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Embedding Enterprise Education into the Curriculum

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Abstract

Learning about and experiencing enterprise whilst at university can lead to enhanced employability and entrepreneurship skills, and can suggest an alternative career option in business start-up or self-employment. However, educators are often resistant to helping their students learn about enterprise and entrepreneurship, or may struggle to fit additional learning opportunities in an already full subject-specific curriculum. This paper offers two case studies showing how students can learn about their subject through enterprise-related assessment tasks such as a tendering exercise or an ideas pitch. In both case studies, the emphasis is on the subject-specific learning, but enterprise and entrepreneurial skills are also acquired. Formal and informal evaluation shows that students are enthused by the tasks, and that staff benefit from increased knowledge of enterprise issues and links with the business community.

Keywords: enterprise education, entrepreneurship, innovative assessment

Introduction

Learning about and experiencing enterprise whilst still at university can have several benefits. It gives you an alternative career option and the confidence that you can set up your own business or social enterprise. Graduates, academic staff, and research students often have ideas that can be taken forward into high-technology enterprises and engagement with enterprise education can help make this happen. Enterprise skills will also be useful to those in employment, or who will become self-employed and work on a freelance or consultancy basis. Hegarty (2006) argues that enterprise and entrepreneurship are learned phenomena, and that universities play a vital role in encouraging and providing opportunities for enterprise to flourish (see also BIS 2010, NCGE 2008, Gibb 2005).

Regardless of career intention, enterprise education can encourage those who take part to reflect on their particular strengths, weaknesses, and key values. It can help address practical skills such as oral and written communication, and personal effectiveness skills such as being creative, being able to influence and negotiate, and being flexible and open-minded. Balls and Healey (2004) add to the above to suggest that an enterprise culture is important to develop a 'can do' confidence, a creative questioning, and a willingness to take risks. They consider this to be important to provide readiness for a rapidly changing economy, and to enable individuals to manage workplace uncertainty and flexible working patterns and careers (see also Hannon 2006, Hegarty 2006, Matley 2005).

There is a widely held assumption in some areas that there is a positive relationship between education and entrepreneurial activity. This assumption was explored by Weaver et al. (2006) in a systematic literature review who found that there is indeed a significant positive correlation between participation in both general and entrepreneurship-specific educational programmes and venture creation; they report two meta-analyses in particular, carried out by van der Sluis, van Praag, & Vijverberg in 2004 and 2005, which showed that the higher the level of general education of the entrepreneur, the higher the level of performance of the venture. Although there is some ambiguity in the literature, possibly as a result of the large time gaps that can often be found between educational study and venture creation, it would appear that whilst individuals 'with at least some college education' are

most likely to select to become entrepreneurs, those with high levels of education are not (Weaver et al., 2006). A recent study of young people in Yorkshire and the Humber by Dubit (2009; commissioned by Business Link) echoed Weaver's pattern in the US, showing again, that there is a drop-off in business aspiration for HE students. Dubit recommended from these results that there should be a reduced focus on Universities as centres for entrepreneurship and that efforts should be abandoned in preference to other areas.

Enterprise education: not just a matter for Business Schools

Although many enterprise and entrepreneurship-specific courses are offered, particularly out of Business Schools, and often aimed at postgraduate students (NCGE 2008; McKeown et al., 2006; Matlay, 2005; see also Brush et al., 2003 for provision of entrepreneurship programmes in the US), the vast majority of students in HE may not currently be given the opportunity to engage in enterprise education as part of their subject-level programme studies (Frank, 2006). A national mapping survey of enterprise and entrepreneurship education by NCGE in 2007 suggested that 61% of all delivery is undertaken by Business Schools with limited provision in other departments and facilities (NCGE, 2008). And yet, it has been suggested that enterprise and entrepreneurship are learned phenomena and that universities play a vital role in encouraging and providing opportunities for all students so that enterprise can flourish (Hegarty, 2006; see also Smith, 2008 and 2007; Weaver et al., 2006, and Gibb 2005). Further to this, the ISBA Consortium (2004) have stated that the role of the educator, university policy, culture, and perceptions of entrepreneurship are important to the success of an enterprise agenda and will become increasingly so as student numbers and the demand for enterprise education increases. Enterprise for all is a recurring theme.

Greene & Saridakis (2007) compared the employment and entrepreneurial outcomes of a representative group of graduates from 1999 using data collected in 2003 by Purcell and colleagues (Purcell et al., 2005, as cited by Greene & Saridakis, 2007). Part of the study was concerned with the acquisition of skills whilst at university, and the need for such skills in participants' employment or entrepreneurial activity. The results showed that there was a mismatch between skills acquired at university and those needed by graduates, and that entrepreneurial skills were poorly developed within university study (second only to language skills). Although the skills acquired by the group of entrepreneurs did not influence their choice to engage in entrepreneurship, acquisition of entrepreneurial skills whilst at university was positively related to the intentions of the participants to become entrepreneurs in the future. An interesting question emerges from these results: if engagement with entrepreneurial skills is currently low at university for the vast majority of students outside Business Schools, could increasing the development opportunities for such skills increase entrepreneurial propensity? Could increasing entrepreneurial propensity have benefits within employment as well as self-employment?

Resistance to enterprise; contested models and values

Binks (2004) called for universities to ensure large-scale access to entrepreneurship education and discussed how such a call would encounter resistance. One of the potential reasons for resistance is that staff and students may not recognise entrepreneurship education as being appropriate curriculum content, particular given an already overcrowded curriculum. Other reasons include the time needed to engage with students and potentially new pedagogical techniques. This latter issue in particular is not unique to enterprise education. *Any* new learning and teaching initiative is immensely time consuming for staff - as Gibbs (1996) states, designing "courses and materials, recasting assessment and support systems and adopting new teaching methods... all require new techniques and skills" (p. 20; see also Davies and Smith, 2006, for a discussion about similar issues raised in relation to uptake of learning technologies).

Although the wider promotion of enterprise education has difficulties in common with other learning and teaching initiatives, concepts of enterprise and entrepreneurship appear to

promote strong reactions that are unique to the subject matter. For example, Neary and Parker (2004) write that the promotion of enterprise as an academic exercise is contentious and may be seen by some as threatening the integrity and principles of those being asked to teach the concept and practice of, particularly capitalist, models of enterprise. For example, the National Council for Graduate Entrepreneurship (NCGE) emphasise the business start-up aspects of enterprise and include a list of entrepreneurial learning outcomes such as B. Creating Empathy with the Entrepreneurial Life-World (e.g. no sell, no income; working flexibly and long hours) and C. Key Entrepreneurial Values (e.g. strong sense of independence; distrust of bureaucracy; belief in the individual and community not the state) (NCGE 2008). These learning outcomes may be associated with the attributes of the classic entrepreneur, but would appear to exclude more collaborative business models and social enterprise, would not necessarily describe the leaders of all successful businesses, and would not appear to be appropriate for enterprise within employment.

Increasingly, enterprise skills are being seen as having wider relevance than simply business start-up. The Higher Education Academy - through the BMAF subject centre - and the Quality Assurance Agency are currently working to produce a set of guidelines for enterprise education, which it is hoped will include a wider definition of enterprise.

Contextualising enterprise education

The emphasis on the 'business start-up' model of enterprise education may explain why the vast majority of delivery is provided by Business Schools. Where enterprise modules are offered to other subject areas, they are often provided as stand-alone enterprise-specific modules with an emphasis on business planning (NCGE 2008). However there is an alternative model of provision where enterprise skills are embedding into the subject-specific context (Smith 2008) and two examples involving novel forms of assessment are reported here. It should be noted that Business Schools are ideally placed to provide enterprise and entrepreneurship education for Business School students, and to support and advise educators in other subject areas. Enterprise education may work best, however, when it is contextualised and adapted to the needs of individual subjects, rather than offered as a generic 'one size fits all' module.

So what are enterprise skills and why should we want to promote them to our students? I report a personal anecdote below to illustrate why they are important to me.

As a new lecturer in Psychology at the University of Birmingham, I attended a Teaching Forum day on campus where fellow new lecturers gave presentations on teaching and learning topics. Over lunchtime, two Professors from another University (who I now know were high-profile proponents of entrepreneurship), came to give a presentation on why learning about enterprise and entrepreneurship would be of benefit to our students. I hate to say this now, but I was bored during their presentation and didn't consider it to have any relevance to me at all. I didn't feel it was my place to 'try to churn out more Richard Bransons' when my students had come to learn about Psychology, and I didn't want to. Over time I forgot about the Forum and thought no more about enterprise education for several years. Over this interim time period, I became more involved in postgraduate research skills training, generic and transferable skills, and the use of learning technologies in HE. I believed, and still do believe, that such skills have huge relevance to, and can help with the learning of, subject-specific skills and knowledge. When I later applied for a post promoting the use of learning technologies in a subject that was new to me – enterprise education – I realised that many of the transferable skills I had promoted as psychology research skills had overlap with the enterprise skills I was reading about. And then I was hooked...

My personal list of enterprise skills include:

- Being creative and innovative
- Identifying and researching opportunities
- Persuading and communicating
- Assessing needs and skills required for particular tasks
- Identifying and bidding for resources: people, equipment, funds
- Promoting yourself and your ideas
- Making things happen

The above can relate to business, social enterprise, research, or within employment

A recent survey of enterprise education activity at the University of Huddersfield (contributing to the national NCGE mapping survey for 2010) suggested that the number of modules offering embedded enterprise skills across campus is relatively low, with the exception of Art Design and Architecture.

Whilst Huddersfield-based examples are being collected, This paper will introduce two case studies from the Embedding Enterprise Education initiative (E³) which started at the University of Birmingham in 2006, funded by the third round of the Higher Education Innovation Fund (HEIF3). E³ was created to help academic Schools embed enterprise and entrepreneurship skills into the subject-specific curriculum (see Smith, 2008 for more detail on E³). For both examples, the emphasis was on the subject-specific learning that took place through an enterprise-related assessment.

Embedding Enterprise Education Case Studies

Case Study 1: School of Geography, Earth, and Environmental Sciences

This project, led by Dr Jason Hilton, developed a new enterprise-related assessment for undergraduate geology students. Students demonstrated their geological knowledge and ability in order to solve a specified task by 'tendering' to a potential client in order to win a hypothetical work contract. Here, students were required to tender to conserve, maintain, and protect a fossilised forest - recently discovered on land being developed for a housing site - and to provide an educational experience for the local community. Students were provided with photographs and maps of the fossilised forest site, details of the rock structure underlying the site, and a list of costs for a recent conservation of similar size in the same area.

In producing the tender document, students needed to understand and communicate how to protect the forest using subject-specific geology knowledge and understanding. They were encouraged to be creative through suggesting an educational experience that also needed to draw on their subject knowledge. They were also required to reflect on and provide explicit evidence of their prior experience and skills in order to promote themselves as the best placed person to undertake the work they outlined, linking into personal development planning and employability skills. Although the assessment was mainly focused on students' geology knowledge, the exercise required an appreciation of the costs involved in undertaking consultancy work and the students were required to work to a professional format in order to 'win' the tender.

The first year of the student experience was evaluated through a questionnaire. 71% of students responded that they enjoyed the task more than standard teaching and 94% that they had acquired transferable skills. Qualitative feedback suggested that although students

broadly saw the benefits of the task for subject-specific learning and transferable skills, some preferred more traditional forms of learning.

“Gets us used to working to deadlines, to writing professional reports rather than essays, practicing solving real world problems with a range of skills. Very useful for the future.”

“Really enjoyed the sessions, opens ones eyes to the professional standards required. I am much better at checking work because of the course”

“Practical and intensive. Gives you the feeling of walking away having achieved something.”

“If I had to do this for a job I would quit!”

“I like theory more – sorry”

In addition to the benefits for student learning, staff reported that they benefited from exploring a new form of assessment that can be used in a variety of contexts. They also reported learning more about enterprise and entrepreneurship issues. Geology consultancy companies were approached to help staff design the tender requirements which has the potential to strengthen links between the university and relevant businesses, to help academics further understand potential employers’ and clients’ skills needs, and to increase companies’ confidence in the employability of the University’s graduates. Students looking to set up their own consultancy business on or after graduation will also have acquired skills to help them in this endeavour.

Case Study 2: School of Medicine

Led by Dr Michael Innes, this project aimed to demonstrate the role of commercial enterprise in national or international healthcare to undergraduate medical science students. It addressed issues of commercialisation in healthcare, from the development of ‘private’ services that might be contracted by governments, through to design and development of cheap alternative technology to extend the delivery of healthcare into poor communities.

The project developed both face-to-face and on-line teaching materials, including video clips on idea generation and business planning, and interviews with people engaged in health-related enterprise. Students were required to generate and develop an idea for commercialisation relevant to international health. The module was assessed through students ‘pitching’ their idea to a panel of judges.

The judging panel were provided with subject-specific assessment criteria on the potential of the idea to improve actual health or health promotion, and the research undertaken and information provided to the panel to support the idea. Other assessment criteria looked at enterprise skills such as communication skills and business and financial planning, however, these received less weight in calculating the final grade.

The ideas generated by the students in the first year of the module exceeded the course leader’s and panel’s expectations. The ideas presented ranged from designs for equipment intended for use by medical students in hospitals; to educational health-related games for schools; to ideas for social enterprises related to water purification and water safety in Africa; to health protection and promotion toys for small children; to ideas for specialist health or fitness clinics. Several of the students accompanied their pitch with designs or hand-made prototypes. All the members of the pitching panel commented on the enthusiasm and effort put into the task by the students. Students themselves generally reported that they had

enjoyed the task and felt that they had learned both about international health and enterprise.

The project team reported that they had also benefited through learning about enterprise as they developed and delivered the course and learning materials with the help of School-based business development experts.

Conclusions

This paper provides two case studies in which enterprise and entrepreneurship can be embedded within the subject-specific curriculum. Embedding in this way introduces enterprising concepts to a large and new number of students who may not have traditionally engaged with entrepreneurship activities, may have been unlikely to seek out enterprise-related learning opportunities, and may not have considered themselves as potentially enterprising or entrepreneurial individuals.

The case studies hopefully show how an enterprise-related task can be tailored to needs of the students and their chosen subject. The tasks are primarily designed to enhance and assess subject-specific learning, but have the potential for added-value outcomes relating to graduate employability, and business or community engagement. What came out strongly in both formal evaluation and anecdotal observations was the enthusiasm with which the majority of the students approached the task, and the added-value benefits for the academics.

Part of the Enterprise Team's remit within Research and Enterprise here at the University of Huddersfield is to advise academics interested in embedding enterprise into their teaching and learning activity. We currently host regular Enterprise Educators Forum through the Staff Development Unit and offer group or one-to-one advice on request. Activity such as the NCGE mapping survey is helping collect information on good practice that can be shared across campus so that we can start to publish examples from the University of Huddersfield.

Please contact the author of this paper if you have an enterprise education story to tell, or if you would more information on the potential for enterprise education for your students.

References

Balls, E. and Healey, J. (2004); Section 1: Towards a Full-Employment Britain – Educating the Next Generation of Entrepreneurs. In Balls, E., Healey, J. and Koester, C. (Eds) *Starting them Young: Creating a Culture of Enterprise For All*. The Smith Institute: London, UK.

Binks, M., (2004); *Entrepreneurship Education and Integrative Learning*". *National Council of Graduate Entrepreneurship, Policy Paper #001*. NCGE: Birmingham.

BIS (2010); A Strategy for Sustainable Growth. Department for Business, Innovation, and Skills.

http://interactive.bis.gov.uk/comment/growth/files/2010/07/8782-BIS-Sustainable-Growth_WEB.pdf. Accessed August 2010.

Brush, C.G., Duhaime, I.M., Gartner, W.B., Stewart, A., Katz, J.A., Hitt, M.A., Alvarez, S.A., Meyer, G.D., and Venkataraman, S. (2003); Doctoral Education in the Field of Entrepreneurship. *Journal of Management*, 29(3), 309-331.

Davies, A. and Smith, K.J. (2006); Drivers and Barriers to the Uptake of Learning Technologies: Staff Experiences in a Research-Led University. In O'Donoghue, J. (Ed).

Technology Supported Learning and Teaching: A Staff Perspective. Information Science Publishing: Hershey, PA, US.

Dubit (2009); *Capturing the Enterprise Potential of Young People: Across the Yorkshire and Humber Region*. Report commissioned by Business Link.

Frank, A.I., (2006); Developing Entrepreneurship Skills and Knowledge at the Discipline Level: The case of the Built Environment. *National Council of Graduate Entrepreneurship, Working Paper 032/2006*. NCGE: Birmingham.

Gibb, A. (2005); Towards the Entrepreneurial University: Entrepreneurship Education as a Lever for Change. *National Council for Graduate Entrepreneurship Policy Paper #003*. NCGE: Birmingham.

Gibbs, G. (1996); Institutional Strategies for Implementing Resource-Based Learning. In Brown, S. & Smith, B. (Eds), *Resource-based learning*. London: Kogan Page.

Greene, F.J., and Saridakis, G., (2007); Understanding the Factors Influencing Graduate Entrepreneurship. *National Council of Graduate Entrepreneurship, Research Report 001/2007*. NCGE: Birmingham.

Hannon, P. (2006); Teaching Pigeons to Dance: Sense and Meaning in Entrepreneurship Education. *Education + Training*. Special Issue on Entrepreneurship Education edited by Matlay H. 48(5), 296-308.

Hegarty, C. (2006); It's Not an Exact Science: Teaching Entrepreneurship in Northern Ireland. *Education + Training*. Special Issue on Entrepreneurship Education edited by Matlay H. 48(5), 322-335.

ISBA Consortium (2004); *Making the Journey from Student to Entrepreneur: A Review of the Existing Research into Graduate Entrepreneurship – Final Report*.

McKeown, J., Millman, C., Sursani, S.R., Smith, K., and Martin, L.M. (2006); Graduate Entrepreneurship Education in the United Kingdom. *Education + Training*, 48 (8/9), 597-613.

Matlay, H. (2005); Entrepreneurship Education in UK Business Schools: Conceptual, contextual and policy considerations. *Journal of Small Business and Enterprise Development*, 12(4) 627-643.

NCGE (2008); *Developing Entrepreneurial Graduates: Putting Entrepreneurship at the Centre of Higher Education*. Joint report of the National Council of Graduate Entrepreneurship, the Council for Industry and Higher Education, and the National Endowment for Science, Technology, and the Arts. NCGE: Birmingham.

Neary, M., and Parker, A., (2004); Enterprise, Social Enterprise, and Critical Pedagogy: Reinventing the HE Curriculum. *National Council of Graduate Entrepreneurship, Policy Paper #002*. NCGE: Birmingham.

Purcell, K., Elias, P., Davies, R., and Winton, N. (2005); The Class of '99: A study of the early labour market experiences of recent graduates. *DfES Research Report No. 691*, ESRU/IEF: University of Warwick and University of the West of England. As cited by Greene and Saridakis, 2006.

Smith, K.J., (2007); Supporting E-learning in Enterprise Education: The TE3 Project. *Education + Training*. 49 (8/9), 656-670.

Smith, K.J., (2008); Embedding Enterprise Education into the Curriculum at a Research-led University. *Education + Training*. 50 (8/9), 713-724.

van der Sluis, J., van Praag, M., and Vijverberg, W. (2005); Entrepreneurship selection and performance: A meta-analysis of the impact of education in developing economies. *The World Bank Economic Review*, 19(2), 225-261. Cited in Weaver (2006).

van der Sluis, J., van Praag, M., and Vijverberg, W. (2004); Education and entrepreneurship in industrialized countries: A meta-analysis. *Tinbergen Institute Working Paper no. TI 03-046/3*, Amsterdam: Tinbergen Institute. Cited in Weaver (2006).

Weaver, M., Dickson, P., & Solomon, G., (2006); Entrepreneurship and Education: What is Known and Not Known about the Links Between Education and Entrepreneurial Activity. *The Small Business Economy for Data Year 2005: A Report to the President*. United States Government Printing Office; Washington, US.