



ENTREPRENEURSHIP PACKAGE

PROMOTION APPROACH

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This WEXHE publication is applicable to the following disciplinary sectors:

Hard pure (e.g. physics etc.)

Soft pure (e.g. literature etc.)

Hard applied (e.g. engineering etc.)

Soft applied (e.g. management studies etc.)

WEXHE research has showed that there are no substantial differences between these four sectors regarding the implementation of Work Based Learning in Higher Education. Therefore this document represents the four sectors mentioned.

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SUMMARY

This Entrepreneurship Promotion Package is composed of two main parts: i) the learning and training arrangements and ii) the organisational arrangements. Learning and training arrangements focus on goals and objectives, key competences and learning outcomes, forms and methods of learning and teaching, admission criteria and assessment of students. This entrepreneurship Promotion Package is a response to a plea from the European Commission addressed to universities to be more entrepreneurial in terms of identifying students' dispositions regarding entrepreneurship, motivation of students for entrepreneurship and development of their dispositions towards entrepreneurial competences. The WEXHE project case studies reveal that the accent of courses and modules aimed at entrepreneurship promotion is on the development of transversal/ generic competences and skills. The WEXHE project identifies the following transversal/ generic competences combined with those from other relevant research:

- Ability to communicate and negotiate
- Ability to search opportunities, value ideas and take initiative
- Capacity to generate new ideas (creativity and innovation)
- Capacity to think critically, ethically and sustainable – (self- reflection and self-awareness)
- Ability to design and manage projects and finances
- Ability to motivate people and move towards common goals (leadership)
- Ability to make a business planning and modelling
- Ability to make reasoned decisions (decision-making), to plan and manage time (organisational skills) and to cope with uncertainty, ambiguity and risk
- Ability to work in a team (teamwork)
- Ability to learn and stay up to date with learning

For each of the above-mentioned competences, methods of development are suggested through acquirement of additional knowledge, skills, autonomy and responsibilities in the classroom as well as in a project work setting. Applying for an entrepreneurship promotion programme, assessment of students and the certification of their study and project results is also dealt with in this section.

Organisational arrangements include the steps necessary to effectively implement entrepreneurship promotion. It starts with including entrepreneurial promotion in curriculum planning and establishing links with study programmes, followed by motivating and admitting students, setting up course work and/ or project work, present and assess business plans and/ or solutions, and ends with the assessment and rewarding of students, evaluation and reporting. The WEXHE research shows that universities

can make these steps better when cooperating with experienced and established entrepreneurs and their companies. The established entrepreneurs can present challenging issues for which teams of students have to find a solution. Special attention is paid to the specification of the main roles (e.g. mentors, experienced entrepreneurs and coordinators) including tasks and responsibilities necessary for successful implementation of an entrepreneurship promotion programme. The package ends with suggestions for finances, quality assurance, evaluation and accreditation arrangements.

The package is prepared as reference material, which can help universities dealing with setting up an entrepreneurship promotion programme to find the ways that suits their conditions best. Therefore, the package also contains some appendices that serve as examples of practical solutions taken from various WEXHE (and other cases) and from literature.

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INTRODUCTION

Looking at the three modes of work-based learning Work Placements, Traineeships and Entrepreneurship (Hereafter: WBL), entrepreneurship might be the one with the most variations in design. WEXHE research shows that it is very difficult to be taught and trained for entrepreneurship without involvement in concrete organisational and business situations. Such an involvement requires some entrepreneurial skills from the student, which we believe can be identified and developed further. Some universities, for instance, highlight formally 'bad students' who turned out as successful entrepreneurs. This indicates that an appropriate approach to learn entrepreneurship is often missing. In addition, the success of entrepreneurial activities depends on the cultural/ national context in which individuals are brought up and in which they set up their 'entrepreneurial projects'.

Struck by observations, such as a lack of entrepreneurial spirit in Europe and the fact that young generations prefer security over taking risks, (one of the core characteristics of entrepreneurs) several appeals have been sent to societal institutions calling for their engagement in the promotion and development of entrepreneurship. In 'The Entrepreneurship 2020 Action Plan' of the European Commission there are three areas of immediate intervention: i) entrepreneurial education and training, ii) removing administrative barriers and iii) reigniting the culture of entrepreneurship. Universities have been urged to become more entrepreneurial (EC, 2019). If to some extent new entrepreneurs have to stand up, the role of universities is to identify students with entrepreneurial dispositions, to motivate them to engage in entrepreneurial activities and to help develop their entrepreneurial competences. Welsh et al (2015) research indicates that the longer students are involved in entrepreneurial activities the more positive their attitude is towards entrepreneurship, which results in a bigger number of those who decide to pursue an entrepreneurial career and persist in it. In addition, the shift towards knowledge-based production requires increased amount of knowledge and less capital investments. Subsequently, this situation would provide universities with the opportunity to create new jobs because of the establishment of new enterprises by students and graduates. Thus, the support and development of entrepreneurial activities has become a part of many universities' mission in order to serve the society.

The WEXHE cases reveal a great variety of activities universities carry out in order to develop entrepreneurial competences. In general, these activities can be placed into three categories:

- Entrepreneurship promotion – Create Entrepreneurial Awareness
- Business creation, and
- Intrapreneurship/ innovation enhancement.

This package deals with promoting entrepreneurial activities at universities and their foundations, career centres, incubators, technological parks, accelerators and similar semi-autonomous university institutions. Entrepreneurial activities are usually focused on the development and delivery of appropriate courses offered to students, and on several active approaches for the teaching, studying and training of entrepreneurship.

The Purpose of the Entrepreneurship Promotion Package

This entrepreneurship Promotion Package is based on information from actual entrepreneurship cases, which are practiced in various work environments in seven EU countries (Cyprus, Germany, Netherlands, Poland, Slovenia, Spain and United Kingdom), and on information from other relevant projects and literature. Its purpose is to systemize this information in a user-friendly form and to make it available to all institutions making efforts to raise the quality of tertiary education in terms of higher employability of students and relevance of their competences for the world of work. Public and private investments in one's education are high. Therefore, adequate returns on investments, such as the quality of labour, individual (self) employment and career prospects and personal satisfaction are reasonably expected.

This package is not intended as a set of rules to be strictly followed. Rather it presents a variety of approaches, practices and solutions applicable in the surroundings of various organisations and traditions. It should be taken as a reference and a source of inspiration for those experts who are in charge of entrepreneurship promotion or who plan to deal with it. It is not a recipe but a menu out of which one can take solutions that fit best to the local conditions.

The package is prepared primarily for universities, which strive to:

- Include entrepreneurship into education and training processes
- Simulate business situations in the learning/ studying processes
- Increase the quality and relevance of a study programme by entrepreneurial competences
- Increase the (self) employability of students, and
- Enhance entrepreneurial activities among students and graduates.

It is expected that students already are equipped with some up-to-date competences in their professional fields of study. However, in order to promote entrepreneurial culture and develop students' entrepreneurial skills and competences special courses and special pedagogical approaches and methods are required. Students should be encouraged to call upon their entrepreneurial spirit and to explore, elaborate and present their business ideas. They should be empowered to implement their business ideas and assisted in overcoming the barriers, which they encounter on the way from idea to registration of a new business unit. By doing so, students will develop their entrepreneurial competences, will mature in risk taking and apply some theoretical knowledge in practice. Although all students will not become self-employed/ independent entrepreneurs the competences acquired during entrepreneurial activities will increase their employability.

LEARNING AND TRAINING ARRANGEMENTS: CONTENT OF THE MODULE

A learning module represents a kind of general curriculum, which can serve as a basis for the elaboration of concrete programmes. These programmes can be adjusted to groups of students enrolled in the same study programme. Generally, the work-based learning (WBL) programme consists of several components (Schmidt and Gibbs, 2009):

- a reflective learning review that articulates and documents experiences, learning outcomes achieved and competences held;
- a learning interview to ensure the suitability of learners to the programme;
- flexible recognition of prior learning;
- clearly defined learning outcomes for study modules and programmes;
- a learning agreement between stakeholders that establishes the learner's programme of study;
- support from the organisation/company;
- assessment including recognition of experiential learning gained in the workplace, recognition of ability to apply theoretical learning and demonstration of related competences in the workplace, mapping of experiential learning onto a template of standard, and assessing modules/projects undertaken;
- officially recognised award of learning outcomes.

The following paragraphs contain the characteristics of a learning module aiming at the promotion of entrepreneurship. The curriculum components will be addressed first, followed by organisational arrangements

Most universities only offer a few specific entrepreneurship study programmes. They rather insert entrepreneurship modules, courses/ subjects, project work and similar forms of education and training into other programmes or offer them as specific electives. As stated in the 'Entrepreneurship Education' (EC, 2019a), an entrepreneurial mind-set and skills can only be effectively built through hands-on, real life experiences and project work. It can be taught in all subject areas, aimed at a separate subject or combined with others. In order to address all these forms clearly the term entrepreneurship promotion module (EPM) will be used. An EPM can be a self-standing study unit or an integral part of a study programme. In the first

case, study programmes should define their relations to this module (e.g. that EPM is offered to students as an elective or (partially) compulsive unit). This means that the role of EPM is determined already in the process of study programmes design.

However packed, the content of an EPM should determine what the main goals and objectives of this entrepreneurship module are, which competences students should develop while participating in the entrepreneurial activities, which learning and training methods are implemented, how learning outcomes are assessed, how many credit points students receive after they successfully complete (parts of) the EPM, how much time is devoted to the EPM, in which phases of the study programme students acquire sufficient knowledge to be involved in EPM, etc. These arrangements may vary from one study programme to another. They depend on several factors, such as the field of study, competences to be developed and other learning outcomes to be achieved, possibilities to simulate entrepreneurship environments at the university, response of employers and other partners to collaborate in entrepreneurship promotion, availability of resources, tradition of entrepreneurship promotion, etc. Course work is similar for all enrolled students while other forms of entrepreneurial education may differ between (groups of) students.

Goals and objectives

The main goal of offering an EPM at universities is to help develop students an entrepreneurial mind-set, help them acquire the competences an entrepreneur needs and encourage them to pursue an entrepreneurial career. Other frequently mentioned motives for offering entrepreneurial education, some of which identified also in the WEXHE project are:

- For students: to develop understanding of theory in a real work environment, to increase their employability, to develop competences and to develop realistic expectations about work environments (Knouse and Fontenot, 2008);
- For universities: to promote and develop entrepreneurial activities and responsibility for society among students, to bridge the competence gap with the world of work and to increase the employability of students, to contribute to the personal development of students, to evaluate study programmes and contribute to curricula development, to help build the name of a university addressing local and regional issues, and to contribute to regional employment and business development.

Concrete objectives of providing entrepreneurship promotion activities are:

- to insert entrepreneurial components/ EPM into study programmes as an integral or elective part
- to identify competences and skills to be developed by EPM
- to identify prior competences needed for a successful participation in an EPM
- to identify courses/ subjects to be included in an EPM
- to identify projects and methods that will help develop entrepreneurial competences and skills
- to help develop students an entrepreneurial mind-set and motivate them to take part in an EPM
- to attract experienced entrepreneurs who are eager to share their experiences with students
- to provide mentors and prepare students for participation in an EPM
- to develop students' entrepreneurial competences, and
- to assess acquired competences and award credits and certificates to students.

Key competences and expected learning outcomes

In the WEXHE study we understand competences as a general term embracing knowledge, skills and autonomy/ responsibility (Wagenaar, 2019, p.391-425) where skills are developed on the basis of relevant knowledge and autonomy/ responsibilities on the basis of both knowledge and skills. In other words, only a proper combination of knowledge, skills and autonomy/ responsibilities that a student acquires make him/ her competent.

During their study, students acquire competences that are in line with a certain study programme. If a programme includes entrepreneurial components or an EPM a lot of knowledge and competences can be taught to students in the class. However, some of these knowledge and skills can be developed better in a real work environment, at the work place of actual entrepreneurs. Even a work placement can be in place in order to promote entrepreneurial activities and development as complementary measure to EPM or as a part of it. Often the competences and skills to be developed during a study programme depend greatly on a professional field, but also on the competences and skills themselves as some are for example related to personality traits. In professional areas such as economics and business, many entrepreneurial courses, exercises and projects are included into a study programme. Programme directors invite experienced practitioners to give (guest) lectures, students study real business cases and simulate business situations, e.g., 'learning enterprise' (Amant, 2003) where students establish an enterprise and fulfil different entrepreneurial roles. In the area of engineering, on the other hand, the same approach has not been widely

used due to the lack of experiences and focus on technical issues. Therefore, an EPM module could be offered to students in this field in combination with a placement in real business environment. Where and how entrepreneurship relevant competences and skills will be developed should be previewed in a study programme.

In a study on entrepreneurship competences (Bocigalupo et al, 2016) the authors identified three areas of which each contains five entrepreneurship competences. These three areas are:

1. **Ideas and opportunities:** spotting opportunities, being creative, having vision, value ideas, being ethical and the ability to think sustainable;
2. **Resources:** self-awareness and self-efficacy, motivation and perseverance, ability to mobilise people and resources, being financial and economic literate;
3. **Into action:** taking the initiative, ability to plan and manage, ability to cope with uncertainty, ambiguity and risk, ability to work with others and to learn through experience.

The cases collected in the WEXHE project indicate that training for entrepreneurship is very much focused on the development of transversal/ generic competences and skills although they differ to some extent from competences and skills developed by work placement and traineeship. The obtained list overlaps significantly with the one presented by Bocigalupo et al (2016). The difference is rather in phrasing than in the content. Since WEXHE cases cannot be considered representative, a merged list of entrepreneurship competences is presented below. The only important WEXHE competence not included in the Bocigalupo et al list is 'communication and negotiation', and only 'vision', and self-efficacy' from the Bocigalupo et al list are missing. The list includes the following ten competences:

- **Ability to communicate and negotiate** (able to read, understand, write and interpret various texts and reports; orally communicate and present clearly with adjustment to individual and group situations; understand and manage body language; communicate in different languages; understand communication in different cultural contexts; manage various styles of communication; eager to communicate with others; have sense of empathy; negotiate with co-workers, partners and customers effectively; recognise partners' messages; manage convincing argumentation; being self-confident in communication; search compromises; etc.)

- **Ability to search opportunities, value ideas and take initiative** (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; 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; initiate action when needed; initiate processes that create value; take up challenges, act and work independently to achieve goals; stick to intentions and carry out planned tasks; etc.)
- **Capacity to generate new ideas (creativity and innovation)** (able to originate new ideas to create value, to think out of the box, to seek improvements of existing processes and to focus on details; ready to share one's thoughts and elaborate proposals; open minded; look at challenges as opportunities; etc.)
- **Capacity to think critically, ethically and sustainable – (self) reflection and self-awareness** (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; reflect on own needs, aspirations and wants in the short, medium and long term; etc.)
- **Ability to design and manage projects and finances** (able to manage various fields, especially projects and finances; estimate the cost of turning an idea into a value creating activity; able to identify, analyse and solve problems; able to deal with several variables simultaneously and effectively; able to find material, non-material and digital resources to turn ideas into action and take appropriate decisions; make the most of limited resources; ready to take decisions and responsibility for the consequences; etc.)
- **Ability to mobilise and motivate oneself and others to move towards common goals (leadership)** (inspire and enthuse relevant stakeholders; get the support needed to achieve valuable outcomes; able to coordinate complex work, to set out common goals and to assign tasks to co-workers properly; engage in goals' attainment, able to spread enthusiasm among co-workers, able to recognise others' abilities and skills and to motivate them for their utilisation; ready to assist co-workers, to fairly assess their contributions and to give clear positive and negative feedback – recognition and critique; able to transfer and ready to share knowledge and skills with co-workers, empathy and assertiveness; being accepted by co-workers; be determined to turn ideas into action and satisfy own and others')

need to achieve; be prepared to be patient and keep trying to achieve long-term individual or group aims; be resilient under pressure, adversity, and temporary failure; etc.)

- **Ability to make a business planning and modelling** (set long-, medium- and short-term goals; define priorities and action plans; able to select an appropriate business idea and elaborate it in terms of concrete products or services; able to apply knowledge from the fields of finances, marketing, human resources and other relevant technical fields; able to design production processes, able to realistically put business ideas into a time frame, able to evaluate business ideas from the perspective of technical feasibility and market analysis; able to adapt to unforeseen changes; etc.)
- **Ability to make reasoned decisions, to plan and manage (organisational skills) and to cope with uncertainty, ambiguity and risk** (make decisions while 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 risk and failing; handle fast-moving situations promptly and flexibly; etc.)
- **Ability to work with others (teamwork)** (work together and co-operate with others to develop ideas and turn them into action; network; understand one's and others roles in teams; accept co-workers having different personal characteristics; seek team synergy; able to defend or withdraw own attitudes; ready to listen and able to understand others' arguments; adjust to the changing interpersonal situations and to different personalities; ready to contribute to the common goals and success; ready to share information, efforts and results; make others interested for own ideas; solve conflicts and face up to competition positively when necessary; etc.)
- **Ability to learn and stay up to date with learning** (use any initiative for value creation as a learning opportunity; learn with others, including peers and mentors; reflect and learn from both own and others success and failure; etc.).

A more precise analysis of competences shows that every transversal competence should be put in the organisational and professional context. Such analysis reveals that the same competence may have different **contents** and could be expected at different **levels** of mastery in different contexts. For instance, initiation of innovative ideas in a production system requires detailed insight into the characteristics of a certain product and into the sequence of

work operations, while elaboration of a proposal for a new performance appraisal system requires attentive observation of workers' and leaders' attitudes and checking of their opinions. For an engineer, required communication skills are excellent/ precise reading and drawing skills, and excellent presentation skills including figures, formulas and graphs. For a cultural events manager however, excellent verbal skills are required, understanding implicit meanings of messages and empathy. This does not mean that engineers do not need verbal skills and that cultural event managers do not need to know how to deal with figures and graphs. They both need to develop these components of communication competence at different levels, one at a more basic/ lower and the other at a more advanced/ higher level.

A grading of competences is already embedded in the tables 2 - 4 where knowledge needed for certain competence represents the basic level, skills added to this knowledge an intermediary level and autonomy/ responsibility represent the highest level of competence/ mastery. Referring to Lundvall and Johnson (1994) one could say that knowledge gives an answer to WHAT, skills to HOW and autonomy/ responsibility to WHY. Looking at competences' grading from a behavioural perspective one could apply additional grading for knowledge, skills and autonomy/ responsibility separately as follows:

- Basic level: expected standards are met on the basis of written or oral instructions
- Average level: expected standards are met independently with no particular instruction
- Advanced level: expected standards are surpassed even in non-standard situations
- Highly advanced (expert) level: expected standards are surpassed including the ability to transfer knowledge and skills on to the co-workers.

An example of how both gradings of competences can be combined is presented in table 1.

Table 1: A two-dimensional grading of competences – the case of ‘teamwork and networking competence’

BEHAVIOURAL D. / CONTENT D.	KNOWLEDGE	SKILLS	AUTONOMY/ RESPONSIBILITY
HIGHLY ADVANCED	Demonstrate highly advanced knowledge and understanding of methods of team composition, networks and attitude to work collaboratively including ability to teach about teamwork and networks.	Function independently and effectively in national and international working/ project teams and networks able to instruct new teams and networks formation.	Identify proactively appropriate methods and strategies of teams’ and networks’ functioning and management. Collaborate constructively, take additional responsibility and enjoys recognition from mates.
ADVANCED	Demonstrate advanced knowledge and understanding of methods of team composition, networks and attitude to work collaboratively.	Function independently and effectively in national and international working/ project teams and networks taking initiative and being a pattern for mates.	Identify appropriate methods and strategies of teams’ and networks’ functioning and management. Collaborate constructively and voluntarily take additional responsibilities.
AVERAGE	Demonstrate good knowledge and understanding of methods of team composition, networks and attitude to work collaboratively.	Function independently and effectively in national and international working/ project teams and networks.	Identify appropriate methods and strategies of teams’ and networks’ functioning and management. Collaborate constructively.
BASIC	Demonstrate basic knowledge and understanding of methods of team composition, networks and attitude to work collaboratively.	Function in national and international working/ project teams and networks on the basis of instruction.	Collaborate constructively.

The more one achieves higher levels of knowledge, skills and autonomy/ responsibility the higher his/ her mastery in a certain competence. One's competency is a sum of all different competences. However, for a successful performance of a certain profession as well as for the design of a study programme including its entrepreneurship component a proper selection of competences must be made and all competences do not need to be developed to the highest level.

The number of competences and the level of competence proficiency/ mastery to be achieved represent the basis for the allocation of credit points in a certain course or programme. This usually implies also the expected workload of students expressed in the number of hours needed to acquire certain competence.

A competency model provides basic information for preparing an entrepreneurship component of a study programme. The other information comes from the study programme that students are involved in. The core of the entrepreneurship component should focus on the achievement of learning outcomes in line with the formula:

Competency/ skill gap = Required KSAR in the programme – Acquired KSAR by the student

where K stands for knowledge, S for skills and AR for autonomy/ responsibilities. The result of such an analysis on the study programme/ module in comparison to the expected entrepreneurial environment shows for each competence one of the options, such as:

- Training is not needed
- Some training is needed
- Substantial training is needed
- Competence is not relevant.

Ideally, one would adjust an entrepreneurship promotion programme to an individual student where his/ her acquired knowledge, skills and autonomy/ responsibility as well as possibilities to further develop them in the entrepreneurship project are taken into account.

In case of entrepreneurship (promotion) this approach has some limitations. Entrepreneurship is, by definition, focused on something new: new products, services and concepts, new technologies of their production and provision, new markets, new sources and new organisational approaches. Although certain generic competences are needed for a successful entrepreneurial activity, as outlined above on the basis of the WEXHE cases and

the EntreComp study (Bocigalupo et al, 2016), equally important are personal characteristics of students – potential entrepreneurs. A check of numerous web pages focused on entrepreneurship, shows that among most frequently mentioned characteristics of entrepreneurs are: (self) motivation and passion, risk taking, creativity and similar which are included into EntreComp model also. These characteristics are partially determined by personality traits and their socialisation in early childhood. However, to some extent they can be developed further in the education process. Therefore, an objective of offering entrepreneurial activities is to involve students into entrepreneurial activities that will contribute to the development of entrepreneurship competences. Entrepreneurship promotion should particularly focus on courses and activities that will make students and their mentors aware of realistic entrepreneurship potential on an individual level. Experienced entrepreneurs can particularly help in this process.

For the preparation of an EPM and for monitoring and evaluation of its results the learning outcomes to be achieved at the end of promotion are presented in generalized form. The outcomes are described with reference to the Tuning CALOHEE project (Wagenaar, 2019, p. 391-425) and to the EntreComp study (Bocigalupo et al, 2016) separately for the graduates of the 6th (Bachelor) and 7th (Master) level of education. Each competence is described in terms of expected knowledge, skills, autonomy and responsibility (see tables 2 and 3).

Table 2: TRANSVERSAL/ GENERIC COMPETENCES AND GENERALIZED LEARNING OUTCOMES DESCRIPTION FOR ENTREPRENEURSHIP – LEVEL 6

QF EHEA descriptors	SQF dimensions Competences	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.
I - Demonstrate knowledge and understanding				
II - Apply knowledge and understanding	- Ability to design and manage projects and finances	-Establish methods of analysis / solution of problems from professional and business fields by linking concepts with basic strategies, procedures and tools. Demonstrate awareness of the key aspects of professional, ethical and social responsibilities linked to management of activities in the professional and business areas, decision making and judgement formulation.	-Analyse a complex problem, recognise its structure, devise, execute and validate a plan for its solution in the professional and business fields. Manage work context in the business area. Find funding options and manage a budget for value creating activity.	-Identify appropriate concepts, methods of analysis / solution of complex problems in the professional and business fields. Identify appropriate and relevant approaches to manage work contexts in the business area and reflect on professional, ethical and social responsibilities in taking decisions and formulating judgements.

	<ul style="list-style-type: none"> - Ability to make a business forecasting, planning and modelling 	<ul style="list-style-type: none"> -Demonstrate knowledge of business planning and modelling: methods, structure, processes and environment. 	<ul style="list-style-type: none"> -Find a viable business idea and elaborate it from technical, financial, commercial, marketing and human resources perspectives in order to pass a feasibility check. Create an action plan, which identifies the priorities and milestones to achieve goals. 	<ul style="list-style-type: none"> - Identify appropriate methods of business risks analysis. Reflect on consequences and responsibilities in application of business plans and models.
<p>III - Gather and interpret relevant data</p>	<ul style="list-style-type: none"> - Capacity to generate new ideas (creativity and innovation) -Ability to make reasoned decisions (decision-making), to plan and manage time and to cope with complexity, uncertainty, ambiguity and risk 	<ul style="list-style-type: none"> -Demonstrate knowledge of the on-going nature of research and debate in the professional area and the business making field. -Demonstrate knowledge of organisational principles and decision-making. 	<ul style="list-style-type: none"> - Approach issues with curiosity, creativity and critical awareness. Retrieve and handle information from a variety of sources, identifying business opportunities. Test and refine ideas that create value for others. -Take decisions and formulate judgements. Deal with several variables simultaneously, set goals and prioritise activities. Evaluate the benefits and risks of alternative options and make choices that reflect own preferences. -Recognize opportunities to address needs that have not been met. Map 	<ul style="list-style-type: none"> -Reflect on one's own perspective, capabilities and performance to improve and use them in a creative way. Think in business terms, point at opportunities, gather and analyse data to estimate risks. - Identify appropriate methods of decision-making and risk minimization. Anticipate measures to ameliorate undesired consequences of decisions. Take responsibility for decisions made in unpredictable work or study contexts.

	<p>-Ability to searching opportunities, value ideas and take initiative</p> <p>-Capacity to think critically, ethically and sustainable (self-reflection and self-awareness)</p>	<p>-Demonstrate knowledge of evaluation and application of business ideas in practice.</p> <p>-Demonstrate knowledge and awareness of business ethics and responsibilities, and of sustainability concepts.</p>	<p>the environment and network to identify business ideas. Initiate value-creating activities.</p> <p>-Make decisions based on ethical and sustainability standards. Avoid partners who do not respect human rights, environmental, anti-corruption and similar standards.</p>	<p>-Take responsibility for own business initiative and respect the authorship of others business ideas. Identify methods for ideas valuation. Take responsibility for initiated ideas and mobilising others for them.</p> <p>-Reflect on ethical and social consequences and responsibilities in application of business plans and models.</p>
IV - Communicate information, ideas, problems and solutions	<p>-Ability to work in a team (teamwork)</p> <p>-Ability to communicate and negotiate</p>	<p>-Demonstrate knowledge of social dynamics and understanding of methods of team composition and networks.</p> <p>-Demonstrate knowledge and understanding of established communication methods and tools, including ICT, and of their limitations for conveying information in a broader public context including negotiation.</p>	<p>-Function effectively in national and international working / project teams to create value. Demonstrate ability of own team composition.</p> <p>-Communicate effectively, clearly and unambiguously complex information, activities and their results to wider national and international audiences in oral and written form. Negotiate effectively with co-workers, superiors, customers and partners.</p>	<p>-Identify appropriate methods and strategies of teams' functioning and management. Collaborate constructively and share responsibility for teamwork effects.</p> <p>-Identify appropriate and relevant communication methods, tools and terminology. Demonstrate ability to listen and to understand different viewpoints and to discuss with diverse audiences fostering transparency and responsibility.</p>

	-Ability to mobilise and motivate oneself and others to move towards common goals (leadership)	-Demonstrate knowledge of entrepreneurship, leadership, management and teams. Demonstrate knowledge of psychology, personality and motivation.	- Able to initiate, elaborate and implement a simple new business. Able to lead and work collaboratively in teams. Able to supervise, persuade, involve and inspire colleagues and junior staff in value-creating activities. Able to analyse consequences of different choices and to manage diversity. Willing to put effort and resources into following own passion and create value for others.	-Ready to take risks associated with business projects. Able to work inter-culturally and inter-professionally with lay and professional groups. Committed to build a sense of social responsibility in the choices made at personal, professional and contextual levels. Identify appropriate methods and techniques to keep oneself and others motivated.
V - Undertake further study with high degree of autonomy	-Ability to learn and stay up to date with learning (learning from failure)	-Demonstrate advanced knowledge and understanding of the learning and working methods necessary to follow developments in science and technology in the professional and business field. Identify relevant competences needed for pursuing further studies and career goals.	-Engage in independent learning and follow developments in business, science and technology autonomously. Organize own study. Reflect and judge achievements and failures and learn from these.	-Identify appropriate learning methods to follow developments in science and technology in the business and professional fields. Enter new fields of study through a positive attitude. Evaluate own personal and professional competences and take responsibility for own learning.

Table 3: TRANSVERSAL/ GENERIC COMPETENCES AND GENERALIZED LEARNING OUTCOMES DESCRIPTION FOR ENTREPRENEURSHIP – LEVEL 7

QF EHEA descriptors	SQF dimensions Competences	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 Critical awareness of knowledge issues in a field and at the interface between different fields	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 reviewing the strategic performance of teams
I - Demonstrate knowledge and understanding				
II - Apply knowledge and understanding	- Ability to design and manage projects and finances	-Demonstrate comprehensive knowledge and understanding of the process and methods of analysis / solution of problems from the professional and business fields by linking concepts with strategies, procedures and tools. Demonstrate critical awareness of the key aspects of	-Analyse / solve very complex, context rich and unfamiliar business problems, recognise their structure, devise, execute and validate creative plans for their solution in the professional and business fields. Manage work contexts in the business area and within broader or	-Identify appropriate concepts, methods of analysis and creative solution of very complex problems that occur even in unfamiliar situations in the professional and business fields. Identify and justify appropriate and relevant strategic approaches and analyse professional,

	<p>- Ability to make a business forecasting, planning and modelling</p>	<p>professional, ethical, business and social responsibilities linked to management of work contexts, decision making and judgement formulation in the subject area.</p> <p>-Demonstrate knowledge of complex business forecasting, planning and modelling: methods, structure, processes and environment.</p>	<p>multidisciplinary contexts that may be unpredictable and require new strategic approaches. Make a plan for the financial sustainability of a value creating activity.</p> <p>-Find a complex business idea and elaborate it in detail from technical, financial, commercial, marketing and human resources perspectives in order to pass a feasibility check. Create an action plan, which identifies the priorities and milestones to achieve goals in changing circumstances.</p>	<p>business, ethical and social responsibilities linked to the management of work contexts in the business area and within broader or multidisciplinary contexts, taking coherent decisions and formulating coherent judgements.</p> <p>- Identify appropriate methods of a complex business risks analysis. Reflect on consequences and responsibilities in application of business plans and models.</p>
<p>III - Gather and interpret relevant data</p>	<p>- Capacity to generate new ideas (creativity and innovation)</p>	<p>-Demonstrate detailed knowledge and understanding of the on-going nature of research and debate in the professional and business field contributing to innovative perspectives.</p>	<p>- Approach issues with curiosity, creativity and critical awareness. Retrieve and handle information from a variety of sources, integrating it critically into a business plan. Formulate original interpretations and innovation proposals. Transform</p>	<p>-Reflect on one's own perspective, capabilities and performance to improve and use them in a creative way. Think in business terms, point at opportunities, gather and analyse data to estimate risks. Deal with business problems in an original</p>

	<p>-Ability to make reasoned decisions (decision-making), plan and manage time, and to cope with complexity, uncertainty, ambiguity and risk</p> <p>-Ability to search opportunities, value ideas and take the initiative</p> <p>-Capacity to think critically, ethically and sustainable (self-reflection and self-awareness)</p>	<p>-Demonstrate knowledge of organisational theory and decision-making models.</p> <p>-Demonstrate knowledge of business theory and evaluation theory and their application in practice.</p> <p>-Demonstrate knowledge and awareness of business ethics and responsibilities, and of sustainability concepts.</p>	<p>ideas into solutions that create value for others.</p> <p>-Take decisions and formulate judgements on complex problems. Deal with a big number of variables simultaneously. Weigh up risks and make decisions despite uncertainty and ambiguity.</p> <p>-Size and shape opportunities to respond to challenges and create value for others. Map the environment and network to identify business ideas. Take initiative to add or create value.</p> <p>-Make decisions based on high ethical and sustainability standards. Refuse partners who do not respect human rights, environmental, anti-corruption and similar standards.</p>	<p>manner. Organize complex efforts integrating the results of diverse studies and analyses.</p> <p>- Identify appropriate methods of decision-making and risk minimization. Anticipate measures to ameliorate undesired consequences of decisions. Take responsibility for decisions made in unpredictable contexts.</p> <p>-Take responsibility for own business initiative and respect the authorship of others business ideas. Identify methods for ideas valuation. Take responsibility for initiated ideas and mobilising others for them.</p> <p>-Apply ethical standards in reflection on social and environmental consequences of business plans and models implementation. Take responsibility for eventual breaching of standards.</p>
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<p>IV - Communicate information, ideas, problems and solutions</p>	<p>-Ability to work with others (teamwork)</p> <p>- Ability to communicate and negotiate</p> <p>-Ability to mobilise and motivate oneself and others to move toward common goals (leadership)</p>	<p>-Demonstrate knowledge and understanding of methods and theories of teams' management strategies that may be composed of different disciplines and operate on different levels.</p> <p>-Demonstrate knowledge and understanding of social relations, principles and tools of intercultural and interdisciplinary communication, as critical understanding of the use of social media and communication technologies in the professional, business and wider social contexts including negotiation.</p> <p>-Demonstrate knowledge of theories and models of entrepreneurship, leadership, management and teams. Demonstrate knowledge of psychology, personality and motivation theories.</p>	<p>-Function effectively in national and international working / project teams as a member or leader to create value. Demonstrate ability to create a team or network based on value-creativity needs.</p> <p>-Communicate effectively, clearly and unambiguously complex information, activities and their results to wider national and international audiences in oral and written form using various media in more than one language. Communicate activities' results and the knowledge and rationale underpinning them. Negotiate effectively with co-workers, superiors, customers and partners most sensitive issues.</p> <p>- Able to initiate, elaborate and implement a new complex business. Able to lead and work collaboratively in diverse teams. Able to supervise, persuade, involve and inspire colleagues and junior staff in value-creating activities despite complex</p>	<p>-Identify and justify appropriate methods and strategies of teams' functioning and management. Collaborate constructively and share responsibility for teamwork effects.</p> <p>-Identify appropriate and relevant communication strategies, methods, tools and terminology for highly sensitive issues and situations. Demonstrate ability to listen and to understand different viewpoints and to discuss with diverse audiences' ideas, problems and solutions fostering transparency and responsibility.</p> <p>-Ready to take risks associated with complex business projects. Able to work inter-culturally and inter-professionally with lay and professional groups. Committed to build a sense of social responsibility in the choices made at personal,</p>
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			and unpredictable situations. Able to analyse consequences of different choices and to manage high diversity, and to prevent, resolve and manage conflicts. Stay focused on own passion and keep creating value despite setbacks. Teaches others.	professional and contextual levels. Identify and chose appropriate methods and techniques to keep oneself and others motivated.
V - Undertake further study with high degree of autonomy	-Ability to learn and stay up to date with learning (learning from failure)	-Demonstrate advanced specialised knowledge and understanding of the learning and working methods necessary to follow developments in science and technology in the professional field. Undertake further studies in new and emerging technologies.	-Engage in independent learning and follow developments in business, science and technology autonomously. Organize own study. Improve abilities to create value by building on previous experiences – successes and failures, and interactions with others.	- Identify and justify appropriate learning and working strategies and methods to follow developments in business and science and technology in the professional field. Enter new fields of study through a positive attitude. Evaluate own personal and professional competences and take responsibility for own learning.

The description of competences with respect to the expected learning outcomes is generalized, meaning that it suits to various professional fields to which it should be adjusted in concrete organisations. Adjustment means that in each case (organisation, programme) a list of competences which serves as a starting point for further steps should be determined. From the list of competences presented in this package one can drop some out, add additional generic competences, and add profession, organisation and job specific competences. In short, the list of competences dealt with in this package represents a core menu of generic competences from which some can be left out and others added, as appropriate to the situation. It is also advised to identify the level to achieve as illustrated in table 1.

The following step to be made is to find appropriate ways for competences development.

Forms and methods of learning/ teaching – defining learning format

“School-based learning appeals to other competencies than work-based learning does. In school-based learning, mainly verbal information has to be memorized, which can be done by: passive reception, active reproduction, and active reconstruction of knowledge. In work-based learning, memorization plays a much smaller role. Instead, gathering experiential knowledge is the main task. This can be done by: learning by doing (surrender to experience), guided learning (following instructions and assignments), and reflective learning (experimenting and making sense of experience)” (De Jong et al, 2006).

“What work-based learning seeks to develop in learners, is a meta-competence that transcends the application of immediate skills in order to adapt to variability in work demands... Faced with unpredictable circumstances, participants rely on reflection-in-action and incorporate activities such as on-the-spot reframing, re-evaluation of standard practices, and spontaneous testing of available knowledge to arrive at a solution to the immediate problem... Their learning arises not from prepared scenarios controlled by classroom instructors but from working through the messy, implicit, and real questions of practice... Classroom learning of this experiential nature can be preparatory for the ultimate application of the desired metacognitive critical skills in natural settings” (Raelin, 2016).

Learning and teaching of students should be organised in proper physical, social and organisational environments which enhance competence development. Students should attend appropriate courses supplemented by a number of active teaching and study methods. In fact, promotion and training of entrepreneurship requires an active approach. The main

reason lays in the nature of entrepreneurship, which combines personality characteristics with acquired knowledge in search for business ideas, their elaboration and implementation. In addition, not many study programmes focus on entrepreneurship. Perhaps more important than studying for a career as an entrepreneur, is to develop entrepreneurial competences among a wider scope of students' from various disciplinary areas. Students of hard, soft, pure and applied disciplinary areas should be offered an EPM in order to develop their entrepreneurial skills. Looking at the WEXHE cases, it is preferred that an EPM is offered by an active approach rather than by passive lectures and study.

The main forms and methods of learning and teaching of students revealed in the WEXHE cases and relevant for entrepreneurship promotion could be structured as follows:

- **Course work:** Course work in an EPM is rather limited in terms of the time devoted to it. It is assumed that students already acquire basic knowledge of their study field before participating in an EPM. However, some general courses from the field of social sciences, such as Economic theory, Organisational theory, Communication theory, Psychology and General management are offered to those students whose study programmes do not teach these theories. In addition, a number of applied courses can be on the list of an EPM.

Examples from the field of **economics** are:

- Economic analysis of entrepreneurial projects
- Value creation
- Economic and financial planning/ forecasting
- Financial and cash flow analysis
- Market analysis/ research
- E-commerce and Marketing strategies

Examples of courses from the **organisational** field are:

- Teamwork and group work dynamics
- Decision analysis
- Problem solving
- Intellectual property
- Logistics

Examples of courses from the field of **communication** are:

- Communication techniques
- Giving and receiving feedback
- Negotiation and Conflicts resolution

In the field of **psychology** courses can be offered, such as:

- Techniques and methods of creativity and ideas generation
- Design thinking

Examples of **applied management** courses are:

- Personal leadership
- People/ talent management
- Gamification
- Validation practices
- Feasibility and evaluation analysis
- Change management

There are many courses which can be offered that **address entrepreneurship** directly: Business models' design, analysis and tools

- Entrepreneurial opportunities
- How to create and register a company/ start-up?
- Business ethics
- How to manage, present and defend innovative projects?
- Personal branding
- Entrepreneurial processes
- Entrepreneurial ecosystems
- Sales techniques and customers management
- Resources and capability analysis,
- IT support for businesses (clouds, multi-platforms, internet of things)
- Legislation for entrepreneurs
- Business documents and Success stories of entrepreneurs

On the top of all the courses mentioned above, some additional instructions can be offered to students involved in EPM, such as:

- Thinking out-of-the-box
- Pitching
- Lean start-up
- How to present your project to investors?

Needless to say, that high selectivity is needed when selecting courses for a concrete EPM and that they should foster an active approach to study. An active approach to teaching and learning at other courses also helps to develop entrepreneurial competences.

- **Project work:** *“While WBL programmes often include course-based and peer-group activities, for most the central component of the programme is project-based. Projects normally address real workplace issues with which learners are involved, and they are often an extension of activities that learners are in the process of undertaking... Activities may be small and localised... or they can be major undertakings that produce significant organisational or professional change and lead to the award of a doctorate”* (Lester and Costley, 2010).

Projects are a central form of the promotion of entrepreneurship and training and are set up by students specifically for this purpose. Often, they start with the formation of a team to work on an entrepreneurial concept formation and end with a recognition/price awarded to the team with the best concept. In between there can be several business creation activities, such as generation of business ideas, analysis of competitive advantages and market potentials, technology development, prototyping, budgeting and fund raising, commercialisation, market targeting and pitching new business proposals. In the EPM this process can include a form of an exercise with several activities of students and intensive assistance of their tutors/mentors. Usually, the most wanted mentors are experienced entrepreneurs who are eager to share their experiences with students and would like to guide them step by step towards the elaboration and presentation of their business ideas. In some cases, old students can also take up the role of tutors. Tutors assist individuals or small entrepreneurial

teams composed of 3 to 8 members.

Tutors may already help the students in the phase of team formation. The individual members can bring their own business ideas into the team, face them and decide

which one they want develop/ explore further. A student with a clear and promising idea may want to form his/ her own entrepreneurship team. Another option is that generation and deciding which business ideas to pursue (new or improved product or service, new technology of production of existing one, etc.) is the first step to be made by a new student entrepreneurship team.

When a business idea is chosen, a team starts working on a detailed business plan/ model. It should include important dimensions, such as technology development, description of production operations, cost calculation, financial resources, identification of potential markets/ target groups and identifying how to penetrate these markets.

An entrepreneurship team should meet frequently in order to discuss and choose a business idea, to elaborate a business plan, to develop prototypes, to evaluate ideas, past events and results, to discuss issues with tutors and to get feedback from them, to prepare further steps and activities. Team members may need to do some field work and site visits, such as meeting and interviewing potential partners and customers, meeting of experienced entrepreneurs in their enterprises to brief business plan solutions, etc. On this basis, a business team makes analyses, such as market analysis, customers' segmentation, product-market fit, case studies etc.

Members of an entrepreneurship team are usually required to write journals on daily activities and to prepare interim, final and reflection reports. In these reports they not only describe what has been done but also evaluate their experiences with respect to how well they have been (theoretically) prepared for the entrepreneurship project, to evaluate the quality of mentors'/ tutors' support, to report on experiences with team members etc. Another obligation of team members is to present their business ideas, business projects and plans or their tangible products. Presentations can be organised in various ways. A frequently used form for the presentation of final results are elevator pitches/ nights. In some cases the whole project is compressed into a 'kick-off' or 'start-up' weekend or week.

Entrepreneurship team members' reports, presentations and products are evaluated and validated by their tutors/ mentors who usually form a jury for the final evaluation. They evaluate business plans, prototypes and other final outputs using the criteria of innovativeness/ originality, feasibility, market potentials and similar. Since a bigger number of entrepreneurship teams present their results, a jury selects the best which

are awarded special recognition/ prize and offered financial support, consultation, space etc. to continue their activities towards entrepreneurship creation.

Entrepreneurship promotion and development projects are not necessarily organised as a competition of business ideas and plans. Another form of entrepreneurial education is role playing where a group of students compose a board of directors and is required to bring strategic decisions. Students can also establish their 'university enterprise' in which they play key management and expert roles. After registering a firm some students take the executive roles, others work in HR, financial, commercial, production, maintenance and other departments. They form all the management/ governance bodies, do some real business, practice decision-making and perform routine tasks.

- **Cooperation with regular work environment:** A challenging approach for generating business ideas is to establish a link with an enterprise, a local community or some other institution which are facing certain operational or development issues. Students form teams and are expected to find, elaborate and present a workable solution. Such an exercise increases students' motivation and responsibility because they deal with a real problem. In addition, it contributes to the university's social responsibility. The institution's representative may play a role of a tutor to students. One of the options is also to place entrepreneurship team members for a certain period into an enterprise where they shadow experienced entrepreneurs in their daily activities (Širec and Rebernik, 2011).

Some examples of how to develop selected competences using various methods are given in table 4. They are mainly derived from WEXHE project cases. It should be noted, however, that some methods contribute to the development of more than one competence at the same time.

Table 4: MEANS OF STUDENTS' ENTREPRENEURIAL TRANSVERSAL/ GENERIC COMPETENCES' DEVELOPMENT

SQF COMPETENCES	Knowledge	Skills	Autonomy and responsibility
General	Lecturing, seminars, field visits, online modules, writing assignment reports, study of literature and cases	Project work, business simulations, research, workshops, round tables, discussion groups	Reflection on theories, authors, technical and social issues, individual and group evaluation meetings, students' lecturing, seminars, round tables
Ability to manage projects and finances	Courses on general and applied management and decision making, on organisational theory, on finances, on production process engineering and systems.	Students elaborate real technical and social problems' solutions, practice 'school enterprise' approach, play managerial roles, prepare financial plans and balance sheets, raise funds.	Leave students to elaborate solutions of a certain problem autonomously and meet solution deadline, to find and select study sources, to present an issue and decide on the presentation style, to raise money for students' activities and to deal with finances.
Ability to make a business forecasting, planning and modelling	Courses on general and applied entrepreneurship, on business forecasting, planning and	Students are involved in entrepreneurship projects design. Experienced	Foster autonomous students' entrepreneurship teams and projects.

	modelling, case studies of entrepreneurship models – success and failure stories.	entrepreneurs take part in course and project work.	Discuss business social responsibility with students.
Capacity to generate new ideas (creativity and innovation)	Courses on general and applied psychology, techniques and methods of creativity, theory of innovation, intellectual property.	Foster generation and elaboration of business ideas among students. Organise and support students' entrepreneurship competitions, kick-off and start-up weekends etc.	Reward new ideas and proposals, allow mistakes and give second chance, allocate time for incubation and reflection, avoid 'one solution only' situations.
Ability to make reasoned decisions (Decision-making), to plan and manage time (organisational skills), to cope with complexity, uncertainty, ambiguity and risk	Courses on organisational theory, decision making and entrepreneurship	Enhance students to organise project work, simulation, field research on their own. Encourage students to participate in civil society activities and to practice some student work.	Encourage students to organise autonomously extra-curricular activities including raising resources to finance them. Support students with some university resources which they manage on their own report on their utilisation.

Ability to Search opportunities, value ideas and take initiative	Courses on entrepreneurship, evaluation theory and methods.	Involve students in business ideas generation, business plans elaboration, presentation and evaluation.	Encourage students to try out their business ideas and plans.
Capacity to think critically, ethically and sustainable thinking (self-reflection and self-awareness)	Courses on social economy, business ethics and on theory and practice of sustainability.	Discuss ethical and sustainability issues with students; ask students to prepare their introductory statements.	Enhance formation of a students' ethical committee, encourage students to take part in civil society sustainability actions, and to make business plans for social economy, discuss their experiences in evaluation meetings.
Ability to work with others in a team (teamwork)	Courses on general and applied organisational theory, human resources management and psychology, team working course (types, composition, functions and management of teams)	Give assignments to project and study teams which students form on their own, encourage students to create their entrepreneurship teams.	Give feedback on student's performance in a team, monitor reactions of other team members. Enhance reflection on team dynamics.

Ability to Communicate and negotiate	Courses on sociology, communication (written, oral, body), languages, negotiation, soft skills, intercultural communication course.	Students write and present reports, take part in the discussion and workshops, give lectures and seminars, do bargaining exercises between groups of students and with potential customers.	Provide clear business communication standards, provide opportunities for written and oral communication, for intercultural communication, initiate learning of languages.
Ability to mobilise and motivate oneself and others to move towards a common goal (leadership)	Courses on leadership, psychology, interpersonal skills, corporate organisation, change management, conflict resolution, intercultural leadership, business excellence	Students chair sessions, workshops, seminars, coordinate projects, lead study groups, practice 'school enterprise', organise business ideas competitions, start-up weekends, elevator pitches.	Give students the opportunity to step in a coordinative role, to create their own teams, invite students to take leadership roles in groups. Organise discussions on entrepreneurship with experienced entrepreneurs.
Ability to learn and stay up to date with learning (learning from failures)	Courses on pedagogics and didactics, blended learning, own learning / learning how to learn	Encourage students to organise and to participate in autonomous study groups, and to study certain material for the presentation in a group.	Convey students the expectation to be updated with the development in his/ her professional field. Support them to take failures as lessons.

Admission to EPM

EPM is offered to students involved in various study programmes as an elective module. Because the number of places in EPM is often limited it is recommended that a university establishes entry criteria to the EPM. These criteria can be specified as follows:

- Finished courses including examination determined in the EPM as a necessary prior learning for successful participation
- Interview with a university mentor/ coordinator to check for student's prior learning, eventual entrepreneurial experiences, motivation, personality characteristics and students' interests
- Student's elaboration of a business idea where the requirements should not be set too high
- Eventual entrepreneurship like experiences, such as those obtained in the project work, extracurricular activities, volunteering, students' union etc.
- Application for EPM as a sign of student's interest

In any case, a university should require a high motivation, positive personal attitude and active approach to entrepreneurship of every student although the role of EPM is to raise this motivation and personal abilities. In some cases, the interest of students to participate in EPM is not very high. An informative/ enhancement/ motivation seminar can help motivate and prepare students before selection is made. Selection of students for EPM is an internal matter of a university and does not need to be highly formalized.

Assessment of students and certification

Mentors and/ or lecturers monitor students on the basis of their use of critical incident diaries, log books, or portfolios of work-based 'products' accompanied by evaluative comments highlighting what has been learnt. Other approaches could be the testing of and reapplying learning through discussion.

"Multiple and rigorous sources of information for assessment process is needed (e.g., up to date records of tasks and reflections in work-based learning, student journals, supervisors' comments, competence against the relevant industry standards and direct observation of competencies performed in workplace settings). Reflective processes may be captured through e-portfolios, portfolio building, journals and post experience reports and

presentations that can be peer-assessed, self-assessed and or assessed by academics” (Henderson and Trede, 2017).

The WEXHE cases describe some assessment and certification procedures and instruments applied by students, their mentors and lecturers. Frequently mentioned assessment instruments are:

- Students' records/ diaries/ personal journals on daily/ weekly activities
- Students' written reports on the projects' realisation – interim and final
- Students' physical/ oral/ video presentations of project reports and results – business plans, prototypes
- Students' self-assessment and peer assessment
- Lecturers' examination and assessment of students during or at the end of coursework
- Mentors'/ tutors'/ lecturers' feedback to students
- Mentors'/ tutors'/ lecturers' progress and final reports
- Jury's assessment of business plans using a variety of criteria, such as: creativity/ innovativeness, relevance, feasibility, expected economic and social outcomes, investment needed, market potentials, level of elaboration, presentation, defence/ explanation of weak points, team quality etc.

Assessment methods and instruments should be specified in the EPM in order that every student, mentor and lecturer knows them in advance. According to Little (2000) this information should include: what and for what purpose will be assessed, who will be involved carrying out assessment, what criteria will be applied, and in what form public recognition of the learning will be given. A special attention should be paid to the assessment of competences and skills specified in the EPM.

The WEXHE cases demonstrate that certification of EPM can be integrated into the study programmes. Students are awarded credits and marks after successful completion of the EPM. However, in some university environments EPM is offered as an experimental or extra-curricular module where credit points are not awarded to students and the EPM is not publicly accredited. Students can then, for example obtain special certificates. This happens especially where EPM is offered by university institutions, such as career centres, incubators, technological parks, accelerators, etc.

ORGANISATIONAL ARRANGEMENTS AND PROCEDURES REGARDING LEARNING AND TRAINING

A learning module includes elements that are closely focused on the learning process. In order for learning to run smoothly some organisational arrangements are required. The key arrangements for an EPM are in the hands of universities and are described in the following paragraphs.

Process specification – sequence and description of activities

The entrepreneurship promotion process is composed of several activities and steps. They will be shortly described in terms of 'who does what'. The sequence of these steps may vary from one EPM to the other and some steps can be omitted. It should be noted that universities can implement an EPM on their own without the involvement of the world of work. However, they usually have to collaborate with external institutions also, e.g., experienced entrepreneurs and organisations providing challenging technical or organisational issues to students' entrepreneurship teams. In some cases universities authorise (or allow) their institutions (career centres, incubators, technological parks, accelerators, foundations...) to carry out an EPM. The main steps are visible in diagram 1. Some steps require deeper expertise that can only be mentioned and not presented in detail in this text.

Curriculum/ EPM planning and development:

The process of setting up entrepreneurial activities starts with curriculum development where it should be determined:

- Which courses will be offered in the framework of EPM and how they will be delivered,
- How the EPM project work will be structured: business plans elaboration and pitching, business roles playing, solving real business problems, placement of students to experienced entrepreneurs, etc.,
- Allocation of time to course work and project work where both can be practiced in parallel or consecutively,
- Which prior learning (courses) should be finished before starting EPM,

- Which are other requirements to students who want to participate in EPM,
- How achieved learning outcomes will be assessed and awarded.

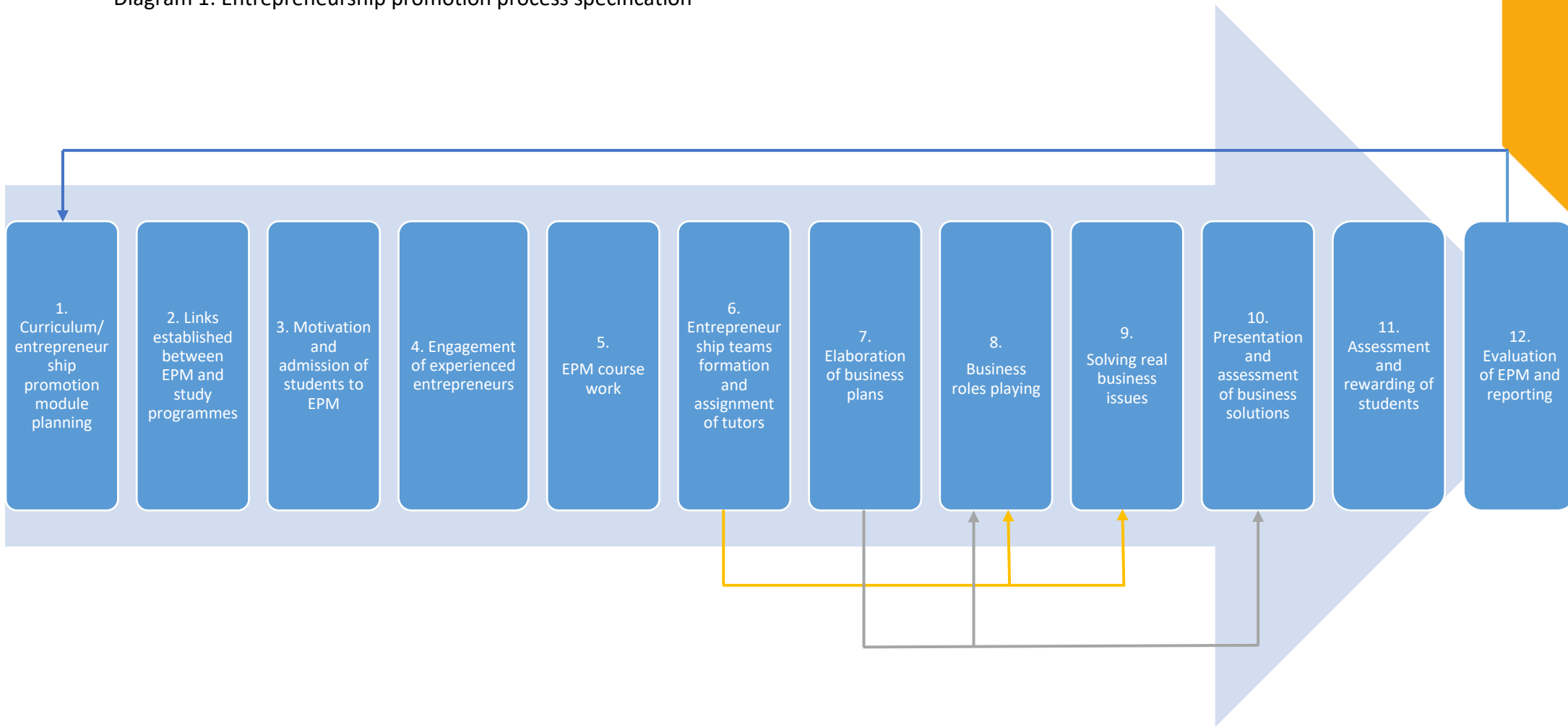
Setting up entrepreneurial activities is usually done by entrepreneurship experts of the university who are advised to consult external experts also.

Establishment of links between EPM and study programmes is necessary because EPM can be offered to students of various study programmes. While participation in EPM requires certain prior knowledge for successful participation of students, the study programmes must also preview the possibility of students' participation in EPM in terms of compulsory or elective participation, the amount of study time devoted to entrepreneurship promotion, the period in the study programme when students can take part in EPM, and recognition of credits awarded in EPM. On this basis the composition of EPM courses and projects can vary between groups of students coming from different study programmes. The coordination between EPM and study programmes should be done by the university staff members in charge of programmes and EPM.

Motivation and admission of students to EPM: Students' interests to participate in EPM vary a lot from country to country and between universities and professional fields. The WEXHE cases indicate both, a lack and a crowd of students who want to participate. The function of EPM is to enhance students' entrepreneurial mind-set and to help them develop entrepreneurial competences. At the same time it is important not to raise the expectations of those students with a weaker entrepreneurial mind-set in order to prevent their disappointments and to avoid difficulties in EPM implementation. Students need to have realistic information on EPM as well as on their entrepreneurial dispositions. The information can be delivered in groups. However, an interview with each student is recommended to find out his/ her preferences and expectations, eventual worries, strengths and weaknesses regarding prior knowledge, personal characteristics etc. This can also be a way to check if the students meet the application criteria. This is a task of EPM directors/ coordinators.

Engagement of experienced entrepreneurs is one of the crucial steps for the quality of EPM. Students need authentic information on the opportunities and risks associated with entrepreneurship. This can be done best by persons who have gained experiences in practice. Experienced entrepreneurs can be engaged for some parts of the course work where they present cases and lead seminars, discussions and exercises. In particular they are needed in the project work as tutors/ consultants to students' entrepreneurial teams in all phases of business plans elaboration, from generation and evaluation of business ideas to elaboration, presentation and evaluation of business plans. Engagement of experienced entrepreneurs is a task of EPM directors.

Diagram 1: Entrepreneurship promotion process specification



EPM course work serves as a preparation for students that will participate in entrepreneurial project work. By attending courses students will acquire the background knowledge needed before they can form teams, work in a team and manage, for business ideas generation, elaboration of business plans in technological, financial, marketing and human resources aspects, for presentation and defence of business plans, for fund raising etc. Which courses students should attend depends on the study programme a student is involved in and on the structure of the EPM. According to the WEXHE cases the time allocated to course work is rather limited which requires a high selectivity in the choice of courses. The courses should be focused on competences needed for entrepreneurship. The more an active approach is implemented in course delivery the better. Students must get an idea of entrepreneurial practice already during course work. This is why in some cases course work and project work are organised in parallel. Course work is a responsibility of professors/ university staff and EPM director/ coordinator. However, involvement of practitioners can enrich it a lot.

Entrepreneurship teams' formation and assignment of tutors is a usual step before students start working on a project. There are several possibilities:

- A student with a clear business idea can form his/ her team by inviting his/ her colleagues.
- Students who know each other from participation in study programmes can team up and start brain storming about a business idea.
- Professors and tutors may suggest individual students to form a team.

Following the WEXHE cases 3 – 8 students in an entrepreneurship team are ideal. Smaller teams are easier to coordinate. What is more important is that students with different and complementary competences come together, e.g., one or two from a specific professional field, one from the field of economics, one from the field of informatics, one with good organisational competences, etc. In literature, the composition of teams is seen as a special expertise (Belbin, 2010, Adizes, 1979).

At this point tutors/ mentors/ lecturers can step in and give their advice and opinion. They are assigned by the EPM director/ coordinator or students can ask them to join and give advice. Tutors/ mentors can be from the university or from outside, e.g., experienced entrepreneurs or representatives of organisations that provide issues to be dealt with by the teams of students. Two mentors/ tutors, an internal and an external can also be assigned to

each team. Both must be qualified for this role. Mentors are in regular contact with students until the EPM is finished. Mentor's task is to support and empower student through trustworthy relations, which will rise the student's self-confidence (Clouder, 2009). University mentors assist students in their career planning, in establishing contacts with entrepreneurs and in keeping contacts with the university. Their role is also to enhance students' reflection on entrepreneurship experience, which can be done in the reflection meetings. External mentors/ experienced entrepreneurs share their experiences with students, give advice on students' project work and evaluate projects' results.

Project work can be considered to be the core of EPM. It can take various forms, such as:

- **Elaboration and presentation of a business plan** which starts with a business idea (new product, new service, new technological or organisational solution in the production or marketing process etc.), continues with elaboration of technical, financial, marketing and personnel details, prototyping and presentation/ pitching of a finalised business plan to a jury. The whole process is usually organised as a competition between several entrepreneurship teams. A jury assesses each business plan, its presentation and defence, and awards prizes, credits or certificates.
- **Business roles playing**, such as simulation of decision making by the board of directors in a Global Management Challenge program presented in one of the Spanish WEXHE cases; or by playing various entrepreneurial roles in a 'school enterprise' founded and managed by a student entrepreneurship team.
- **Solving real business issues** on the basis of an agreement made between the university (students' entrepreneurship team) and an institution, such as an enterprise, local community or public institution. Some good examples are provided by the Dutch WEXHE cases, such as a 'Co-Challenge' where students of the Utrecht University solve problems for the Municipality of Utrecht, or 'Cultural Entrepreneurship' where students of the Erasmus University of Rotterdam and of the Rotterdam University of Applied Sciences organise cultural performances individually or in cooperation with cultural institutions, such as museums, galleries and cultural centres.

Project work can be organised in many different ways. An important point is that it enables active involvement of all participating students, that it addresses generic and specific competences needed for entrepreneurship and that it is concluded by a reflection meeting of students and their mentors.

Presentation and assessment of business solutions is an integral part of a project work. Entrepreneurship teams present their business plans, prototypes and other solutions to other teams, to tutors/ mentors, juries, professors and representatives of participating organisations. Presentations often include discussions in which the audience pose questions, express opinions and evaluate results and presentations while students defend the presented results. The EPM may be concluded with the ranking of presented projects and awards given to entrepreneurship teams.

Assessment and rewarding of students: Course work of students should be assessed and marked on a regular basis. In addition, mentors monitor students' project work directly. They also read students' reports and discuss with them in group meetings. Mentors care for the progress students make towards expected project results and learning outcomes – development of competences and skills. On this basis they assess students and award them credits. The best should be encouraged and supported to make a step towards business creation.

Evaluation of EPM and reporting is focused on the assessment of an individual student and his/ her success in the course work, on the teamwork and the team's project results, and on the overall results of EPM in a certain generation of students. To some extent evaluation is carried out during the process of EPM. Final evaluation is usually made at the end of a certain period, e.g. a study year. The WEXHE cases indicate that evaluation is generally internal. Evaluation results are reported to the management of university and to participating organisations. Essential in the report is to what extent the learning outcomes are achieved. On this basis study programmes and EPM can be improved. Reporting is a task of the EPM coordinators.

Roles specification – tasks and responsibilities

The most frequently mentioned roles related to EPM at the universities are: EPM coordinators/ directors, mentors/ tutors and lecturers of individual courses who often take the roles of directors and coordinators also. Among the externals one should single out the role of experienced entrepreneurs who are invaluable in carrying out EPM. There is also administrative support to the EPM activities carried out by university staff. The main roles are shortly specified in the following paragraphs.

- **Mentors/ tutors/ coaches:** These roles are overlapping to a great extent. The difference is rather in the name and style than in the content. Mentors at the universities are usually teachers or coordinators in charge of EPM. Mentors from outside university are invited from collaborative organisations or from a network of experienced entrepreneurs. Mentors are assigned to a team of students. Mentors will advise students on how to do the project work. However, an important role of university mentors is overall guidance, support to students throughout their involvement in EPM, empowerment and trust building.

A mentor suggests students' participation in courses, seminars, workshops etc., helps during the formation of student teams, enhances brain storming and the selection of a business idea, instructs students in elaboration of business plans and in seeking solutions for a business problem, monitors students' progress, keeps regular meetings with them and gives feedback on their project's progress, discuss their career perspectives and issues that may arise, organises group meetings with students, enhances students' reflection on the EPM, reports on the progress and performance of students, evaluates EPM etc. The main responsibility of a mentor is to guide a student towards successful achievement of the agreed learning outcomes, i.e., to enable students' realistic view on their entrepreneurship potentials, to motivate them for entrepreneurship and to help them develop competences needed for it. Their role is also to enhance students' reflection on entrepreneurship and to give career guidance.

Lester and Costley (2010) add some more functions of mentors / tutors. "The role of the tutor often moves, on the one hand, from being a teacher to being both a facilitator and an expert resource, and, on the other, from supervisor to advisor or 'academic consultant'... The role of a WBL tutor... will include:

- helping learners to become active in identifying their needs and aspirations and managing the learning process;

- acting as a process consultant;
- helping learners develop their abilities of critical reflection and inquiry;
- helping learners identify and work with ethical issues;
- helping learners make effective use of workplace resources;
- developing learners' academic skills and helping them use them in the workplace;
- providing specialist expertise, and
- inspiring and encouraging learners" (Lester and Costley, 2010).

It is highly desirable that people taking up the role of mentors are trained for it like 'meister' in German companies. In several countries SME associations organize training of mentors who work in companies including recognition of prior learning, examination and certification of mentors' competences. Only mentors having official certificates should be allowed to take on this role. In some countries training of mentors has been included in the national qualification frameworks thus providing certification and public recognition to mentors. University mentors are supposed to be qualified for this role as university teachers.

- **Experienced entrepreneurs** take up a special role in the EPM. They can be a mentor. Having gone through several entrepreneurship projects they can guide students throughout their projects step by step by enhancing students' creativity, sharing their experiences, evaluating solutions, expressing signs of warning etc. They can be first hand instructors to students. Their role is to work with students, bring knowledge to the surface and make explicit that was has become tacit through repeated exercise. "The facilitator's role, in part, is to help create awareness of those habitual and unconscious behaviours that participants rely upon, in order to encourage them to re-evaluate their responses and develop fresh understandings... ...participant, industry specialist and facilitator are all learning from the process in which they are mutually engaged" (Darlymple et al, 2014).
- **EPM coordinators/ directors** coordinate the activities of the other personnel involved in EPM: mentors, experienced entrepreneurs, lecturers and students. They also look for, engage with and draw up contracts with experienced entrepreneurs. Coordinators should do everything necessary for the smooth running of an EPM: entrepreneurship module planning, making links with study programmes, motivating and admitting students, facilitate the team formation of students, finding organisations which can offer business issues that students can

work on, organising presentations, assessment and evaluations procedures and reporting. The main responsibility of coordinators is to coordinate all the activities related to EPM in terms that all the participating parties get relevant information on how to play their roles, and that all get assistance if needed. Henderson and Trede (2017) think that “the establishment of centres in the university to facilitate purposeful, organized, and ‘assessable’ work-based learning in academic programs is beneficial. Such centres provide ‘lead’ individuals with specific education and expertise...” “Universities will have to establish specific structures that are responsible for the special needs of WBL pathways... and of the groups of learners engaged in this kind of learning experience. Specifically, trained teaching and tutoring staff with high academic qualifications as well as social awareness and human sensitivity must be employed in this field...” (Schmidt and Gibbs, 2009).

FINANCING

EPM infers certain costs to universities and to students/ business creation teams. However, it can bring benefits also. These are presented in table 5.

Table 5: Costs and benefits of an Entrepreneurship Promotion Module

PARTNERS	COSTS	BENEFITS
UNIVERSITIES/ SUPPORTIVE ORGANISATIONS	Labour costs: <ul style="list-style-type: none"> - Coordinators - Mentors - Experienced entrepreneurs Material costs: <ul style="list-style-type: none"> - Awards to business teams - Subsidies for supportive institutions (incubators, accelerators etc.) Administrative costs: <ul style="list-style-type: none"> - Running of EPM - Application and reporting to entrepreneurship supportive schemes - Fund rising activities 	Subsidies from public schemes supporting entrepreneurship promotion and from sponsors Increasing employability of students/ graduates Improved public image
STUDENTS/ BUSINESS TEAMS	Material costs: <ul style="list-style-type: none"> - space - equipment - input materials and energy - products and services development 	Subsidies from the university, public schemes, sponsors Awards for the best business teams: money, business creation support Experiences gained and competences developed Increasing employability Raising awareness of entrepreneurial competences

There are some comments needed with regard to the outlined costs and benefits.

The labour costs of universities do not need to be very high particularly if EPM is an integral part of a curriculum. However, the maintenance of business supportive environment including space, equipment, awards to entrepreneurship teams and supportive institutions, such as incubators can be more costly. Therefore, universities usually make their supportive institutions (incubators, accelerators, career centres etc.) autonomous hoping that they will be able to attract additional non-university resources (from independent private and public funds, business angels, government schemes, successful new entrepreneurs) for entrepreneurship promotion and creation. Universities themselves count rather on indirect benefits, such as increasing employability of graduates and good public image. In addition, universities expect governments to financially assist these programmes if they have an extra-curricular status since they are considered to be an expression of universities' social responsibility.

In case of good supportive environment students benefit most out of the entrepreneurship promotion programmes. They gain experiences, develop competences and increase their employability. The best students can proceed towards business creation. In case of weak support students can start demonstrating their entrepreneurship spirit by rising funds needed for their business projects.

The WEXHE cases show that universities cover the costs of EPM in most of the cases, particularly if an EPM is integrated in overall university curriculum. In some cases, an EPM has an experimental or extra-curricular status. Universities may still cover the costs inferred or they address sponsors (enterprises, foundations, local governments...) to step in. University supportive institutions also raise funds to run entrepreneurship promotion modules.

QUALITY ASSURANCE, EVALUATION AND ACCREDITATION

Quality assurance, evaluation and accreditation of EPM remain internal in most of the WEXHE cases. Various quality assurance and evaluation activities are mentioned that students and their mentors are expected to perform. The **quality** of EPM is usually assured by:

- Well prepared EPM curriculum
- Good preparation of students before they are admitted to EPM
- High quality network of experienced entrepreneurs
- Training of mentors for their teaching and coaching roles
- Mentors' counselling and giving advice to students
- Regular meetings of mentors/ tutors with their students including their reports to coordinator
- Well-structured and organised presentations of business ideas and plans
- A strong coordination

Evaluation procedures will include providing feedback regarding the quality assurance. It can be performed by those involved in an EPM – internal evaluation or by externals, e.g., evaluation agencies. There could be an overall evaluation of an EPM with the accent on its effectiveness and efficiency, satisfaction of participants etc., or a more focused one, e.g., on the roles of mentors and coordinators, on the quality of courses and projects, etc. It can take various forms, such as:

- Students' evaluation of EPM and its realisation by means of questionnaires
- Students' evaluation of course works and projects by means of questionnaires
- Mentors' evaluation of projects by means of questionnaires or by means of reports to coordinators
- Evaluation seminars/ workshops organised for the group of students
- Coordinators' evaluation and reports
- External agency's evaluation.

The criteria of evaluation should be specified. Among the criteria special attention should be paid to meeting the goals and objectives of an EPM, i.e., to what extent the competences and skills specified in the EPM are developed in the course of placement and to what extent the learning outcomes are achieved.

The WEXHE cases show that EPM tends to be an integral part of a curriculum and study programme and is therefore directly accredited and publicly recognised. A successfully completed EPM provides students with credit points which contribute to meeting study requirements. In countries having a well-developed national qualification system there is a possibility to accredit EPM as a specific study module. However, the WEXHE cases indicate that not all universities are opened for modules, such as an EPM. It remains an elective or extra-curricular activity provided by universities. It does not necessarily result in study credits for students, but students can receive certificates after successful completion.

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APPENDICES

Appendix 1 – Examples of cases illustrating Entrepreneurship Promotion:

- New Technology Ventures (Netherlands)
- Program e2 “Student by Entrepreneur” (Spain)
- Program Global Management Challenge (Spain)

Appendix 2 – Check List for UK Entrepreneurs Start-ups/ Incubators

Check List for UK Entrepreneurs Start-ups/Incubators

- Company registration (including directors registration) as part of start-up process –
 - o Check the name you want is available at Companies House website
<https://www.gov.uk/get-information-about-a-company>
 - o Registered office, doesn't need to be your physical location, especially if you are going to move frequently as you grow.
- Trademark check (ensure you can use the company and product names you have selected)
- Website – check domain name (url) for company name is available. Purchase URL (and any similar eg .co.uk .net). Hosting and web design. You may want an SSL or EV SSL certificate depending on your market. You may want secure hosting, depending on market and service provision.
- Email addresses – related to above, purchase URL and hosting..
- Bank account
- Accountant (Register with HMRC, National Insurance, Payroll, PAYE, Corporation Tax etc). You could use a book keeper, payroll service, etc for basic administration. Do you want to change your Accounting Reference Date (financial year end) to 31st March to tie in with tax year? All directors will need to register to file personal self-assessment tax returns. Any PAYE payments have to be reported to HMRC in real time via electronic payroll software.
- Maintain and file a PSC (person of significant control) register
<https://www.informdirect.co.uk/company-records/psc-register-of-people-with-significantcontrol-what-is-it>

- Lawyer
 - Logo
 - Stationary (eg headed paper, fax cover sheet, email signature, including company number, registered office, VAT number. Business cards. Invoice)
 - Website. Company details on website, including company number, registered office, VAT number). Privacy and cookie policies.
 - Data protection licence
 - o Self assessment <https://ico.org.uk/for-organisations/data-protection-fee/selfassessment/>
 - o Fee £40 per annum for startups <https://www.highspeedtraining.co.uk/hub/dataprotection-licence-application/>
 - o Data security guidelines
 - Employer liability insurance (compulsory)
 - Indemnity insurance, Public Liability insurance and other business insurance
http://www.startinbusiness.co.uk/flowchart/8flowchart_ins.htm
 - VAT registration <http://www.hmrc.gov.uk/vat/start/register/> (not essential until you reach trading limit)
 - Do you need to pay council business rates
 - Knowledge of Health and Safety requirements for employees.
 - Keeping minutes of board meetings.
 - Data backup off site (cloud?)
 - Standard legal documents such as licences for product, software, services, consulting, online sales, depending on your business.
 - Do you need regulatory approval for your company or your products eg FCA approval, or CE marking
 - Premises, furniture, fittings, computers, printers, phones,
 - If no premises – business address and phone answering service?
...and, get used to keeping records and receipts, your accountant will need them, and you will need to keep them for 6 years.
- Not a recommendation, but
<https://www.informdirect.co.uk/>
for company secretarial support and company formation, registered address service etc.

GLOSSARY

For composing this list of terms and their definitions, the following sources have been used among others: Tuning Educational Structures in Europe, *Universities' contribution to the Bologna Process. An introduction*. 2nd Edition, Bilbao and Groningen, 2008; Jenneke Lokhoff a.o. eds., *A Tuning Guide to Formulating Degree Programme Profiles. Including Programme Competences and Programme Learning Outcomes*. Bilbao, Groningen and The Hague, 2010; CEDEFOP, *Terminology of European education and training policy. Second Edition. A selection of 130 key terms*. Luxembourg: Publications office of the European Union, 2014. European Commission, *ECTS Users' Guide 2015*. Luxembourg: Publications office of the European Union, 2015.

Ability:

Acquired or natural capacity, competence, proficiency or talent that enables an individual to perform a particular act, job or task successfully.

Accreditation of an education or training programme:

A process of quality assurance through which a programme of education or training is officially recognised and approved by the relevant legislative or professional authorities following assessment against predetermined standards.

Active learning:

An approach to instruction that involves actively engaging students with the course material through discussions, problem solving, case studies, role plays and other methods. It is opposed to passively taking in the information.

Allocation of ECTS credits:

The process of assigning a number of credits to qualifications, degree programmes or single educational components. Credits are allocated to entire qualifications or programmes according to national legislation or practice, where appropriate, and with reference to national and/or European qualifications frameworks. They are allocated to educational components, such as course units, dissertations, work-based learning and work placements, taking as a basis the allocation of 60 credits per full-time academic year, according to the estimated workload required to achieve the defined learning outcomes for each component.

Apprenticeship:

Systematic, long-term training alternating periods at the workplace and in an educational institution or training centre. The apprentice is contractually linked to the employer and receives remuneration (wage or allowance). The employer assumes responsibility for providing the trainee with training leading to a specific occupation. The term originates and is in particular applied in Vocational Education and Learning. WEXHE advises to avoid using the term in higher education, with the exception of *dual learning*.

Competence:

The ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and personal development. Fostering competences is the object of all educational programmes. Competences are developed in all course units and assessed at different stages of a programme. Some competences are subject-area related (specific to a field of study), others are generic (common to any degree course). It is normally the case that competence development proceeds in an integrated and cyclical manner throughout a programme.

Course unit:

A self-contained, formally structured learning experience. It should have a coherent and explicit set of learning outcomes, expressed in terms of competences to be obtained, and appropriate assessment criteria. Course units can have different numbers of credits, although it is recommended that units carry a uniform number of credits or a multiple thereof. These units, with thesis work and work placements where appropriate, are the building blocks of programmes.

Degree programme:

The set of educational components leading to the award of a degree to a student after successful completion of all the requirements.

Diploma Supplement:

The Diploma Supplement (DS) is a document accompanying a higher education diploma, providing a standardised description of the nature, level, context, content and status of the studies completed by its holder. It is produced by the higher education institutions according to standards agreed by the European Commission, the Council of Europe and UNESCO. The Diploma Supplement is also part of the Europass framework transparency tools.

ECTS credits:

ECTS credits express the volume of learning based on the defined learning outcomes and their associated workload. 60 ECTS credits are allocated to the learning outcomes and associated

workload of a full-time academic year or its equivalent, which normally comprises a number of educational components to which credits (on the basis of the learning outcomes and workload) are allocated. ECTS credits are generally expressed in whole numbers.

Elective:

A course unit that may be taken as part of a study programme but is not compulsory for all students.

Entrepreneurship:

Entrepreneurship is the act of creating a business or businesses while building and scaling it to generate a profit.

European Credit Transfer and Accumulation System (ECTS):

A learner-centred system for credit accumulation and transfer, based on the principle of transparency of learning, teaching and assessment processes. Its objective is to facilitate planning, delivery and evaluation of study programmes and student mobility by recognising learning achievements and qualifications and periods of learning.

European Qualifications Framework for Lifelong Learning (EQF):

The European Qualifications Framework for Lifelong Learning is a common European reference tool for describing and comparing qualification levels in qualifications systems developed at national, international or sectoral levels. The EQF uses eight reference levels based on learning outcomes that are defined in terms of knowledge, skills and autonomy and responsibility.

Evaluation:

Evaluation of teaching and academic studies in a subject or department and the related degree programmes comprises all those activities which aim at assessing quality and fitness for purpose and of purpose. Strengths and weaknesses of education and training can be identified by stocktaking, analysis and proposals formulated to ensure the sustainability of quality. Evaluation may be carried out through both internal and external procedures. Internal evaluation comprises the systematic collection of administrative data and obtaining feedback from staff, students and graduates, as well as holding structured conversations with lecturers and students. External evaluation may include visits by a review team to the department in order to review the quality of the academic studies and teaching, the use of external examiners, external accreditation, etc. A significant element in enhancing quality is ensuring that internal and external procedures are used to improve student learning.

Formal learning:

Learning typically provided by an education or training institution, which is structured (in terms of learning outcomes, learning time and learning support) and leads to certification.

Framework for Qualifications of the European Higher Education Area (QF-EHEA):

An overarching framework at European level that makes transparent the relationship between national higher education frameworks of qualifications of the different European countries and the qualifications they contain. It is an articulation mechanism between national frameworks. It is characterised by credit ranges.

Generic competences:

Generic Competences are also known as transferable skills or general academic skills. They are general to any degree programme and can be transferred from one context to another, although they have normally been developed in the context of a particular academic field of study.

Informal learning:

Learning resulting from daily activities related to work, family or leisure which is not organised or structured in terms of objectives, time or learning support; it may be unintentional from the learner's perspective; examples of learning outcomes acquired through informal learning are: skills acquired through life and work experiences, project management skills, ICT skills acquired at work, languages learned, intercultural skills acquired during a stay in another country, ICT skills acquired outside work, skills acquired through volunteering, cultural activities, sports, youth work and through activities at home e.g. taking care of a child (EU Council Recommendation 2012/C 398/01).

Internship:

A period of work experience offered by an organization for a limited period of time. Initially to medical graduates, internship is nowadays used for a wide range of placements in businesses, non-profit organisations and government agencies. They are typically undertaken by students and graduates looking to gain relevant skills and experience in a particular field. Interns may be high school students, college and university students, or post-graduate adults. These positions may be paid or unpaid and are temporary. An internship often comes in addition to the actual study programme. WEXHE advises to avoid the term internship and to use the term work placement in a higher education setting instead, because the last expresses that this mode of learning is an integral part of the programme.

Intrapreneurship:

Refers to a system that allows an employee to act like an entrepreneur within a company or other organization. Intrapreneurs are self-motivated, proactive, and action-oriented people who take the initiative to pursue an innovative product or service. Intrapreneurship is known as the practice of a corporate management style that integrates risk-taking and innovation approaches, as well as the reward and motivational techniques, that are more traditionally thought of being typical for entrepreneurship.

Learning Outcomes:

Statements of what a learner knows, understands and/or is able to do on completion of a learning process. The achievement of learning outcomes has to be assessed through procedures based on clear and transparent criteria. Learning outcomes are attributed to individual educational components and to programmes at a whole. They are also used in European and national qualifications frameworks to describe the level of the individual qualification. In WEXHE they express level of intended and/or achieved competences.

Learner:

An individual engaged in a learning process (formal, non-formal or informal learning). Students are learners involved in a formal learning process.

Lecture:

A discourse given before an audience or class especially for instruction.

Lecturer:

A teacher at a university or college, who offers guidance to students in their learning process, e.g. offering instruction (lectures, seminars, assignments) and support and assess students work.

Levels:

Levels are understood to be a series of sequential steps to be taken by the learner (within a development continuum) expressed in terms of a range of generic outcomes, within a given programme.

Level descriptor:

Generic statements describing the characteristics and context of learning expected at each level against which learning outcomes and assessment criteria can be reviewed. They are also intended to guide the learner, teacher and curriculum with respect to the complexity, relative demand and learner autonomy. These general descriptors can be applied to specific subject disciplines and ways of learning. Level descriptors are useful for curriculum design,

assignment of credit, validation, guidelines for recognition of learning from experience and of non-formal learning and for staff development.

Lifelong learning:

All learning activity undertaken throughout life, with the aim of improving knowledge, skills and competences within a personal, civic, social and/or employment-related perspective. Programmes and services contributing to lifelong learning within the higher education sector may include mainstream programmes, continuing education, evening classes, specific programmes for part-time learners, access to libraries/higher education institution resources, distance learning, training courses, targeted guidance and counselling services among other actions and initiatives.

Mentor:

A member of staff at a company or institution who gives a learner/student help and advice over a specific period of time at work or at a (higher) education institution.

Module:

A course unit in a system in which each course unit carries the same number of credits or a multiple of it.

National Qualifications Framework (NQF):

An instrument for the classification of qualifications according to a set of criteria for specified levels of learning achieved, which aims to integrate and coordinate national qualifications subsystems and improve the transparency, access, progression and quality of qualifications in relation to the labour market and civil society.

National qualifications frameworks encompass all education qualifications – or all higher education qualifications, depending on the policy of the country concerned – in an education system. They show what learners may be expected to know, understand and be able to do on the basis of a given qualification (learning outcomes) as well as how qualifications within a system articulate, that is how learners may move between qualifications in an education system. National qualifications frameworks are developed by the competent public authorities in the country concerned, in cooperation with a broad range of stakeholders – including higher education institutions, students, staff and employers.

Prior learning (assessment) (PLA):

Is learning gained outside a traditional academic environment, e.g. while working, participating in employer training programs, serving in the military, studying independently, volunteering or doing community service, and studying open source courseware. PLA is the

evaluation and assessment of an individual's life learning for higher education credit, certification, or advanced standing toward further education or training.

Qualification:

Any degree, diploma or other certificate issued by a competent authority attesting the successful completion of a recognised programme of study.

Quality assurance:

The process or set of processes adopted nationally and institutionally to ensure the quality of educational programmes and qualifications awarded. Quality assurance should ensure a learning environment in which the content of programmes, learning opportunities and facilities are fit for purpose. Quality assurance is often referred to in the context of a continuous improvement cycle (i.e. assurance and enhancement activities).

Recognition (academic recognition):

Approval of courses, qualifications, or diplomas from one (domestic or foreign) higher education institution by another for the purpose of admitting students to undertake further studies.

Skill:

A learned capacity to achieve pre-determined results often with the minimum outlay of time, energy, or both. Skills are often divided into general/generic and subject specific skills.

Student:

A learner enrolled on a formal educational programme at a higher education institution.

Student-centred Learning:

A learning approach characterised by innovative methods of teaching which aim to involve both students and teachers in the learning process. This implies that students are active participants in their own learning, fostering both subject specific competences (knowledge and skills) and generic competences such as problem-solving, critical and reflective thinking, creativity and entrepreneurship, teamwork and project work.

Subject specific competences:

Competences related to a specific subject area. They cover both knowledge and disciplinary skills key to the subject area.

Supervisor:

Member of academic staff of the University who monitors the progress of a student by providing advice and guidance for thesis work, but also for work-based learning.

Teacher:

See lecturer.

Traineeship:

A type of work-based learning that is aimed at students who have finished their educational training (graduated students) but have not yet entered the labour market. It includes not just structured trainee programmes aimed to attract new talents and prepare them for leadership roles - normally offered by larger organizations, but also schemes for the reinsertion into the workforce.

Transformative learning:

Transformational learning is the process of deep, constructive, and meaningful learning that goes beyond simple knowledge acquisition and supports critical ways in which learners consciously make meaning of their lives. It is the kind of learning that results in a fundamental change in our worldview as a consequence of shifting from mindless or unquestioning acceptance of available information to reflective and conscious learning experiences that bring about true emancipation.

Transversal skills:

See generic competences.

Tutor:

A staff member who gives individual or small group instruction. In a student-centred environment, he or she is also expected to help students help themselves, and to assist or guide them to the point at which they become independent learners.

Work-based learning:

Learning delivered by a university, college or other training provider in the workplace, normally under the supervision of a person from the same company as well as a professional teacher from outside the company.

Workload:

An estimation of the time learners typically need to complete all learning activities such as lectures, seminars, projects, practical work, work placements, individual study required to achieve the defined learning outcomes in formal learning environments. The correspondence of the full-time workload of an academic year to 60 credits is often formalised by national legal provisions. In most cases, student workload ranges from 1,500 to 1,800 hours for an academic year, which means that one credit corresponds to 25 to 30 hours of work. It should be recognised that this represents the normal workload and that for individual learners the actual time to achieve the learning outcomes will vary.

Work placement:

A planned period of experience outside the institution (for example, in a workplace) to help students to develop particular skills, knowledge or understanding as part of their programme.

A work placement is an integral part of the curriculum.

Work Placement Certificate:

A document is issued by the receiving organization / enterprise upon the trainee's completion of the work placement, and it can be complemented by other documents, such as letters of recommendation. It aims to provide transparency and bring out the value of the experience of the student's work placement.