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Understanding Universities and Entrepreneurship Education: towards a comprehensive future research agenda
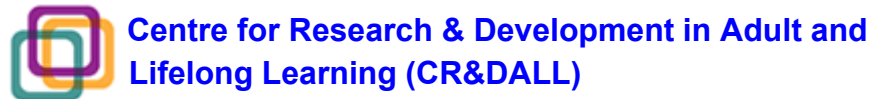
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Abstract

Understanding the potential and dynamics of entrepreneurship and education requires better understanding of how universities function as knowledge communities, and the role of students in such milieu. This can reveal how universities' teaching activities influence the development of students' entrepreneurial orientations and competencies. This article argues that entrepreneurship education has not yet fulfilled its potential partly because of a poor fit with other knowledge activities of universities. It proposes that a future research agenda for universities' entrepreneurship education should focus more upon how entrepreneurship activities fit with universities' core knowledge community activities. This would allow a coherent understanding to emerge of the potentials and limitations of universities' contributions to the inculcation of entrepreneurial attitudes.

Keywords: entrepreneurship education, university institutional architecture, knowledge creation, communities of practice, innovation policy, university enterprise, university entrepreneurship.

1. Introduction

There is increasing interest in using university education as a means of stimulating entrepreneurship. This is a trend that has been developing over recent decades, but it has received a particular impulse, notably within Europe, because of the power by which the notion of "entrepreneurship" has been imbued by policy-makers seeking to drive a wider economic recovery from the global crisis of 2008. The European Commission have created an important link between supporting entrepreneurship in HE and the *Europe 2020* strategy[1] that sets out EU's intentions of achieving smart, sustainable and inclusive growth (Commission of the European Communities, 2010). The EC's proposed *Multiannual Financial Framework* 2014-2020 reinforces this strategy by considerably increasing investment in education, research and innovation[2] (see also Brennan *et al.,* 2014).

Underlying this is a sometimes implicit argument that education, and most particularly higher education, is a key driver for human capital development and that entrepreneurship education is vital to leverage wider benefits from human capital investments. Although there are a number of definitions of entrepreneurship, for the purposes of this paper we argue that the definition set made by Entrepreneurship Unit of DG Enterprise and Industry of the European Commission provides an illustrative good working definition:

> *Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. (Directorate-General Enterprise and Industry 2012: 7)*

Yet, this definition has not yet been reflected into research on student entrepreneurship, with the majority of research focusing on student and graduate enterprise activities, but there is much less written in a conceptually coherent way about how education can improve and support entrepreneurship in this broader sense encompassing this "creativity, innovation and risk-taking" We argue that there has been a tendency by researchers to reduce the ways that universities contribute to entrepreneurship to rather peripheral projects supporting enterprise, focusing on the entrepreneurial act rather than the educative act. This therefore excludes looking at other ways that universities may stimulate entrepreneurship, that contributes to leveraging human capital, but without being directly linked with a subsequent act of enterprise. Given that universities educate far more students than those that create new enterprises, this distracts from considering the bulk of university contributions. We therefore argue that to properly understand the role of universities, there should be a core concern in better understanding how entrepreneurship education fits with university core processes rather than peripheral projects.

Understanding the potential and dynamics of entrepreneurship and education requires better understanding of how universities function as knowledge communities, and the role of students in these such milieu. This can reveal how universities' teaching activities influence the development of students' entrepreneurial orientations and competencies. We contend that entrepreneurship education has not yet fulfilled its potential partly because of a poor fit with other knowledge activities of universities. We conclude by arguing that a future research agenda for universities' entrepreneurship education should focus more upon how entrepreneurship activities fit with universities' core knowledge community activities. This allows a coherent understanding to emerge

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of the potentials and limitations of universities' contributions to the inculcation of entrepreneurial attitudes.

2. The policy urgency and the enduring problematic

European HEIs are increasingly being invited to play an explicit role in developing the European economy by raising the growth potential of stocks of human capital. Entrepreneurship has been portrayed by policy-makers as a means of leveraging human capital by ensuring innovation takes place not only within large R&D intensive firms but also in SMEs, the public sector and wider civil society. Many EU initiatives have sought to advance this agenda, notably complemented by a range of national interventions, including in Finland (Ministry of Education 2009), Ireland (within the government's Framework for Sustainable Economic Renewal, Department of the Taioiseach 2008), Norway (an action plan for Entrepreneurship in Education and Training from compulsory schooling to higher education 2009-2014), the Netherlands (the Education and Entrepreneurship Action Programme of 2007), and the UK (a National Centre for Entrepreneurship in Education (NCCE)).

Entrepreneurship is embedded into a number of important strands of European Commission policy imbuing it with an appearance of being unavoidable within the European Higher Education policy landscape. Entrepreneurship centrality within Europe 2020 strategy is intended to consolidate and build synergies between a number of recent piecemeal initiatives, including the European Research Area, the European Higher Education Area ('Bologna') and latterly the European Innovation Area. Higher Education Institutions (HEIs) have particularly important roles to play in Horizon 2020 based upon enhanced structural co-operation between HEIs, government and businesses for driving innovation (CEC, 2011a; 2011b) to:

> stimulate the development of entrepreneurial, creative and innovation skills in all disciplines and in all three cycles, and promote innovation in higher education through more interactive learning environments and strengthened knowledge transfer infrastructure. (Commission of the European Communities 2011b: 72)

Part of this intervention has come through creating new organisations to mobilise an interest community around entrepreneurship education. The Commission formed the *University-Business Forum* in 2008 to encourage the sharing of ideas, good practice and stimulating innovation between HEIs, companies, students, NGOs and policymakers at the European level (COM 2009 158 Final). This forum brings together universities, businesses, associations, intermediaries and public authorities into a common space from which efforts to modernise higher education, attuning it in particular to the needs of the European job-market. The forum has developed a prototype *Self-assessment Tool for Entrepreneurial Universities*, whilst the *Knowledge Alliances* pilot project seeks to encourage structured, 'results-driven' cooperation ventures between universities and companies in particular sectors.

Conversely, the notion of entrepreneurship has entered a range of other policy areas salient to HE, often under the general heading of "modernisation" by which the European Commission means reforming universities to optimise their societal service, stressing the involvement of all disciplines and the three HE cycles (undergraduate, postgraduate, Ph.D.). The Commission referred to a need to equip graduates with knowledge and competences for highly-skilled occupations and criticised HEIs

for often being slow in responding to the need for curriculum change, failing to anticipate the needs of the economy, noting:

> Involving employers and labour market institutions in the design and delivery of programmes, supporting staff exchanges and including practical experience in courses can help attune curricula to current and emerging labour market needs and foster employability and entrepreneurship. (EC 2011b, p. 5)

Other more specific policy fields have also started to emphasise entrepreneurship. The EC's 2012 Communication, *Rethinking Education: Investing in skills for better socio-economic outcomes* [3] published in 2012 also considers HE's role in developing entrepreneurial skills as well as recognising the opportunity of business creation as a career destination. It speaks of the need to develop transversal skills, including 'the ability to think critically, take initiative, problem solve and work collaboratively' to prepare individuals for varied, unpredictable career paths. The Communication calls for to embedding real world experience, through problem-based learning and enterprise links, within **all** disciplines with appropriate customisation to **all** levels of education, including HE. The recently adopted EC Communication on the *Entrepreneurship 2020 Action Plan*[4] specifically states that universities 'should become more entrepreneurial'. This refers to the EC's collaboration with OECD to develop a framework for entrepreneurial universities facilitating university self-assessment in this in improving their entrepreneurship capabilities with tailor-made learning modules. A number of the EC's stated Action Plan interventions would clearly affect the development of entrepreneurship in HE, including:

> Disseminate the entrepreneurial university guidance framework in early 2013; facilitate exchange between universities interested in applying the framework; gradually promote it to the EU Higher Education Institutions; and

> Endorse successful mechanisms of university-driven business creation (spin-offs etc.) and emerging university-business ecosystems around key societal challenges.

It also notably invited Member States to:

> Ensure that the key competence 'entrepreneurship' is embedded into curricula across primary, secondary, vocational, higher and adult education before the end of 2015.

Pressures have also come from Commission-associated organisations, including the European Institute of Technology (EIT)[5] in Budapest, which pioneered entrepreneurship's role as a key innovation enabler on a EU level, championing making problem-solving and 'learning by doing' more central within university curricula. The EIT's *Knowledge and Innovation Communities* (KICs) brings together key actors from HE, other research and business, in thematic communities, currently Climate Change, ICT and Sustainable Energy and EIT. HEI's degrees and diplomas awarded in the context of the KICs, and entrepreneurship education provided by KICs are seen as being key means to create European value whilst sidestepping traditional university governance's limitations (Brennan *et al.* 2014: 34), namely a lack of responsiveness and unwillingness to work with external stakeholders (cf Amaral, et al, 2003; Shattock, 1999).

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[3] See COM(2012) 669 final, http://ec.europa.eu/education/news/rethinking/com669_en.pdf
[4] See COM (2012) 795 final, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF
[5] See http://eit.europa.eu

Entrepreneurship has also become part of the successor to the Lifelong Learning Programme, the Erasmus+ programme, whose Key Action 2 concerns 'co-operation for innovation and the exchange of good practices' (EC 2014:3), in part through 400 *Knowledge Alliances* and *Sector Skills Alliances.* Knowledge Alliances are large-scale partnerships between HEIs and businesses whose explicit objectives include 'developing entrepreneurship mind-set and skills' (EC 2014: 109) amongst students, researchers, educators and other HE staff. Sector Skills Alliances are partnerships between education, training providers and businesses to promote employability by creating new sector-specific curricula and developing innovative vocational teaching and training forms.

3. Entrepreneurship and universities

Efforts to stimulate university entrepreneurship education long preceded these recent EC efforts, but we contend that this recent policy emphasis suggests that these early experiments failed to lead to widespread transformation. Moreover, entrepreneurship education has remained peripheral to institutions, embedded within discrete units and projects rather than as this new policy framework seeks, to be an indivisible element of university education. Many universities offering modules and activities to stimulate entrepreneurship are without any doubt highly successful (*inter alia* Hills, 1988; Garavan & O'Cinneide, 1994; Souitarism *et al.*, 2007). But the problem remains that this does not equate with *all* university training inculcating people with entrepreneurship *competencies* ensuring that even those individuals who do not follow enterprise pathways help to contribute to a more dynamic, innovative Europe. We further argue that entrepreneurship education activities have remained peripheral to universities because of a fundamental tension between three groups:

- policy-makers who want to raise universities' contribution to entrepreneurial potential,
- students acting as (potential) entrepreneurs who are concerned with evaluating and exploiting a particular opportunity for them, and
- universities who are concerned with the stewardship of their core educational and research activities.

Much recent research has focused on the processes and resources that universities make available to (aspiring) entrepreneurs via particular university activities or projects. Yet, given persistent policy demands for *more entrepreneurship* in the curriculum, we conclude that entrepreneurship has not *yet* become a core university education value in Europe, and remains outwith universities' core teaching and research activities. Promoting entrepreneurial potential has become simply yet *another* mission for the already overloaded higher education sector (De Boer *et al.*, 2009) rather than a core university value. To become more central, the value of promoting entrepreneurship must move to the centre of HEIs' institutional architectures (*cf.* Vorley & Nelles, 2008) and clearly help universities to reach their core institutional goals of high quality teaching, research, infrastructure, employment conditions and partner satisfaction.

Our starting point for understanding how entrepreneurship education fits within university institutional architectures is the idea of *entrepreneurial potential*, a concept used to explain individuals' propensities, faced with the choice of becoming (or not becoming) an entrepreneur to positive choose to become an entrepreneur (Krueger, 1993; Krueger and Brazeal, 1994). This extended Shapero's (1982) idea of the *entrepreneurial event*, where an individual is stimulated by

some kind of disruption to become an entrepreneur. Krueger and Brazeal (1994) considered pathways by which individuals progressed prior to individual entrepreneurial events, arguing three kinds of precondition characteristic affected entrepreneurial potential:

- *Perceived desirability*: the perception the individual has that being entrepreneurial is rewarding for them (whether intrinsic/socially or extrinsic/ economically)

- *Perceived feasibility*: the perception the individual has that they have the necessary skills to be an effective and successful entrepreneur.

- *Propensity to act*: the individual personality trait of being willing to take an uncertain/risky course of action that nevertheless can be rationally justified in terms of its rewards.

Krueger and Brazeal (1994) argued that the first two variables came together to represent 'credibility', the extent to which individuals believed that following an entrepreneurial course of action could be rewarding for them. Combined with the third variable, namely propensity to act, this defined an individual's entrepreneurial potential, which in turn affected the individual's propensity to become an entrepreneur when faced with a concrete precipitating event. Their model is shown in Figure 1 below.

Figure 1: A simplified model of entrepreneurial potential
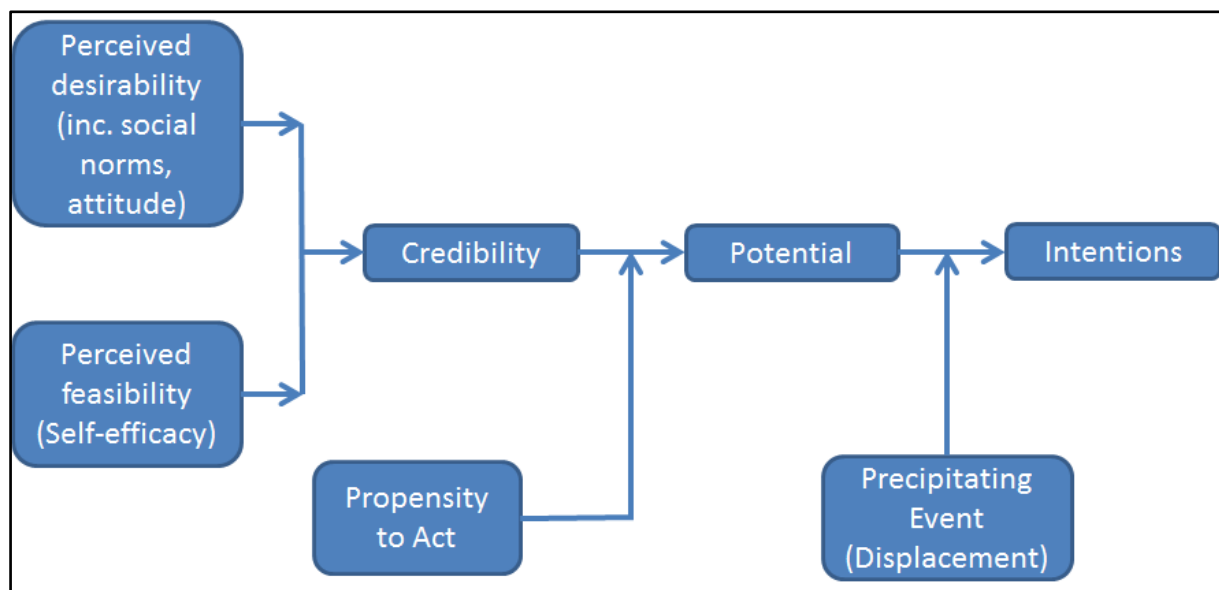
Source: Krueger and Brazeal (1994)

Although this model is two decades old, the Krueger-Bazeal model retains its saliency for understanding what determines entrepreneurial potential (e.g. Guerrera *et al.*, 2008; Hindle *et al.*, 2009; Fitzsimmons *et al.*, 2011). This also provides a basis for understanding *how* universities support entrepreneurial potential, namely they contribute to these three stages of the process by:

- **Creating** a sense that entrepreneurial activity is a credible choice for an individual to undertake (*awareness raising*)

- **Creating** an identity that an individual can be an entrepreneur when presented with an opportunity (*identity forming*)

- **Driving** the decision to engage in a particular activity and to commit to that particular course of activity (*opportunity activation*)

4. Universities hosting entrepreneurship knowledge communities

There are a range of ways by which universities may promote Krueger-Bazeal Entrepreneurial Potential (KBEP): we group these along two dimensions, firstly by following the entrepreneurial journey from norm formation to post-entrepreneurial event, and secondly, by considering the nature of the university input. Understanding what kind of university activity may contribute to the entrepreneurial journey in turn helps clarify what makes institutions act to support that potential. We here draw on Benneworth *et al.* (2009) who distinguish four kinds of university activity: teaching, research, service and knowledge exchange.

Fayolle's (2013) comprehensive review of entrepreneurship education suggests that there is a strong agreement that learning about entrepreneurship takes place through **interactive and socialised learning processes**:

> Looking at the literature on [entrepreneurship education], a number of articles emphasize the importance of 'active', experiential', 'learning by doing' and 'real-world' pedagogies. (*ibid*, p. 5).

This fits with the KBEP model, where KBEP is raised by shaping identity, norms and motivation, rather than simply involving the accretion of a series of resources and skills. suggests that these university activities can be understood as 'collective learning processes'. Understanding knowledge exchange programmes using post-graduate associates and the university's entrepreneurial culture can be understood as as a social learning community (such as a community or network of practice (Benneworth, 2007; Rae *et al.*, 2010; Gertner *et al.*, 2011; *cf.* Wenger, 1998; Benner, 2003). In contrast to community of practices (CoPs) contained within organisations, these knowledge exchange Communities of Practice have a core located at the organisational periphery. In Gertner *et al.*'s example, the knowledge transfer associate spans between a university research development (centred around the scientific researcher) and the firm's research and development (R&D) team. Knowledge is created across organisational boundaries and the associate spans between two knowledge domains, scientific and economic.

A range of cognate approaches have latterly been deployed to conceptualise entrepreneurship education (e.g. Schrooten, 2009; Cope and Down, 2010; Pitaway *et al.*, 2011; Rae, 2012). From this perspective, university activities offer *collective learning arenas* where students undertake concrete tasks in which their KBEP increases <u>even where that is not the apparent purpose of the task</u>. A social learning community functions by creating collective tacit knowledge (Polayni, 1967) between students and academics. This tacit knowledge can partly be codified into scripts, but also important are *collective knowledge vectors*, participants who stay and transfer this shared knowledge to other participants in the community.

In the context of entrepreneurship education activities, there are a number of kinds of individuals who can be regarded as fulfilling this collective knowledge vector role. Most importantly and obviously are university staff participating in the particular activity who know the 'tricks' to ensure that a particular instrumental task develops KBEP amongst students. Likewise, university researchers involved with entrepreneurship research may provide material input into activities. External experts involved in these activities – such as business advisers, financial planners, or patent lawyers – can also contribute their knowledge. Universities' commercialisation offices actively engaged in promoting entrepreneurship have detailed understanding of how local entrepreneurship processes function. Part-time entrepreneurs still located in or connected to the university may offer their tacit knowledge in mentoring individuals undergoing entrepreneurial journeys (Benneworth & Hospers, 2007). Students may self-organise associations, organisations and networks that in turn ensure continuity of activity between years and cohorts. External competitions, networks and organisations may provide concrete activities (e.g. business plan competitions) to focus knowledge, support and expertise in implementing entrepreneurial activities in a HE setting.

A particular entrepreneurship activity can be regarded as mobilising a wider learning community who collectively raise students' KBEP. This community's core is formed by immediate participants, with an immediate periphery formed by the university, where two different layers are evident. Firstly are the university technology transfer infrastructures that help to embed entrepreneurial students in entrepreneurial activities (see spin-off companies below). There is also a wider university community including the students, their clubs, and also those who are part of the learning community whilst not being formally part of the university. The most obvious example of this is start-up companies where entrepreneurs have laboratory or office space within the university, forming part of that university's entrepreneurial community, and potentially contributing to these entrepreneurial activities.

University media activities may support learning, potentially identifying iconic entrepreneurs, publicising competitions, lauding winners, and other kinds of activities that promote entrepreneurial norm and identity formation. Outside this community anchored immediately around the university, there is a wider network of practice constituted through various epistemic and professional networks and associations. A stylised map of the wider learning community, and its three elements (the core community, the peripheral community and the network) are represented in Figure 2 below. The diagram is 'messy', representing a complex situation where diverse organisational and institutional elements are fulfilling different functions: consider for example incubators and hatcheries that may or may not be involved in student university entrepreneurship promotion (and this is why they span the boundary here).

Figure 2: The social learning community associated with university contributions to raising entrepreneurial potential
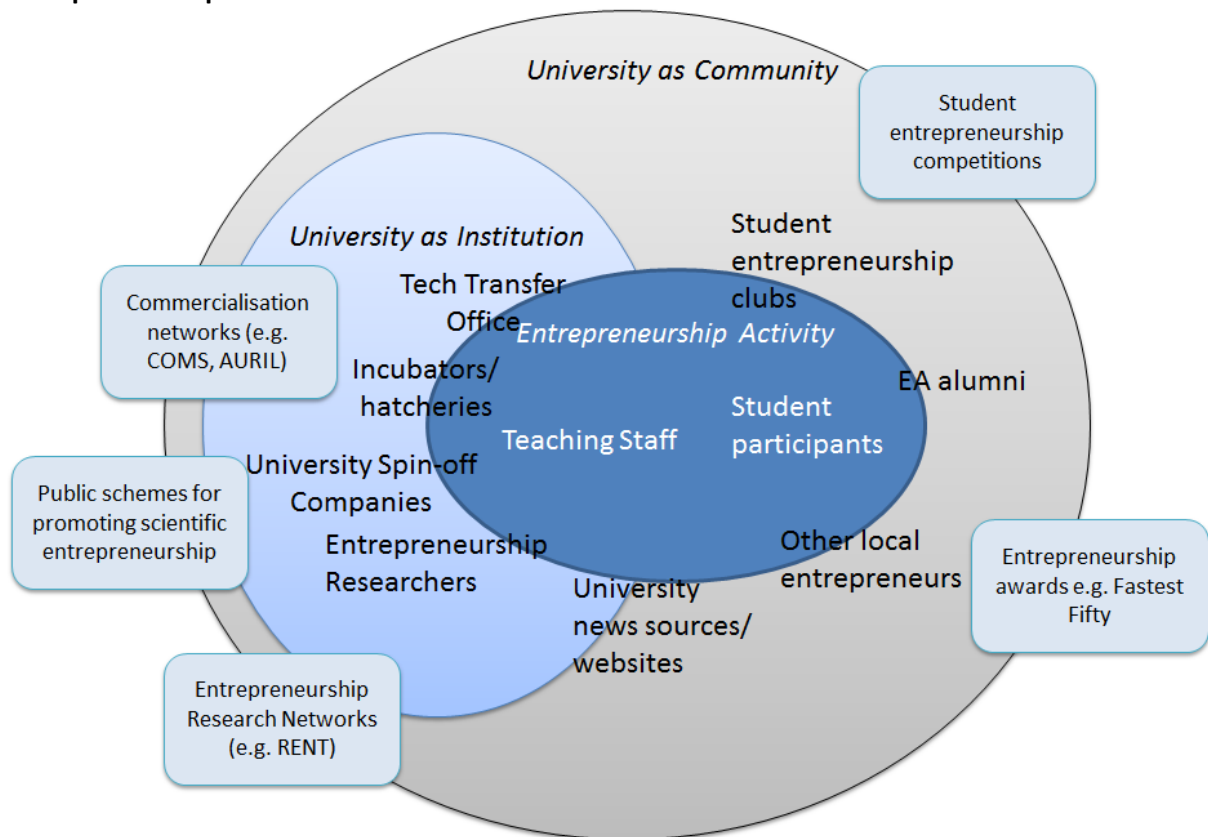
Source: own design after Benneworth (2007).

5. The poor fit of entrepreneurship knowledge communities in university institutional structures

Although there has been a range of good examples of highly entrepreneurial universities, with innovative curricula over the last 30 years (Fayolle and Gailly, 2009), more generally stimulating university entrepreneurship has proven problematic (O'Shea *et al.*, 2005; Bercovitz *et al.*, 2008). With the exception of the relatively limited number of institutions that regard themselves as 'entrepreneurial universities', promoting entrepreneurship is rarely a direct strategic mission for universities. Therefore, although the bulk of universities may engage in entrepreneurial activities, they are often subordinate to core teaching and research missions. Even though it has been common to talk of a 'third engagement mission' for universities (whether business, community, public or societal, *cf.* NCCPE, 2010; Schuetze and Inman 2010; Duke, Osborne and Wilson 2013), the reality has been that excellent engagement tends to be a consequence of performing core missions well, rather than being a mission in its own right (Benneworth, 2013).

But engagement is a broad mission, and entrepreneurship just one of the engagement activities (Benneworth *et al.*, 2009). Universities face a huge range of pressures from external organisations for their attention and support, and supporting entrepreneurship adds to the complexity of managing universities who face what De Boer *et al.* have called 'mission overload' (2007). Research consistently demonstrates that although third mission income is a growing share in many countries'

HE sectors, this tends to come from increasing numbers of research and consultancy contracts from firms to universities rather than through entrepreneurial activities. Indeed, by their very nature, entrepreneurs can be difficult customers from which universities may generate income (Bruneel *et al.*, 2010). At best, entrepreneurs' timescales and needs ('effectuation') are entirely out of step with those of universities' administrative structures ('causation') (Van Burg *et al.*, 2008; Sarasvasthy, 2009). At worst, the necessarily effectuative and opportunistic nature of the entrepreneurship process (which can be likened to a desperate scramble for resources where the ends justify the means) can hinder universities working effectively with entrepreneurs (Guerrero & Urbano, 2012).

And it must also be acknowledged that despite the promoting entrepreneurship and entrepreneurial potential not necessarily being a core university business, many universities are rather good at it (see for example Clark, 1998; d'Este & Perkman, 2010), as there are structural reasons why universities can be supportive environments for entrepreneurs. Universities are by their very nature a loose agglomeration of many overlapping and interlinked communities involved with creating, developing and applying new knowledge, including in business settings (Benneworth, 2014). The most entrepreneurial universities open themselves up as abundant eco-systems for entrepreneurs and potential entrepreneurs, educating a cadre of entrepreneurs with good know-how and know-who of the university, then permitting and regulating those entrepreneurs to access the necessary resources to create new businesses (e.g. Mora *et al.*, 2010). It is here where we see the policy problematic emerging; entrepreneurship promotion policies to date have tended to be rather top-down and implicitly have assumed that the purpose of universities is exclusively to work with innovative businesses (Rasmussen, 2008). This can in turn lead to policy-making that seeks to stimulates one-off projects that neither strengthen the university's entrepreneurial competencies nor increase aggregate levels of entrepreneurship and entrepreneurial potential (Harrison and Leitch, 2010).

Effectively stimulating universities to contribute to raising entrepreneurial potential needs to recognise three tensions:

- What entrepreneurs want to get from universities is not always in the universities' best interests (e.g. a livelihood that is not a degree)

- Universities are generally unwilling to strategically support entrepreneurship at the cost of their core activities, (e.g. training their students to leave before graduation), and

- Policy-makers therefore should not attempt to strategically steer universities to encourage entrepreneurial potential *where it is not in the universities' best interests*.

These tensions form the basis for our approach for further investigating the enabling of entrepreneurship in HE: in order to encourage universities to stimulate entrepreneurial potential, it is necessary to understand not only the complexity of what entrepreneurs need and benefit from, but also how that fits with universities as these complex organisations. There has been to date a tendency to deal with this complexity by focusing on one side or the other of the relationship, looking at either entrepreneurs or universities (Pinheiro *et al.*, 2012). Any effective intervention needs be based on understanding how universities as complex institutions and communities engage with entrepreneurs on their individually-complex innovation journeys. This understanding therefore

forms the basis of conceptual frameworks for the situation of entrepreneurial arenas that we introduce in the latter part of this article (see Figure 5).

6. How things 'fit' in university institutional structures, a stakeholder approach

In our view research should explore how the collective entrepreneurship learning arenas illustrated in Figure 2 operate within the overall institutional architecture of universities. These activities are not free-standing, but have a range of interdependencies and feedback loops with other kinds of university undertakings: they fit into a wider institutional architecture, and their effectiveness is influenced by the goodness of fit with that institutional architecture. The key question in terms of institutional fit is: how effectively do entrepreneurship projects contribute to core strategic goals and missions. To understand how universities permit collective entrepreneurship learning arenas to build up within their institutional architecture, we should recognise the relationship of these collective learning arenas to the other elements of the university, including what Clark (1988) referred to as the 'steering core' (Benneworth *et al.*, 2013).

The higher education modernisation process of the last thirty years has sought to sensitise universities to societal stakeholders (Jenniskens 1997; De Boer *et al.*, 2007). This has led to a situation where universities face increasing numbers of demands, at a time when they have to make strategic choices, leading to a situation termed 'mission overload' (Ćulum, Rončević and Ledić 2013; Damme 2009; Enders and Boer 2009). This has forced them to become strategically selective and to focusing efforts exclusively on activities contributing to core goals. This poses a direct threat to university entrepreneurship activities, both actively and passively (Benneworth and Osborne, 2013). Actively, this may concentrate resources on core activities and make it harder to bring resources together to create experimental and permissive spaces for more peripheral activities. Passively, re-regulation of universities to optimise strategic management can create barriers to entrepreneurial individuals participating in these communities.

Therefore, we argue that future research should focus at least partly upon the question of how these entrepreneurial activities can be made more strategically important to universities, identifying what they do to achieve that, the barriers they face and how they address those barriers. A useful starting point is provided by Rae *et al.* (2010) who map (Figure 3) how an entrepreneurial culture builds up in the university. Central to their argument is that the change agent is an "entrepreneurial learning team", an emergent grouping that forms between people each trying to mobilise their own collective learning arenas and who join forces at some level to mutually reinforce the desirability of entrepreneurial activities within the university. The "entrepreneurial learning team" through this mobilisation can leverage any success they may enjoy. Their experiments in creating core university value from experimental entrepreneurship activities may have a demonstrative value that is able to influence other spheres of the university, its mission, the curriculum, students, external communities and third stream activities. Part of the success of this depends on the extent to which the team is able to build connections between the various participants, and create shared resources that at the same time are valued by other university constituencies who are changing what they are doing to be in part more entrepreneurial.

Figure 3: Five key areas of interaction for the entrepreneurial learning team
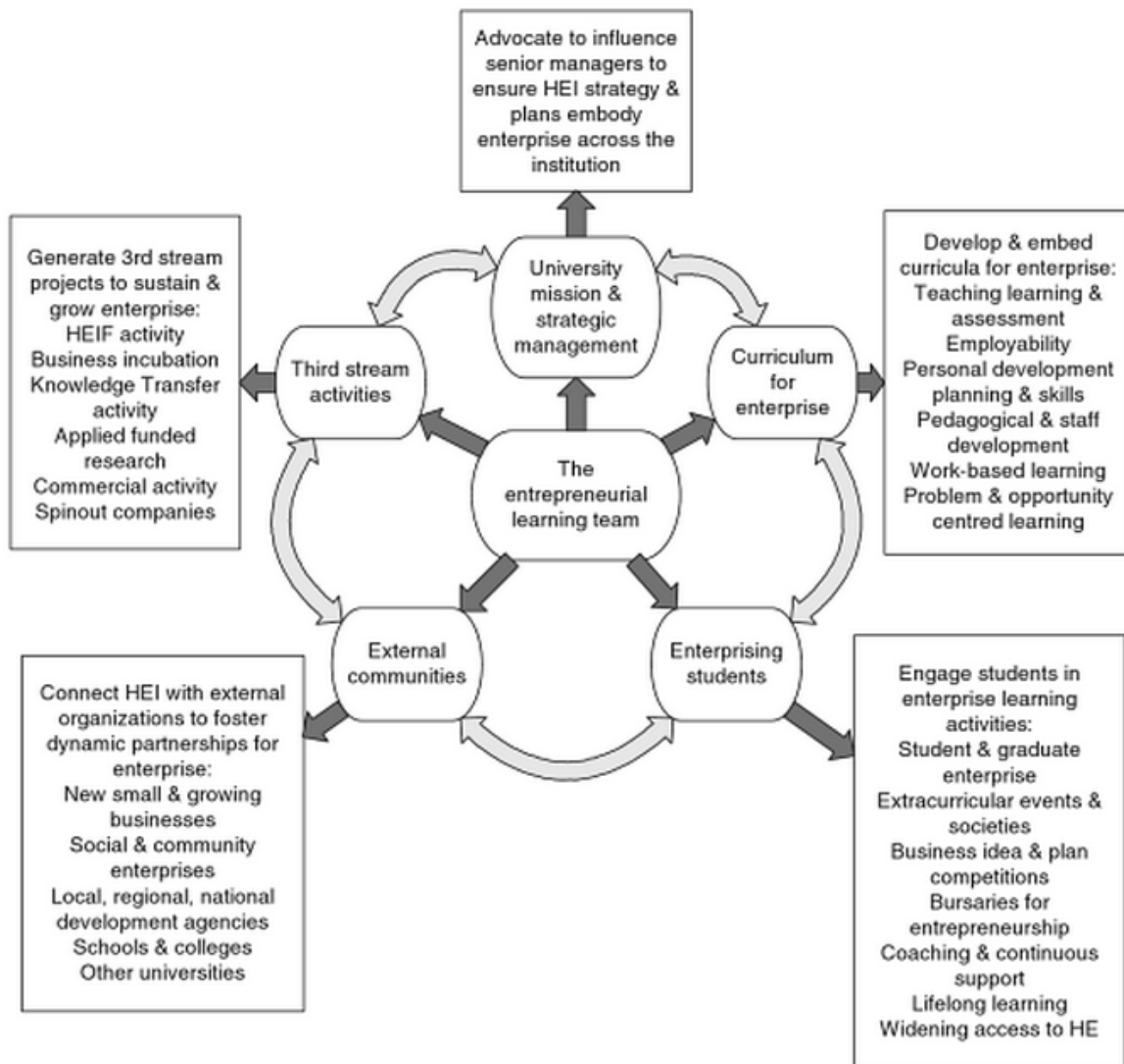
Source Rae et al., 2010.

Extending Rae *et al.*'s analysis and incorporating Figure 2 we argue that it is not just the entrepreneurial learning team embedded in these networks, but rather each different group within the team that has its own communities. Thus, to understand the dynamics we must understand how the different interests of team members are in turn shaped and influenced by their own stakeholders (Jongbloed *et al.*, 2008). Stakeholders are an individual, group or institution with a stake or an interest in an organisation's success: that interest might be in its activities, in helping it to reach its goals, or in the wider success of those activities. Stakeholders influence - either negatively or positively - an organisation's scope to take particular courses of action. With universities facing many divergent demands from many stakeholders, effective university strategic management depends on identifying which demands can be adequately fulfilled, the activities necessary to fulfil them, and then creating synergies between these different activities.

A stakeholder model provides a means to understand how promoting KBEP can become more important to universities, something which, following Benneworth and Jongbloed (2009) requires

sufficient consensus amongst internal and external stakeholders that they value these activities as helping to meet their core purposes. In responding to competing demands, a university itself evolves and that changes the situation of particular activities within the wider institutional architecture, and successful activities become increasingly strategically anchored. Ultimately, they can affect the entire institutional culture (*cf.* Rae *et al.*, 2010) becoming more central, more formalised and established, and ultimately, the university becoming more entrepreneurial (Clark, 1998; Rae *et al.*, 2010). Table 1 below provides a categorisation of university stakeholders, taken from Benneworth and Jongbloed (2009).

Table 1: Stakeholder categories and constitutive groups

Stakeholder category	Constitutive groups, communities, etc.
Governing entities	State and federal government; governing board; board of trustees, buffer organisations; sponsoring religious organisations
Administration	President (vice-chancellor); senior administrators
Employees	Faculty; administrative staff; support staff
Clienteles	Students; parents/spouses; tuition reimbursement providers; service partners; employers; field placement sites …
Suppliers	Secondary education providers; alumni; other colleges and universities; food purveyors; insurance companies; utilities; contracted services
Competitors	Direct: private and public providers of post-secondary education potential: distance providers; new ventures Substitutes: employer-sponsored training programmes
Donors	Individuals (includes trustees, friends, parents, alumni, employees, industry, research councils, foundations,…)
Communities	Neighbours; school systems; social services; chambers of commerce; special interest groups…
Government regulators	Ministry of Education; buffer organisations; state and federal financial aid agencies; research councils; federal research support; tax authorities; social security; Patent Office
Non-governmental regulators	Foundations; institutional and programmatic accrediting bodies; professional associations; church sponsors
Financial intermediaries	Banks; fund managers; analysts
Joint venture partners	Alliances and consortia; corporate co-sponsors of research and educational services

Source: Benneworth and Jongbloed (2009) after Burrows (1999)

7. Mapping the fit of entrepreneurship knowledge communities into university institutional architectures

Using Table 1, it is therefore possible to create a university-level view of how particular entrepreneurship activities are anchored within the university's institutional architectures, encompassing this broader stakeholder set. Entrepreneurship activities exist partly within the university institutional space, an institutional space also occupied by other internal stakeholders,

including the governing body, management, administration and the core functional activity. The university at the same time faces pressure from its external stakeholders, which we here classify into five main types:

- *System stakeholders*: these are other actors in the higher education network, including competitors, regulators and policy-makers, concerned with the overall production of HE outputs.

- *Financial stakeholders*: these are actors who provide finance to the university for its services, whether public policy-makers and research councils, or private, (donors and bankers).

- *Corporate stakeholders*: these actors have an interest in the commercial success of the university in its various aspects, including its bankers, as well as joint venture partners.

- *Commercial stakeholders*: these are actors that have a formal supply relationship with the university, either as suppliers or service users of the university

- *Content stakeholders*: these are actors that benefit from positive spill-over effects from the presence of the university such as the local community and media.

This arrangement is shown in Figure 4 below.

Figure 4: Strategic stakeholders in university entrepreneurship promotion activity
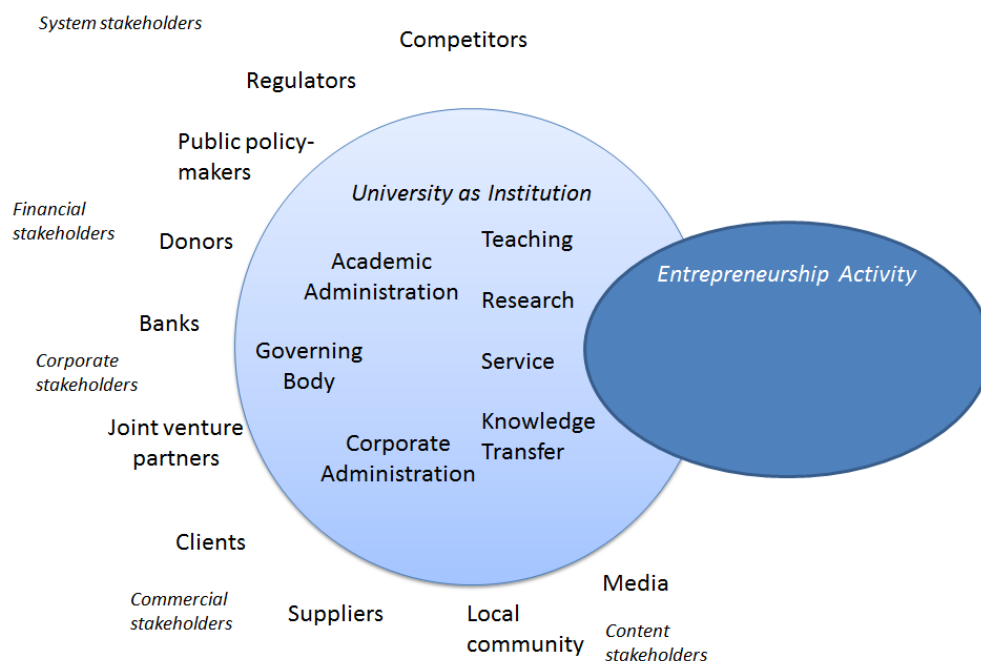
Source: own design after Benneworth and Jongbloed (2008)

To meaningfully understand how universities can contribute to raising entrepreneurial potential beyond one-off projects (extremely dissatisfying to policy-makers), it is necessary to understand how these activities relate to this wider 'web' of stakeholder relationships. In our conceptual framework (Figure 5 below), an entrepreneurship activity will tend to be successful within a university when supported by a strong coalition of internal and external beneficiaries. Internal beneficiaries may be supportive of the activity because of the benefits that the tacit knowledge generated in the

community brings to their own teaching and research efforts; further the activities might help provide useful employability experience and transferrable skills for students, and enrich courses improving student satisfaction. Commercial external beneficiaries may welcome attempts to create new businesses that then become their clients (for example bankers), policy-makers may welcome improved firm formation rates, whilst local stakeholders potentially benefit from newly created jobs.

Understanding how universities may improve their entrepreneurial potential therefore requires understanding how different models of entrepreneurship activities (collective learning arenas which successfully develop KBEP) co-exist. The first element of the conceptual framework suggests that at the heart of this process are entrepreneurship activities that involve collective learning between students and university internal stakeholders. These activities develop entrepreneurial potential by developing entrepreneurial norms, helping people form entrepreneurial identities, motivating people to pursue entrepreneurial opportunities and supporting the pursuit and exploitation of those activities. The endeavours ultimately not only improve entrepreneurial performance, in terms of the generation of new start-ups and spin-offs, but also encourage social entrepreneurship and intra-company entrepreneurship ('intrapreneurship').

The second element of the conceptual framework argues that these activities should be successfully embedded within universities' wider (external) stakeholder networks. Entrepreneurship activities create assets directly accessible by a range of core internal stakeholders: researchers studying entrepreneurship processes, teachers and students benefiting from assets enriching courses, and commercial stakeholders benefiting from assets facilitating knowledge exchange and co-creation (*cf.* Schutte, 2000). The fact that these entrepreneurship activities create assets which support core university activities in turn mean that they are supported and valued by peripheral internal stakeholders, university management and administration, for their contribution to the overall goals of the university. Through their contribution to the overall goals of the university, contributing to a stable, successful institution, these activities are in turn valued by the external stakeholders. The value of the conceptual framework lies in its capacity to enable us to identify different models of change in the entrepreneurial activities of HEIs. It allows us to see where the strengths and weaknesses of these activities lie, and to identify, through the distinctive elements and approaches HEIs employ and with reference to the range of all parties involved, not only models of successful change but also how success is achieved.

Figure 5: Conceptual framework for the situation of entrepreneurial arenas within the institution of university
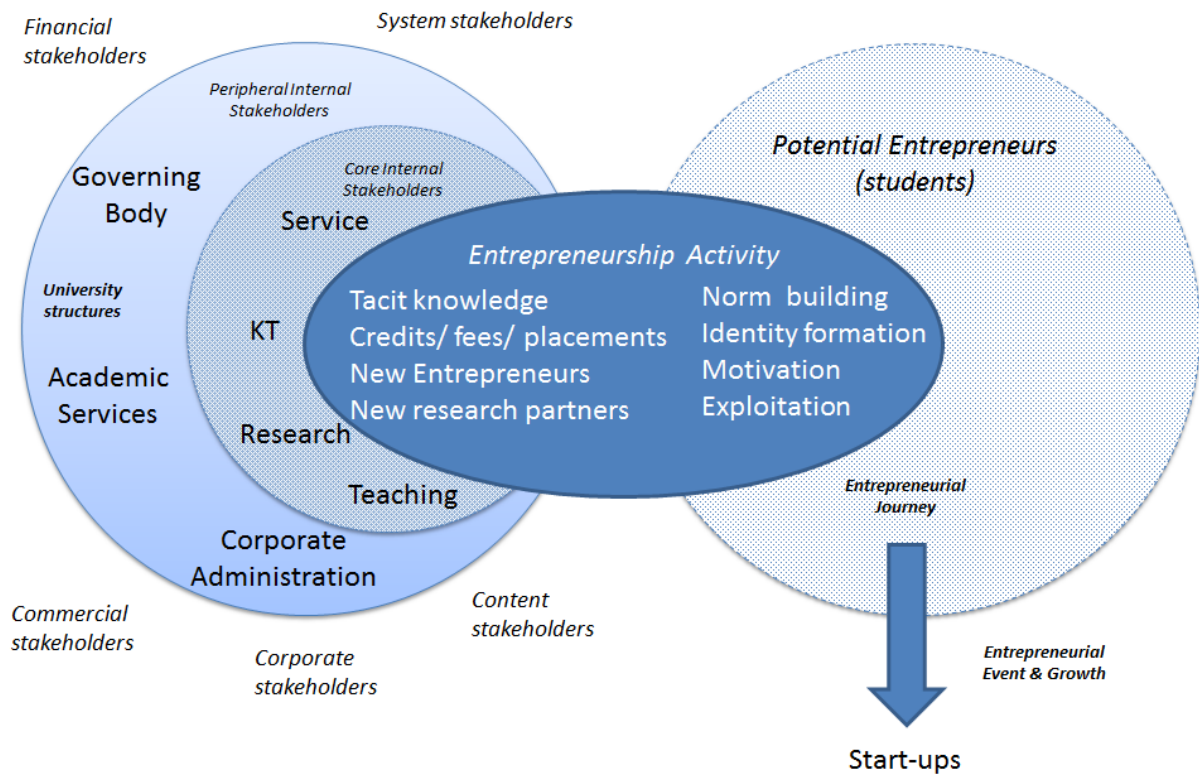
We therefore argue that a future research agenda should therefore attempt to deal with two key lacuna or empty spaces in current understandings of entrepreneurship education, university institutional architecture and stakeholder models:

- how do particular curricular and extracurricular activities contribute to the development of entrepreneurial potential in students?

- how do entrepreneurial activities (curricular/ extracurricular) become embedded in particular universities?

These questions are action-oriented because they push enquiry beyond simply information gathering to identifying both reasons why some practices are effective but others less so, and the means by which, within different HEI contexts, they might be introduced and developed. By way of example, crucial information-seeking fieldwork questions to stakeholders such as 'What new approaches exist in order to integrate entrepreneurship in curricula design and teaching methodology?' and 'Are there (significant) differences among different disciplines?' would provide data needed to address the first key research question: 'How do particular curricular and extracurricular activities contribute to the development of entrepreneurial potential in students?'. Similarly, a fieldwork question such as 'What are the existing measures and approaches used to assess entrepreneurial teaching and outcomes?' would provide a knowledge base for the same key question, which in turn will provide a context for a further fieldwork question, 'What are the approaches' strengths and weaknesses?'

The second key question 'How do entrepreneurial activities (curricular/extracurricular) become embedded in particular universities?' offers a deeper perspective to indicative fieldwork questions

such 'To what extent does the involvement of entrepreneurs and business practitioners in education enhance entrepreneurship as an extracurricular activity? What outcomes are related to this activity?' and '(What are the) key success factors for enhancing opportunities for entrepreneurship in extracurricular activities?' The flexibility of the conceptual framework offered here means that it has the capacity to identify and accommodate unanticipated processes, stakeholder types and perspectives through a case study approach thus ensuring that analysis not only new understanding but also the opportunity for methodological development in the field of entrepreneurial skills acquisition, development and application.

8. Conclusions and future research directions.

Although a comparatively small number of universities characterise themselves as 'entrepreneurial universities', entrepreneurial activities for most HEIs remain one element of their third mission of engagement with lower priority than their main research and teaching missions. Although there has been attempts by the European Commission to encourage Member States to embed entrepreneurship competencies into university curricula, co-ordinated action in this regard has been hindered by the very different levels of control these States have over HE curricula. In this paper we have sought to offer an alternative perspective on the place of entrepreneurship education in higher education, and to transcend the notion that it is produced exclusively through specific entrepreneurship education activities (which often in reality could better be characterised as enterprise). Its nature as a set of loosely-anchored learning communities means that university entrepreneurship education is best promoted when a range of beneficiaries value that education as an effective way of achieving their core goals. This in turn helps us to relativize claims and demands from some policy quarters for higher education to become more entrepreneurial as if that were a task to be undertaken without reference to universities' other missions nor the contemporary reality of HE facing many pressures to adopt new missions.

As previously highlighted the EU strategy for the modernisation of higher education[6] stresses the involvement of all disciplines and in all three cycles. Likewise, the EUs *Entrepreneurship 2020 Action Plan*[7] specifically states that universities 'should become more entrepreneurial'. Such differential control, and its effects on entrepreneurial skills development in HEIs, is one of two key tensions that our conceptual framework seeks to accommodate in addressing the overarching research questions which we have identified as core.

The other tension is that between the needs of the university and the needs of the entrepreneur along with their supporting 'casts' of stakeholders as shown in Figure 5. As we have previously noted, the timescales, needs and philosophies of entrepreneurs and universities mean they function quite differently. The conceptual framework enables us to move the focus of attention away from tensions such as national boundaries and 'university versus entrepreneurial needs', in favour of activities offering a variety of models of 'entrepreneurial activities' carried out in 'collective entrepreneurship learning arenas' situated within university institutional architectures that affect but do not completely determine these outcomes. The framework enables us not only to compare

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[6] COM (2011) 567 final, http://ec.europa.eu/education/higher-education/doc/com0911_en.pdf
[7] See COM (2012) 795 final, http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2012:0795:FIN:EN:PDF

activities in different universities across different countries, but more importantly, to ask: *How can these entrepreneurial activities be made more strategically important to universities*. In this way both the conceptual framework and our questions enable us to focus research on identifying what universities do to achieve that goal, and how they deal with the barriers.

The emphasis of research questions on 'how' activities can contribute to the development of entrepreneurial potential in students, and 'how' the activities can be embedded in the universities ensure that the focus is on the intended impact of the activities and the manner and extent to which this is supported by the stakeholders who, in a number of guises and gradations, will be internal or external to the university. For the purposes of proposed future research, entrepreneurial activities constitute the cases and it is the cases that provide the data. However, it is not the data on the activity *per se* which interests us primarily but rather the way that those activities plug entrepreneurship into the architecture (informal practices and formal structures) by which universities organise their activities and meet the needs of their many stakeholders.

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[8] See http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0158:FIN:EN:PDF

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