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The Challenge of Enterprise / Innovation: A Case Study of a Modern University

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Abstract

In the prevailing economic and political climate for Higher Education in the UK and internationally, a greater emphasis has been placed on diversifying the funding base. The present study was undertaken between 2012 and 2014 and, through the vehicle of a case study, addressed the implementation of an approach to the transformation of one academic school in a medium-sized modern (post-1992 sector ¹) university in Wales to a more engaged enterprise culture. Universities are reaching out increasingly to communities outside academia through physical and virtual means, to help the universities contribute financially, as well as by adding value culturally and socially to their local and regional economies. A multi-method investigation included a bi-lingual (English and Welsh) online survey of academic staff and yielded a 71% response rate (n=45). The findings informed a series of in-depth interviews (n=24) with a representative sample of those involved in enterprise work (support staff, managers, senior managers), as well as those who were not. The results were clustered around four themes and provided the platform for the 'S⁴E model' for effective engagement with enterprise: (i) Strategic significance for Enterprise, (ii) Support for Enterprise, (iii) Synergy for Enterprise, and (iv) Success for Enterprise. The outcomes of the research and the recommendations from it have potential to inform practice in other academic schools within the university and, in a wider context, within other Schools of Education regionally, nationally and internationally. Its original empirical exploration of enterprise within education studies is a significant contribution to that body of knowledge.

Key words: Enterprise, Innovation, Entrepreneurship, Management

¹ 'Modern' in this context refers to the sector of higher education institutions in the UK that were given university status through the Further and Higher Education Act 1992. Synonymous with 'post-1992' or 'new' universities, it is used as an adjective only.

I Introduction

The focus of this research was the imperative to encourage academic staff in UK universities to engage in enterprise² activities and to be entrepreneurial. It was based on empirical research conducted over a four-year period at a School of Education (SoE) in a medium-sized modern (post 1992 sector) Welsh university.

The paper has three substantive sections followed by a brief set of concluding remarks. The first presents a critical summary of key background literature. Anchored in the discourses of the knowledge economy, the 'entrepreneurial university' is examined as a means of contextualising the university's initiatives to promote staff engagement with enterprise. The skills-set of the entrepreneur is scrutinised and the role of the intrapreneur (i.e. the creative innovator from within the organisation - see Bridge, O'Neill and Martin, 2009) is examined for its relevance to academic staff in the case study school. A conceptual framework reflecting a central core of support is presented. It is a synthesis of Wickham's (2006) notion of intrapreneurship, a hierarchical approach adopted in relation to enterprise needs (Bridge *et al.*, 2009), and the stepped, progressive style for project management (Newton, 2005).

The second section is an account of the research design and methods of data collection. Based on a constructivist epistemology and an interpretive approach, a single case study incorporated a bilingual (English and Welsh) on-line questionnaire and semi-structured interviews. It also includes a description of the organisational context for the work and a note on research ethics and the challenges of conducting research as an 'insider'.

The third section summarises the interpretation and analysis of the data and presents the original S⁴E Model for Enterprise that emerged. Specifically, it emphasises the importance of enterprise as strategically significant (S¹), a supportive (S²) enterprise culture with appropriate systems in place, synergy (S³) between the knowledge and skills sets of academic

² For operational clarity, an inclusive operational definition of 'enterprise' is adopted: ... the application of creative ideas and innovations to practical situations [by using] a set of skills and attitudes that can enable a culture of innovation, creativity, risk taking, opportunism... that underpins employability, enables entrepreneurship, intrapreneurship and facilitates knowledge exchange. (Vitae, 2011, 1)

staff and the enterprise activities proposed, and the acknowledgement and celebration of success (S⁴).

II Background: Enterprise in Higher Education

Conceptual and operational clarity about 'enterprise' in Higher Education (HE) has been undermined by imprecision in the use of nomenclature; 'enterprise', 'third mission', and 'innovation and engagement' have often been used interchangeably (E3M, n.d.). The practice of enterprise has been linked to student employability (Burniston, Rodger & Brass, 1999; Rae, 2007, 2010; QAA, 2012), and importantly, in Wales, the Funding Council has had strategic objectives linked to innovation and engagement, supporting activities that contributed to the economic and social wellbeing of Wales (HEFCW, 2012).

The Higher Education sector in the UK has expanded from the stable, state-funded system of the 1960s. Post-1992 universities emerged, and more recently the loss of free Higher Education led to the introduction of student tuition fees (Deem, Hillyard & Reed, 2007). This changing context heralded (in part at least) the genesis of the 'entrepreneurial university' and the knowledge-based economy, and created interaction between universities, industry and government, with universities becoming more business-like and recognising the value of their resources (Etzkowitz, 2008).

Delivery of enterprise in a School of Education offers challenges and opportunities. With fewer examples of spin-off products, proofs of principle and patents within the broad subject field of education studies, enterprise is less readily addressed than in, for example, design and technology or science. Education is also less research-rich than STEM subjects (especially engineering) and business and management. There are therefore limitations on the easy 'overlay' of enterprise with research. Schools of Education, however, often have strong social enterprise and community engagement, which previously might not have been recognised as enterprise. All these are features which emerge clearly in the empirical elements of the present study (see section IV).

The role of academics is complex and ever-changing (Knight, 2002; D'Andrea & Gosling, 2005; Hughes, 2007). Yet there has been some neglect of the importance of enterprise (Cannon & Newble, 2000; Race, 2001; Armitage *et al.*, 2007; Fry, Ketteridge & Marshall,

2009), and there has been an increasing interest in the entrepreneurial scholar (Gibb, 2010; Thorp & Goldstein, 2010) and the 'pracademic' (Penaluna, Penaluna & Jones, 2012).

The entrepreneurial university was first highlighted in the work of Clark (1998) who described it as one that sought to innovate and required five collective elements for purposeful transformation: managerial capacity, organisational infrastructure to support enterprise, diversified sources of income, academic acceptance of enterprise, and a culture that embraces change. Highlighting omission of 'entrepreneurial leadership' from this account, Etzkowitz (2004; 2008) emphasised interactions between university, industry and government that can combine to form a 'triple helix', creating a 'knowledge economy' (Shattock, 2003), that relies on capitalising knowledge and managing university-industry-government interdependence.

The knowledge economy, with universities becoming more 'business-like' has been contested by many academic staff (including some of those who participated in this case study). A good education and opportunities for all were perceived as a right rather than a monetary commodity that was for sale to those willing to pay. There has been a perception that enterprise was associated with income generation and creating wealth for the university rather than student employability. A corollary of this has been a feeling that income generation detracted from projects aligned to social justice, impacting on the ethos of particular academic programmes. An additional barrier to engagement with enterprise has been the perception (real or imagined) of academics being asked to deliver enterprise projects to create income for the university whilst at the same time sacrificing their own time, without financial remuneration. On one hand academic staff were being encouraged to use their networks to create financial opportunities whilst on the other, the reward for their endeavour was unclear to them.

Historically, modern (post-1992) ¹ universities were funded for their teaching activities and only received funding for research after they had attained university status (Deem, Hillyard and Reed, 2007). In 1998, the Government expanded the traditional foci of teaching and research within universities, to incorporate a third mission – wealth creation (Klein, 2002). The Higher Education Funding Council for Wales (HEFCW, 2004; 2006; 2012) embraced the development of knowledge exchange and identified multiple benefits (see Figure 1).

[Figure 1 about here]

'Enterprise' became a buzz-word in the 1980s (Ahier, Cosin & Hales, 1996), with 'enterprise' and 'entrepreneurship' becoming popular labels with cachet (Bridge *et al.*, 2009). Often described as a core competence of any Higher Education qualification linked to employability, enterprise is used less often in the context of academic engagement owing to the limited understanding of importance of generating income and diversifying the funding base. This 'understanding' was often seen to conflict with the imperative for widening access to education, a need to create positive social change and societal benefit; omitting the role of the social entrepreneur to address social justice.

Delivery of enterprise requires the staff involved to have the pre-requisite characteristics – for example, knowledge, technique, skills, temperament and talent. Wickham (2006) has argued that anyone is able to become an entrepreneur and that life experiences are most important. However, the the guidance for '*Enterprise and entrepreneurship education*' provided by the Quality Assurance Agency (QAA) for Higher Education (2012, p17), identifies a skills-set for the entrepreneur, expressed as a graduate outcome with students required to demonstrate ability to:

- take creative and innovative approaches that are evidenced through multiple solutions and reflective processes (creativity and innovation);
- persuade others through informed opinion and negotiate support for ideas (persuasion and negotiation);
- manage a range of enterprise projects and situations appropriately, for example by proposing alternatives or taking a holistic approach (approach to management);
- evaluate issues and make decisions in situations of ambiguity, uncertainty and risk (decision making);
- use networking skills effectively, for example to build or validate ideas or to build support for ideas with potential colleagues or stakeholders (networking);
- recognise patterns and opportunities in complex situations and environments (opportunity recognition);
- model and propose business opportunities that take account of financial implications, legal implications and issues of intellectual property (finance and business literacy).

There is also a set of enterprise competencies (i.e. dedication, decision making, goal setting, planning, risk taking, responsibility), personal qualities (i.e. creativity, confidence, innovation, risk taking, insight) and skills (i.e. technical competencies, sensitivity to changes, networking and contacts, developing relationships, project management) that are characteristic of an effective entrepreneur (Bridge *et al.*, 2009).

To provide the context of institutional support for enterprise activities, Bridge *et al.* (2009) developed a 'hierarchy of needs' (cf. Maslow, 1954) based on what individuals most needed to start new enterprises. They argued that these varied depending on circumstances; some needed training, others needed money. However, by categorising needs into a hierarchy, lower-order needs (i.e. ideas for enterprise, resources) were dominant until satisfied, and only then could higher-order needs (i.e. expertise and support, a sustaining environment) be met.

All of this needs to be understood clearly and communicated effectively. Transparency of purpose can be a motivational driver, and motivation is linked to attitude and is needs-related (Armitage *et al.*, 2007; Pritchard & Ashwood, 2008). Wickham (2006) links motivation to the entrepreneurial responsibility of setting goals. He also rationalises that if an individual is to deliver outcomes on these goals, s/he may need support and reward.

Against this background, it is clear that enterprise skills will become more explicitly needed for academic staff over time. Motivating academic staff to engage in enterprise activities is affected by a number of issues such as knowledge, skills, confidence, time, willingness and reward. Thorp and Goldstein (2010, 106) confirm that:

Inside academia, it's hard to talk about the university's impact on the world's greatest problems without getting immersed in a conversation about faculty rewards and university structure. Discussions about enterprise creation or entrepreneurship... quickly become debates over whether faculty should be rewarded with promotion and tenure for securing patents and creating businesses.

Barker and Cole (2007, 7) discuss the benefits of managing enterprise initiatives that are challenging, varied, interesting and offer job satisfaction. In contrast, they also suggest that demanding projects provide a way to learn quickly, saying that there is "no substitute for on-

the-job training.” One of the challenges in a learning-by-doing approach is ensuring that academic staff are sufficiently supported and able to achieve a successful outcome. An unsupported member of academic staff managing a demanding project might lead to stress-related failure. In turn, this devalues the benefits that can be gained from engagement with enterprise activity. See, for example, Newton’s (2006) step-by-step approach to managing and delivering projects which addresses the key themes of motivation for the project, value added by undertaking the work, co-deliverables, omissions and exclusions, gap(s) in knowledge, assumptions, challenges and delimitations.

The approaches to the delivery of enterprise activities are synthesised in this paper into a conceptual model – figure 2. It incorporates Wickham’s (2006) notion of academic staff behaving like entrepreneurs, and models the hierarchical approach adopted by Bridge *et al.* (2009). It also embraces the stepped, progressive style of Newton (2006). In contrast to the hierarchy of enterprise needs presented by Bridge *et al.* (2009), however, where the environment to sustain well-run enterprise activity is seen to be the pinnacle for the hierarchy, it is based on a central core. This ‘core’ also reflects the need to sustain motivation (Wickham, 2006) through an effective and supportive network and is fundamental in nurturing an effective enterprise culture that is sufficiently agile to respond to commercial, social and cultural opportunities.

[Figure 2 about here]

In summary, reading from the bottom to the top, the model has as its premise academic staff with a basic understanding of their role and the expectation to engage with enterprise activity (step one). This is aligned to the relevant strategic direction of the university/School and established an explicit link between enterprise and research. Having ‘ideas’ that have potential to generate income and contribute to the knowledge economy is fundamental to the progressive model. The activities involved must be both ‘do-able’ and fully costed (step two). The resources necessary to deliver the enterprise activity are addressed (step three), encompassing financial rewards and incentives. The ‘skills for enterprise’ (step four), which include skills for research, are partly an acknowledgement of the multiple benefits that can accrue from enterprise projects, and the potential interface with research impact. Finally, commercialisation (step five) through which the outcomes of academic research in the context of education are utilised for economic advantage – consistent with a Welsh

Government priority and a recommendation for providers of Initial Teacher Training (Tabberer, 2013).

The model was implemented in the present study with the aim of developing an integrated approach to research and enterprise. It is, of course, context sensitive; but is also sufficiently 'loose fitting' to be applicable to other HEIs with some shared characteristics in common with the case study. These are described in the section that follows.

III A note on research design and context

A mixed methods approach has become increasingly popular in education studies (Biesta, 2012), combining qualitative and quantitative methods of data collection (Gill & Johnson, 2010) to provide a richer, fuller story (Braun & Clarke, 2013). The present study adopted a single case study approach consistent with the characteristics identified by Denscombe (2003); it was in-depth, focused on relationships and processes, in a real-life situation, and used multiple sources and multiple methods – specifically, questionnaires, interviews and documentary analysis.

The overall design of the study was informed by the research ethics guidance from the British Educational Research Association (2011), and approval was granted under the University's research ethics governance arrangements. Particular care was given to the researcher's³ impact on students and colleagues, especially in this instance because of 'power relations' involved. As an 'insider researcher' (Dandelion, 1997) there are inevitably challenges of balancing roles (Coghlan & Brannick, 2010). The benefit of being 'culturally literate' and able to make sense of the day-to-day workings of the organisation (Trowler, 2011), was offset, to some extent at least, by the difficulty of achieving analytical 'distance'. Voluntary informed consent was secured from participants on the basis that anonymity would be protected as far as practicably possible and confidentiality respected unless 'guilty knowledge' (Fetterman, 1983) came to light.

There were two main phases of the empirical work. The first was a bi-lingual (English and Welsh) on-line questionnaire (Salmons, 2010; Menter *et al.*, 2011). A draft survey was piloted

³ The empirical research was conducted by the first author, a senior manager with responsibility for enterprise in the school.

to enhance functionality of the instrument (Cohen, Manion & Morrison, 2007), and the final version was administered through 'Checkbox' (Checkbox Survey Solutions, 2002-2012a) to the whole School as a 'census' (Menter *et al.*, 2011). There were three types of question – closed, multiple-choice and open. The initial response from the 63 members of staff invited to participate was 28.6% (n=18); and there were two subsequent reminders that yielded a final response of 71.4% (n=45) – in line with the outcome of a well-planned survey (Cohen *et al.*, 2007) ⁴.

The emergent themes from the survey informed the second phase of data collection. A series of semi-structured interviews was conducted with a total of 24 members of staff including a member of the University's senior management team and support staff (n=5). Purposeful sampling (Salmons, 2010) was used to select from the 30 members of academic staff who volunteered to be interviewed, so that the final group of 18 were broadly representative of the School (King & Horrocks, 2010). Interviews were recorded digitally using *QuickVoice Pro*, transcribed verbatim, and subjected to content analysis.

Enterprise was (and remains) a priority for the university and the case study school, and is driven in part by the Welsh Government's ambition for universities to commercialise the research activities. At the time of the empirical work, the case study school had an annual turnover of between £10 million and £15 million and its enterprise work was led by a member of the management team and supported by two full-time members of administrative staff.

Specifically, the School engaged with enterprise, embracing financial, cultural and societal outcomes. The greatest source of external income was generated via full-time commercial centres; these included a language centre and a publishing house. Income was also generated through fractional secondments to external organisations and through commercial contracts from external organisations such as the Welsh Government and Her Majesty's Inspectorate for Wales. All other enterprise activities were non-formal. Not all were income generating, some enhanced student employability as they resulted in students

⁴ Importantly, one respondent indicated that the availability of the survey in Welsh affected her motivation to participate positively: "it's this point of principle... if I receive things in Welsh, I am much more likely to respond ... [it's about] respect towards the language." The response rates from Welsh-speaking participants (80%, n=10) was better than from English-speaking participants (70%, n=37).

attaining an additional, external qualification alongside their degree programme, whilst others, including conferences, were founded on social justice. All enterprise activities across the School were subject to a formal costing and pricing exercise that required the approval of the university's Director of Enterprise.

The School also had three departments containing a wide range of provision, including pre- and post-compulsory education, undergraduate and taught postgraduate (professional and discipline-based) and research degrees. The School's research reflected this range. The department with the largest number of staff (n = 31) was linked to initial teacher education also had the largest number of staff engaged in enterprise (n= 20) and its pedagogic and curriculum-based research contributed to Welsh policy debates, as well as UK and international collaborations. The staff profile showed that 37% had been in post for ten years or more, and a further 35% between two and ten years. Throughout the section that follows data are drawn extensively from the largest single group of respondents, members of academic staff. For those who were not academics or who had additional responsibilities, their roles are indicated explicitly.

The survey respondents reflected the profile of the school as a whole – with 84% reporting that they participated in enterprise activities, and a further 5% unsure whether some of their work was enterprise or general academic activity (e.g., “networking events [and] promotional stalls at conferences”, “... I am currently trying to organise [a] conference”). For some, enterprise linked closely to research interests, for others there were opportunities to pursue the University's internationalisation imperative. Half of the respondents saw enterprise as solely income-generation.

Reflecting the drive to commercialise knowledge (Clark, 1998; Gibb, 2010; Young, 2014), the net income to the school had quadrupled between 2008/09 and 2012/13, with 60% returned to the school. However, respondents commented on the other benefits including reputational enhancement, increased competitiveness in student recruitment (see also Wickham, 2006; Bridge *et al.*, 2009), improved employability of graduates, cross-curricular sharing, professional development of staff, ‘real world’ application, and innovation / creativity. These aspects will be discussed further in the analysis below.

IV Towards a Conceptual Model of an Entrepreneurial University

The key outcome of the present study is an evidence-based conceptual framework for enterprise activity, the 'S⁴E model' (figure 3). It has four key pillars: Strategic significance for Enterprise (S¹), Support for Enterprise (S²), Synergy for Enterprise (S³), and Success for Enterprise (S⁴). These are explained drawing upon some of the data.

[Figure 3 about here]

S¹: Strategic Significance for Enterprise

Predictably, some staff were better informed than others about the strategic significance of enterprise; and perhaps also unsurprisingly, when asked about the strategic purpose of enterprise, respondents did not refer to corporate ambition or school implementation of the strategic plan. There was some general understanding that it was "important", and consistent with Clark (1998), Kate, a member of academic staff with programme director responsibilities, was not alone when she spoke of the perceived need to diversify income streams:

... we have got to essentially make sure all our eggs are not in one basket and I think we need to start diversifying and ensuring that the institution is going to remain robust in these recessionary and challenging times.

One member of the School's Management and Planning Team (Harriet) commented that enterprise, "chimes with an overall mission or target of the university which is increasingly to see itself as a university operating within the community [letting] people know what we are doing and to see if there is any level on which we can engage participatively in projects and activities." This disposition reflected the mission of the University to engage with local communities - mainly in urban areas and the former heavy primary industry region, the valleys.

There was some recognition of the idea of the 'entrepreneurial university' (Gibb, Haskins & Robertson, 2009; Gibb, 2010) as an approach to achieve a more promising future (Clark, 1998). However there was also some perceived 'identity confusion' with, as Gethyn put it: "aspirations in that direction" but "want[ing] to maintain a more traditional university identity". Reflecting a political conviction, he continued explaining that education was (or should be): "a public service and a public right and something that should transcend commercialism" (see also Shattock, 2009). It was a theme taken up by Andrew, another member of academic staff with programme director responsibilities:

... if it was taken from a neo-liberal, sort of let's go out and make lots of money at lots of people's expense, then I am not sure universities should be in that business at all. If [it] is viewed more as, actually let's serve the needs of the communities that we work with and it relates to the innovative, creative and developmental needs ... then it should be happening.

Reflecting on the impact on individual members of academic staff, Grace, also a programme director, described some linked benefits: “[enterprise] provides opportunities we probably wouldn't have ... the opportunity to be involved in something outside of my job, that complements my job... to work with other bodies outside of the university system”. There was a strong sense too of the ‘real world’ relevance that working with industry sectors brings to the learning and teaching roles to which staff were extremely committed, and was affirmed by a member of the University's senior management team who commented that engagement with enterprise to be “a natural part of what you do as an academic in an applied post '92 modern university. We don't tend to recruit people who want to shut themselves away in an office for eight to ten hours a day with a pencil and pad and think great thoughts”.

At the time of the data collection the University was committed explicitly to the three missions of learning and teaching, research, and enterprise (see Higher Education Academy, 2009). There was the potential for enterprise to be central to this nexus with embedded skills for entrepreneurship informing curriculum design, the outcomes of enterprise projects informing curriculum content and the commercialisation of research. Yet in spite of this, there was still a sense that enterprise was not afforded the same status as the other two missions; it was a kind of “poor relation” (Tracey).

For those with a key role in supporting enterprise activity centrally, there was a sense of frustration in this lack of strategic awareness of the university's enterprise imperatives. A member of the Research and Enterprise Services unit explained: “it is written down in all the right places and they say all the right things. However, there is a long way to go (to gain a greater understanding of the strategic importance of enterprise)”. They rationalised that enterprise had a smaller focus than research at Research and Enterprise Board, and smaller still at Academic Board where the Enterprise agenda jostled alongside those for Research and Learning and Teaching. This was an interesting observation, but it was also true that the significance of enterprise had grown with an increased recognition of enterprise-informed

learning and teaching and the commercialisation of research. More importantly, there was a greater recognition of enterprise as a viable career option from the Vice-Chancellor's Board with the introduction of more clearly defined routes for academics to Reader and Professor status, enabling academic staff to use enterprise activities such as international work, knowledge transfer, the exploitation of intellectual property and external advisory roles to inform their application. This was a positive strategic message that communicated the value of enterprise activity across the university, articulated at the highest level via the university's Academic Board and reported to the university's Board of Governors.

For all the added value of engaging in enterprise activities (McCaffery, 2004), members of the School's Research and Enterprise Support Team were unequivocal in their understanding of the economic imperative. Quite simply, one remarked, the School "couldn't function without it ... because budgets have been slashed [there's] an onus on enterprise to bring in the money. You are also looking at the employability of students. Where would they get the extra strings to their bow [without] enterprise opportunities?"

At departmental level, the main concern was about 'ownership' of the strategic objectives for enterprise. Crucially, they needed to chime with the interests of the colleagues who would be responsible for the delivery of enterprise. First, enterprise and enterprise-informed learning and teaching enhanced the credibility of academic staff and the curriculum. Grace, a Programme Director, explained that, "our partnerships with schools are really important... they think we are at the forefront of things... Knowing what is going on and being involved in developing it is very important for our credibility". Rhiannon added: "enterprise for us is important because it means we are keeping our hand in regarding recent developments which are in schools. [Without this] it could be very easy for us to be left behind".

Second, active engagement with enterprise increased competitiveness in relation to student recruitment (Wickham, 2006; Bridge *et al.*, 2009). Brangwen explained the 'shop window' effect of enterprise: "We need to be out there, we need students, we need them to know who we are and what we do". There were internal benefits too, for if the enterprise endeavours remain known only to those who engage with them, the outcomes are less influential, the opportunities to develop understanding are lost (Gibb, 2010). Jayne elaborated: "we should actually do a lot more sharing... I know other people have been involved in other things, but I have no idea what they do, how they've been involved, or what the outcomes have been".

For the strategic imperative for enterprise to have significance in terms of outcomes, there needs to be strong, underpinning support both centrally and at School level. This enables academic staff to innovate and contribute effectively with enterprise activities.

S²: Support for Enterprise

In the School of Education there was a dedicated (in both senses) support team (n=2 FTEs) whose role it was to inform, promote, offer guidance, and provide support to academic staff, thereby ensuring that those staff willing to share their creative ideas were empowered and enabled to bring them to fruition. In addition to the school's Director of Enterprise, there were three academic staff with fractional roles as Enterprise Activists, one for each of the three departments within the School and an Enterprise Champion who was also a member of academic staff.

There existed a well-established enterprising culture across the School (Wickham, 2006), which served to encourage creativity (Bessant and Tidd, 2011). Jessica, an academic and programme director, explained:

I think [enterprise has] a really high profile. All through the year there have been lots of emails, lots of information... this is happening, are you interested in doing this? So I know who the enterprise team are, and I know if there was something I wanted, I know the person to go to. I think that personal connection is very clear and very strong.

Having introduced a support infrastructure to promote participation in enterprise activities in the School, the approach taken had been appreciated by participants: "knowing that there is a team of people that you can go to with ideas and they are always prepared to listen [and] prepared to give you expertise to make those ideas a reality" (Fiona), and "if I have an idea I can pop up and be told 'yes' or 'no'" (Elsie).

Engagement with enterprise needs succession planning. It should be founded on procedures and entrepreneurial processes (Wickham, 2006), and not reliant on individual personalities. Yet the disposition of key support personnel helps to generate a 'can do' attitude. Andrew noted: "I'm easily put off if there are any barriers [because] I haven't got the energy to start jumping through loads of extra hoops. [The team are] very good at pushing barriers out of the way, you tend to do the barrier pushing and I'm able to get on with [what's] important".

In this HE context, therefore, support extends beyond finance (Wickham, 2006), managing performance (McCaffery, 2004), and managing motivation (Pritchard and Ashwood, 2008), to include the development of an entrepreneurial skill set through a focussed training programme (Henry, Hill and Leitch, 2005; Gibb, 2010) and providing appropriate incentivisation for engagement (Pritchard and Ashwood, 2008). In this sense, the school had a nurturing approach that enabled staff to gain confidence with projects of modest scale before progressing to more challenging and lucrative initiatives. The development of fledgling academic entrepreneurs was similar to the trajectory of early career researchers and contributed to the research and enterprise nexus (Bridge *et al.*, 2009; Higher Education Academy, 2009).

Amongst academic staff, survey data indicated that perceptions of the wider set of skills and competencies needed to support enterprise engagement revealed that 'communication skills' (73%; n=32) and 'subject knowledge' (68%, n=30) were both considered 'very necessary'. In contrast, 'financial awareness', 'understanding the commercial market', and 'marketing skills' were considered 'not necessary at all' by a minority (7%, n=3). This might reflect a resistance to the commercialisation of knowledge and/or conflict with academic values (Shattock, 2009). Exploring the latter, Jayne commented:

Personally, I don't really feel the need to be aware of [financial skills], maybe because I've got no expertise or, quite frankly, interest in it. What interests me is going out and spreading the word and working with teachers and students. I'm very happy for somebody else to kind of do the financial stuff.

Tracey added: "We don't have to think about that because that's all done for us. The decisions are made on whether it's a good tender and it's a viable option. The costing and pricing is a blurry little field of spreadsheets that we don't need to get involved in."

Delivered by support staff, appropriate support may be a solution to the lack of financial acuity but leaves an area of under responsibility (Thorpe and Goldstein, 2010) and a known skills gap that leaves academic staff unprepared for the financial responsibility associated with senior management positions (Newton, 2006).

Analysis of the survey data identified three key interlinking ways in which academic staff could develop their enterprise skills. First, and of primary importance to most respondents, the promotion of opportunities available (i.e. internal funding initiatives, relevant external

tenders, mentoring and meeting Professorial eligibility and for these to be communicated centrally and at School level). Second, and of significant importance to most respondents, was the appropriateness of training provided (i.e. the context of enterprise in an education setting, the benefits of engaging with enterprise, understanding the strategic imperatives of the University, developing specific entrepreneurial skill sets and sharing learnt skills/experience). Third, and mentioned by a number of respondents, was time to attend training events (i.e. scheduled teaching covered by a colleague and inclusion in workload allocation). However, for some, a tension remained that was brought about by the detrimental impact on students of engagement with enterprise. Grace explained: “While I am doing that one day, I’m not actually responding to emails that come in from my students. You become less sensitive to [their] needs. So I think there is definitely a conflict there”. Rhiannon was also aware of the possible consequences for her own work-life balance: “I think I have been holding back partly because of concerns not just about my own wellbeing, but the family one as well.”

Overall, there was a general appreciation of the support provided to enterprise active staff, but it was clear that the availability of support to enable academic staff to engage with enterprise activities needed to be communicated more clearly. While the majority of academic staff engaged with enterprise, only a minority (29%, n=11) considered sufficient time had been allocated to their enterprise activities. A key step forward proposed by this group was effective workload management through greater synergy between the knowledge, skills and experiences of academic staff and the types of enterprise activities undertaken.

S³: Synergy for Enterprise

The kinds of enterprise projects engaged in by academic staff varied. Most (51%, n=20) had been involved with the School’s International programmes, 46% (n=18) the School’s short course portfolio, 33% (n=13) in externally funded projects (n=13), and 31% (n=12) in Strategic Insight Partnerships. A significant number (36%, n=14) had also been involved in external examining duties.

The wide range of enterprise activities undertaken reflected the knowledge, skills and research interests of academic staff. However, in addition, the enterprise activities needed to

have some connectivity to learning and teaching activities and/or research, in order to create a nexus (Higher Education Academy, 2009) and have greatest impact.

The strongest linkages were made through enterprise informed learning and teaching, and they were the strongest. For example, the International Summer School provided one respondent with an opportunity to,

draw on the discussions that had taken place to provide an extra perspective for the modules that I deliver to students in my normal teaching role. I found that the extra knowledge that I had gained from the international programme was extremely relevant to some of the modules that I teach, especially those that encourage the use of a global view of education.

Another, Nia, an academic, provided the example of engagement with the Welsh Medium Improvement Strategy, via enterprise, as a means to “develop [the] language skills and proficiency of prospective teachers and their ability to develop literacy levels and teach their learners through the medium of Welsh”.

Only 19% (n=7) of respondents made reference to research. For example, one respondent wrote: “I have been undertaking a Professional Doctorate [and] this research has helped me greatly in relation [to] research methods. This has enabled me to feel more confident when presenting to peers at conferences”. Another explained:

The enterprise work that I have undertaken was informed greatly by research work in the initial stages, and recently it has led to further research opportunities. It has had a significant impact on the methods of delivery and content of the PGCE Secondary Music and BA courses.

Some (38%, n=14) respondents reported that they were engaged in all three academic missions, and one respondent described multiple benefits:

My PhD research has a focus on Forest School, an element of this links clearly with my enterprise activities and Forest School training. Enterprise, research and teaching for me are closely connected. For me, each term involves a good balance of all three strands of work. It can be a challenge sometimes in finding the time to maintain this approach, however, I feel it enriches my working days, my understanding and most importantly impacts positively on the quality of experiences of students and agencies I work in collaboration with.

Attempts to commercialise research were most evident through organising conferences, but it was acknowledged that in comparison with other enterprise activities, the financial return was low. There was also the perception that the University lacked a clear approach to link learning and teaching with research and enterprise. Some, like Jayne, who was involved in a national, cutting-edge pilot scheme based on an innovative approach to music education, had been able to link Learning and Teaching with Enterprise, but had been unable to incorporate a research element.

The key issue was the synergy created where enterprise activities were matched to the knowledge, skills and experiences of academic staff, so that the outcomes extended beyond the enterprise project itself. 'Added value' was created by embedding new knowledge gained as a result of enterprise endeavour into learning and teaching. One of the core gains relative to enterprise was an increased knowledge of enterprise competencies required for compliance with the guidance document from the QAA (2012); to prepare students for self employment as well as employment.

The theme of employability was a recurrent one, but the importance of the self employment was not recognised prominently: "it's probably not addressed a great deal, we are equipping them to go and do a job in a school, and therefore they are not going to be entrepreneurs" (Tracey). Jayne concurred: "When I am with students, enterprise isn't something that really comes to mind. I am aware of it as an agenda and I am aware that schools are interested in enterprise, but it's not something that really figures highly".

Yet, academic staff with responsibility for training teachers to work in primary and secondary school need to be cognisant of the Young Report *Enterprise for All* (2014) and the challenges of teaching entrepreneurship education (Henry *et al.*, 2005). Trainee teachers working in primary schools will need to capture the imagination of pupils. Similarly, trainee teachers working in secondary schools need to promote successful enterprise education. In preparing trainee teachers for the job market, business awareness is deemed to be part of the skill set required of teachers with head teachers advised to recruit accordingly (Young, 2014).

In summary, it was clear that alignment was necessary between the knowledge, interests, experiences and skills-set of academic staff and the type of enterprise activities undertaken. Engagement with relevant enterprise activities has led to enterprise informed learning and teaching, creating a synergy between enterprise and learning and teaching, but the School

had been less successful in commercialising its research. Part of the reason for that had undoubtedly been the failure to develop greater connectivity between Enterprise, Research, and Learning and Teaching.

S⁴: Success for Enterprise

The entrepreneurial university is characterised by a shared vision where innovation and success is rewarded (Gibb *et al.*, 2009). The benefits of engaging with enterprise activities are summarised in figure 4, and success for enterprise can be measured in a number of ways – financial, reputational (based on the impressions of the wider societal community), outcome based (including social justice), or personal.

[Figure 4 about here]

The overwhelming majority of respondents (97%, n=38) considered enterprise activities had enhanced the reputation of the University; 84% (n=33) indicated that there had been professional development of academic staff. They also thought that enterprise activities had had some geographical influence – 72% (n=28) local, 63% (n=25) regional, and 68% (n=27) international. This aspect is of importance, not only in terms of the credibility of academic staff and the School, but also in terms of communicating its success – achieved mainly through conference papers and conference workshops, publications and public lectures. It also became clear that there was, for some, a real sense of enjoyment and satisfaction about the commercial aspect of enterprise work. A senior manager of the university explained: “Academics are often driven by the success of publishing a journal article, or finishing a course. I think you have to get some genuine pleasure from the commercial aspect of the work. You know, making a bit of profit, it gives you a good feeling”.

Interviewees talked of a sense of achieving something for students and providing opportunities for academic staff to engage in enterprise projects that they were passionate about and/or to work with colleagues in a new and different context. For example, Matthew described the achievement as “the buzz you can get from working with proactive people who want to make things happen, and can...” Roger referred to enjoyment of teamwork: “The ones I’m enjoying the most are the ones where I am collaborating with other members of staff... to bounce ideas off and to develop, everyone brings something different to the table... everyone’s got different experiences and skills”.

When considering the effects of incentivisation as a means of motivating academic staff, Pritchard and Ashwood (2008) refer to the need for a connection between the incentive, the action and the result. Across the School varying options were utilised to 'reward' enterprise active staff. Some academic staff with a full timetable of teaching commitments, chose an additional payment as recognition of the additional time spent undertaking enterprise. Others chose to have hourly paid lecturers cover their teaching to alleviate their workload. Some academic staff, focussed on the intrinsic reward engagement which enterprise afforded. Matthew also explained that: "Engagement with community groups brings enough reward. It is contributing to a sense of purpose, and a sense of social justice. It makes academic life more interesting, broadening the students' perspective in terms of career destinations and possible work experience." Wider professional recognition was mentioned by Jayne making reference to her secondment, saying:

The recognition of my colleagues is probably the most rewarding part of it. You can be seen as somebody who is kind of stuck in a university and 'that lady who used to teach once', but what is really rewarding is that I am working with colleagues in all sorts of different environments: classroom, peripatetic teachers, and you know, I am being recognised for that work. Certainly in Wales, [...] my name has become synonymous with [it].

Importantly too, the sense of being valued was a significant factor in the willingness of staff to engage in enterprise activities. At the close of all projects, a point was made to thank all staff involved, copying in line managers, Heads of Department and the Dean of School. As Joanne commented: "a 'thank you' goes a long way", and Tracey added: "we all like good feedback, everybody likes good feedback. We aren't very good at celebrating ourselves, so it's always nice when that's shared."

In summary, academic staff were keen to have their enterprise endeavours recognised. Proper recognition of the time for undertaking projects was mentioned frequently, alongside the intrinsic factors that helped to motivate staff – achieving and enhancing reputational influence in the wider community, locally, regionally, nationally and internationally.

V Concluding Remarks

As part of this research it was noted by a member of the university's Vice-Chancellor's Board that enterprise was deemed to be a natural part of an academic's role in a post 1992 modern university and whilst the university has driven the corporate vision for enterprise through the strategic planning process, academic staff were more likely to engage in enterprise when activities were linked to: a) their research interests; b) learning and teaching; c) maintaining credibility in their field; and d) personal benefits. They were less likely to engage when the focus was associated purely with making money or when they felt pressurised into doing so. With this in mind, establishing a strong interrelationship between corporate objectives and benefits for academic staff alongside the implementation of the S₄E Model for Enterprise promoted the 'can do culture' of entrepreneurship in an educational context.

A number of recommendations emanated from the research undertaken in this case study. To improve the clarity in the context of engagement with enterprise it was recommended that a) the university updated its Job Description and Person Specification for academic positions to make its expectations more explicit; b) that explicit routes to reader and professor via enterprise and the criteria on which they are conferred were more explicit; c) devise a metric that allocates value to the enterprise activities valued by the university and links them to career progression; and d) establish a staff development programme relating to enterprise capabilities as a means of developing an entrepreneurial culture. To support this culture, it was also recommended that the conceptual model for supporting enterprise was implemented as well as the S₄E Model of enterprise.

The original conceptual model is one contribution of this in-depth and evidence-based understanding of engagement with enterprise activity in a single academic school within a modern university. The model emphasises the need for enterprise to be of strategic significance (S¹), both corporately and at School level, to academic staff. An enterprise culture needs to be supportive (S²) with appropriate systems in place to make engagement with enterprise straightforward. Synergy (S³) is required between the knowledge and skills sets of academic staff and the enterprise activities proposed. Finally, successful engagement with enterprise (S⁴) needs to be acknowledged and celebrated. The empirical basis of the work is derived from one academic school in one Welsh university in the UK. Nevertheless, it is reasonable to assume that the experiences of the participants in the present study are not dissimilar from those of colleagues at other British universities, especially the 'modern' (post 1992) higher education institutions.

Many of the findings are consistent with the established literature in the subject field, but this conceptual model offers the opportunity to raise the profile of engagement with enterprise and contribute to greater connectivity between Learning and Teaching, Research and Enterprise.

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Benefiting Society

Benefiting the Economy

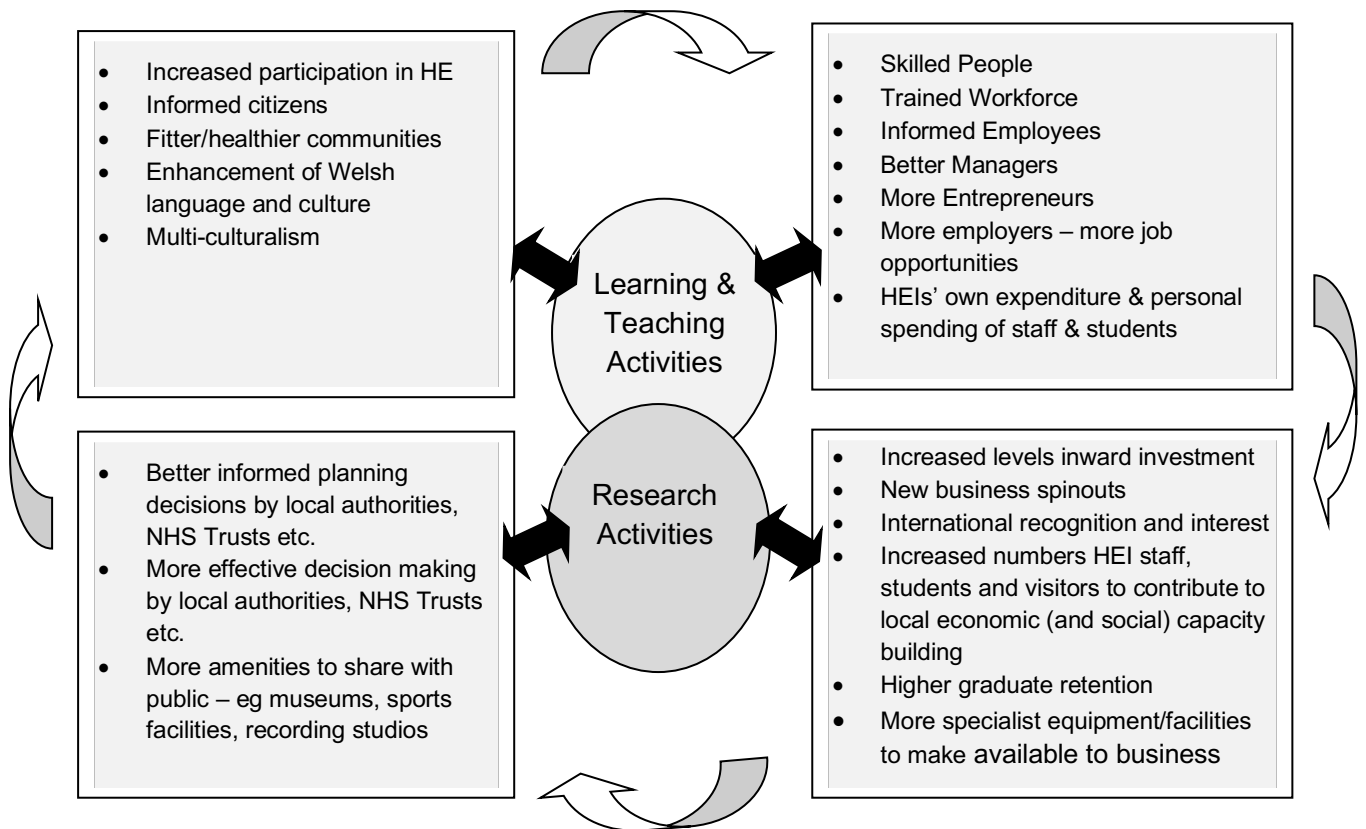


Figure 1: Adapted from HEFCW's (2004) 'Third Mission'

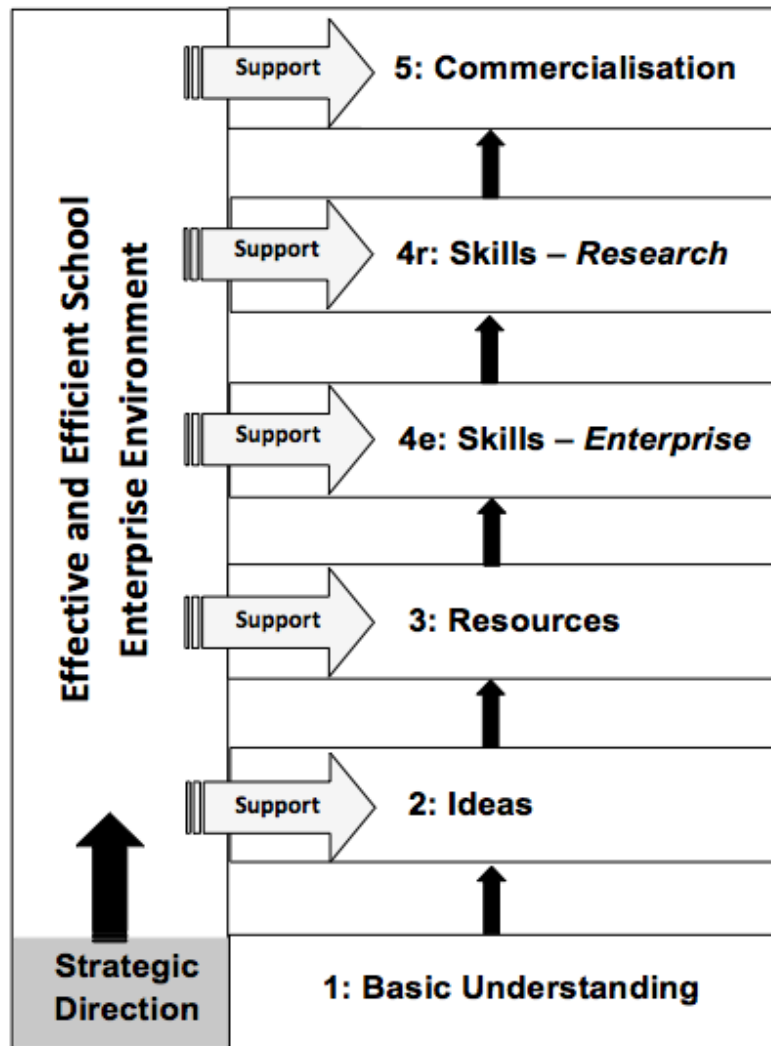


Figure 2: Conceptual model for supporting enterprise

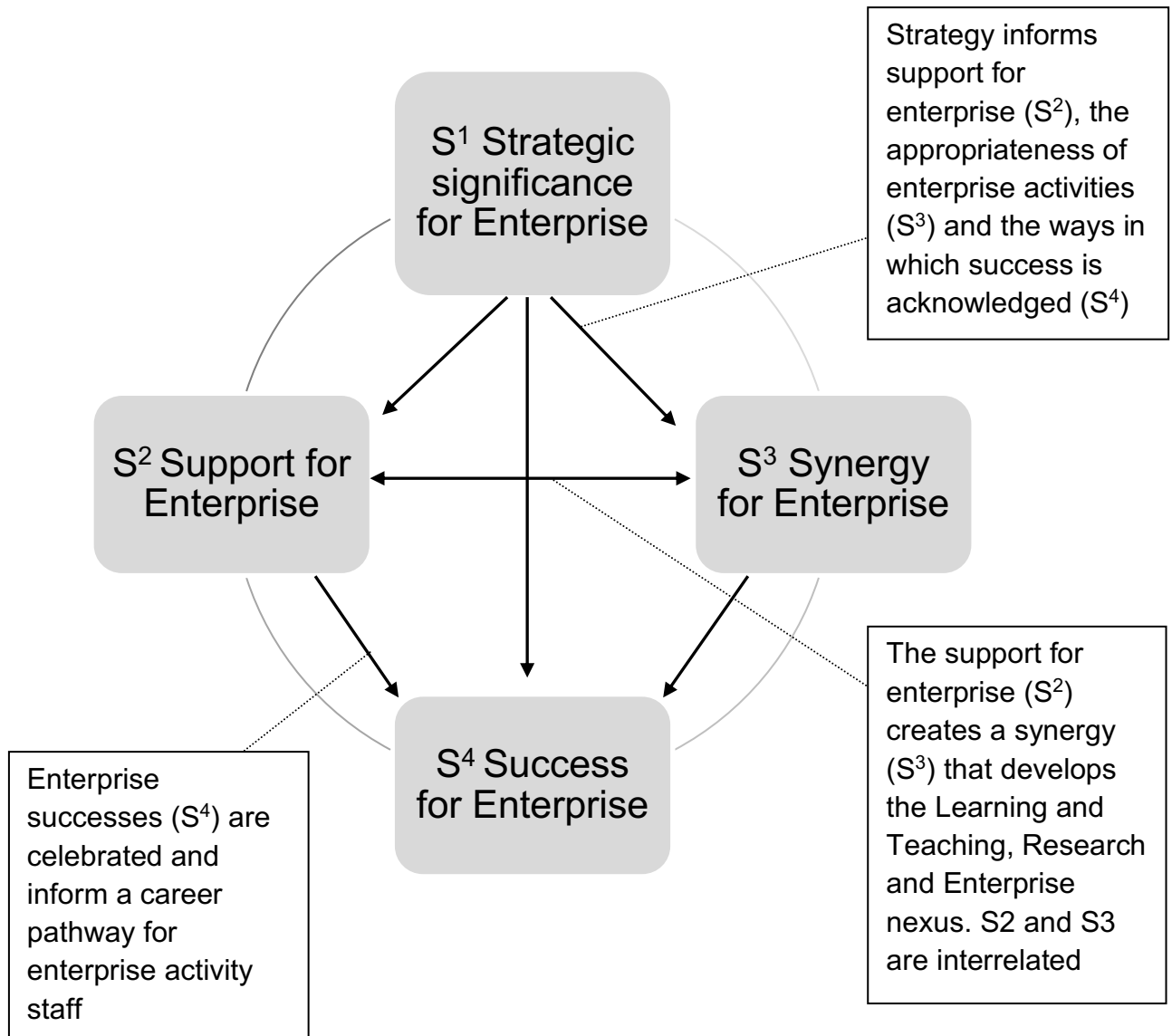


Figure 3: The S⁴E Model for Enterprise

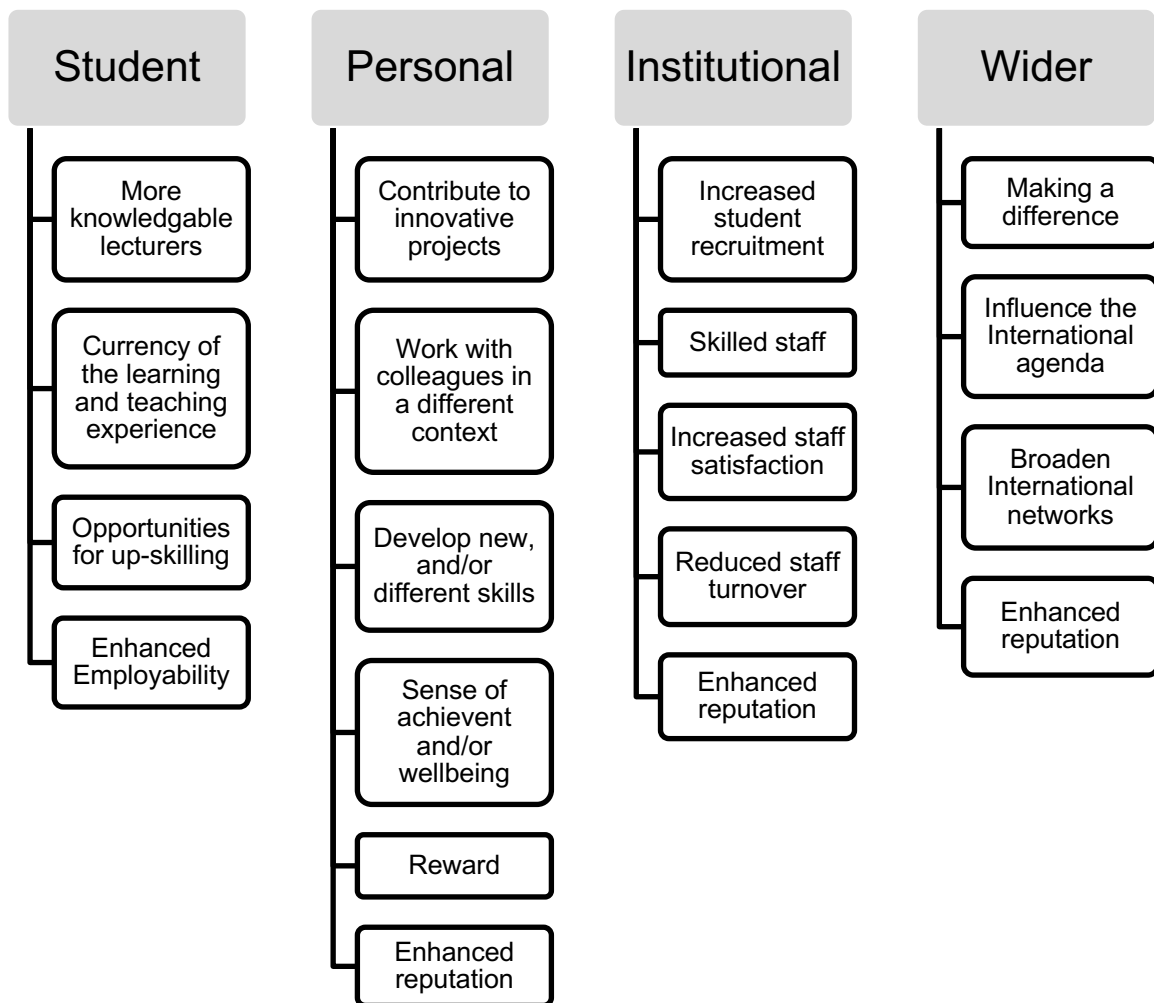


Figure 4: Benefits of Enterprise – Summary of Findings