actors as nodes in a network, represented as a graph structure. In this sense, a network consists of a set of actors, and a set of ties between pairs of actors. The type of pairwise connection defines the nature of each social network. Examples of different types of ties are affiliation, friendship, professional, behavioural interaction, or information sharing.
Social network analysis is used to analyse accumulation of social capital as a measure for the reputation but also for the strategic position of a member in a community, to identify the experts and the novices in a CoP, to distinguish them from each other and, to build recommender algorithms (example: LinkedIn).

The EnterMode Community of Practice is defined to support the development, sharing of and critical reflection on entrepreneurship practice as well as socialising newcomers into the world of business, and to facilitate the knowledge flow between higher education and enterprises for organisation of internships and skills building. To this purpose the partnership provides a space as well as tools for learning and collaboration between higher education tutors and companies' mentors that are called to develop entrepreneurial skills to students, adopt the EnterMode model and organise students' internships.

The EnterMode model includes learning analytics tools, which aim at improving quality and efficiency of the internship by enabling mentors and organisations to adapt the internship programme to personal and organisational needs. Learning analytics in the internship model will act as a support tool for student guidance, quality assurance, activities development and improvement of efficiency.

The main data sources of learning analytics are the online game and community of practice. The serious game includes learning analytics mechanisms in order to track and direct students' learning progress, while they use the game. Achievements in the EnterMode game are used as triggers for the evaluation and control of knowledge-based processes. Learning analytics also facilitate the self-directed learning of students, since statistical data produced can be used by instructors to build hypothesis, from which derive personalised recommendations for action. Personalised recommendations could also be based on assessments of students, e.g. based on the results of a quiz, students are recommended to return to a certain lesson in order to successfully complete it.

Collected data on activities, such as contributions to the community of practice or achievements in the EnterMode game are used for the evaluation and control of knowledge-based processes. These data intend also to help students with self-directed learning, by supporting self-reflection or personalised recommendations for action. For example, students from the same field of study can be identified from the data of problems and solutions. On the basis of the data, it is also possible to propose particularly successful problem solvers for an exchange of experience.

EnterMode implements two types of learning analytics, each of which relates to a specific type of learners.





On one hand learning analytics relates to students who play the game in the context of their internships. Learning analytics here aims at making visible the learning performance of students or groups of students over different competency areas. Learning analytics is expected to deliver important insights into the students' state of knowledge in those areas, and changes over time. Moreover, learning analytics is supposed to deliver indications on knowledge gaps that may impact internship performance, and this way make visible potential areas for improvement.

The second type of learning analytics relates to collective learning processes taking place in the EnterMode Community of Practice. It aims at practitioners, who in the course of the CoP learn from each other by exchanging knowledge and experience with a view to solve the problems and issues that may arise from the implementation of the EnterMode model. Different to the first case learning analytics in this case aims at making visible the functioning of the CoP as a learning community, the way it supports the knowledge flow process set out in the previous chapter (EnterMode knowledge cycle) and its contribution towards building common ground on EnterMode internship practice.

Data gathered that are analysed through learning analytics include:

- Resources that learners use, gather, create (such as videos, images, texts, links and other learning objects, which learners are expected to utilise in the course of using the CoP).
- Interactions between users.
- Learning topics created.
- Assessment results according to the measurement of achievements completed.
- Knowledge progression.
- Satisfaction and engagement.

Last but not least, learning analytics help to identify the most efficient tools for reflection on learning experience. A selection of those tools will be offered on the Community of Practice during the internships and user interactions for each of them will be tracked and analysed.

For the application of learning analytics in the EnterMode Community of Practice, we propose a combination of methods of both process-oriented and network analysis. Using content-oriented analysis in the EnterMode internships would be rather meaningless, since learners during their interactions would have to refer to a common set of learning materials, which does not apply in EnterMode.

The following table shows a number of initial ideas, which serve as starting point for more in-depth investigations into the topic of CoP learning analytics. The table starts from the most prominent solution to an unbiased processing of learning analytics data: the recording of low-level activities, e.g. interactions of learners or learning tools (learning objects). It continues with the more complex idea of measuring reputation and strategic positions of community members and it ends up with the analysis of the knowledge flow between heterogeneous types of practitioners. It goes without saying that the options for learning analytics, that is the collection of personalised data and data mining, will largely depend on the consent of members. Therefore, by the time of implementation, members will be asked for active consent. According to GDPR they shall have the right to opt out from learning analytics at any time.





Table 5. Data which can be collected through CoP learning Analytics

| | | | |
|--|---|--|---|
| User engagement | Statuses shared | Comments on statuses and items shared by other members | Recommendations of statuses and items shared by other members |
| | Frequency and number of items shared | Discussions started | Frequency and number of items viewed or downloaded |
| Centrality of learners | Connections made with other members | Frequency of exchange with affiliates | Feedback 'received' upon discussions and items shared |
| Clusters of central learners | Mutual connections | Mutual mentions in posts | Members followed |
| Relevance of internship model and good practice | Results from recurring polls | | |
| Knowledge flow between HEI and world of business | Connections established between HEI and company staff | Frequency and density of interaction between HEI and company members | HEI staff followed by company staff and vice versa |

Source: own elaboration

The EnterMode CoP is hosted in DISCUSS, a European internet platform for virtual Communities of Practice,. For learning analytics, a range of new extensions have been developed, that are based on the Mode-View-Controller structure.

Computed results will be visualised and represented through a dashboard. Moreover, selected results inside the EnterMode CoP are displayed with the aid of modules.

It goes without saying that each of the above listed ideas needs to be examined in depth, tested for relevance, validity, robustness and above all: fitness for purpose. We expect learning analytics to deliver important insights into both, individual learning as well as collective learning processes and, in this way, to help us to better understand the impact of EnterMode practice.

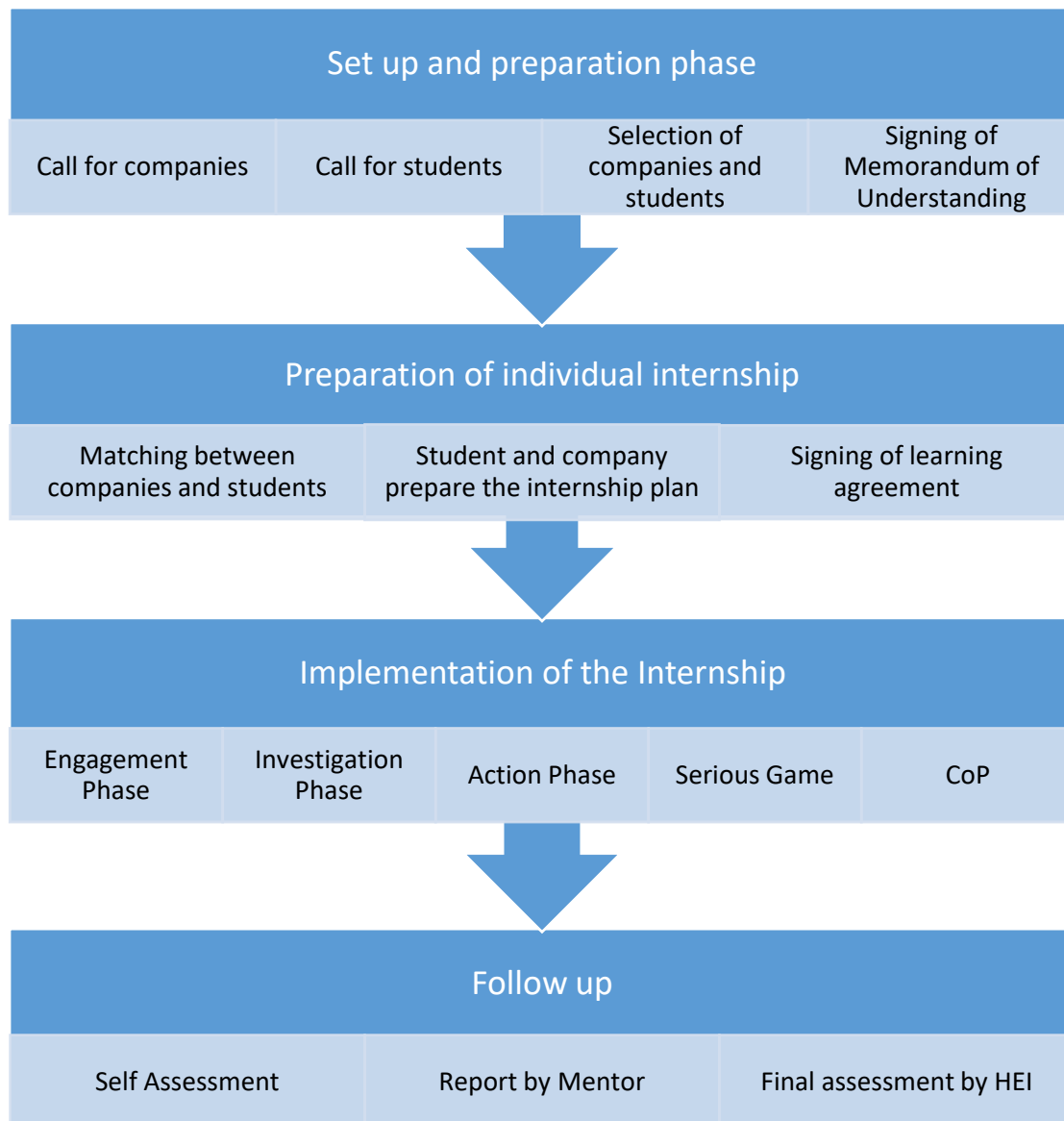




1 2. Implementation of the internship model

For the implementation of the EnterMode internship model, a list of processes needs to be undertaken and realised. Those processes can be seen in the following figure:

Figure 5: EnterMode internship processes



Source: own elaboration





The EnterMode internship model starts with the issuing of a call for students and a call for companies, done by the HEI administration office, following the definition of the selection criteria for students and for companies by the Academic tutor and the preparation of the necessary documentation. After the final selection of students and companies that will be involved in the EnterMode internship, the HEI administration office, supports the matching between them, with the participation of the Academic tutor. Every university has to decide how many students can adopt the model according to its on structure and to the time they can dedicate to prepare and assist interns and companies.

The next step is the development of the internship plan, where the students and the company work together to define the challenge that will be implemented during the internship and the learning outcomes, that will be achieved. The learning outcomes that will be defined, will be based on the EntreComp framework and they will target a specific competence along the progression model. Furthermore, the internship design will aim at utilising the results of the EntreComp framework, by promoting specific challenges that target entrepreneurial competences identified by the framework. The implementation of challenge- based learning will facilitate the acquisition of entrepreneurial skills and competences as well as their advancement to the next progression level. The challenge is an open statement, based on a real situation of the company. It can be a problem, a new project, a new product etc. These challenges are going to be identified by the internship mentors and will also be abetted by the use of learning analytics, incubation services and a serious game. The internship plan will then be submitted for approval to the Academic tutor, who together with the administration office will develop the learning agreement. The learning agreement will have to be signed by the three parties involved in the internship, the HEI representative, the company representative and the student.

During the internship, the challenge-based learning will be implemented. The internship will be divided in three phases – Engagement, Investigation and Action. The companies, which will implement the entrepreneurial internship will act as “incubators” to students and will help them develop their own ideas, based on the given challenge. Moreover, during the internship, the students will also be invited to be involved in a serious game, which will act complementary in order to promote the acquisition of entrepreneurial skills and competences.

At the end of the internship the final assessment will take place by the company mentor and the HEI, who will assess the learning outcomes achieved, during the whole implementation of the internship, the theoretical and practical knowledge acquired, etc. In parallel, the student will conduct a self-assessment by using a predefined method and tool, regarding the entrepreneurial skills he/she acquired. The company mentor will review the results of the self-assessment and give his/her feedback and recommendations to the student.

Please refer to the EnterMode guide for details about specific actions to be taken in each stage of the internship and respective templates.





13. Sustainability of the EnterMode internship model

As we have seen, the main objective of the EnterMode internship model is to improve the entrepreneurial spirit of students and to stimulate their interests by turning their ideas into action. Another pillar of the model is to stimulate Higher Education Institutions and company partnerships to validate and ensure the sustainability of the model.

As stated by the EntreComp framework, Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social (FFE-YE, 2012). Therefore, the EnterMode model will act as a bridge between the worlds of education and work, with the final beneficiaries being the students.

The use of work-based learning for the development of transversal skills is among the new big trends in the area of work-based learning, as clearly stated in the recent Symposium organised by the OECD and Cedefop⁷. As we are moving towards a world where new skills are required, the development of entrepreneurial competences is crucial for students. The EnterMode internship model that we propose is an effective approach that can be easily integrated in current internship schemes, as it does not require significant investments in terms of costs. Nevertheless, it does require investments in capacity building of academic staff, in-company mentors and in the creation of a Community of Practice, between all involved persons.

The prerequisites for the adaptation, success and sustainability of the model are:

At an organisational level

- Motivation of the HEI to adapt such a programme and to offer entrepreneurial learning for students as an extra option to an established internship programme.
- Creation of a network of companies that agree to join the EnterMode and offer quality internship places to HEI students.
- Selection of the companies that will join the scheme. The main criterion is their commitment to provide incubation to students, e.g. mentoring, support, networking and resources needed for the achievement of their project.
- Capacity building of academic staff and in-company mentors involved, through the Community of Practice as well as through ad-hoc seminars and webinars.

At personal level

- Motivation and active involvement of all involved persons, i.e. academic staff, in-company mentors and students.
- Selection of the students, following their own motivation to join the scheme.

⁷ 2019 joint Cedefop and OECD symposium: The next steps for apprenticeship, Paris 7/10/2019, retrieved at <https://www.cedefop.europa.eu/en/events-and-projects/events/2019-joint-edefop-and-oecd-symposium-next-steps-apprenticeship-0>





- Continuous collaboration between the Academic tutor, the in-company mentor and the student.
- Assessment of students' achievement and continuous improvement of EnterMode.

The EnterMode partners, through the CoP, are willing to provide guidance and support to HEIs that want to apply the EnterMode internship model in their institutes. The expansion of the CoP with more HEIs and companies will allow the creation of a multimodal network that can add value to all parties. HEIs will benefit from a large network and the participation of companies, not only in their regions, but also abroad. Companies will benefit from collaborating with different HEIs around Europe, attracting students that can bring value to their operations and daily activities.

Complementarily and in order to ensure the sustainability of the model, partners will highlight good practices, which will derive from the implementation of the EnterMode internships. Other means, which can be used to ensure the circulation of the project results will be videos, social media posts, news releases, articles and information materials, which will be distributed to companies and other HEIs. Moreover, HEIs will utilise their alumni network, to inform future students about the benefits of the EnterMode internship practice. By involving more companies and students in internship programmes with the aim of enhancing students' entrepreneurial skills, the internships culture of HEIs will change and more institutions are expected to adopt the EnterMode model.

Our main objective is to implement the EnterMode model as a template for planning all future internships in the Universities involved in the project. Through its dissemination, we envisage the distribution of the model and the extension of its use by including additional Higher Education Institutions in Europe, which also aim at evolving their internship programmes. We believe that since students will acquire entrepreneurial skills and aptitudes, this will generate impact on their lives and future carriers. This element will ultimately result in students being the ones who will ensure the sustainability of the model.





References

Bacigalupo, M., Kampylis, P., Punie, Y., Van den Brande, G. (2016). *EntreComp: The Entrepreneurship Competence Framework*. Luxembourg: Publication Office of the European Union; EUR 27939 EN; doi:10.2791/593884. Available at <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC101581/lfna27939enn.pdf>

Biggs, J.B. (2003). *Teaching for quality learning at university (second edition)*. Buckingham: Open University Press/Society for Research into Higher Education.

Calloway, D., & Beckstead, S.M. (1995). Reconceptualising internships in management education. *Journal on Management Education*, 19, 326- 341.

Calvo M., Alonso-Fernández C., Freire M., Martínez-Ortiz I., Fernández-Manjón B. (2018). *Making understandable Game Learning Analytics for teachers*, Zenodo 1250767, DOI: 10.5281.

Cedefop (2012). Curriculum reform in Europe: the impact of learning outcomes. Luxembourg: Publications Office. *Cedefop research paper*; No 29. <http://www.cedefop.europa.eu/en/publications-and-resources/publications/5529>.

Cedefop (2017). *Defining, writing and applying learning outcomes: a European handbook*. Luxembourg: Publications Office.

Council of the European Union (2009). Council conclusions of 12 May 2009 on a strategic framework for European cooperation in education and training ('ET 2020'). *Official Journal of the European Union*, C 119/2.

Deterding, S., Khaled, R., Nache, L.E., and Dixon, D. (2011). *Gamification: Toward a Definition*. DOI: 10.1145/1979742.1979575.

EnterMode project outputs. (n.d). Retrieved June 29,2020, from <https://entermode.eu/outputs/>.

European Commission (2011). Using learning outcomes: European qualifications framework series: Note 4. Luxembourg: Publications Office. http://www.cedefop.europa.eu/files/Using_learning_outcomes.pdf

European Commission (2015). *Employment and Social Developments in Europe 2015*. Luxembourg: Publications Office of the European Union.

European Parliament; Council of the EU (2008). Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European qualifications framework for lifelong learning. *Official Journal of the European Union*, C 111, 6 May 2008, pp. 1-7.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:111:0001:0007:EN:PDF>





FFE-YE. (2012). Impact of Entrepreneurship Education in Denmark - 2011. In L. Vestergaard, K. Moberg & C. Jørgensen (Eds.). *Odense: The Danish Foundation for Entrepreneurship - Young Enterprise*.

Fuller, R., & Schoenberger, R. (1991). The gender salary gap: Do academic achievement, internship experience and college major make a difference? *Social Science Quarterly*, 72(4): 715–726.

Greller W., Hoppe U. (2017). *Learning Analytics: Implications for Higher Education*. In: Zeitschrift für Hochschulentwicklung, Jahrgang 12 Nr. 2, 2017.

Johnson, L., Adams Becker, S., Cummins, M., Estrada, V., Freeman, A., and Hall, C. (2016). *NMC Horizon Report: 2016 Higher Education Edition*. Austin, Texas: The New Media Consortium.

Klamma R. (2013) Community Learning Analytics – Challenges and Opportunities. In: Wang JF., Lau R. (eds) *Advances in Web-Based Learning – ICWL 2013. ICWL 2013. Lecture Notes in Computer Science*, vol 8167. Springer, Berlin, Heidelberg. Doi: 10.1007/978-3-642-41175-5_29.

Lang Ch., Siemens G., Wise A., Gasevic D. (2017). *Handbook of Learning Analytics. Society for Learning Analytics Research 2017*. DOI: 10.18608/hla17.

Matthews, C., & Zimmerman, B. B. (1999). Integrating service learning and technical communication: Benefits and challenges. *Technical Communication Quarterly*, 8, 383– 404.

Narayanan, V. K., & Olk, P. M. (2010). Determinants of Internship Effectiveness: An Exploratory Model. *Academy of Management Learning & Education*, 9 (1), 61-80.

Nichols, M., Cator, K., and Torres, M. (2016) *Challenge Based Learner User Guide*. Redwood City, CA: Digital Promise.

Preisinger-Kleine, R. (2013) An Analytical Quality Framework for Learning Cities and Regions, *International Review of Education*, 59, 521–538.

Renganathan, S., Abdul Karim, Z.A., & Chong, S. L. (2012). Students' perception of industrial internship programme. *Education + Training*, 54 (2/3), 180-191.

Rothman, M. (2003). Internships: Most and least favored aspects among a business school sample. *Psychological Reports*, 93, 921–924.

Rychen, D. S. & Salganik, L. H. (2000). *Definition and Selection of Key Competencies: Theoretical and Conceptual Foundations*. INES GENERAL ASSEMBLY 2000. Retrieved from <http://www.deseco.admin.ch/bfs/deseco/en/index/02.parsys.69356.downloadList.26477.DownloadFile.tmp/2000.desecocontrib.inesg.a.pdf>.

Sanchez-Cardona I., Sanchez-Lugo J., Velez-Gonzalez J. (2012). Exploring the potential of communities of practice for learning and collaboration in a higher education context. In: *Procedia - Social and Behavioral Sciences* 46 (2012) 1820 – 1825.





University of Ioannina (2019). *Background Study: Entrepreneurial education in HE in partner's countries, entrepreneurial skills required by HE students, framework for internships*. Retrieved from <http://entermode.eu/outputs/> .

Wenger E. (2010) *Communities of Practice and Social Learning Systems: the Career of a Concept*. In: Blackmore C. (eds) *Social Learning Systems and Communities of Practice*. Springer, London.

Wenger, E., McDermott, R. and Snyder, W. (2002). *Cultivating Communities of Practice: A Guide to Managing Knowledge*. Harvard Business School Press.

Wenger-Trayner, E. and Wenger-Trayner, B. (2015). *Introduction to communities of practice: A brief overview of the concept and its uses*. Grass Valley, CA: Wenger-Trayner.

2019 joint Cedefop and OECD symposium: The next steps for apprenticeship. (n.d.). Retrieved June 29, 2020 from <https://www.cedefop.europa.eu/en/events-and-projects/events/2019-joint-edefop-and-oecd-symposium-next-steps-apprenticeship-0>.





Glossary

| Term | Description |
|------------------------------------|---|
| Challenge-based learning | A collaborative framework for learning while solving real-world challenges and problems. |
| Community of practice (CoP) | A group of people who share the same craft or profession, and learn how to do it better as they interact regularly |
| Company Mentor | A more experienced or more knowledgeable person that helps to guide a less experienced or less knowledgeable person (mentee). A mentor may share with a mentee information about his or her own career path, as well as provide guidance, motivation, emotional support, and role modelling. A mentor may help with exploring careers, setting goals, developing contacts, and identifying resources. |
| Competence | A set of demonstrable knowledge, skills and attitudes that enable, and improve the efficiency of job performances |
| Career office | Career offices or career services, popular at universities, are services that help individuals make informed career choices. They may also maintain collections of reference books periodicals, newspapers, and employment newsletters and run services on occupational exploration, emerging occupations, and salaries, undergraduate and graduate schools, resume writing, interviewing, and more. |
| Distributed social learning | A theory of learning process and social behaviour, which proposes that new behaviours can be acquired by observing and imitating others. Being distributed, it does not need face-to-face interactions; it is rather based on distributed resources over a network. |
| GDPR | General Data Protection Regulation (GDPR) is a Regulation of the EU on data protection and privacy right of all individual citizens of the European Union (EU) and the European Economic Area (EEA). |
| Hands-on learning | A hands-on approach to learning, meaning students must interact with their environment in order to adapt and learn. Known also as "Learning by doing". |
| EntreComp | The European Entrepreneurship Competence Framework (EntreComp) defining entrepreneurship as a framework. EntreComp is a common reference framework that identifies 15 competences in three key areas that describe what it means to be entrepreneurial. |
| Entrepreneurial mind-set | A state of mind, a way of thinking, which orientates actions towards entrepreneurial activities and outcome |





| | |
|---|--|
| Entrepreneurial skills | A range of technical, management and personal skills that are needed for a successful entrepreneurial activity. |
| Experiential learning | The process of learning through experience. It is more specifically defined as "learning through reflection on doing". Hands-on learning can be a form of experiential learning but does not necessarily involve students reflecting on their product. |
| Gamification | Gamification is the use of game design elements in non-game contexts. |
| Higher Education Institute (HEI) | Higher Education Institute (HEI) is a term used in Europe to designate organisations providing higher, postsecondary, tertiary, and/or third-level education. |
| HEI Administrative officer | HEI office that administratively manages the internship. |
| HEI Academic tutor | An academic who is academically supervising the internship. |
| HR responsible | Responsible for Human Resources of the company. |
| Incubation | A combination of business development processes, infrastructure and people, designed to nurture and grow new and small businesses by supporting them through the early stages of their development. |
| Intern | A student who works in a company or organization to gain work experience or satisfy requirements for a qualification. |
| International Relations Office | University services responsible for developing and coordinating the international activities of its staff and students. This involves providing support and feedback to the University management on staff and student mobility. |
| Internship | A period of work experience offered by an organisation to a young worker for a limited period. |
| Internship office | University services responsible for developing, managing and implementing internship programmes for their students. |
| Learning analytics | The measurement, collection, analysis and reporting of data about students and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs. |
| Mentoring | A system of semi-structured guidance whereby one person shares his/her knowledge, skills and experience to assist others to progress in their own lives and careers. |
| Organisational learning | The process of creating, retaining, and transferring knowledge within an organisation. |
| Receiving organisation | The organisation, company, responsible to host a student that will implement an internship. |





| | |
|-----------------------------|--|
| Sending organisation | The educational institution, HEI, responsible for sending the student to the receiving/host organisation (company) to implement an internship. |
| Serious game | The serious game combines gamification and technology in a learning context. It is a game designed for a primary purpose other than pure entertainment. The "serious" adjective is generally prepended to refer to video games used by industries like education, scientific exploration, health care, emergency management, city planning, engineering, and politics. In the context of this model, it refers to entrepreneurial competences. |
| Student | Higher education student who, for the needs of this model, participates in an internship programme. |





ANNEX: EnterMode Virtual Internships Model

Introduction

The EnterMode Virtual Internships Model is supplementary to the “Internship Model for The Acquisition of Entrepreneurial Mind-Set and Competences”⁸, developed within the framework of the EnterMode Erasmus+ project. This adjusted model was developed as a response to the Coronavirus pandemic, which has caused travel restrictions and forced social distancing measures. As a result, many of the Higher Education Institutions (HEIs) which are part of the EnterMode consortium, have chosen to organise virtual (or blended) internships instead of face-to-face ones.

The EnterMode Virtual Internships Model describes the elements of the EnterMode model which should be adjusted for internships that are organised virtually. For practical guidelines on how to implement the EnterMode virtual Internships model as well as success stories from the implementation of the EnterMode model during virtual internships, please refer to the EnterMode mentor’s guide, ANNEX VIII.

⁸ Available at <http://entermode.eu/outputs/>





What is a Virtual Internship?

Virtual internships can be defined as internships which are conducted without the physical presence of the intern in the company, where the internship takes place. A virtual internship can be organised totally remotely through teleworking, the intern works from home and communicates with the mentor and colleagues through digital means, or as a blended approach, with alternating periods of physical presence and remote work.

A virtual internship allows students to gain work experience and develop their skills in a remote setting, while when properly delivered can be a rewarding experience for both student and company.

Examples of virtual apprenticeships

A) An example of an internship turned virtual, is the one of Chiara G. who worked as an intern in one of the companies of the EnterMode consortium, in particular IDEC SA. Chiara was a linguistics and international relations student from a University in Italy, who came to IDEC in Greece to work as an intern for three months, from February to May 2020. Chiara was given tasks on creating content for social media, preparing project outputs etc. Moreover, she was asked to fill some parts related to proposals to be submitted for the European Commission. She had to deal with partners from other countries, as well as be involved in project management.

In the middle of March, quarantine was enforced in Greece due to the coronavirus, and companies were prompt to apply teleworking in large scales. Chiara was given all necessary equipment (laptop, monitor, headset, mouse) and software for online collaboration (Microsoft Teams platform), to be able to continue her internship from home.

During the virtual internship, Chiara was always able to communicate with her colleagues through online collaboration platforms such as Skype, Microsoft Teams and Zoom. She was given new tasks and the mentor from the company monitored her progress on a weekly basis. Every Friday, a video conference was organised, where all colleagues had the opportunity to talk with each other, present the work done the past week and express their expectations regarding future work. Chiara was therefore able to complete her internship successfully and develop her skills.

B) Another example of a virtual internship was the one by Antonio G. a master's student in Global Marketing and Comparative International Relations from Italy, who started his internship in September 2020, after the pandemic had started.

The main difference in this case was that the students did not have the chance to start working in the office and then move online. On the contrary, it was the other way around and Antonio G. started his internship online.





Before the internship, the student again was given all the necessary equipment (both hardware and software), which would enable him to work online during his internship.

The internship started with an online welcome by the company manager and the student's mentor, who introduced the company to the student and explained his tasks and responsibilities during the duration of the internship. A second meeting was then organised, to introduce the rest of the company staff to the student and make him feel part of the team.

During his internship, the student was given new tasks by the company mentor and other company staff. The tasks were explained virtually, through instant chat, emails and virtual meetings. For every task, the student was given the necessary information and tools, which would help him complete the task (eg. Templates, bibliography, past projects etc). Each week, the student would meet with his company mentor, in order to make an overview of tasks completed and discuss problems or questions he may have.

During his internship, the student had the chance to visit the office, since rotation teleworking was applied and meet some of his colleagues face to face. In general, the student was asked to work from the office 5-10 days per month and only if he was not experiencing symptoms. Communication with other colleagues during these days, continued to be held remotely, through the online communication platform that the company used.

By comparing the internship of student Antonio G. with the one by Chiara G, we saw that in the second case, where the internship started virtually from the beginning, the student did not develop the same relationships with his colleagues. The internship seemed more distant and the student faced difficulties communicating with people he had never seen before, either on personal or professional level. Furthermore, after reviewing the whole internship, we could see that Antonio G. managed to complete less tasks than the previous interns who followed the traditional methods of internships in the office.





Virtual internship in EnterMode internship programme

The aim of the EnterMode internship model for the acquisition of entrepreneurial mind-set and competences is to facilitate the acquisition of entrepreneurial skills and competences by students in higher education, using challenge-based approach with gamification elements. This aim does not alter even if the internships are carried out online, meaning that the EnterMode model could also be applied to virtual internships, without changing its components, but adjusting the procedures.

The benefits for Higher Education Institutions (HEIs) and companies still remain the same. For students we could also add the benefit of enhanced ICT skills, since participating in virtual internship means he/she will have to complete tasks and work using new technologies.

Roles during virtual internships

The roles of actors in virtual internships remain mainly the same. Again, success of the virtual internships depends on the organisation and coordination of persons involved, only this time coordination and communication is handled mainly online.

Student

The main role of the student will not change during EnterMode virtual. The only difference is that all procedures have to be followed online, e.g. the student has to apply online to his/her HEI. Furthermore, additional communication with the hosting company and mentor during all phases of the internship, has to be done through online means.

HEI administration officer

The HEI administration officer, needs to rely also on online means in order to facilitate the EnterMode virtual Internships. Communication with both sides (i.e. students and companies) for preparing necessary paperwork needs to be facilitated online (e.g. emails or online working platforms). The HEI administration officer has the additional role to prepare the company mentors to stand out in their roles in the virtual environment. The training of the company mentors, organized before internships, should be adjusted, to prepare mentors on how to facilitate virtual internships. Except from the indicative topics described in the Mentors' guide, additional topics on virtual communication, monitoring, networking and giving feedback should be added.

HEI academic tutor

The role of the academic tutor needs not to be changed during virtual internships. Again, the difference is that feedback and assessment given by the academic tutor need to be facilitated online.

Mentor





The main elements of the role of the company mentor, are again not changed. Nevertheless, remote working is becoming a mainstream phenomenon that applies also to internships. This means that company mentors also need to adjust to continue to support, monitor and motivate students through virtual means. Therefore, participation in the training of mentors offered by the HEI, is highly encouraged.

HR responsible (company)

The role of the HR responsible is not changed for virtual internships.

Characteristics of virtual internships in EnterMode

The characteristics of the EnterMode virtual internships are slightly modified. In particular:

Challenge Base Learning

Challenge Based Learning is also applied during virtual internships. During the engagement/preparation phase, the challenge is still set by mentors together with interns, only this time the consultation and meetings are performed online. The challenge should also be modified, in order for the intern to be able to pursue it and complete tasks online. In any case, the challenge still needs to be relevant to the company and student, and target the development of entrepreneurial skills of the student. The action plan should also be discussed with the mentor online and involve tasks that can be performed by the student remotely. The resources that the company gives to the student, as well as the resources mobilised by the student should also be modified to fit the virtual context of the internship.

Monitoring and evaluation of the progress of students should not be neglected but should be rather done online. Due to different resources and personal working environments in virtual internships, it is more difficult to estimate how long it will take someone to complete a specific task. Larger projects therefore should be divided into smaller sections and milestones should be set for every week.

Incubation

Creating an environment for students, in which they will be able to develop their entrepreneurial skills, is essential in the framework of the EnterMode internships. Therefore, even in virtual internships, companies should offer resources and support to students. Individual growth should be also stimulated, while having the chance to cooperate with other employees of the company. Mentoring is an essential part of the EnterMode internship, which should be adjusted for virtual internships.

Interns need to get to know the real workflow in a company. Mentors organise online meetings using Skype or similar tools and share their screen. It can also make sense to record the video of the online meeting. Interns can then watch the video at their own pace and, if necessary, come back to it.

The daily contact with other employees is an important point when working remotely to avoid the feeling of isolation. Instant messaging services like Slack enable direct exchange with the





whole team. In this way, interns can also exchange ideas and support each other at work. For questions that arise regarding tasks, a preferred contact option should be discussed in advance. It is important that interns do not continuously disturb other employees in their work or their mentor, but also do not feel excluded. In this regard, emails may be better than instant chat. This is because interns have to think more about how to formulate the problem and the question when composing the email.

Serious game

The EnterMode serious game is offered online, so there is no need for adjustments during virtual internships.

Community of Practice

The EnterMode CoP will serve as a means for creating an online network of HEIs and companies. During the implementation of the virtual internships, the Community of Practice will launch a campaign on international internships, which will include more information and discussion on virtual internships.

The campaign extends existing community activities on the topic on virtual internships, by widening the view of possible settings within EnterMode internships, which potentially could take place. The lead role will be taken by universities, who on the background of their international relationships and good knowledge of overseas internships can bring rich expertise into the community.





Challenges of virtual internships in EnterMode

Virtual internships may have many benefits for all involved parties but may also entail a lot of challenges. In particular:

Virtual internships may not be fit for all types of study programmes and careers. Interacting face-to-face is often a defining feature of the job, like for example in customer services or social sciences. Furthermore, in some cases physical presence is required, for example in engineering studies.

Networking and interpersonal relationships are difficult, without personal interactions. Only meeting people online and interacting with them through chatting, does not promote the formation of relationships and does not help with growing the student's network. Another issue is that the students do not receive immediate feedback but should rather ask for it.

Virtual internships may result in lack of commitment and engagement by the student. Lack of physical contact and communication as well as lack of close, in person monitoring may lead to students not being committed into their tasks.

To tackle the above challenges, mentors should make sure students feel that they are part of the company and that the internship is a path for self-development and self-motivation. To do so, a greater amount of time should be dedicated for mentoring and guidance. A good option would be to organise virtual get to know meetings with members of staff, like virtual lunches or progress report meetings.

For further suggestions on virtual internships, you can also see the video "How to make the most from virtual traineeships" prepared by project consortium and uploaded on the EnterMode YouTube channel <https://www.youtube.com/watch?v=-MRR-3Y6okk&t=67s>





Conclusions

As we all know, the COVID-19 pandemic has changed the way we work and interact with each other. Quarantine and travel restrictions have made virtual working essential and in most cases mandatory. Similarly, virtual internships were sometimes forced, as countries decided to close their borders. Nevertheless, this situation has showed us that virtual and distance working is the future and we all need to adapt. As a result, virtual internships will be organised systematically in the future and we predict that they will also be preferred by students and companies.

Virtual internships offer many benefits for all actors. Students do not need to relocate to acquire work experience and can save money since travelling is not required. This way, internationalisation is promoted, since students can acquire experience from companies that reside in different countries. Furthermore, virtual internships offer flexibility, since the students can design their own daily schedule. From the company perspective, virtual internships offer reduced costs for equipment and resources and also offer a larger pool of talents, to be discovered by companies.

On the other hand, virtual internships have also drawbacks. Virtual internships are not fit for all fields of study and working remotely can be challenging since it lacks immediate feedback and requires self-motivation. The lack of informal interactions may also lead to communication problems and misunderstandings, while knowledge transfer may be hindered.

In any case, it is true that virtual internships are the future and the world of education needs to adapt. Therefore, the main challenge when deciding to be involved in virtual internships, which will also lead to their sustainability, is to find ways to successfully integrate the students into the culture of the company, so that they feel part of it, and therefore offer them the opportunity to develop not only their technical but also their entrepreneurial skills.

