



Enterprise and Entrepreneurship Education:

**Guidance for UK Higher
Education Providers**

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Foreword

Described as a landmark document by the British Government's Chief Entrepreneurial Adviser, and used to inform international initiatives such as the European Commission's EntreComp Framework, QAA's 2012 [guidance on Enterprise and Entrepreneurship](#)¹ has been applied to shape and develop new educational initiatives worldwide. Five years on, we have seen its impact evidenced in new types of courses, new types of learning and new metrics for success.

The purpose of this document is to capture this impact and to provide a future roadmap for Enterprise and Entrepreneurship Education. We have consulted widely, heard case studies from around the UK at our Quality Enhancement Network events, taken the views of over 60 delegates from an international conference, and listened to international colleagues who are actively using it in contexts that we never imagined.

The 2012 team described the guidance as a 'stake in the sand', meaning that at that juncture many of the concepts were untried and untested. This document builds on the success that has been evidenced, learns from interpretations derived from it and once again looks forward, in order to support the educator community which has evolved and continues to evolve this important educational agenda.

I can only express my deepest gratitude to all of those who have supported this review and, ultimately, contributed to the development of this document. The names and organisations of those involved in the final drafting are included at the back of this guidance, and indicate the sheer breadth of stakeholder engagement.

The reader who is familiar with the 2012 guidance will notice that our definitions have been enhanced, a new breadth of impact measures has been developed, and the pipeline of learning activities is aligned to institutional support. These were the changes called for by the educators who joined our consultations, however, these new additions are simply enhancements, in line with what the community of practice has called for.

Andy Penaluna

Chair, QAA Enterprise and Entrepreneurship Review

¹ *Enterprise and entrepreneurship guidance: Guidance for UK higher education providers* (2012), available at: www.qaa.ac.uk/publications/information-and-guidance/publication?PubID=70.

Introduction and context

About this guidance

This guidance reflects current thinking and practice in Enterprise and Entrepreneurship Education. It is intended to inform, enhance, and promote the development of Enterprise and Entrepreneurship Education across UK higher education. The guidance draws on contemporary best practice and has been developed by experts from the Enterprise and Entrepreneurship educator community, with support from QAA.

This guidance is not specific to any degree programme, subject specialism or level of study. It should be read in conjunction with the appropriate QAA Subject Benchmark Statement and can be supported by other guidance developed for Enterprise and Entrepreneurship educators (see Resources section). It aims to help academics, educators and practitioners who are seeking to embed enterprise and entrepreneurship across the curriculum and beyond.

Note: The use of language and terminology has been carefully considered throughout this guidance. As our intention is to provide a spotlight on areas for development, we acknowledge that there may be some areas of overlap.

The value of Enterprise and Entrepreneurship Education

Enterprise and Entrepreneurship Education provides interventions that are focused on supporting behaviours, attributes and competencies that are likely to have a significant impact on the individual student in terms of successful careers, which in turn adds economic, social and cultural value to the UK.

Enterprise Education is an excellent tool to prepare students for changing environments. It provides enhanced impact through placements and activities that build links between academic institutions and external organisations.

Entrepreneurship Education and the development of entrepreneurial capacity is not simply linked to employment. It provides competencies to lead a rewarding, self-determined professional life. Students will be well placed to add significant social, cultural and economic value to society through entrepreneurial activity throughout their careers.

Enterprise and Entrepreneurship Education can have significant impact for the academic institution, through spin-out or graduate start-ups that build credibility for the institution, and through new external relationships with growth-orientated organisations.

These activities combine to support the delivery of multiple strategies for the sector: teaching and learning; research and impact; and knowledge exchange and engagement. Enterprise and Entrepreneurship Education is a significant part of the university landscape; its successful delivery is key to the overall success of the sector.

Aims and vision for Enterprise and Entrepreneurship Education

Enterprise and Entrepreneurship Education has been shown to:

- be inclusive and support wider participation
- have a positive influence on students' creativity, flexibility and the innovation process
- have a positive impact on behaviour change and active citizenship
- have a positive impact on learning attainment and grades
- significantly improve stakeholder engagement
- demystify career opportunities and enhance employability
- have a positive impact on positions gained within employment
- significantly increase start-up rates.

This guidance is underpinned by the principle that all students should have an opportunity to engage with Enterprise and Entrepreneurship, and to align it with their subject(s) of choice. This will enable them to identify and seek out new opportunities; have higher aspirations in their careers; be resilient; and better adapt to change.

It values Enterprise and Entrepreneurship Education as a teaching and learning approach as well as a subject. It maintains that teaching and learning strategies, and educator development opportunities such as continual professional development (CPD), should reflect this.

The guidance supports an approach where institutions who offer Enterprise and Entrepreneurship Education develop strategies and share their findings through engagement, evaluation, research and dissemination, so that the sector can grow.

Context

Enterprise and Entrepreneurship Education in context

Note: all initiatives, reports and strategies mentioned can be found in the Resources section (Appendix 1).

Learning about and experiencing Enterprise and Entrepreneurship while at university can have several benefits. It gives students alternative perspectives on their career options and ultimately, the confidence to set up their own business or social enterprise. Enterprise competencies will be useful to those in employment, or those who become self-employed and work on a freelance or consultancy basis. It can help develop a 'can-do' confidence, a creative questioning approach, and a willingness to take risks, enabling individuals to manage workplace uncertainty and flexible working patterns and careers. Enterprising competencies, such as teamwork and the ability to demonstrate initiative and original thought, alongside self-discipline in starting tasks and completing them to deadline, are essential attributes that have been identified by employers as priorities. The potential for portfolio career trajectories also suggests that these learning experiences will support the needs of our students.

Entrepreneurship Education takes the next leap, and builds on these, introducing and developing business competencies that enable the journey towards start-up and new business development.

The following section describes various policy drivers that are concerned with employability and the broader UK economy. It is important to note that Enterprise and Entrepreneurship Education can provide highly engaging learning opportunities, particularly when related to the programme of study chosen by the student.

UK Policy context - Enterprise and Entrepreneurship in higher education

Since the publication of QAA's Enterprise and Entrepreneurship guidance in 2012, the policy landscape has evolved substantially and provided some key drivers for the review of the guidance.

A call from microbusinesses to parliamentarians in 2014 resulted in a study entitled 'An Education System Fit for an Entrepreneur'. This All Party Parliamentary Group document provided a springboard for future work and was used by the Prime Minister's office in the production of Lord Young's 'Enterprise for All'.

In 2016, the Council for Science and Technology wrote to the Prime Minister arguing the importance of formal Entrepreneurship Education in universities, in particular for STEM undergraduates. The letter argues that greater entrepreneurial activity among STEM graduates will lead to more innovative, science-based companies being formed and scaled-up, driving economic growth, creating jobs and increasing productivity. The Prime Minister's response to the letter specifically referred to the 2012 guidance, suggesting that future work could build on it.

The 2017 Building our Industrial Strategy highlighted the government's aim to support the next generation of entrepreneurs and improve support for scale-ups. Responses to the preceding Green Paper supported the importance of Enterprise and Entrepreneurship to the successful delivery of the industrial strategy. The new role of Chief Entrepreneurial Adviser was created at the Department for Business, Energy and Industrial Strategy (BEIS), to assess the support available to entrepreneurs, consider international best practice, and ensure good practice across business schools can reach the widest audience.

In Scotland, 2017 saw the development of an Enterprise and Skills Strategic Board. The Board was created in response to the 2016-17 Enterprise and Skills Review in Scotland. The review aimed to ensure that Scotland's public agencies deliver adequate enterprise and skill support for Scotland's young people, universities, colleges, training providers and businesses. To deliver this aim, the Enterprise and Skills Strategic Board will align and coordinate the activities of Scotland's enterprise and skills agencies.

The Teaching Excellence Framework (TEF) provides the opportunity for higher education institutions to recognise the value of high quality Enterprise and Entrepreneurship Education and highlight the career benefits for students. The Department for Education's Teaching Excellence and Student Outcomes Framework Specification makes specific reference to Enterprise and Entrepreneurship. Possible examples of evidence for the 'Student Outcomes and Learning Gain' aspect of the TEF include 'Extent of student involvement in enterprise and entrepreneurship' and 'Number, impact and success of graduate start-ups'.

Substantial progress has been made to improve the evidence base to help institutions identify the impact of Entrepreneurship Education on jobs and the economy. Between July 2015 and June 2017, the new Destinations of Leavers from Higher Education (DLHE) review was conducted to design a new model for collecting information about what higher education students do after graduation, including what kind of businesses have been started by graduates. The new model offers a better way of capturing the outcomes for students who take non-traditional routes, including through entrepreneurship, self-employment or freelancing. The new format Graduate Outcomes Survey will replace the new DLHE and may also provide insightful evidence though more longitudinal insights.

In addition, Enterprise and Entrepreneurship has been recognised as a subject discipline within the Higher Education Classification of Subjects (HECoS) coding system, which replaces the JACS system when implemented from autumn 2019. Initiatives such as the Graduate Outcomes Survey may also provide insightful evidence.

The Higher Education Funding Council for England (HEFCE) has been developing a Knowledge Exchange Framework (KEF) that builds upon the data collected by the extensive UK-wide HE-BCI survey and the information provided for the Higher Education Innovation Fund (HEIF) in England. Whilst the HE-BCI survey recognises the importance of both staff and student start-ups, and HEIF funding is used to support a wide range of knowledge exchange activities including student entrepreneurship, Enterprise Education initiatives fall beyond their scope. The HEFCE KEF Group McMillan Report published in 2016 called for greater strategic recognition of the importance of knowledge transfer within universities and, more recently, the government has committed to the development of enhanced benchmarking to improve knowledge exchange. The definition of knowledge exchange will include support for Enterprise and Entrepreneurship activities, which adds another external driver.

In Scotland, higher education institutions (HEIs) are taking part in the Universities' Scotland 'Making it Happen' initiative, which aims to address the gaps of Enterprise and Entrepreneurship Education in Scottish higher education. All Scottish universities have signed and agreed a set of eight actions that aim to increase the availability of Enterprise and Entrepreneurship Education in higher education; the number of student start-ups; the number of students and staff taking part in Enterprise and Entrepreneurship related activity; and more. The initiative, which started in 2015, will finish in 2018 and will report on the progress of the eight actions demonstrating how far the Scottish sector has come in terms of Enterprise and Entrepreneurship.

In Wales, spearheaded by the Welsh Government's 'Youth Entrepreneurship Strategy' and 'Big Ideas Wales', entrepreneurial role models are centrally funded for all levels of education, and teacher training is actively supported. The establishment of institutional champions led to educator networks and collaborative boot camps. The Successful Futures' review of schooling highlighted the need for enterprising creative contributors, which is now part of central policy, and in turn leads to enhanced teacher training initiatives. In late 2017, the Welsh Government's Economic Action Plan called for more entrepreneurship and innovation driven enterprises, through working with all levels of education.

In Northern Ireland, the 'Think/Create/Innovate' Education Action Plan informed the 2014-25 Innovation Strategy for Northern Ireland. This called for enhancing creativity and providing skills needed by innovative companies through education. It noted that formal qualifications needed to be supplemented, as Entrepreneurship Education was a basic requirement. A 'Creative NI Framework' is planned to catalyse and enhance collaboration across business, academia, the third sector and government.

Analysis by HEFCE shows entrepreneurship is becoming better recognised as a career choice for students, with 4,160 new graduate start-ups in 2014-15. Meanwhile, the 2017 CBI/Pearson Education and Skills Survey found that 40% of recruiters were dissatisfied with graduates' business awareness. Furthermore, the 2015 Dowling Review emphasised the importance of training in areas such as Intellectual Property, and raising commercial awareness among both students and researchers. In addition, both Lord Young's report, *Enterprise for All: The relevance of enterprise in education*, and the All-Party Parliamentary Group for Micro Businesses report, *An Education System fit for an Entrepreneur*, call for Enterprise and Entrepreneurship Education to be embedded into the curriculum across all disciplines and all levels of education.

International policy context

On the international stage, the United Nations Conference on Trade and Development developed an International Policy Toolkit. Noting that policy makers around the globe had adopted a narrow perspective of entrepreneurship that only focused on business, they proposed an 'ecosystem' approach that had education as its third pillar. Calls in the policy included the mainstreaming of entrepreneurial types of education, promoting experiential approaches and training teachers, recognising leadership through an increased level of professorial recognition and supporting networks of educators. The work was supported by the European Union (EU).

The EU's independent research team, The European Joint Research Centre, brought together two case study reports and the publication of their 'EntreComp' framework, a 'de facto' guide for all levels of education. The 2012 QAA guidance was used to inform the process and was mapped onto the framework as it developed.

It is important to note that these international policy calls go beyond the higher education sector, and promote entrepreneurial schooling, encouraging an education pipeline to develop. This requires supportive university-level research and innovation, not least in the development of teacher training initiatives. The Organisation for Economic Cooperation and Development (OECD) Entrepreneurship360 project typified this practice.

In a related collaboration between the OECD and the European Commission, HEInnovate was developed. This provides a framework for universities to consider their innovative potential through questions relating to, for example, leadership, entrepreneurial teaching and learning, supporting entrepreneurs and metrics for impact.

In late 2017, the Commission's Joint Research Centre published a paper that discussed its key policy initiatives for the next decade: improving university-business engagement and developing enhanced links between employment and innovation. It challenges causality metrics and calls for more experimentation. This too is a priority for Enterprise and Entrepreneurship Education.

Definitions and distinctions

Enterprise, entrepreneurship and employability are not new concepts within higher education, and they may be found in curricular, co-curricular and extracurricular activities. When enterprise and entrepreneurship are used together they are termed 'entrepreneurial'.

Combined, these activities are core to a wide reaching and rewarding education for students and for educators when developing their teaching and learning practices. They are also key for impactful research and act as a vehicle for university engagement, for example, working with their local, national and global communities, businesses, public sector organisations and society.

The following definitions and distinctions will support educators interested in entrepreneurial types of learning to identify new opportunities and evaluate existing practice. Entrepreneurial learning often takes place within institutions without bearing the 'label' of enterprise or entrepreneurship, and can often be referred to, for example, as 'innovative thinking' or 'design thinking' when the goal is to create value by solving a problem or identifying new opportunities. Some educators may be more inclined to work at different ends of the Enterprise and Entrepreneurship spectrum; however, it is the appropriateness of the student's learning that should remain the focus.

More important than a label are the approaches taken to learning and collaboration and the resulting behaviours, attributes and competencies that are developed. Taken together, this is where the overlap and synergies with entrepreneurship and employability and their constituent features occur, and the associated ways of thinking are often referred to as the 'mindset'.

Subject specialists may use different labels, but the premises described here remain. The definitions outlined below should be used in conjunction with expertise, customs and practices that already exist within each education institution, and aligned to subject specialisms. This will ensure that educators empower their students and graduates to develop the wide-ranging qualities that enable them to develop and sustain a rewarding professional life.

Enterprise

Enterprise is defined here as the generation and application of ideas, which are set within practical situations during a project or undertaking. This is a generic concept that can be applied across all areas of education and professional life.

It combines creativity, originality, initiative, idea generation, design thinking, adaptability and reflexivity with problem identification, problem solving, innovation, expression, communication and practical action.

Entrepreneurship

Entrepreneurship Education is defined as the application of enterprise behaviours, attributes and competencies into the creation of cultural, social or economic value. This can, but does not exclusively, lead to venture creation.

Entrepreneurship applies to both individuals and groups (teams or organisations), and it refers to value creation in the private, public and third sectors, and in any hybrid combination of the three.

All forms of entrepreneurship are embraced, and many new labels are evolving. For example, social entrepreneurship, green entrepreneurship and digital entrepreneurship are relatively new areas of focus, and the sustainability education agenda (see QAA and

HEA's Education for Sustainable Development (2014) is reliant on the development and application of entrepreneurial competencies.

Social entrepreneurship is where entrepreneurial ventures are driven by solving social or cultural issues, as opposed to financial gain or profit.

Green entrepreneurship is where environmental problems are explored to result in a net positive impact on the natural environment using sustainable processes.

Digital entrepreneurship is where digital products and services that are created are marketed, delivered and supported online.

Note: it is important to recognise that these entrepreneurial ventures will seek to become financially sustainable, in order to respond to the needs of their target audience(s).

Intrapreneurship is the application of enterprise behaviours, attributes and skills within an existing micro or small business, corporate or public-sector organisation.

Employability and Employment

The most widely used definition of employability in higher education was developed by Knight and Yorke (2003). 'A set of achievements – skills, understandings and personal attributes – that make individuals more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.'

UK sector requirements, geographical locations and skills gaps will influence any comparisons that are made between employers and education providers. Also, the subject being studied has a contextual relationship to employment and will impact on a student's opportunities. For example, Accountancy could offer opportunity at almost every level within a business of any size, whereas Veterinary Science graduates may find less of a market for their skills in the context of larger businesses; they will more likely find themselves in a small practice as one of a few specialists, where flexibility and adaptability have a stronger role. These students will require a broader set of competencies with, for example, different demands on their communication and financial management skills.

An optimum strategic employment spot can be found by considering subject-related competency development, physical factors such as location, and meeting a recognised demand. New and developing enterprises are typically less stable environments than long-standing or stable businesses; hence the need for enterprise competencies in students is more prevalent when change is inherent in the workplace.

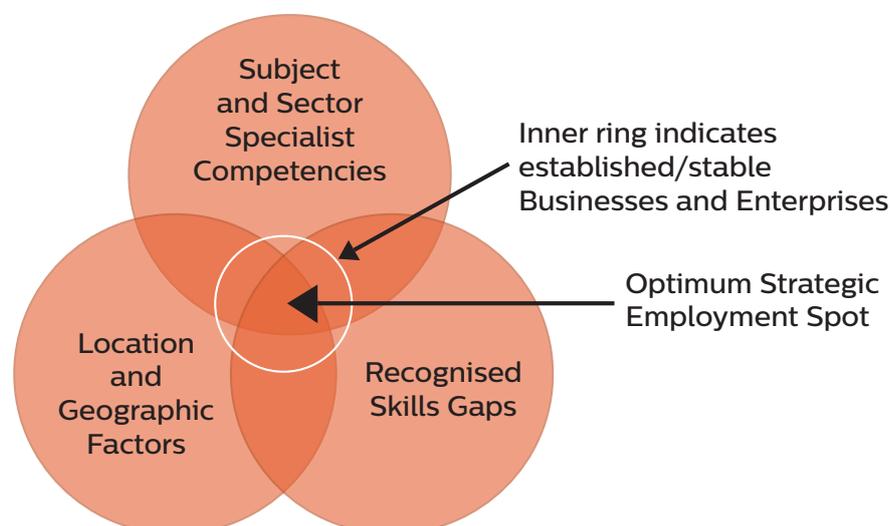


Figure 1: Finding the optimum strategic employment spot

Enterprise Education

Enterprise Education is defined here as the process of developing students in a manner that provides them with an enhanced capacity to generate ideas, and the behaviours, attributes, and competencies to make them happen. It extends beyond knowledge acquisition to a wide range of emotional, intellectual, social, cultural and practical behaviours, attributes and competences, and is appropriate to all students. These are all underlying factors that can enhance employability prospects as well as be taken further through Entrepreneurship Education.

The aim of Enterprise Education is to produce graduates with an awareness, mindset and capability to generate original ideas in response to identified needs, opportunities and shortfalls, and the ability to act on them, even if circumstances are changing and ambiguous; in short, having an idea and making it happen.

- Enterprise behaviours can include: taking the initiative, making things happen, reflecting, communicating, pivoting and adapting, storytelling, taking responsibility, networking, personal effectiveness and managed risk taking.
- Enterprise attributes can include: open mindedness, proactivity, curiosity, self-efficacy, flexibility, adaptability, determination and resilience.
- Enterprise competencies can include: intuitive decision making, identifying opportunities, creative problem solving, innovating, strategic thinking, design thinking, negotiation, communicating, influencing, leadership and financial, business and digital literacy.

Entrepreneurship Education

Entrepreneurship Education aims to build upon the enterprising competencies of students who are capable of identifying opportunities and developing ventures, through becoming self-employed, setting up new businesses or developing and growing part of an existing venture. It focuses on the application of enterprising competencies and extends the learning environment into realistic risk environments that may include legal issues, funding issues, start-up and growth strategies.

Students with both Enterprise and Entrepreneurship competencies may apply their abilities in a range of different contexts, including new or existing businesses, charities, non-governmental organisations, the public sector and social enterprises. Entrepreneurship Education is the realisation of ideas, through an enhanced understanding and application of business processes within the legal and ethical constraints that are found in the context of their chosen venture.

Entrepreneurial Education

Entrepreneurial Education is used here as a 'catch all' term that encompasses both Enterprise and Entrepreneurship, and may be used when discussing the combination of both. Many new international schooling and similar initiatives are under development, and they employ this term in this context.

The relationship between employability, enterprise and entrepreneurship

This guidance is not specifically about employability, but there is an overlap between the broad set of skills, attributes and competencies that contribute to graduate employability and the characteristics of Enterprise and Entrepreneurship described above. These are not the same, for example a small or micro business may value and utilise enterprising and entrepreneurial qualities more highly than a larger business or company, although a research and development department within the same company may also seek out these competencies. Hence the potential career trajectory of the student has a part to play.

An effective approach to Employability, Enterprise and Entrepreneurship Education has a significant impact on learning to learn, and therefore the future success of the individual student. It prepares them for a rewarding professional life and acts as a significant vehicle to deliver against the institutional aims for graduate employment, employability and future success.

Employability support covers a vast array of interventions and activities, both in the curriculum and beyond, and includes activities such as placements, CV workshops, careers fairs and support with job applications. These interventions may also support Enterprise and Entrepreneurship. However, an effective approach needs to go much deeper than these kinds of activities alone and we need to develop a broader more coordinated range of activities that build year on year.

The diagram below illustrates the relationship between enterprise and employability/ entrepreneurship. Career paths may reflect these interconnections.

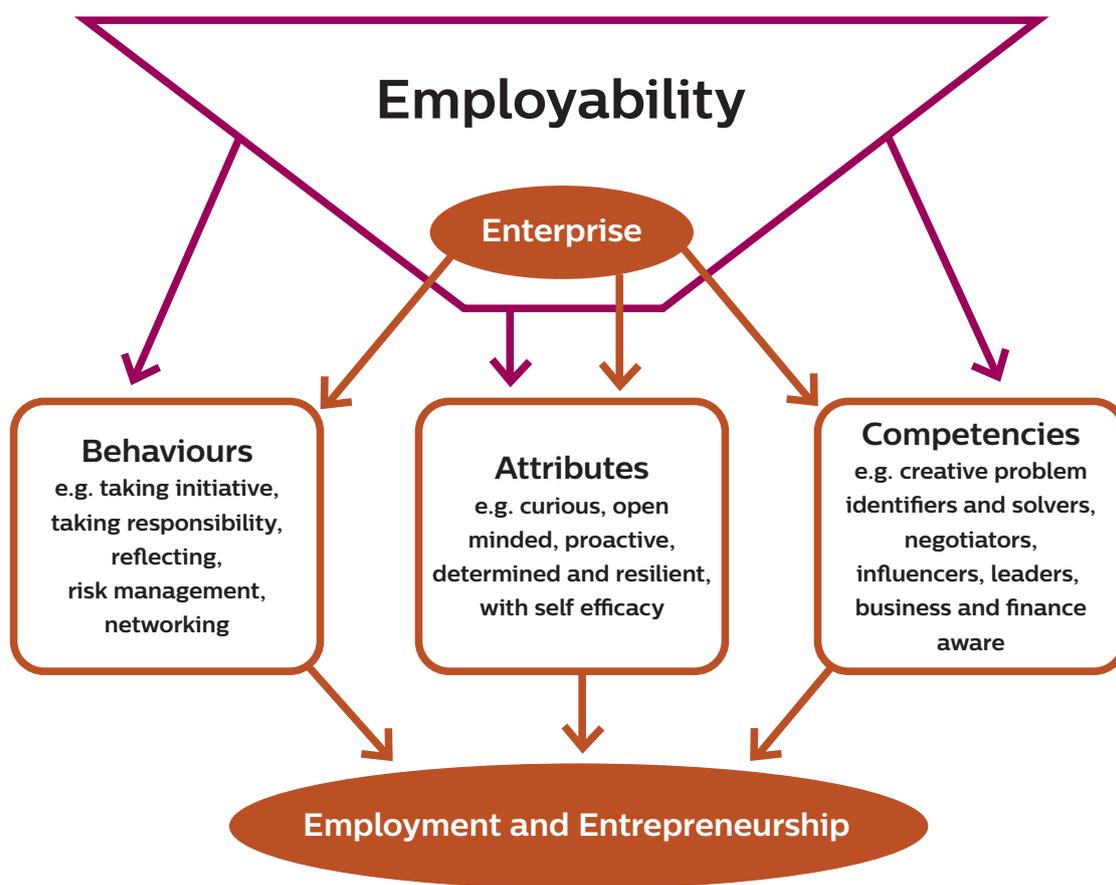


Figure 2: Discovering synergies between enterprise and employability (credit: Higher Education Academy)

Delivering Enterprise and Entrepreneurship Education

Educators may come from a wide variety of contexts and backgrounds and from any discipline; they are those who seek to embed innovation in their teaching and they may work within the curriculum or alongside it; on some occasions, outside of it. These educators are often tasked to tackle the ‘wicked’ problems of preparing students for jobs that don’t yet exist, using technologies that have not yet been invented, and spotting and solving problems that we have yet to define clearly. To face this challenge, we need to develop students and graduates who are enterprising, flexible and innovative. Students should be able to identify and respond to opportunities using their ideas, knowledge, skills and confidence to create interventions that will address the challenges they meet. In this context, defining the goal as either enterprise or entrepreneurship is helpful, especially when it comes to assessing and evaluating learner performance.

Enterprise Education develops students’ capabilities as enquiring, critical thinking, future orientated thinkers, who are equipped to face the challenges of their careers along with awareness of civic and social responsibility. The predominant assessment strategy asks ‘are they being innovative, challenging norms and seeing new ways forward?’

Entrepreneurship Education focuses enterprising competencies in the context of new venture creation and business environments, developing entrepreneurial graduates and citizens who are able to undertake autonomous learning and self-evaluation in more risky contexts that include legal, financial and ethical considerations. The predominant assessment strategy is ‘can they apply and implement their ideas within practical constraints?’

The role, attributes and tasks of Enterprise and Entrepreneurship educators

Note: This section is drawn from the SFEDI National Occupational Standards for Enterprise Educators (2016).

The role of the entrepreneurial educator is to:

- plan and deliver effective Enterprise and Entrepreneurship curricula
- build collaborative relationships with students, educators and other stakeholders
- motivate and inspire students to develop enterprising and entrepreneurial behaviours attributes, and competencies
- reflect on own practice as an entrepreneurial educator.

The activities, abilities and skills of the entrepreneurial educator will be shaped by:

- the nature and context of their institution and its strategic priorities
- their job role, which may be anything from academic staff working on degree programmes, to career advisers working on programmes to improve students’ competencies (this may include starting a business)
- enterprise advisers working in an incubator or accelerator – considering the needs of the students they work with.

The attributes and specific tasks of the entrepreneurial educator should contribute to the enhancement of student engagement and experience; enabling students and institutions to achieve their desired outcomes.

Attributes

- **Inclusive leadership:** encouraging enterprising and entrepreneurial behaviour in students and colleagues - by creating and shaping appropriate learning environments.
- **Innovative:** in their approach to teaching and willing to identify and experiment with different pedagogies, activities, learning tasks and assessments to motivate and inspire students, including exploring different contexts for their teaching and enhancing their personal development to inform and improve their teaching practice.
- **Enterprising:** in their approach to exploiting new opportunities for enhancing the student experience. For example, by involving students and alumni in improving the experience and highlighting the impact they can have.
- **Reflective:** a practitioner who regularly reviews, evaluates and improves their teaching practice to the benefit of their students, their institution and themselves.
- **Engaging:** working with enterprising people, entrepreneurs, innovators, organisations and other stakeholders in the learning experience.
- **Enabling:** students to relate their learning to their subject, and personal and professional aspirations.
- **Relevant:** maintaining the relevance of provision, able to link to current trends and needs. (This may be particularly applicable to vocational subjects or those with embedded work-based learning or placements.)

Specific tasks of the entrepreneurial educator

- Providing pathways towards a designated outcome, for example starting a business or using enterprise skills within an industry sector, organisation or social enterprise by creating value for others; being intrapreneurial.
- Designing constructively aligned curricula that matches learning to outcomes and contributes to the strategy and context of their institution. This should be based on research and take into account students', colleagues' and other stakeholders' feedback.
- Signposting and building student experience beyond the specific teaching activity or assessment. For example, for those interested in starting a business this might include entering competitions or joining an incubator or accelerator.
- Contributing to the achievement of institutional strategy, for example designing and delivering internal metrics. Also through the consideration of how the culture, habitat and resources of the institution and its environment can be more aligned with entrepreneurial activity.
- Influencing their institution and the broader educator community, sharing their experience and encouraging others to develop an entrepreneurial approach and practice.
- Provide insight into legal and fiscal constraints such as Intellectual Property realisation and management, taxation, alternative business models and their alignment.

Delivery of Entrepreneurial Education should enable students to express the notion of their value propositions both within their studies, and in relation to external stakeholder perspectives. These could be financial, social or related to sustainability, and should include ethical considerations. Centralised Enterprise Teams or Centres that sit outside of academic departments may lead or support these approaches, especially when interdisciplinary responses are the goal.

Delivery methods

The educator can select delivery methods based on the behaviours, attributes and competencies they wish to enhance and develop. These methods will ideally align to students' prior learning and context along with any subject specialism, hence the following points should be taken into consideration.

- Take a contextualised approach that enables students to enhance their entrepreneurial capabilities within their subject or discipline.
- Delivery should be designed to allow students to 'do' their subject in a way that enables them to identify and solve problems, with an overall aim to conceptualise and develop a value proposition for others.
- Offer action-based practical activities and challenges, which may be set by the community, businesses and enterprises or other appropriate partner, for example, provide consultancy services to clients, SMEs or a social endeavour.
- Encourage cross-disciplinary approaches in both learning strategies and assessment, for example business students and computing students in a team with those from the creative arts (QAA's Subject Benchmark Statements can provide insights into how these can be integrated and evaluated).
- Develop realistic and relevant high engagement, high impact activities, such as simulations and Venture Creation Programmes.
- Enable students to start and run a business as an integral part of their programme.
- Employ alumni, entrepreneurs and other relevant specialists as visiting lecturers and guest speakers, ensuring that reflective processes support the learning.
- Use experiential learning strategies where theory follows practice, and provide theory support and encourage discussion on the merits and demerits of the theories under consideration.
- Encourage use of reflection to consolidate learning points, critically explore emotional responses, and plan for future action.
- Make distinctions between 'learning about' (e.g. theory and cases/observation) 'learning for' (preparing for action) and learning through (in action), to distinguish between the theoretical and practical components that are developed within Enterprise and Entrepreneurship Education.

Learning 'about', learning 'for' and learning 'through'

Enterprise and Entrepreneurship Education may be delivered differently and with different goals as described above, and therefore can be assessed in different ways. The following distinctions will help to further clarify learning and assessment strategies:

- knowledge acquisition through the study of the topic is learning 'about'
- a more practical goal, such as, learning how to be more entrepreneurial is learning 'for'
- learning 'through' the practical application of entrepreneurial activity requires the development of enhanced reflection skills and relates to practical activities, such as start-ups, Venture Creation Programmes and incubators or accelerators.

These distinctions are important, as typically learning 'about' entrepreneurship is embedded in curriculum where examinations and tests are dominant, whereas learning 'for' and learning 'through' typically require more holistic evaluative metrics. While all three ways of learning are valid, the distinctions should be considered when any curriculum is being evaluated, new curricular or extracurricular programmes are being developed, or co-curricular support is being mapped and tested.

'About' courses are intended help students assimilate and reflect upon existing theories, knowledge and resources that enhance their understanding of a topic or theme, for example, venture creation and business growth strategies. They tend to draw upon a more traditional pedagogy involving lectures and set texts to explore the theoretical underpinnings of Enterprise and Entrepreneurship. Case studies will investigate past events and decision-making that could inform 'for' approaches. Students may also learn how Enterprise and Entrepreneurship has evolved as a discipline and will be able to critically evaluate the relevant literature.

'For' courses focus on creating an enterprising approach, aiming to help students discover what it is to be enterprising, as well as offering insight into being an entrepreneur; it is a preparatory method. These courses are normally delivered via experiential learning opportunities that engage and enhance the student's capabilities within a meaningful and relevant context. They challenge the student to think about the future and visualise opportunities. Students will typically be engaged in scenarios that challenge their thinking and make explicit the need for creativity and innovation.

As with all academic disciplines, practice should be underpinned by theory. An ideal combination is to include learning both 'about' and 'for' within the curriculum. Courses that aim to create iterative developments typically introduce theory first, so that ideas can be built on existing theory. In contrast, as radical innovation requires curious and enquiring minds, theory will follow the experience, and then be critically compared and contrasted to the associated activities.

'Through' activities focus on developing the entrepreneurial capabilities of the student and normally involve learning through doing, reflecting on experiences and drawing on theory. Venture Creation Programmes are an example of this being achieved within a curricular context, although these initiatives are often delivered by dedicated teams of enterprise educators that sit alongside incubation and accelerator schemes, often acting as gateways between Enterprise and Entrepreneurship Education.

Assessment

Educators often utilise new and different approaches to assessment when introducing Enterprise and Entrepreneurship into their teaching. Interdisciplinary approaches should be considered, as not all types of assessment are utilised within specialist disciplines. Aligning the learning outcomes as described above is also referred to as 'constructive alignment'. This is the case for both formative and summative assessment.

In designing and delivering assessment, educators should consider the following:

- learning 'about' entrepreneurship is normally evaluated through analytical texts such as essays and knowledge retention exercises such as examinations
- learning 'for' entrepreneurship requires practical activities where students demonstrate their development
- learning 'through' entrepreneurship is primarily a reflective process, where a student engages in entrepreneurial activities and maps their own learning and (supported) progression.

The following points can also assist the assessment process:

- knowledge retention and knowledge harvesting are different - the latter takes the learning journey further, from critical analysis towards synthesis
- teamwork is an essential component of employability and entrepreneurship, and peer review can be used to inform assessment, for example, through contribution audits that clarify and support individual team members' contributions
- assessment that measures against known outcomes differs from assessment that develops new perceptions and new opportunities, particularly when these are situated in ever changing contexts and environments - this requires process-driven assessment that maps against demonstrated stages of learning
- temporary failure can inform progress and increase resilience - realisation of failure through reflection can inform positive assessment
- assessment that utilises start-up 'pitches' and business modelling within a scenario or context related to the student's aspirations are effective - not only in terms of becoming entrepreneurial, but can also provide valuable insights into business operation and potential career opportunities
- external stakeholders and alumni are useful sources of inspiration: how they are evaluated and the manner in which they progress in their current role can provide significant insights into assessment - student consultancies and Venture Creation Programmes should be well aligned to these kinds of insight
- incubation units, accelerators and Venture Creation Programmes are often evaluated against success rates and financial returns, yet the way in which students develop and operate their businesses can also form part of the evaluation and support
- assessment should relate to evidence provided by the student or learning team, and this requires portfolio styles of collated work that demonstrates progression through reflection and guidance.

Some students may start at the top of the pyramid, and learn about and through enterprise once they have commenced trading or working within realistic simulation environments. There may be fewer numbers of students at the top of the pyramid, so personal mentoring and small group sizes will also guide the manner in which they learn and can be assessed.

Within Enterprise Education, assessment will primarily relate to innovation outputs where the result may not be reasonably guessed in advance because innovation assumes an element of newness and surprise. Here, the learning journey and its mapping provide opportunities for meaningful assessment.

Within Entrepreneurship Education, failure may be catastrophic if funds have been lost or university reputation put at risk, so risk mediation and limitation is prevalent. There is more of a business-led focus, which in turn may require knowledge related to legal implications and marketing strategies. These components lend themselves more easily to recall-based methods of assessment such as tests and examinations.

Students' own career goals and aspirations will impact how far they wish to progress into the entrepreneurship zone. For some it may simply offer enhanced insights that could make them more employable, and for others it may be a goal to become an owner/manager.

Future thinking...

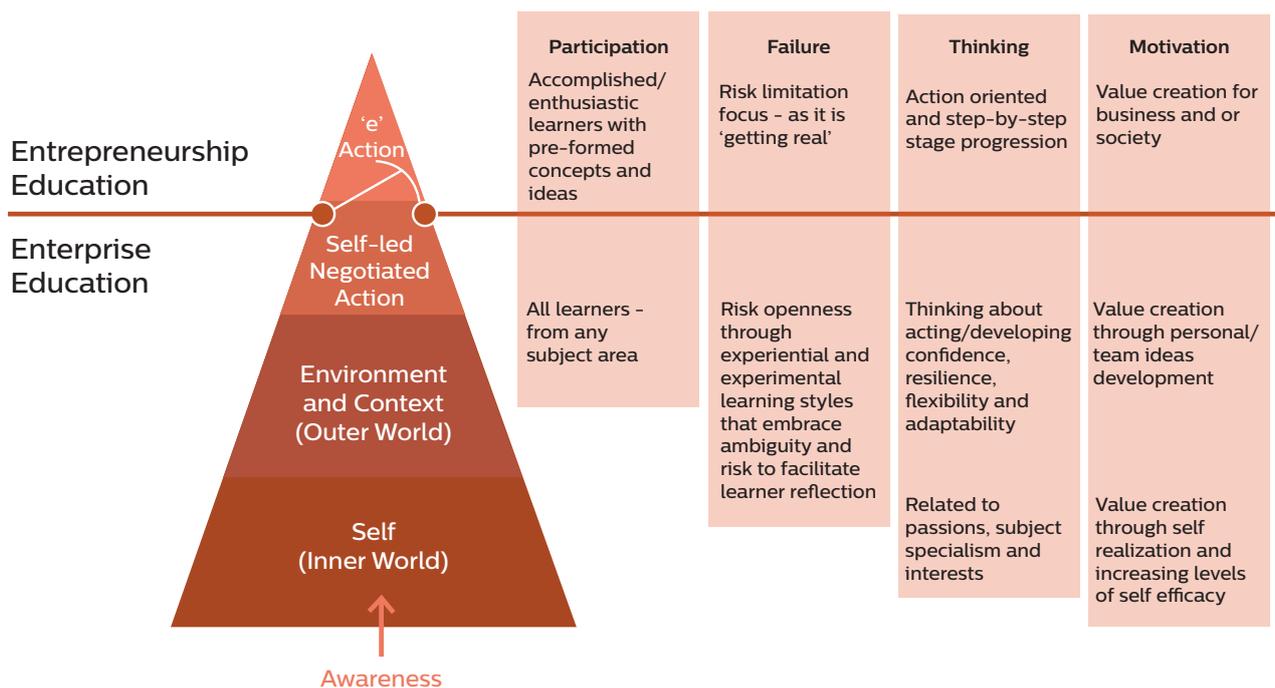


Figure 3: Assessing Enterprise and Entrepreneurship - the gateway triangle

In recent years much work has been done to map, progress and manage entrepreneurial learning, which encompasses all of the above. The European Commission's EntreComp Framework is a good example, and can be used to chart progress and assist with assessment metrics.

In the EntreComp model the learning has been divided into three areas, those of 'ideas and opportunities', 'resources' and 'into action'. EntreComp is a competencies-based model, within which areas such as 'planning and management' or 'financial and economic literacy', would be applicable to Entrepreneurship Education, whereas other components such as 'spotting opportunities', 'creativity' and 'vision', would sit more comfortably under Enterprise Education.

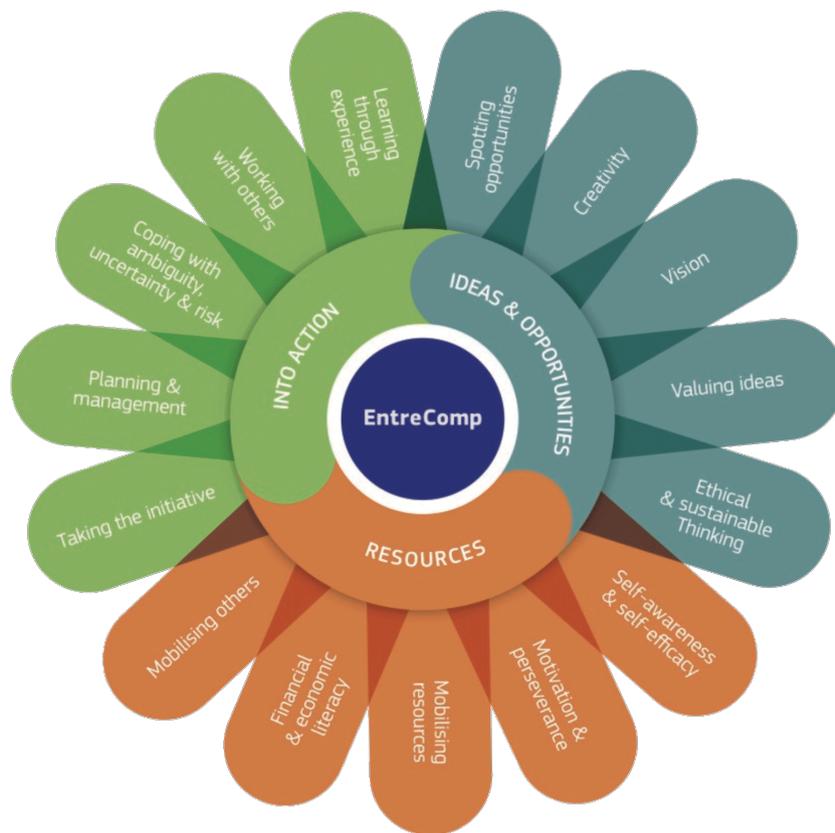


Figure 4: EntreComp framework

Evaluation and impact

To evaluate the results and impact of a module or programme, the educator (or their manager) should undertake the approaches outlined below.

- Relate impact to the provision (see figure 6, page 22). The curricular and extracurricular learning continuum, and the strategy/context of the institution (see also ‘The Supporting Institution’, page 26).
- Ensure that impact measures take account of broader considerations than the school/department/centre that has specific responsibility for Enterprise and Entrepreneurship Education in the institution. External perspectives are especially valuable.
- Take into account student views, feedback and experiences and those of alumni, who can evaluate the impact of the enterprise education that they received. Alumni can also be asked to feedback their evaluation to educators, who can take this experience into account when modifying modules or courses.
- Look beyond simply measuring the number of businesses immediately created by students or graduates. The insights provided in the assessment section above provides a useful indication as to what these might be.
- Consider that some graduates might start their businesses a significant time after graduation, having gained more experience in employment, in start-ups or larger companies. While longitudinal data can be difficult to manage institutionally, educators are well placed to inform their institution of insights that they receive.
- Easily measurable outcomes rarely consider the innovation process, whereas portfolio assessment and similar strategies can surface soft skills such as leadership and self-efficacy.
- Note that impact can also be related to institutional and or departmental support and recognition, and that double-loop learning can provide valuable insights.

The student learning experience

The learning journey

This section looks at the student's learning experience through the range of formal and informal activities, and the role of wider experiences that can contribute to the development of entrepreneurial effectiveness. An essential feature of Enterprise and Entrepreneurship Education is that it supports and leads to entrepreneurial action, now or in the future, whether it be in the context of self-employment, creating a new business venture, social entrepreneurship, or 'intrapreneurship' within an existing organisation.

Practical opportunities for gaining experience can be created both within the curriculum, and through optional extracurricular activity that complements learning within the curriculum, and recognises the value of extracurricular experiences for confidence-building, networking and student enterprise. Extracurricular learning in isolation is unlikely to provide a student with sufficient competencies or insights.

Embedding enterprise into the curriculum can stimulate interest toward extracurricular support. Effective signposting helps to engage students in a range of different ways. Student enterprise societies and students' unions can be very effective in creating student-centred activities.

Towards entrepreneurial effectiveness

The overall goal of Enterprise and Entrepreneurship Education is to develop entrepreneurial effectiveness. Students will attain entrepreneurial effectiveness to different degrees, and in differing ways, based on a wide range of variables such as their personality, prior learning, motivation, ability, and context. One way to situate the learning journey is to consider the discussions thus far under the themes of awareness, mindset and capability, and to place them in a pipeline for development.

Enterprise awareness

Students acquire enterprise awareness by developing knowledge and understanding of enterprising and entrepreneurial activities. They will understand the professional significance of Enterprise and Entrepreneurship in the wider world, as well as its meaning and relevance to them personally. Examples may include students learning to appreciate the pace of change and the need for adaptability, the role of small firms in an industry, social enterprises in a locality, and the value of ideas and intellectual property management.

Curricular activities might introduce teaching about Enterprise and Entrepreneurship in society, exploring relevant underpinning theories, and considering enterprise in relation to employment opportunities, especially within small businesses. Selected guest entrepreneurial speakers and role models can be inspirational, especially when they are relevant to the students' learning. Opportunities for interaction with external enterprises and scenario-based simulations (managed by the educator) can also be beneficial. Formally assessed curricular work will feature broad or exploratory learning outcomes, which may highlight particular themes (see 'Thematic approaches', page 22).

Extracurricular activities will most likely be generally focused and aimed at a broad student audience across all programmes of study. Students' unions, societies, start-up centres and careers services can be active in promoting enterprise awareness in partnership with departments, especially through focused initiatives such as 'Global Entrepreneurship Week', which presents an opportunity for students to actively engage in a wide range of activities.

The media also raises awareness and initiates entrepreneurial aspirations. Enterprise and Entrepreneurship Education should encourage students to be critically aware of the influence of media stereotypes in Entrepreneurship Education.

Developing an entrepreneurial mindset

Students should be encouraged to develop self-awareness of their own enterprising and entrepreneurial capabilities, as well as the motivation and self-discipline to apply these flexibly in different contexts to achieve desired results. This might include recognising themselves as a person who is creative or resourceful; who can translate ideas into actions; or who is prepared to challenge assumptions through critical investigation and research.

Developing an entrepreneurial mindset is becoming:

- self-aware of personality and social identity
- motivated to achieve personal ambitions and goals
- self-organised, flexible and resilient
- curious towards new possibilities for creating value
- responsive to problems and opportunities by making new connections
- able to go beyond perceived limitations and achieve results
- tolerant of uncertainty, ambiguity, risk, and failure
- sensitive to personal values, such as ethical, social, diversity and environmental awareness.

Curricular, co-curricular and extracurricular activities will become more focused on developing specific areas that are aligned to subject contexts. These activities can help students to develop their own entrepreneurial mindset and awareness of their individual interests and aspirations as their studies evolve. An active learning mode explores problems and opportunities as vehicles for creative problem solving to enable students to develop their enterprise capabilities. Learning activities are often group-based, especially when team-working skills are desired outcomes. Business simulations can also be valuable for experiential learning. Learning through individual and group reflection should be encouraged.

Entrepreneurs and business advisers who relate well to students can make valuable contributions to both curricular and extracurricular experiences. They bring personal insights to life, and may also enhance the development of personal contacts and networks for the student. Ideally, they can connect with the students, make it real for them and inspire them to go further.

More experienced students can take a leadership role and offer peer support through campus societies, through engaging in the teaching process or assisting in the evaluation of another student's progress. Alumni can play an important role, especially if they have recent experience of entrepreneurship or the subject area, and can demonstrate the practical value of activities such as self-presentation and communication skills.

Developing entrepreneurial capability

Prior experience, networks and learning can help students to develop a range of enterprising, practical, social and conceptual abilities, which can help to develop opportunities. Entrepreneurial capability can be specific to a particular discipline, vocational requirement or context, and as such will vary. This might be demonstrated when a student designs a new service or product to meet an identified need, or identifies an opportunity and visualises potential actions together with their prospects for success.

Through gaining practical insights, learning experiences will increasingly develop entrepreneurial capabilities, enabling students to take the lead and demonstrate autonomy, either individually or as part of a group. Competence frameworks such as EntreComp, Occupational and Higher Apprentice standards can be very useful, as they locate the learning for the student.

Students will be encouraged to recognise that team-based performance is an essential feature of both employed and entrepreneurial work. Project work (for example, to research business start-up opportunities, or assignments to develop and design new services for organisations) can not only provide 'hands-on' activities, it can also engage external stakeholders, such as potential clients, thus extending the team and students' perspectives. Structured experience in work placements and paid work can also help to develop enterprising capabilities and confidence, by developing entrepreneurial insights and reflective practices.

When students take responsibility for extracurricular activities, for example, by organising societies, sports activities, community volunteering, representation, or other events, this contributes to their entrepreneurial learning and may count towards awards schemes. Reflection on their experiences can be supported through academic tutorials, careers guidance and mentoring.

Entrepreneurial effectiveness

Entrepreneurial effectiveness is likely to be achieved as the student moves toward completion of their current study and prepares for the transition into work, self-employment, further study, or other options. 'Live' projects for external clients and enterprises will offer opportunities to network and meaningfully engage with external stakeholders, to prepare for this transition.

By this stage, students' learning becomes increasingly self-directed, pursuing both academic and broader career-life goals. Students may aspire to take their ideas into plans to start their own business, or to extend an informal activity such as freelancing or trading into more formalised opportunities. They may also have become aware that start-up is not for them, but that they would make an excellent cornerstone employee who can act intrapreneurially in a new or developing enterprise.

As learning develops it can be supported through more personalised means, such as e-learning activities, optional training sessions, and specialist seminars. One-to-one support, such as coaching or mentoring, can be highly effective in providing support and responding to emerging needs. Building confidence and reinforcement during this transitional phase is important, and coaching provides students with individualised support that helps them identify their options and address practical obstacles. Mentoring can involve established entrepreneurs or other practitioners with specific and relevant expertise and experience.

Business start-up support and guidance can be accessed through enterprise centres and business incubators, where available. Online enterprise networks and off-campus support organisations such as Growth Hubs, can be valuable. Informed educators will signpost and engage relevant enterprise support opportunities on behalf of the student.

Using this model as a framework for learner development, figure 5 illustrates the awareness, mindset, competencies and effectiveness approach within a curricular and extracurricular context.

This diagram provides an illustration of the learning journey and related experiences. It indicates how these can be mapped onto the development of enterprise awareness, entrepreneurial mindset, capability and effectiveness

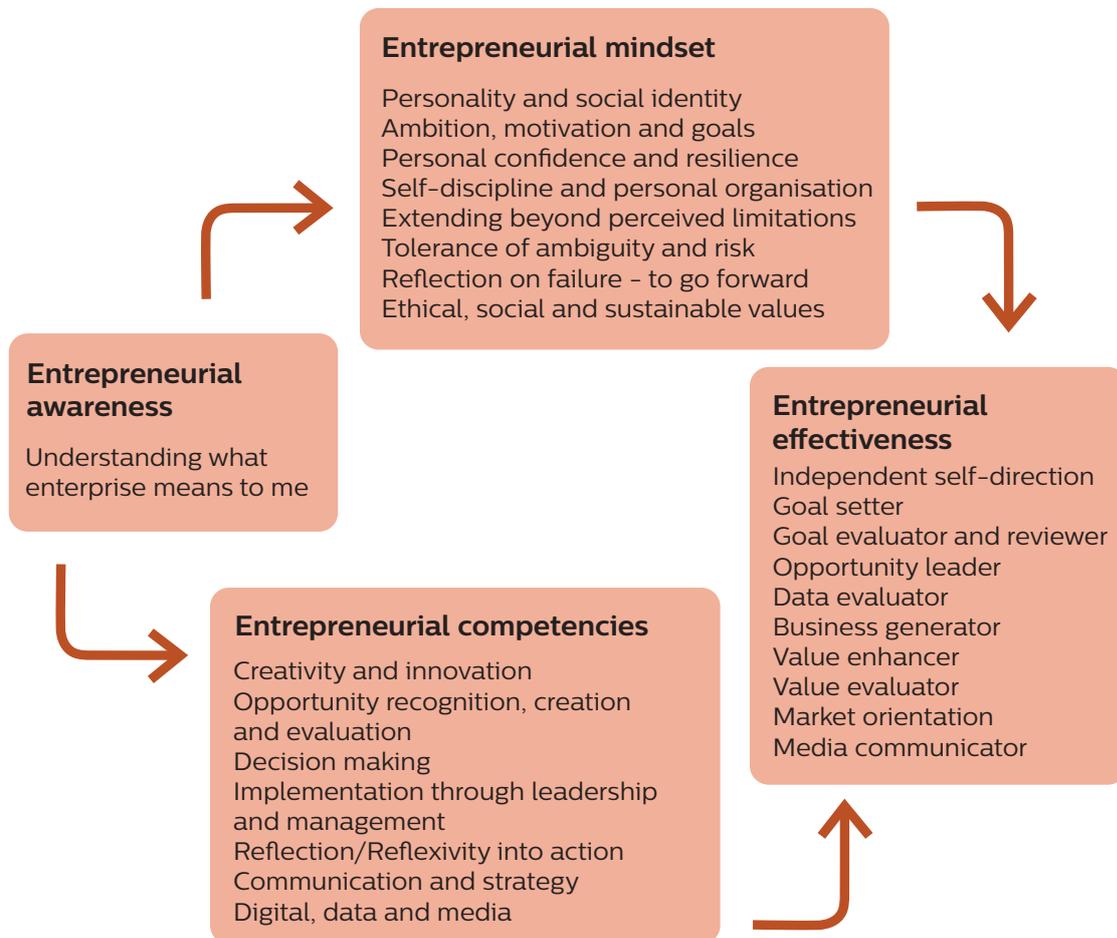


Figure 5: The journey towards entrepreneurial effectiveness

Students' learning may not be linear; their journeys are likely to have diverse starting points and transition into the future; they may pass through different stages in an iterative fashion, or engage simultaneously in different learning experiences. Curricular and extracurricular activities will vary widely between providers, and some institutions will offer incubation space or accelerator support so that the learning journey can become a reality.

The activities in each stage of the typical student journey shown in the boxes are only examples to illustrate a potential pipeline of activities. Co-curricular work will align with curricular provision and extracurricular experiences can be aligned to subject specialisms and potential career opportunities.

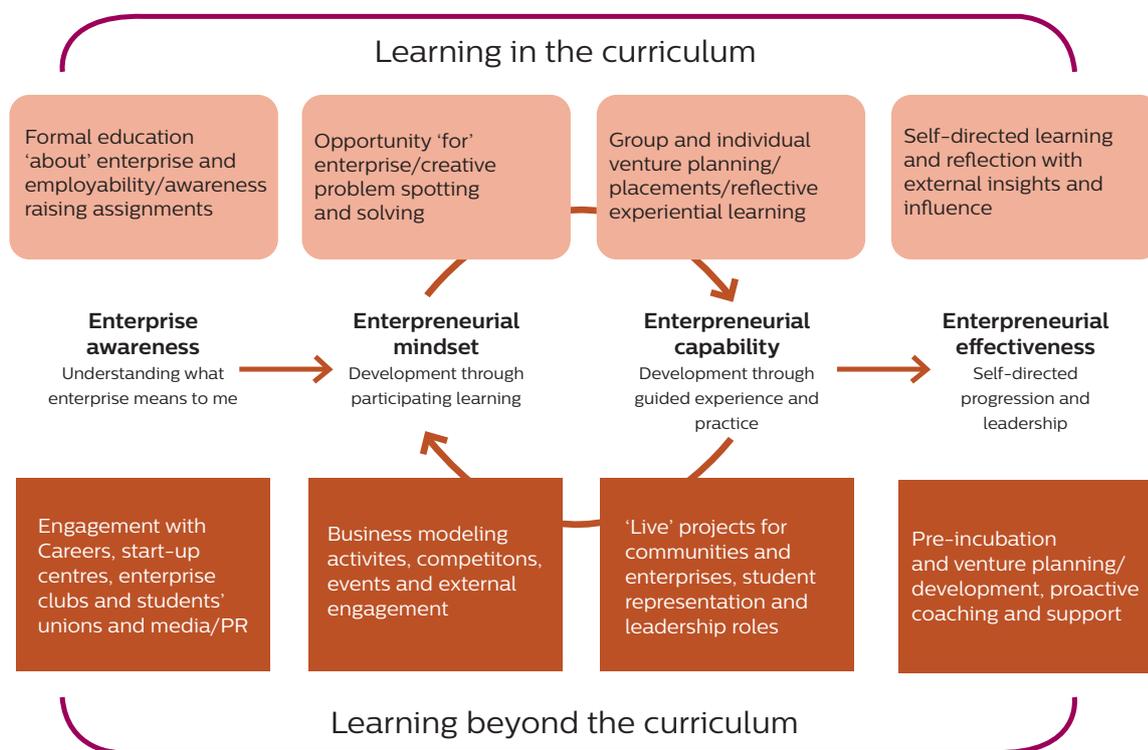


Figure 6: The curricular, co-curricular and extracurricular learning pipeline

Graduate outcomes

This section offers a broad framework that higher education providers can use to articulate learning outcomes that can be applied across a wide range of programmes and pedagogies. The educator's aim is to help develop students' core behaviours, personal attributes, core competencies and entrepreneurial effectiveness. Opportunities should be provided for these to be practiced within a wide range of situations in order for the student to develop confidence in these key areas. Each area is highly dependent on the next and therefore should be approached holistically and not individually.

Thematic approaches

Enterprising behaviours, attributes and competencies are highly interconnected. The following themes help to draw out essential requirements.

Creativity and innovation

Ideas led by Enterprise and Entrepreneurship are founded on the ability to think and act creatively and innovatively. Graduates should be able to:

- generate multiple ideas, concepts, proposals, solutions, or arguments in response to identified problems and opportunities
- think speculatively, employing both convergent and divergent approaches to arrive at appropriate solutions.

Delivery should include opportunities for:

- creative thinking
- conceptualisation
- innovation
- problem solving
- understanding the value of intellectual property
- value creation from different markets.

Opportunity recognition, creation and evaluation

At the heart of Enterprise and Entrepreneurship is the recognition of real opportunities from a spectrum of possible ideas. Where possible educators should be engaging with industry to provide relevant and current working material. Graduates should be able to:

- identify, analyse and respond to relevant opportunities
- develop and produce multiple solutions to enhance existing provisions, and identify problems, shortfalls and similar challenges
- be flexible and adaptable, seeing alternative perspectives and offering a choice of solutions
- review and evaluate multiple solutions in contexts that anticipate and accommodate change and contain elements of ambiguity, uncertainty and risk.

Delivery should include opportunities to:

- recognise or create multiple opportunities through actively making connections
- make connections as a result of problem solving, evaluating and assessing ideas
- develop relevant subject expertise and awareness of contemporary issues, both of which should be evidenced in any strategies for recognising opportunity - as Enterprise and Entrepreneurship are led by ideas, it is important for students to develop awareness of how to manage Intellectual Property issues.

Decision making supported by critical analysis, synthesis and judgement

Entrepreneurs and intrapreneurs rely on an ability to combine new and emerging insights that enable them to make decisions, even where these are based upon limited or unclear data or emotional considerations such as well-being. Decisions to act are made within a context of uncertainty and through iterative processes. Graduates should be able to:

- source and retrieve relevant contextualised information
- evaluate information and formulate arguments, independently and within a team
- combine analysis with synthesis, intuition and intuitive decision making, drawn from subject expertise and evaluation of critical incidents
- be resilient and flexible when faced with change or uncertainty.

Delivery should include opportunities to:

- research and collect evidence
- critically analyse evidence collected
- intuitively make decisions under uncertainty
- use judgement to take calculated risks
- take the initiative to take or change action
- demonstrate financial literacy in the context of their learning.

Implementation of ideas through leadership and management

Successful Enterprise and Entrepreneurship depends upon the ability to take action, and implement decisions, through social processes. Graduates should be able to:

- manage resources in response to a problem or need, demonstrating an enthusiasm for enquiry and the motivation to sustain it.

Delivery should include opportunities for:

- leadership and team management within projects
- productively linking intention, context and process with outcome and dissemination, within management structures
- development and maintenance of effective relationships with audiences, clients, markets, users, and consumers, as well as with participants, co-workers, and co-creators
- evaluation of resilience and adaptability, using effectiveness in relationships as a gauge.

Action and reflection

Individuals successful in Enterprise or Entrepreneurship often have heightened levels of self-awareness developed through reflecting upon, and continually learning from, their actions; they use failure to inform progress. Graduates should be able to:

- critically reflect upon, review and evaluate the solutions they have explored
- identify personal development needs and other changing factors through the reflective process
- evaluate their own learning and respond to identified shortfalls (competencies, attributes and behaviour gaps)
- demonstrate resourcefulness in seeking development guidance or mentoring from both external and internal contacts.

Delivery should include opportunities for:

- audits and evaluations before and after entrepreneurial activity
- developing critical reflection techniques
- action planning for self-development with SMART objectives
- reviewing networks
- use of iterative, discovery and learning processes that include learning from failure
- reflection on generating novel and associative solutions in response to perceived problems, rather than just the final outcome.

Communication and strategy skills

As well as working within teams, Enterprise and Entrepreneurship involves the ability to build effective relationships with a variety of stakeholders. Interpersonal skills become well developed through communication and interaction with others. Effective and adaptive planning is key to developing and implementing strategies. Graduates should be able to:

- identify and respond to stakeholder needs
- communicate enthusiasm and passion to 'sell' new ideas, concepts or solutions
- employ visualisation and flexible planning skills to interact effectively with others, articulate ideas, build trust and present information or outputs to audiences
- draw on the views of others to inform the development or enhancement of their work
- provide research and other evidence to suggest how ideas can be taken forward over time, taking changing environments and emerging technologies and concepts into account.

Delivery should include opportunities for:

- thinking about and visualising the future, scanning the environment, planning, communicating, influencing, directing, and rationalising
- building relationships, building trust, influencing, networking, negotiating and reviewing progress
- multiple forms of communication for a range of audiences including stakeholders and new media technologies
- learning how intellectual property and issues of confidentiality impact on communication.

Digital and Data Skills

Big data can inform the decision-making process, and the development of/management of digital and data competencies inform successful Enterprise and Entrepreneurship. Graduates should be able to:

- perceive the importance of digital technologies and the impact on productivity
- understand technological advances and ability for different technologies to connect
- explore technological advances in application to venture creation and effective management.

Delivery should include opportunities to:

- explore digital advances and their application
- critically review the advantages and disadvantages of data-driven decision making
- engage with industry experts and big data sources
- review innovation, problem solving and resilience in the context of data-driven opportunities.

The supportive institution

There are different models of institutional support for Enterprise and Entrepreneurship Education emerging across the UK, and these tend to be based on physical location, future visioning, funding streams and educator capabilities related to quality enhancement.

An entrepreneurial institution will:

- encourage improved student engagement and entrepreneurial outcomes in the learning process, for example, being able to map them against the enterprise and/or entrepreneurship definitions provided by QAA
- drive graduate success through intrapreneurship, self-employment and the creation of new businesses and value creation opportunities
- map and articulate institutional development that responds to policy drivers, economic development and social wellbeing, on regional, national and global levels
- employ learning evaluation metrics that respond to identified entrepreneurial needs - for example, projects that require change and adaptation can enhance competencies related to flexibility and adaptability, and outcomes that require multiple solutions (that can be compared and contrasted) can enhance creative capacity
- strengthen links/relationships with businesses, social enterprises, alumni and relevant organisations by inviting entrepreneurs to be guest speakers and/or visiting lecturers. Understanding the distinctive differences between what larger business and smaller business can offer is integral to this.

Location within an institution: factors to consider

The most well developed and innovative Enterprise and Entrepreneurship Education opportunities for students are created when the institution provides a central environment that supports collaborative working across different areas. The following points outline how a central function can better support the delivery and embedding of Enterprise and Entrepreneurship activity.

- A central unit has the advantage of cross-disciplinary opportunities, where innovation results from the meeting of different minds and different methodologies, and can give coherence to the overall institutional approach to enterprise and entrepreneurship. Credit-bearing Enterprise and Entrepreneurship Education has often been developed within a single faculty or department, and has evolved as a result of the interventions of a specialist champion. As outreach to other departments can be problematic, more developed models encourage student accessibility and adaptability through a centralised model.
- Centralised models can aid the development of progressive approaches to the delivery of Enterprise and Entrepreneurship. Examples of this progression are master's degrees in Enterprise and Entrepreneurship that integrate with and are supportive of subject-based learning; or initiatives such as an entrepreneurship placement year, where students can set up their own businesses as learning experiments.
- Venture Creation Programmes are an evolving set of courses where students are required to set up and run a business as the basis of their credit-bearing studies. The best models are interdisciplinary in nature and require support and coordination at an institutional level with a central-point of coordination.
- Cross-institutional enterprise centres and/or the students' union may offer support for extracurricular activities only. In this model, student self-selection is the norm and assessment is typically light touch or based only on self-evaluation. Close coordination

with curricular provision through a central model enhances relevance, offers connectivity and ensures that meaningful metrics of evaluation are developed.

- If the institution has an incubator or accelerator, metrics that demonstrate learning progression as well as financial or social success can support a centralised unit.

See HEA Embedding Employability in Higher Education Framework (2015) in the Resources section (Appendix 1) for further information.

Supporting the educators

As Enterprise and Entrepreneurship Education has matured it has become more complex in terms of depth and breadth. This has resulted in an increasing need to develop staff and to build expert teams that have the necessary skills, vision and support to deliver the required learning to an appropriate standard.

The nature of the support provided at an institutional level will determine the sustainability of the opportunities developed. Educator development, networking opportunities and recognition strategies are examples of progressive approaches that can provide enhanced insights and proactive change. Educator progression can be mapped and developed, and career opportunities provided. Educator Standards such as that provided by the Institute of Enterprise and Entrepreneurs (IOEE - see Resources) can inform this process.

Strategy and vision

Institutions with a well-developed offer are more likely to have a coherent and clearly articulated vision for Enterprise and Entrepreneurship Education, defining what success in achieving that vision looks like. For some institutions, this is a standalone strategy for Entrepreneurial Education, whereas others link to a broader institutional vision for student learning outcomes, graduate employability and local economic development within learning and teaching, research, and knowledge exchange strategies.

Funding

The supportive institution will determine funding streams and allocate dedicated budget for the cost-bearing activities associated with Enterprise and Entrepreneurship Education, recognising the long-term benefits it can bring to the Institution. Planning for funding can alleviate problems around mixed messaging to student, inconsistent learning developments and loss of connectivity with external stakeholders who have already engaged.

Evaluating impact and success

Success metrics will look different for each institution and, while relatable to metrics in the TEF, REF and KEF (for example), an institution can enhance these metrics with a richer narrative that deepens understanding of the value and impact of Enterprise and Entrepreneurship Education in relation to the institution strategy and vision. The key to both evaluating impact and success is relevance, whether that is through subject specialism, research, pedagogical styles, new modes of student assessment or institutional strategy, and management priorities. Tier 4 Student Visa regulations, particularly relating to entrepreneurial education, may also impact on these metrics.

Institutions may wish to use tools such as HEInnovate (see Resources section) to map their progress; it is important to note that this may require senior staff engagement or support from those who have access to appropriate data.

The most advanced institutions share best practice both within and beyond their institution, for example, through educator networks and engagement with national competitions. There is a range of delivery mechanisms emerging across different institutions that share methods that include group work, participative learning and creative assignments.

Appendix 1: Resources

APPG for Micro Businesses (2014), An education system fit for an entrepreneur
www.enterprise.ac.uk/index.php/news/item/download/70_e3bc9b6704c5be4efe1dd-f06ab704e5b

Big Ideas Wales
<https://businesswales.gov.wales/bigideas>

BIS (2015), The Dowling Review of Business–University Research Collaborations:
www.raeng.org.uk/policy/dowling-review/the-dowling-review-of-business-university-research

BIS (2014), Enterprise for All: The relevance of enterprise in education:
www.gov.uk/government/uploads/system/uploads/attachment_data/file/338749/EnterpriseforAll-lowres-200614.pdf (PDF, 2.3MB)

CBI (2017), Helping The UK Thrive: CBI/Pearson Education And Skills Survey 2017:
www.cbi.org.uk/index.cfm/_api/render/file/?method=inlineandfileID=DB1A9FE5-5459-4AA2-8B44798DD5B15E77 (PDF, 1.6MB)

Council for Science and Technology (2016), Strengthening entrepreneurship education: CST letter
www.gov.uk/government/uploads/system/uploads/attachment_data/file/592424/Improving_entrepreneurship_education_-_cst_letter_-_more_accessible.pdf (PDF, 171KB)

Department for Business, Energy and Industrial Strategy (2017), Building our Industrial Strategy
https://beisgovuk.citizenspace.com/strategy/industrial-strategy/supporting_documents/buildingourindustrialstrategygreenpaper.pdf (PDF, 9.5MB)

Department for Education (2017), Teaching Excellence and Student Outcomes Framework Specification, pp54
www.gov.uk/government/uploads/system/uploads/attachment_data/file/658490/Teaching_Excellence_and_Student_Outcomes_Framework_Specification.pdf (PDF, 618KB)

Donaldson, G (2015) Successful Futures; Independent Review of Curriculum and Assessment Arrangement in Wales
<http://gov.wales/docs/dcells/publications/150225-successful-futures-en.pdf> (PDF, 1.58MB)

ENACTUS <http://enactus.org>

EntreComp: The Entrepreneurship Competence Framework (2016)
<https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/entrecomp-entrepreneurship-competence-framework>

Enterprise and Skills Strategic Board in Scotland
<https://beta.gov.scot/groups/enterprise-and-skills-strategic-board>

Enterprise and Skills Review in Scotland
<https://beta.gov.scot/policies/economic-growth/enterprise-and-skills-review>

ETC Toolkit
www.enterprise.ac.uk/index.php/resources/etc-toolkit

HEA Embedding Employability in Higher Education Framework (2015)
www.heacademy.ac.uk/knowledge-hub/framework-embedding-employability-higher-education

HEFCE (2011) Opportunity, choice, and excellence in Higher Education, available at:
www.hefce.ac.uk/news/newsarchive/2011/Name_94292.en.html

HEInnovate
<https://heinnovate.eu/en>

HESA (2016), Results of the 2014/15 HE Business and Community Interaction Survey
www.hesa.ac.uk/news/07-04-2016/graduate-start-ups

Institute of Enterprise and Entrepreneurs (IOEE)
<http://ioee.uk/>

Moncada-Paternò-Castello P., Grassano N. and Vezzani A. 'Innovation and Industry: Policy for the next decade', Industrial RandD - JRC Policy Insights, December 2017
<https://ec.europa.eu/jrc/sites/jrcsh/files/jrc109610.pdf> (PDF, 426MB)

OECD/EU Entrepreneurship360: Skills for Entrepreneurship:
www.oecd.org/cfe/leed/entrepreneurship360-skills-entrepreneurship.htm

Royal Academy of Engineering (2017), Engineering an economy that works for all
www.raeng.org.uk/publications/responses/engineering-an-economy-that-works-for-all

Skills Development Scotland
www.skillsdevelopmentscotland.co.uk

SFEDI National Occupational Standards for Enterprise Educators (2016)
<http://campus.ioee.uk/national-enterprise-standards/>

Strengthening entrepreneurship education: Prime Minister's response
www.gov.uk/government/uploads/system/uploads/attachment_data/file/592417/Improving_entrepreneurship_education_-_PM_response.pdf (PDF, 847KB)

Subject Benchmark Statements:
www.qaa.ac.uk/assuring-standards-and-quality/the-quality-code/subject-benchmark-statements

The Royal Society (2017), Response to Building our Industrial Strategy Green Paper
<https://royalsociety.org/~media/policy/Publications/2017/17-04-17-submission-industrial-strategy-green-paper.pdf> (PDF, 131KB)

UNCTAD Entrepreneurship Policy Framework (2012)
<http://unctad.org/en/Pages/DIAE/Entrepreneurship/EPF-3.aspx>

Universities' Scotland 'Making it Happen'
<http://www.universities-scotland.ac.uk/publications/making-it-happen>

Welsh Government Prosperity for all: economic action plan
<http://gov.wales/docs/det/publications/171212-economic-action-plan-en.pdf> (PDF, 2.3MB)

Welsh Government's 'Youth Entrepreneurship Strategy'
www.youthworkwales.org.uk/creo_files/upload/files/140221-national-youth-work-strategy-en.pdf (PDF, 152KB)

Wilson, T (2012) A Review of Business-University Collaboration. Department for Business, Innovation and Skills
www.gov.uk/government/uploads/system/uploads/attachment_data/file/32383/12-610-wilson-review-business-university-collaboration.pdf (PDF, 891KB)

Youth Entrepreneurship Strategy: An Action Plan for Wales 2010-2015
<http://gov.wales/docs/det/publications/101115yesen.pdf> (PDF, 867KB)

2014-25 Innovation Strategy for Northern Ireland
www.economy-ni.gov.uk/sites/default/files/publications/deti/Innovation-Strategy-2014-2025_2_0.pdf (PDF, 3.3MB)

Appendix 2: The Advisory Group

Nigel Adams	University of Buckingham
Ruth Burchell	QAA
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Neil Coles	University of Bristol
Ann Davidson	Scottish Institute for Enterprise
Charlotte Freeman	Royal Academy of Engineering
Bonnie Hacking	University of St Andrews
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Sarah Pates	University of Sheffield
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Jonathan Powell	Lancaster University
David Rae	De Montford University
Kelly Smith	Coventry University
Emilia Todorova	QAA (Scotland)
Sarah Trouten	IOEE
Sarah Underwood	University of Leeds
Greg Wade	UUK
Kate Wicklow	GuildHE
Bruce Wood	Glasgow Caledonian University

Appendix 3: Partner Organisations

QAA would like to thank the following organisations that have supported this work and provided invaluable expertise.

Enterprise Educators UK (www.enterprise.ac.uk)

Enterprise Educators UK (EEUK) is the national network for enterprise educators. Its purpose is simple – to support its members to increase the scale, scope and effectiveness of Enterprise and Entrepreneurship Education and practice. EEUK welcomes this update to the QAA 2012 guidance on Enterprise and Entrepreneurship, as it captures the impact and progress in this significant area and to inform, enhance and promote Enterprise and Entrepreneurship Education in the higher education sector. It supports educators to enhance their practice, to empower their students and graduates to develop the skills, abilities and competencies towards a sustainable, rewarding and impactful professional life.

GuildHE (www.guildhe.ac.uk)

GuildHE was founded in 1967 as the Standing Conference of Principals, and became GuildHE in 2006. By 2020, GuildHE wants to see a sector that is more distinctive, more inclusive and stronger. The diversity of UK higher education nurtures innovation and creativity. It means more choice for students and for graduate employers and more opportunities to reach out to new learners. It encourages healthy competition, fresh approaches to research, different ways of engaging with business and industries, and new ways of enriching the social, economic and cultural prosperity of life in the UK's communities and regions.

The Higher Education Academy (www.heacademy.ac.uk)

The Higher Education Academy (HEA) is the national body that champions teaching excellence. It works with governments, ministries, universities and individual academics in the UK and around the globe to improve student outcomes. It provides value to the higher education sector by focusing on the contribution of teaching as part of the wider student learning experience. HEA focuses entirely on improving approaches to teaching, and individual teaching practice, to help improve the student journey into, through and beyond higher education.

The Institute of Enterprise and Entrepreneurs (<http://ioee.uk>)

The Institute of Enterprise and Entrepreneurs (IOEE) is the first learning institute dedicated to developing and recognising the skills of enterprising people. With a membership of over 30,000 both in the UK and internationally the IOEE recognises the entrepreneurial spirit in everyone. In addition, its programmes are built on extensive research and are designed for those who wish to start and grow their own business, and the business support professionals who work with them including advisers, mentors and enterprise educators.

Institute for Small Business and Entrepreneurship (<http://isbe.org.uk>)

The Institute for Small Business and Entrepreneurship (ISBE) is a network for people and organisations involved in small business and entrepreneurship research, policy, education, support and advice. Its primary aim is to put research into policy and practice. Its members are its most valuable resource, offering vast reserves of knowledge and research, and there is a strong community of researchers and practitioners with an enterprise education focus.

The National Centre for Entrepreneurship in Education (<http://ncee.org.uk>)

The National Centre for Entrepreneurship in Education (NCEE) supports higher education to build its entrepreneurial future. Working with universities, its senior leadership and practitioners it provides a range of services ensuring UK higher education remains at the forefront of Enterprise and Entrepreneurship. It supports organisations to develop their entrepreneurial capacity. NCEE's Entrepreneurial Leaders Programme drives change, and has helped over 150 leaders to respond and react to this complex environment, providing concepts and strategies that work.

The Royal Academy of Engineering (www.raeng.org.uk)

The Royal Academy of Engineering is the UK's national academy for engineering and brings together the most successful and talented engineers from across the engineering sectors for a shared purpose: to advance and promote excellence in engineering. The Academy takes a lead on engineering education and invests in the UK's world-class research base to underpin innovation. The Academy's Enterprise Hub is a national resource for the UK's most promising engineering entrepreneurs. The Hub makes awards to exemplars of excellence in engineering innovation who receive an intensive package of training and mentoring.

SFEDI (www.sfedigroup.com)

SFEDI is the government-recognised Sector Skills Organisation for enterprise and business support. Established in 1996, SFEDI is recognised as the expert in skills and know-how development for small, medium and micro-sized businesses. Working with a diverse range of organisations in the public, private and third sectors, SFEDI provides enterprising solutions to the challenges and opportunities faced in understanding and supporting enterprise learning and skills development. Its core services include standard setting, quality assurance, research development and delivery of innovative learning and skills.

The Scottish Institute for Enterprise (www.sie.ac.uk)

The Scottish Institute for Enterprise (SIE) creates opportunities for students to be innovative. SIE works nationally to promote and support Enterprise and Entrepreneurship in Scotland's students. It works closely with local institutions to champion enterprise education and help students start new innovative businesses and social enterprises. SIE provides free one-to-one advice, enterprise workshops and national competitions. Its website is a hub for student-focused enterprise activity happening across Scotland, from enterprise competitions to exciting events and opportunities.

UUK - Universities UK (www.universitiesuk.ac.uk)

As the voice of the UK university sector, UUK's priorities include driving innovation, skills and growth. Helping to maintain the world-leading strength of the UK university sector, UUK supports its members to achieve their aims and objectives. It helps to shape the higher education policy agenda, engaging directly with policy makers and other stakeholders. UUK maintains strong and proactive relationships with government, the private sector, the professions and sector agencies. The diversity and autonomy of the UK's higher education sector is critical to its success.

The Quality Assurance Agency for Higher Education (www.qaa.ac.uk)

The Quality Assurance Agency for Higher Education (QAA) safeguards standards and improves the quality of UK higher education wherever it is delivered around the world. As an independent, not-for-profit organisation, QAA checks that students working towards a UK qualification get the higher education they are entitled to expect. QAA works across all four nations of the UK to raise the standards and quality of higher education, and uses its expertise to support the development of quality assurance systems worldwide.

This document is also available in Mandarin Chinese; we wish to convey our thanks to Venture Education for the Chinese translation.

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